

# AV AMPLIFIER/AV RECEIVER DSP-AX1/RX-V1

## SERVICE MANUAL

### IMPORTANT NOTICE

This manual has been provided for the use of authorized YAMAHA Retailers and their service personnel. It has been assumed that basic service procedures inherent to the industry, and more specifically YAMAHA Products, are already known and understood by the users, and have therefore not been restated.

**WARNING:** Failure to follow appropriate service and safety procedures when servicing this product may result in personal injury, destruction of expensive components, and failure of the product to perform as specified. For these reasons, we advise all YAMAHA product owners that any service required should be performed by an authorized YAMAHA Retailer or the appointed service representative.

**IMPORTANT:** The presentation or sale of this manual to any individual or firm does not constitute authorization, certification or recognition of any applicable technical capabilities, or establish a principle-agent relationship of any form.

The data provided is believed to be accurate and applicable to the unit(s) indicated on the cover. The research, engineering, and service departments of YAMAHA are continually striving to improve YAMAHA products. Modifications are, therefore, inevitable and specifications are subject to change without notice or obligation to retrofit. Should any discrepancy appear to exist, please contact the distributor's Service Division.

**WARNING:** Static discharges can destroy expensive components. Discharge any static electricity your body may have accumulated by grounding yourself to the ground buss in the unit (heavy gauge black wires connect to this buss).

**IMPORTANT:** Turn the unit OFF during disassembly and part replacement. Recheck all work before you apply power to the unit.

## CONTENTS

|                               |       |                                  |         |
|-------------------------------|-------|----------------------------------|---------|
| TO SERVICE PERSONNEL .....    | 1     | TUNER ADJUSTMENTS .....          | 34~37   |
| FRONT PANELS .....            | 2     | IC DATA .....                    | 38~53   |
| REAR PANELS .....             | 3~4   | PRINTED CIRCUIT BOARD .....      | 54~83   |
| SPECIFICATIONS .....          | 5~8   | BLOCK DIAGRAM .....              | 84~88   |
| INTERNAL VIEW .....           | 9     | PIN CONNECTION DIAGRAM .....     | 89      |
| DISASSEMBLY PROCEDURES .....  | 9~10  | SCHEMATIC DIAGRAM .....          | 90~101  |
| SELF DIAGNOSIS FUNCTION ..... | 11~32 | PARTS LIST .....                 | 102~135 |
| AMP ADJUSTMENTS .....         | 33    | REMOTE CONTROL TRANSMITTER ..... | 136~141 |

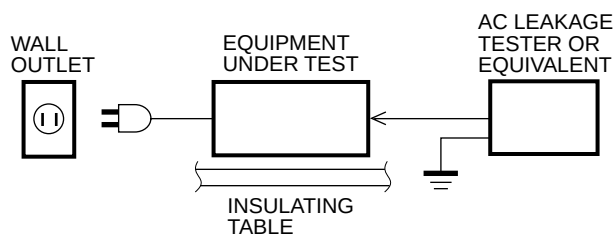


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This Service Manual uses recycled paper.



## ■ TO SERVICE PERSONNEL

1. Critical Components Information.  
Components having special characteristics are marked  $\triangle$  and must be replaced with parts having specifications equal to those originally installed.
2. Leakage Current Measurement (For 120V Models Only).  
When service has been completed, it is imperative to verify that all exposed conductive surfaces are properly insulated from supply circuits.
  - Meter impedance should be equivalent to 1500 ohm shunted by 0.15 $\mu$ F.
  - Leakage current must not exceed 0.5mA.



- Be sure to test for leakage with the AC plug in both polarities.



### “CAUTION”

“F751 : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE 12A, 250V FUSE.”

### CAUTION

F751 : REPLACE WITH SAME TYPE 12A, 250V FUSE.

### ATTENTION

F751 : UTILISER UN FUSIBLE DE RECHANGE DE MEME TYPE DE 12A, 250V.

## WARNING: CHEMICAL CONTENT NOTICE!

The solder used in the production of this product contains LEAD. In addition, other electrical/ electronic and/or plastic (where applicable) components may also contain traces of chemicals found by the California Health and Welfare Agency (and possibly other entities) to cause cancer and/or birth defects or other reproductive harm.

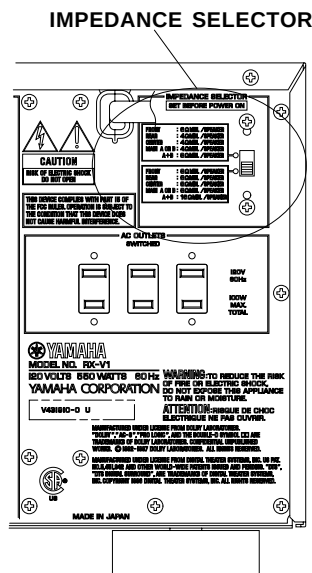
DO NOT PLACE SOLDER, ELECTRICAL/ ELECTRONIC OR PLASTIC COMPONENTS IN YOUR MOUTH FOR ANY REASON WHATSOEVER!

Avoid prolonged, unprotected contact between solder and your skin! When soldering, do not inhale solder fumes or expose eyes to solder/flux vapor!

If you come in contact with solder or components located inside the enclosure of this product, wash your hands before handling food.

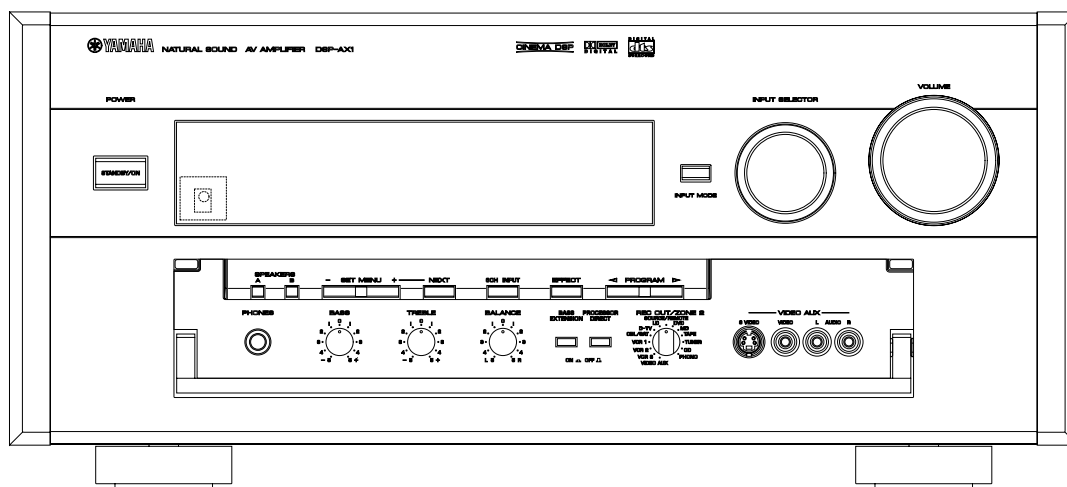
### WARNING

Do not change the IMPEDANCE SELECTOR switch setting while the power to this unit is on, otherwise this unit may be damaged.

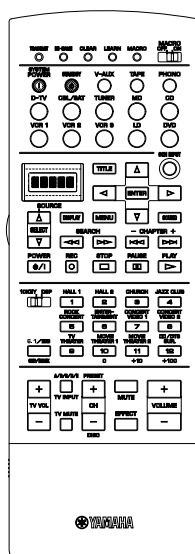
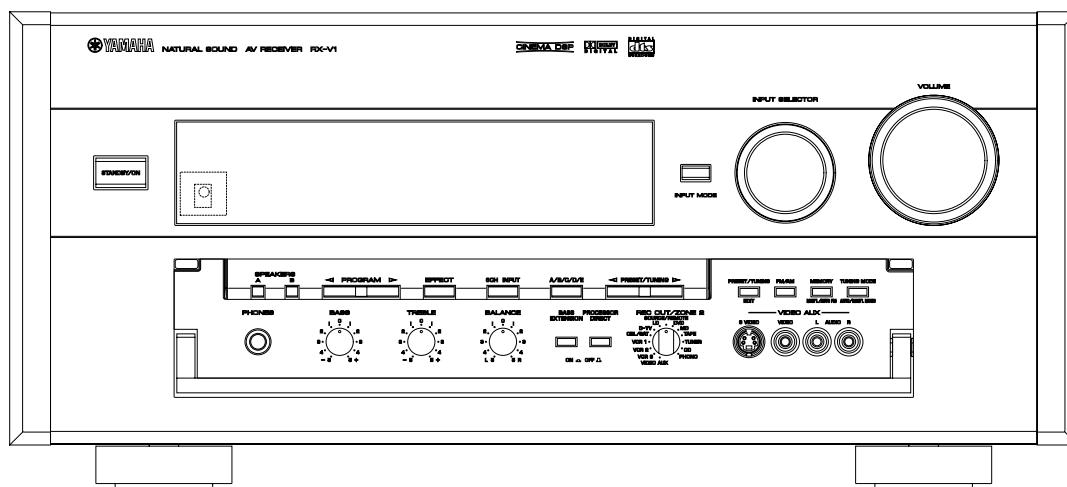


# FRONT PANELS

## DSP-AX1

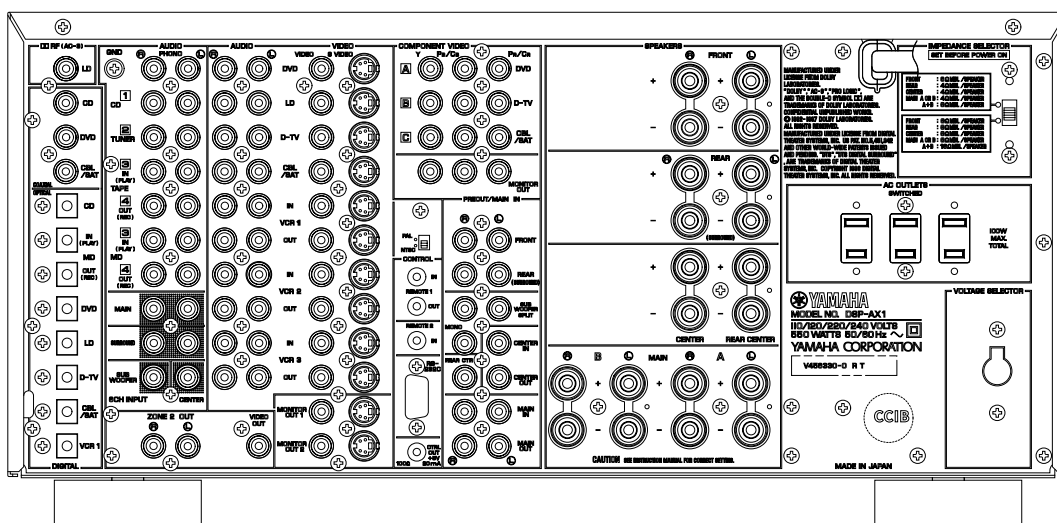


## RX-V1

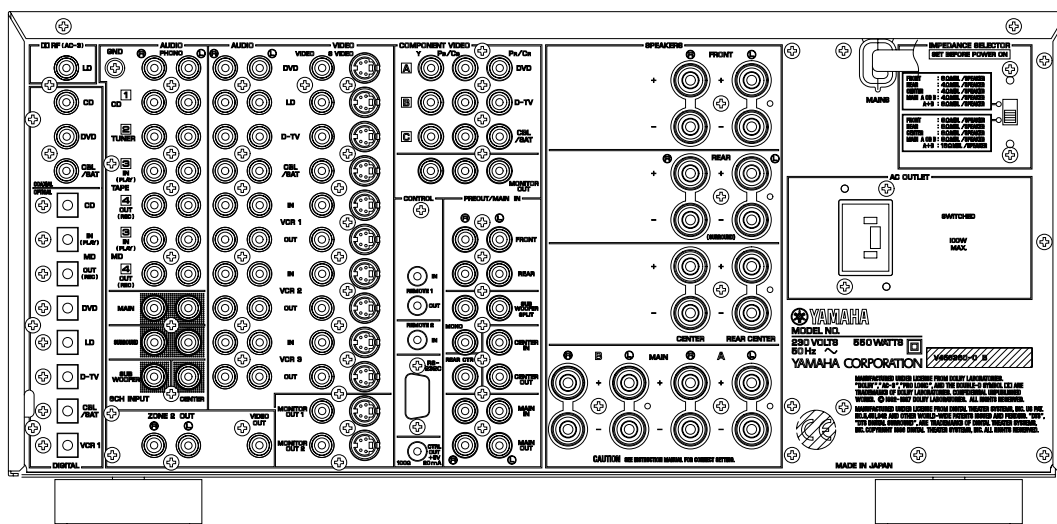


## REAR PANELS

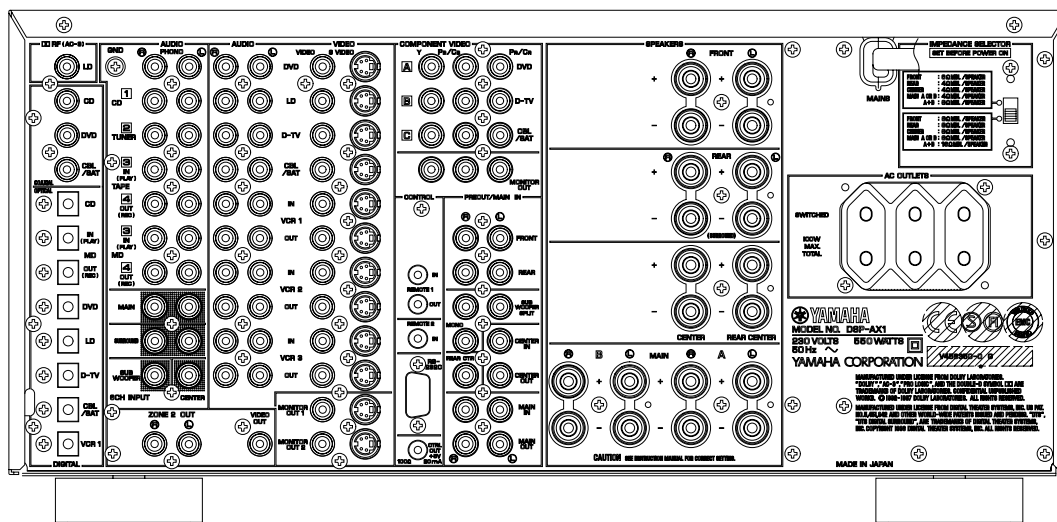
### ▼ DSP-AX1 R, T models



### ▼ DSP-AX1 B model

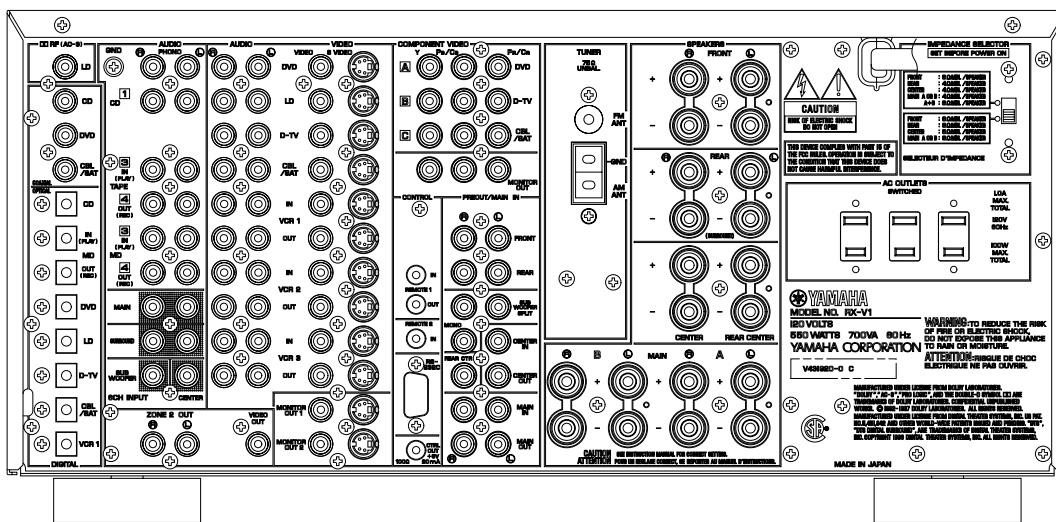
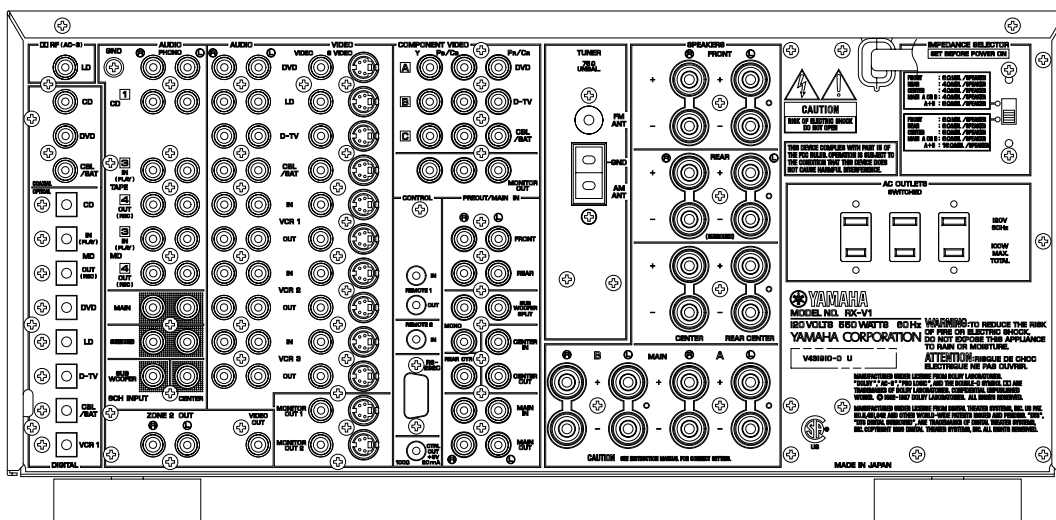


### ▼ DSP-AX1 G model





### ▼ RX-V1 C model



The diagram illustrates the rear panel of the Yamaha RX-V1 receiver, organized into several functional sections:

- RF (40-81) Section:** Includes ports for LD, CD, DVD, and D-TV, along with a COIL/FILT switch and a MAIN/STANDBY selector.
- AUDIO SECTION:** Features inputs for DVD, LD, D-TV, and various sources (VCR 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812,

SPECIFICATIONS

AUDIO SECTION

|                                                          |                      |
|----------------------------------------------------------|----------------------|
| Minimum RMS Output Power per Channel                     |                      |
| MAIN, 20Hz to 20kHz, 0.015% THD, 8Ω                      | 110W+110W            |
| CENTER, 20Hz to 20kHz, 0.015% THD, 8Ω                    | 110W                 |
| REAR, 20Hz to 20kHz, 0.015% THD, 8Ω                      | 110W+110W            |
| REAR CENTER,                                             |                      |
| 20Hz to 20kHz, 0.015% THD, 8Ω                            | 110W                 |
| FRONT, 1kHz, 0.05% THD, 8Ω                               | 35W+35W              |
| Maximum Power per Channel (R, T models only)             |                      |
| MAIN, 1kHz, EIAJ, 10% THD, 8Ω                            | 150W+150W            |
| CENTER, 1kHz, EIAJ, 10% THD, 8Ω                          | 150W                 |
| REAR, 1kHz, EIAJ, 10% THD, 8Ω                            | 150W+150W            |
| REAR CENTER, 1kHz, EIAJ, 10% THD, 8Ω                     | 150W                 |
| FRONT, 1kHz, EIAJ, 10% THD, 8Ω                           | 45W+45W              |
| Dynamic Power per Channel (U, C, R, T models only)       |                      |
| MAIN, 8/6/4/2Ω                                           | 150/180/240/340W     |
| Dynamic Headroom (U, C, R, T models only)                |                      |
| 8Ω                                                       | 1.3dB                |
| DIN Standard Output Power per Channel (B, G models only) |                      |
| MAIN, 1kHz, 0.7% THD, 4Ω                                 | 180W+180W            |
| CENTER, 1kHz, 0.7% THD, 4Ω                               | 180W                 |
| REAR, 1kHz, 0.7% THD, 4Ω                                 | 180W+180W            |
| REAR CENTER, 1kHz, 0.7% THD, 4Ω                          | 180W+180W            |
| FRONT, 1kHz, 0.7% THD, 4Ω                                | 60W+60W              |
| IEC Power (B, G models only)                             |                      |
| MAIN, 1kHz, 0.015% THD, 8Ω                               | 120W                 |
| Power Band Width                                         |                      |
| MAIN, 0.04% THD, 55W/8Ω                                  | 10Hz to 50kHz        |
| Damping Factor                                           |                      |
| MAIN/CENTER, 20Hz to 20kHz, 8Ω                           | 200 or more          |
| Input Sensitivity/Impedance                              |                      |
| PHONO MM                                                 | 2.5mV/47kΩ           |
| CD, etc                                                  | 150mV/47kΩ           |
| MAIN IN                                                  | 1V/47kΩ              |
| Maximum Input Signal Level                               |                      |
| PHONO MM, 1kHz, 0.05% THD, (Effect on)                   | 100mV                |
| CD, etc, (Effect on)                                     | 2.3V                 |
| Output Level/Impedance                                   |                      |
| REC OUT                                                  | 150mV/600Ω           |
| PRE OUT (MAIN, etc)                                      | 1V/1.2kΩ             |
| SUB WOOFER (EFFECT OFF, MAIN SP : SMALL)                 |                      |
| SPLIT                                                    | 2.0V/1.2kΩ           |
| MONO                                                     | 4.0V/1.2kΩ           |
| Maximum Voltage Output (20Hz to 20kHz, 1% THD)           |                      |
| PRE OUT (MAIN L/R)                                       | 3V                   |
| Headphone Jack Rated Output/Impedance                    |                      |
| CD, etc, (40mV, 8Ω)                                      | 150mV/100Ω           |
| Frequency Response (10Hz to 100kHz)                      |                      |
| CD, etc, MAIN L/R                                        | +0/-3.0dB            |
| RIAA Equalization Deviation (20Hz to 20kHz)              |                      |
| PHONO MM                                                 | 0±0.5dB              |
| Tone Control Characteristics                             |                      |
| BASS : Boost/cut                                         | ±10dB (50Hz)         |
| Turnover Frequency                                       | 350Hz                |
| TREBLE : Boost/cut                                       | ±10dB (20kHz)        |
| Turnover Frequency                                       | 3.5kHz               |
| Center Graphic Equalizer                                 |                      |
| Frequency                                                | 100/300/1k/3k/10kHz  |
| Boost/cut                                                | ±6dB                 |
| Q                                                        | 0.7                  |
| Bass Extension                                           |                      |
|                                                          | +6dB (60Hz)          |
| Filter Characteristics                                   |                      |
| SUB WOOFER OUT : L.P.F.                                  | fc = 90Hz, 24dB/oct. |

|                                             |                           |
|---------------------------------------------|---------------------------|
| Cinema Equalizer                            |                           |
| High                                        | Frequency 1kHz to 12.7kHz |
|                                             | Boost/cut -9dB to +6dB    |
| PEQ                                         | Frequency 1kHz to 12.7kHz |
|                                             | Boost/cut -9dB to +6dB    |
| Q                                           | 1.85                      |
| Total Harmonic Distortion (20Hz to 20kHz)   |                           |
| PHONO MM to REC OUT (1V)                    | 0.01%                     |
| CD, etc, to PRE OUT MAIN L/R (1V)           | 0.005%                    |
| MAIN IN to L/C/R SP OUT (55W/8Ω)            | 0.005%                    |
| Signal-to-Noise Ratio (IHF-A-Network)       |                           |
| PHONO MM, Input Shorted 5mV (Effect off)    | 86dB                      |
| CD, etc, Input Shorted (Effect off)         | 96dB                      |
| Residual Noise (IHF-A-Network)              |                           |
| MAIN, SP OUT                                | 150μV                     |
| Channel Separation (Vol. -30dB, Effect off) |                           |
| PHONO MM, Input Shorted, 1kHz/10kHz         | 70dB/60dB                 |
| CD, etc, Input 5.1kΩ Shorted, 1kHz/10kHz    | 70dB/60dB                 |
| Muting                                      | — ∞                       |

VIDEO SECTION

|                                   |                 |
|-----------------------------------|-----------------|
| Video Signal Type                 |                 |
| U, C models                       | NTSC            |
| A, B.G models                     | PAL             |
| R, T models                       | NTSC/PAL        |
| Composite Video Signal Level      |                 |
| S-Video Signal Level              | 1Vp-p/75Ω       |
| Y                                 | 1Vp-p/75Ω       |
| C                                 | 0.286Vp-p/75Ω   |
| Component Signal Level            |                 |
| Y                                 | 1Vp-p/75Ω       |
| Cb/Cr                             | 0.7V/75Ω        |
| Video Maximum Input Level         |                 |
| Video Signal-to-Noise Ratio       | 50dB            |
| Monitor Output Frequency Response |                 |
| Composite Video Signal            | 5Hz~10MHz, -3dB |
| S-Video Signal                    | 5Hz~10MHz, -3dB |
| Component Signal                  | DC~20MHz, -3dB  |

## FM SECTION (RX-V1 only)

### Tuning Range

|             |                    |
|-------------|--------------------|
| U, C models | 87.5 to 107.9MHz   |
| A models    | 87.50 to 108.00MHz |

### 50dB Quieting Sensitivity (IHF, 75 Ω)

|                          |                 |
|--------------------------|-----------------|
| U, C models only         |                 |
| Mono (1kHz, 100% Mod.)   | 1.6μV (15.3dBf) |
| Stereo (1kHz, 100% Mod.) | 23μV (38.5dBf)  |

### Usable Sensitivity (DIN, 75 Ω)

|                   |       |
|-------------------|-------|
| A model only      |       |
| Mono (S/N 26dB)   | 0.9μV |
| Stereo (S/N 46dB) | 28μV  |

### Alternate Channel Selectivity (± 400Hz)

|             |      |
|-------------|------|
| U, C models | 75dB |
|-------------|------|

### Selectivity (two signals, 40kHz Dev.) (± 300Hz)

|         |      |
|---------|------|
| A model | 55dB |
|---------|------|

### Signal-to-Noise Ratio

|                                        |         |
|----------------------------------------|---------|
| U, C models                            |         |
| Mono/Stereo (IHF)                      | 81/75dB |
| A model                                |         |
| Mono/Stereo (DIN-weighted, 40kHz Dev.) | 75/69dB |

### Harmonic Distortion

|                    |          |
|--------------------|----------|
| Mono/Stereo (1kHz) | 0.1/0.2% |
|--------------------|----------|

### Stereo Separation

|      |      |
|------|------|
| 1kHz | 48dB |
|------|------|

### Frequency Response

|               |         |
|---------------|---------|
| 20Hz to 15kHz | 0±1.0dB |
|---------------|---------|

### Output Level

|                    |       |
|--------------------|-------|
| U, C models        |       |
| FM 100% mod. 1kHz  | 550mV |
| A models           |       |
| FM 40kHz Dev. 1kHz | 550mV |

### Antenna Input

|  |                 |
|--|-----------------|
|  | 75 Ω unbalanced |
|--|-----------------|

## AM SECTION (RX-V1 only)

### Tuning Range

|             |                 |
|-------------|-----------------|
| U, C models | 530 to 1,710kHz |
| A model     | 531 to 1,611kHz |

### Usable Sensitivity

|  |         |
|--|---------|
|  | 300μV/m |
|--|---------|

### Output Level

|                  |       |
|------------------|-------|
| AM 30% mod. 1kHz | 150mV |
|------------------|-------|

### Signal-to-Noise Ratio

|  |      |
|--|------|
|  | 52dB |
|--|------|

### Antenna

|  |              |
|--|--------------|
|  | Loop antenna |
|--|--------------|

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## GENERAL

### Power Supply

|             |                              |
|-------------|------------------------------|
| U, C models | AC 120V, 60Hz                |
| A model     | AC 240V, 50Hz                |
| B, G models | AC 230V, 50Hz                |
| R, T models | AC 110/120/220/240V, 50/60Hz |

### Power Consumption

|                |            |
|----------------|------------|
| U model        | 550W       |
| C model        | 550W/700VA |
| A, R, T models | 550W       |

### Maximum Power Consumption (R, T models only)

|  |      |
|--|------|
|  | 770W |
|--|------|

### AC Outlets

|                                 |                           |
|---------------------------------|---------------------------|
| U, R, T, G models, Switched x 3 | 100W max (Total)          |
| C model, Switched x 3           | 100W max/1.0A max (Total) |
| A, B models, Switched x 1       | 100W max                  |

### Dimensions (W x H x D)

|  |                     |
|--|---------------------|
|  | 471 x 211.5 x 473mm |
|--|---------------------|

### Weight

|  |                                |
|--|--------------------------------|
|  | (18-9/16" x 8-5/16" x 18-5/8") |
|--|--------------------------------|

### Finish

|       |                       |
|-------|-----------------------|
| RX-V1 | 28.0 kg (61 lbs 11oz) |
|-------|-----------------------|

### Accessories

|            |                        |
|------------|------------------------|
| RX-V1 only | Gold color/Black color |
|            | Gold color/Black color |

### DSP-AX1/RX-V1

|  |                     |
|--|---------------------|
|  | AM loop antenna x 1 |
|--|---------------------|

|  |                       |
|--|-----------------------|
|  | Indoor FM antenna x 1 |
|--|-----------------------|

|  |                                |
|--|--------------------------------|
|  | Remote Control Transmitter x 1 |
|--|--------------------------------|

|  |                                |
|--|--------------------------------|
|  | Battery (size "AA", "R06") x 3 |
|--|--------------------------------|

\* Specifications subject to change without notice.

### U ..... USA model

### C ..... Canadian model

### A ..... Australian model

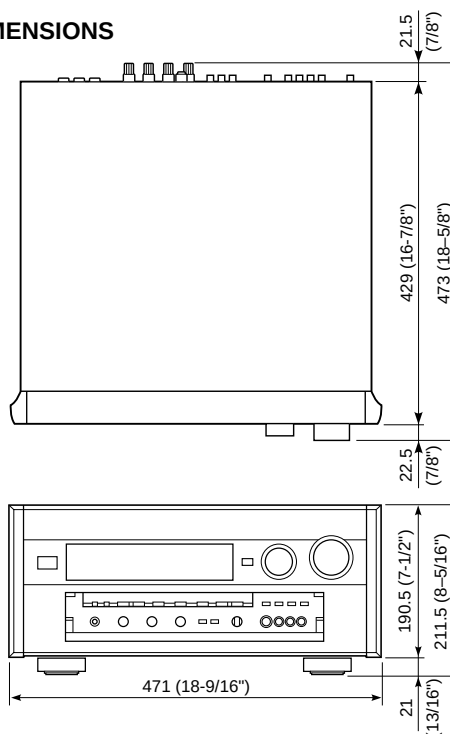
### B ..... British model

### G ..... European model

### R ..... General model

### T ..... China model

## DIMENSIONS



Units : mm (inch)

## ● SET MENU TABLE

| No. | SET MENU                | PRESET VALUE                                        | SETTING RANGES                                                                                                                                        |
|-----|-------------------------|-----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.  | SPEAKER SET             |                                                     |                                                                                                                                                       |
| 1A  | CENTER SPEAKER          | LARGE                                               | LARGE/SMALL/NONE                                                                                                                                      |
| 1B  | MAIN SPEAKER            | LARGE                                               | LARGE/SMALL                                                                                                                                           |
| 1C  | REAR L/R SPEAKER        | LARGE                                               | LARGE/SMALL/NONE                                                                                                                                      |
| 1D  | REAR CT SPEAKER         | LARGE                                               | LARGE/SMALL/NONE                                                                                                                                      |
| 1E  | LFE/BASS OUT            | BOTH                                                | SUBWOOFER/MAIN/BOTH                                                                                                                                   |
| 1F  | FRONT EFCT SPEAKER      | YES                                                 | YES/NONE                                                                                                                                              |
| 1G  | MAIN LEVEL              | NORMAL                                              | NORMAL/-10dB                                                                                                                                          |
| 2.  | LOW FREQ. TEST          | TONE : OFF<br>OUTPUT : MAIN L/R<br>FREQUENCY : 88Hz | ON/OFF<br>L/C/R/RS/RC/LS/SW/FRONT<br>35 — 250Hz                                                                                                       |
| 3.  | DOLBY DIGITAL SET       |                                                     |                                                                                                                                                       |
| 3A  | LFE LEVEL               | SPEAKER : 0dB<br>HEAD PHONE : 0dB                   | -20dB — 0dB<br>-20dB — 0dB                                                                                                                            |
| 3B  | DYNAMIC RANGE           | SPEAKER : MAX<br>HEAD PHONE : MAX                   | MAX/STD/MIN<br>MAX/STD/MIN                                                                                                                            |
| 4.  | DTS SET                 |                                                     |                                                                                                                                                       |
| 4A  | LFE LEVEL               | SPEAKER : 0dB<br>HEAD PHONE : 0dB                   | -10dB — +10dB<br>-10dB — +10dB                                                                                                                        |
| 5.  | SPEAKER DELAY TIME      | CENTER : 0ms<br>REAR CENTER : 3ms                   | 0ms — 5ms<br>0ms — 30ms                                                                                                                               |
| 6.  | AUDIO DELAY             | 0ms                                                 | 0ms — 99ms                                                                                                                                            |
| 7.  | CENTER GRAPHIC EQ.      | EACH ch : 0dB                                       | 100Hz — 10kHz, -6dB — +6dB                                                                                                                            |
| 8.  | REAR CENTER GRAPHIC EQ. | EACH ch : 0dB                                       | 100Hz — 10kHz, -6dB — +6dB                                                                                                                            |
| 9.  | CINEMA EQ.              | ALL "OFF"                                           | L, C, R/FRONT EFCT//REAR L,R/REAR CT ON/OFF                                                                                                           |
| 9A  | L, C, R EQ.             | HIGH 12.7kHz, -3dB PEG 12.7kHz, -4dB                | HIGH, PGE : 1kHz — 12.7kHz                                                                                                                            |
| 9B  | FRONT EFCT EQ.          | HIGH 12.7kHz, 0dB PEG 8kHz, -3dB                    | GAIN : -9dB — +6dB                                                                                                                                    |
| 9C  | REAR L/R EQ.            | HIGH 12.7kHz, 0dB PEG 8kHz, -3dB                    |                                                                                                                                                       |
| 9D  | REAR CENTER EQ.         | HIGH 12.7kHz, 0dB PEG 8kHz, -3dB                    |                                                                                                                                                       |
| 10. | HP TONE CTRL            | BASS : 0dB<br>TREBLE : 0dB                          | -6dB — +3dB<br>-6dB — +3dB                                                                                                                            |
| 11. | PARAMETER INITIALIZE    | OFF                                                 | PROGRAM 1 — 12                                                                                                                                        |
| 12. | 6.1/ES AUTO             | ON                                                  | ON/OFF                                                                                                                                                |
| 13. | MEMORY GUARD            | OFF                                                 | ON/OFF                                                                                                                                                |
| 14. | COMPONENT VIDEO INPUT   | [A] : DVD<br>[B] : D-TV<br>[C] : CBL/SAT            | DVD, LD, D-TV, CBL/SAT, VCR1, VCR2, VCR3, V-AUX<br>DVD, LD, D-TV, CBL/SAT, VCR1, VCR2, VCR3, V-AUX<br>DVD, LD, D-TV, CBL/SAT, VCR1, VCR2, VCR3, V-AUX |
| 15. | INPUT MODE              | D-TV : AUTO<br>CBL/SAT : AUTO<br>VCR1 : AUTO        | AUTO/LAST<br>AUTO/LAST<br>AUTO/LAST                                                                                                                   |
| 16. | INPUT RENAME            | LD(Currently selected input)                        |                                                                                                                                                       |
| 17. | DIMMER                  | 0                                                   | -4 — 0                                                                                                                                                |
| 18. | ZONE2 SET               | ZONE2 OUT : FIX                                     | FIX/VAR                                                                                                                                               |

## ● SUPERIMPOSING

| Input LD, etc. |        | Output             | Superimposing |
|----------------|--------|--------------------|---------------|
| Terminal       | Signal | Monitor connection |               |
| S              | O      | O                  | O (On screen) |
| V              | O      | —                  | X             |
| S              | O      | X                  | X             |
| V              | O      | —                  | O (On screen) |
| S              | O      | O                  | O (On screen) |
| V              | X      | —                  | X             |
| S              | O      | X                  | X             |
| V              | X      | —                  | O (Blue back) |
| S              | X      | —                  | X             |
| V              | O      | —                  | X (On screen) |
| S              | X      | —                  | O (Blue back) |
| V              | X      | —                  | O (Blue back) |

S : S video signal  
 V : Composite video signal  
 O : YES  
 X : NO  
 — : NO CARE

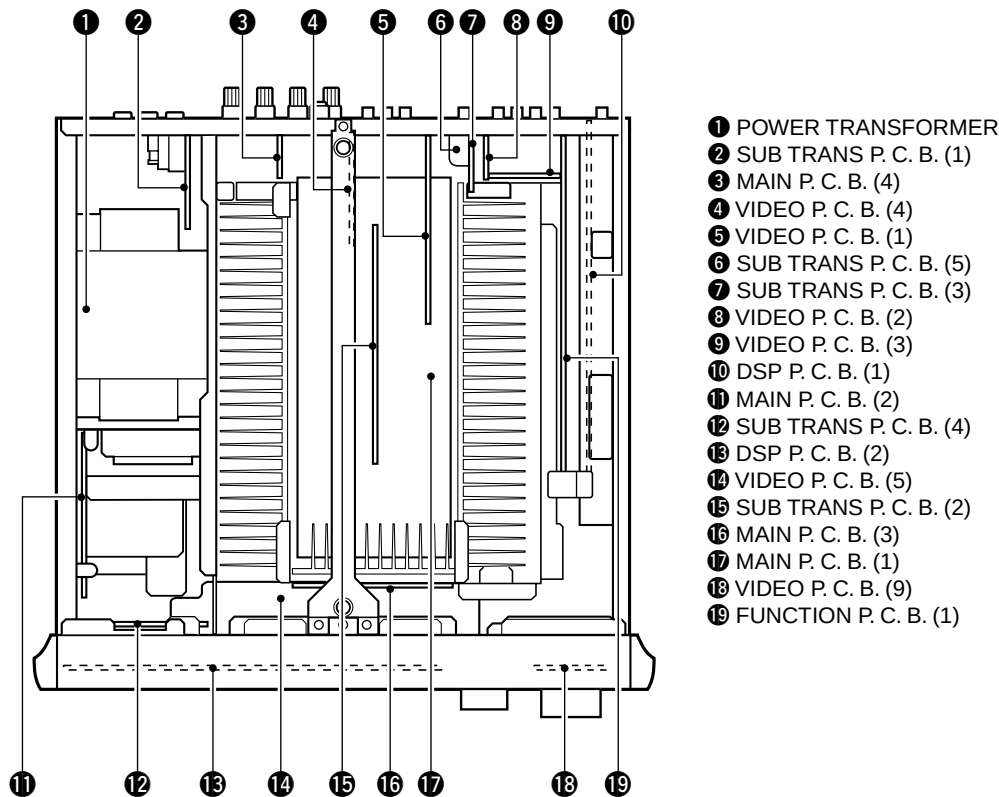
Caution: Superimposing function is not usable for component signals.

## ●PARAMETER TABLE

| [SP MODE]        |                   |                 |              |                     |                        |                             |                      |                         |                           |                        |                          |                   |                 |             |               |                 |                |                 |
|------------------|-------------------|-----------------|--------------|---------------------|------------------------|-----------------------------|----------------------|-------------------------|---------------------------|------------------------|--------------------------|-------------------|-----------------|-------------|---------------|-----------------|----------------|-----------------|
| Sub-program Name | [P]INIT.DLY<br>ms | [P]ROOM<br>SIZE | [P]ALIVENESS | S.DELAY<br>(2ch) ms | S.DELAY<br>(DD/dts) ms | S.INIT.DLY<br>(DD+ExH+E) ms | S.ROOM SIZE<br>(2ch) | S.ROOM SIZE<br>(DD/dts) | S.ROOM SIZE<br>(DD+ExH+E) | S.LIVENESS<br>(DD/dts) | S.LIVENESS<br>(DD+ExH+E) | RC.INIT.DLY<br>ms | RC.ROOM<br>SIZE | RC.LIVENESS | REV.TIME<br>s | REV.DELAY<br>ms | REV.LEVEL<br>% | EFCT TRIM<br>db |
| Europe Hall A    | 30                | 1.0             | 5            |                     | 10                     |                             |                      |                         |                           |                        |                          |                   |                 |             |               |                 |                | 0               |
| Europe Hall B    | 30                | 1.0             | 5            |                     | 5                      |                             |                      |                         |                           |                        |                          |                   |                 |             |               |                 |                | 0               |
| Europe Hall C    | 30                | 1.0             | 5            |                     | 5                      |                             |                      |                         |                           |                        |                          |                   |                 |             |               |                 |                | 0               |
| U.S.A. Hall D    | 35                | 1.0             | 5            |                     | 5                      |                             |                      |                         |                           |                        |                          |                   |                 |             |               |                 |                | 0               |
| Europe Hall E    | 30                | 1.0             | 5            |                     | 5                      |                             |                      |                         |                           |                        |                          |                   |                 |             |               |                 |                | 0               |
| Live Concert     | 45                | 1.0             | 5            |                     | 5                      |                             |                      |                         |                           |                        |                          |                   |                 |             |               |                 |                | 0               |
| Tokyo            | 40                |                 | 3            |                     | 15                     |                             |                      |                         |                           |                        |                          |                   |                 |             |               |                 |                | 0               |
| Freiburg         | 95                |                 | 3            |                     | 15                     |                             |                      |                         |                           |                        |                          |                   |                 |             |               |                 |                | 0               |
| Royanmont        | 69                |                 | 3            |                     | 15                     |                             |                      |                         |                           |                        |                          |                   |                 |             |               |                 |                | 0               |
| Village Gate     | 21                | 1.0             | 3            |                     | 5                      |                             |                      |                         |                           |                        |                          |                   |                 |             |               |                 |                | 0               |
| Village Vanguard | 26                | 1.0             | 5            |                     | 5                      |                             |                      |                         |                           |                        |                          |                   |                 |             |               |                 |                | 0               |
| The Bottom Line  | 30                | 1.0             | 5            |                     | 5                      |                             |                      |                         |                           |                        |                          |                   |                 |             |               |                 |                | 0               |
| Roxy Theatre     | 15                | 1.0             | 5            |                     | 7                      |                             |                      |                         |                           |                        |                          |                   |                 |             |               |                 |                | 0               |
| Warehouse Loft   | 15                | 1.0             | 5            |                     | 8                      |                             |                      |                         |                           |                        |                          |                   |                 |             |               |                 |                | 0               |
| Arena            | 15                | 1.0             | 7            |                     | 8                      |                             |                      |                         |                           |                        |                          |                   |                 |             |               |                 |                | 0               |
| Disco            | 26                |                 | 5            |                     | 5                      |                             |                      |                         |                           |                        |                          |                   |                 |             |               |                 |                | 0               |
| Party            | 15                |                 | 5            |                     | 12                     |                             |                      |                         |                           |                        |                          |                   |                 |             |               |                 |                | 0               |
| Genial/Amusement | 45                |                 | 5            |                     | 12                     |                             |                      |                         |                           |                        |                          |                   |                 |             |               |                 |                | 0               |
| Pop/Rock         | 21                | 1.0             |              | 25                  | 5                      | 31                          | 1.0                  | 1.0                     | 1.0                       |                        |                          | 15                | 1.0             |             | 2.2           | 120             | 1              | 0               |
| DJ               | 23                | 1.0             |              | 30                  | 5                      | 31                          | 1.0                  | 1.0                     | 1.0                       |                        |                          | 15                | 1.0             |             |               |                 |                | 0               |
| Classical/Opera  | 28                | 1.0             |              | 30                  | 5                      | 31                          | 1.0                  | 1.0                     | 1.0                       |                        |                          | 15                | 1.0             |             |               |                 |                | 0               |
| Pavilion         | 23                | 1.0             |              | 30                  | 5                      | 20                          | 1.0                  | 1.0                     | 1.0                       |                        |                          | 15                | 1.0             |             | 2.5           | 142             | 4              | 0               |
| Mono Movie       | 49                | 1.0             | 2            |                     | 8                      |                             |                      |                         |                           |                        |                          |                   |                 |             |               | 160             | 2              | 0               |
| Variety/Sports   | 10                | 1.0             |              | 30                  | 8                      | 12                          | 1.0                  | 1.0                     | 1.0                       |                        |                          | 15                | 1.0             |             | 1.6           | 100             | 4              | 0               |
| Spectacle        | 13                | 1.0             |              | 23                  | 15                     | 32                          | 1.0                  | 1.0                     | 1.0                       |                        |                          | 15                | 1.0             |             |               |                 |                | 0               |
| Sci-Fi           | 16                | 1.0             |              | 20                  | 15                     | 2                           | 1.0                  | 1.0                     | 1.0                       |                        |                          | 15                | 1.0             |             |               |                 |                | 0               |
| Adventure        | 15                | 1.0             |              | 20                  | 15                     | 12                          | 1.0                  | 1.0                     | 1.0                       |                        |                          | 15                | 1.0             |             | 1.5           | 10              |                | 0               |
| General          | 15                | 1.0             |              | 20                  | 15                     | 23                          | 1.0                  | 1.0                     | 1.0                       |                        |                          | 15                | 1.0             |             |               |                 |                | 0               |
| Normal           |                   |                 |              | 20                  | 5                      |                             |                      |                         |                           |                        |                          |                   |                 |             |               |                 |                | 0               |
| Enhanced         |                   |                 |              | 20                  | 5                      | 18                          | 1.0                  | 1.0                     | 1.0                       | 4                      | 4                        |                   |                 |             |               |                 |                | 0               |
|                  |                   |                 |              |                     |                        |                             |                      |                         |                           |                        |                          | 15                | 1.0             | 5           |               |                 |                | 0               |

| [HP MODE]        |                  |              |             |                  |                     |                            |                        |                   |                      |                          |                     |                         |                  |              |             |            |              |             |              |
|------------------|------------------|--------------|-------------|------------------|---------------------|----------------------------|------------------------|-------------------|----------------------|--------------------------|---------------------|-------------------------|------------------|--------------|-------------|------------|--------------|-------------|--------------|
| Sub-program Name | (P)INIT.DLY (ms) | (P)ROOM SIZE | (P)LIVENESS | S.DELAY (2ch) ms | S.DELAY (DD/dts) ms | S.INIT.DLY (DD+Exts+ES) ms | S.INIT.DLY (DD/dts) ms | S.ROOM SIZE (2ch) | S.ROOM SIZE (DD/dts) | S.ROOM SIZE (DD+Exts+ES) | S.LIVENESS (DD/dts) | S.LIVENESS (DD+Exts+ES) | RC.INIT.DLY (ms) | RC.ROOM SIZE | RC.LIVENESS | REVTIME \$ | REV/DELAY ms | REV LEVEL % | EFCT TRIM db |
| Europe Hall A    | 30               | 1.0          | 5           |                  | 10                  |                            |                        |                   |                      |                          |                     |                         |                  |              |             |            |              |             |              |
| Europe Hall B    | 32               | 1.0          | 5           |                  | 5                   |                            |                        |                   |                      |                          |                     |                         |                  |              |             |            |              |             |              |
| Europe Hall C    | 30               | 1.0          | 5           |                  | 5                   |                            |                        |                   |                      |                          |                     |                         |                  |              |             |            |              |             |              |
| U.S.A. Hall D    | 35               | 1.0          | 5           |                  | 5                   |                            |                        |                   |                      |                          |                     |                         |                  |              |             |            |              |             |              |
| Europe Hall E    | 30               | 1.0          | 5           |                  | 5                   |                            |                        |                   |                      |                          |                     |                         |                  |              |             |            |              |             |              |
| Live Concert     | 45               | 1.0          | 5           |                  | 5                   |                            |                        |                   |                      |                          |                     |                         |                  |              |             |            |              |             |              |
| Tokyo            | 40               |              | 3           |                  | 15                  |                            |                        |                   |                      |                          |                     |                         |                  |              |             | 2.5        | 122          | 56          |              |
| Freiburg         | 95               |              | 3           |                  | 15                  |                            |                        |                   |                      |                          |                     |                         |                  |              |             | 4.0        | 117          | 52          |              |
| Royanmont        | 69               |              | 3           |                  | 15                  |                            |                        |                   |                      |                          |                     |                         |                  |              |             | 4.0        | 120          |             |              |
| Village Gate     | 21               | 1.0          | 3           |                  | 5                   |                            |                        |                   |                      |                          |                     |                         |                  |              |             |            |              |             |              |
| Village Vanguard | 26               | 1.0          | 5           |                  | 5                   |                            |                        |                   |                      |                          |                     |                         |                  |              |             |            |              |             |              |
| The Bottom Line  | 30               | 1.0          | 5           |                  | 5                   |                            |                        |                   |                      |                          |                     |                         |                  |              |             |            |              |             |              |
| Roxy Theatre     | 15               | 1.0          | 5           |                  | 5                   |                            |                        |                   |                      |                          |                     |                         |                  |              |             | 1.6        | 100          | 7           |              |
| Warehouse Loft   | 15               | 1.0          | 5           |                  | 8                   |                            |                        |                   |                      |                          |                     |                         |                  |              |             | 2.0        | 160          | 6           |              |
| Arena            | 28               | 1.0          | 7           |                  | 8                   |                            |                        |                   |                      |                          |                     |                         |                  |              |             | 2.0        | 120          | 8           |              |
| Disco            | 26               |              | 5           |                  | 12                  |                            |                        |                   |                      |                          |                     |                         |                  |              |             | 2.7        | 120          | 4           |              |
| Party            | 15               |              | 5           |                  | 15                  |                            |                        |                   |                      |                          |                     |                         |                  |              |             | 2.5        | 140          | 4           |              |
| Genie/Amusement  | 45               |              | 5           |                  | 12                  |                            |                        |                   |                      |                          |                     |                         |                  |              |             | 2.5        | 110          | 10          |              |
| Pop/Rock         | 21               | 1.0          |             | 25               | 5                   | 31                         | 31                     | 1.0               | 1.0                  | 1.0                      |                     |                         | 15               | 1.0          |             | 2.2        | 120          | 2           |              |
| DJ               | 23               | 1.0          |             | 30               | 5                   | 30                         | 30                     | 1.0               | 1.0                  | 1.0                      |                     |                         | 15               | 1.0          |             |            |              |             |              |
| Classical/Opera  | 28               | 1.0          |             | 30               | 5                   | 18                         | 18                     | 1.0               | 1.0                  | 1.0                      |                     |                         | 15               | 1.0          |             |            |              |             |              |
| Pavilion         | 23               | 1.0          |             | 30               | 5                   | 20                         | 20                     | 1.0               | 1.0                  | 1.0                      |                     |                         | 15               | 1.0          |             | 2.5        | 142          | 4           |              |
| Mono Movie       | 45               | 1.0          | 2           |                  | 8                   |                            |                        |                   |                      |                          |                     |                         |                  |              |             |            |              |             |              |
| Variety/Sports   | 10               | 1.0          |             | 30               | 8                   | 12                         | 12                     | 1.0               | 1.0                  | 1.0                      |                     |                         | 15               | 1.0          |             | 1.6        | 100          | 4           |              |
| Spectacle        | 13               | 1.0          |             | 23               | 8                   | 32                         | 32                     | 1.0               | 1.0                  | 1.0                      |                     |                         | 15               | 1.0          |             |            |              |             |              |
| Sci-Fi           | 21               | 1.0          |             | 20               | 8                   | 16                         | 16                     | 1.0               | 1.0                  | 1.0                      |                     |                         | 15               | 1.0          |             |            |              |             |              |
| Adventure        | 16               | 1.0          |             | 20               | 8                   | 32                         | 32                     | 1.0               | 1.0                  | 1.0                      |                     |                         | 15               | 1.0          |             | 1.5        | 10           |             |              |
| General          | 15               | 1.0          |             | 20               | 15                  | 23                         | 23                     | 1.0               | 1.0                  | 1.0                      |                     |                         | 15               | 1.0          |             |            |              |             |              |
| Normal           |                  |              |             | 20               | 5                   |                            |                        |                   |                      |                          |                     |                         |                  |              |             |            |              |             |              |
| Enhanced         |                  |              |             | 20               | 5                   | 19                         | 19                     | 1.0               | 1.0                  | 1.0                      | 4                   | 3                       | 15               | 1.0          | 5           |            |              |             |              |

## INTERNAL VIEW



## DISASSEMBLY PROCEDURES (Remove parts in the order as numbered.)

### 1. Removal of Top Cover

- Remove 8 screws ( ① ) and then slide the Side Panel to remove it in Fig. 1.
- Remove 2 screws ( ② ) and 2 screws ( ③ ) and then remove the Top Cover in Fig. 1.

### 2. Removal of Bottom Cover

- Remove 12 screws ( ④ ) and then remove the Bottom Cover in Fig. 1.

### 3. Removal of Front Panel

- Remove 2 knobs in Fig. 1.
- Remove 4 screws ( ⑤ ) and then slide the Panel/Side forward to remove it in Fig. 1.
- Remove 4 screws ( ⑥ ) and then remove the Front Panel in Fig. 1.

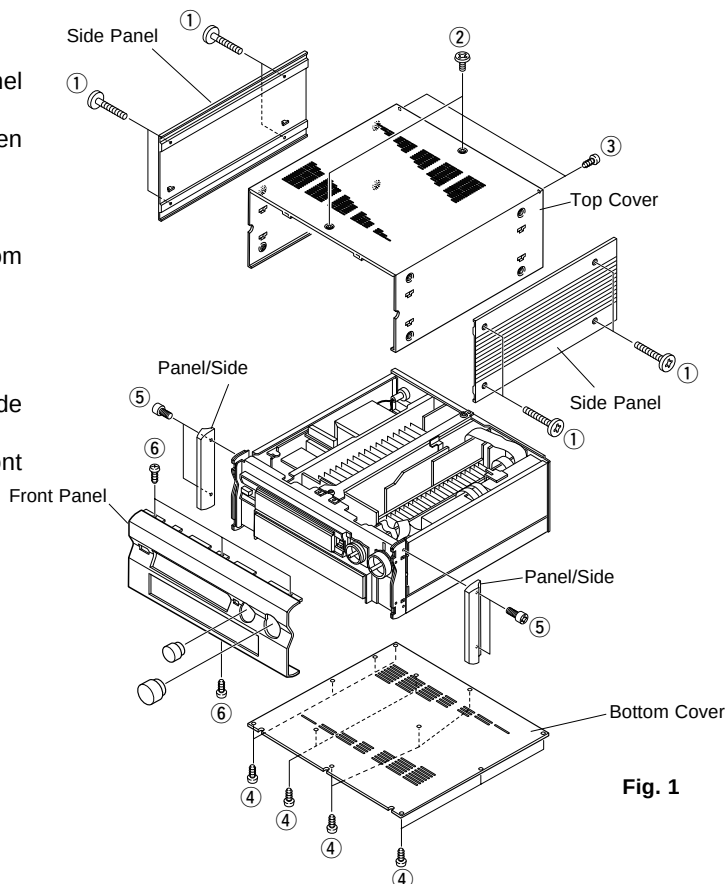


Fig. 1

#### 4. Removal of DSP P.C.B. (1)

- a. Remove 2 screws ( ⑦ ) and remove the right Plate Side in Fig. 2.
- b. Remove 15 screws ( ⑧ ) and remove the right Upper Frame in Fig. 2.

#### Note :

1. When the rear panel has been removed, the ground wire of the input/output pin jack becomes loose. Connect it to the chassis by using a lead wire.

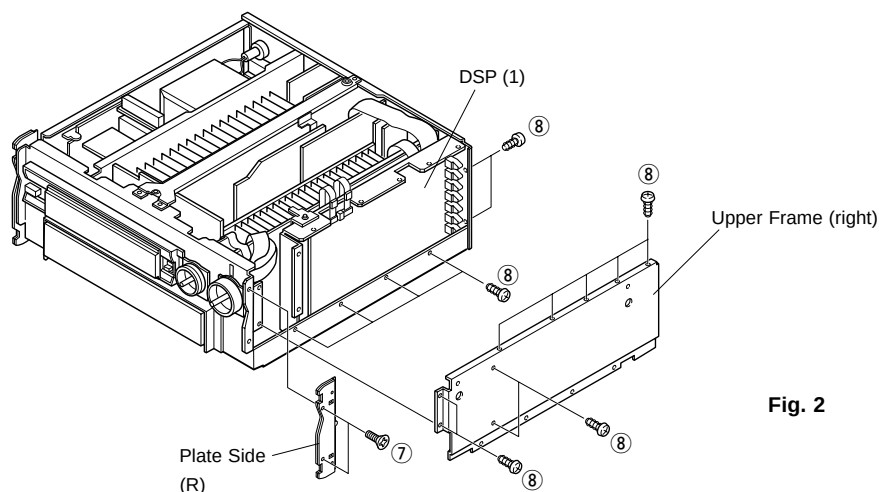


Fig. 2

#### 5. Removal of Main P.C.B. (2)

- a. Remove 2 screws ( ⑨ ) and remove the left Plate Side in Fig. 3.
- a. Remove 6 screws ( ⑩ ) and then remove the left Side Frame in Fig. 3.

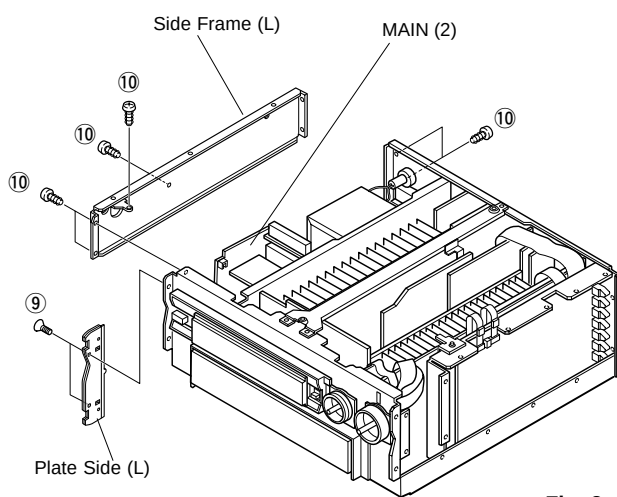


Fig. 3

#### 6. Removal of Main P.C.B. (3)

- a. Remove 4 screws ( ⑪ ) and remove the center Upper Frame in Fig. 4.
- b. Remove 6 screws ( ⑫ ) and then take up the Sub Chassis in Fig. 4.

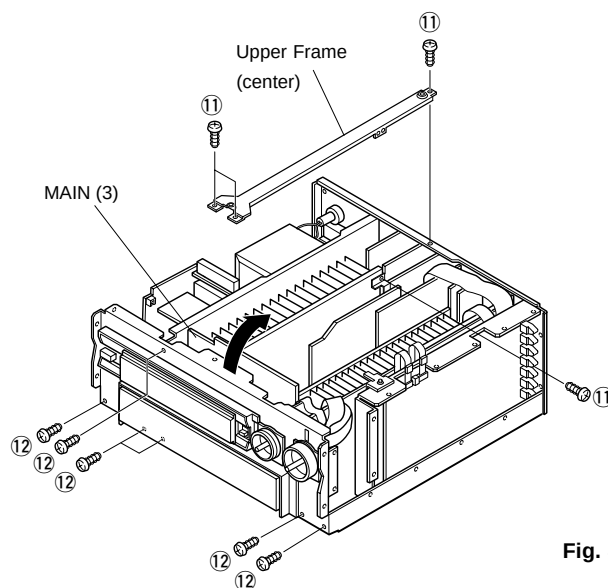


Fig. 4

## ■ SELF DIAGNOSIS FUNCTION

This product has a built-in self diagnosis function (DIAG) to facilitate inspection, measurement and determination of a faulty item, if any. There are 14 DIAG menu items each of which has sub-menu items.

Listed in the table below are menu items and sub-menu items.

| No. | DIAG menu          | Sub-menu                                     | Remote control code (key) |
|-----|--------------------|----------------------------------------------|---------------------------|
| 1   | DSP THROUGH        | 1. ANALOG BYPASS                             | 7A---90 (PRG 9)           |
|     |                    | 2. DSP 0dB                                   | 7A---91 (PRG 10)          |
|     |                    | 3. DSP FULL BIT                              | 7A---92 (PRG 11)          |
| 2   | DECODER THROUGH    | 1. YSS918/908                                | 7A---93 (PRG 12)          |
|     |                    | 2. DSP FULL BIT                              | 7A---10 (TUNER PRESET +)  |
| 3   | RAM THROUGH        | 1. 2ch/MULTI                                 | 7A---11 (TUNER PRESET -)  |
|     |                    | 2. DSP FULL BIT                              | 7A---12 (TUNER A/B/C/D/E) |
| 4   | PRO LOGIC          | 1. YSS918                                    | 7A---9C (SET DOWN)        |
|     |                    | 2. YSS908                                    | 7A---9D (SET UP)          |
|     |                    | 3. EFFECT OFF                                | 7A---9E (SET INC)         |
| 5   | BYPASS             | 1. DECODER                                   | 7A---9F (SET DEC)         |
|     |                    | 2. DSP                                       | -----                     |
| 6   | SPEAKERS SET       | 1. MAIN:SMALL 0dB                            | 7A---88 (PRG 1)           |
|     |                    | 2. MAIN:LARGE -10                            | 7A---89 (PRG 2)           |
|     |                    | 3. CENTER:NONE                               | 7A---8A (PRG 3)           |
|     |                    | 4. LFE/BASS:MAIN                             | 7A---8B (PRG 4)           |
|     |                    | 5. FRONT MIX:5ch                             | 7A---8C (PRG 5)           |
|     |                    | 6. CENTER:SMALL                              | 7A---8D (PRG 6)           |
|     |                    | 7. REAR:SMALL                                | 7A---8E (PRG 7)           |
| 7   | DISPLAY CHECK      | 1. EFFECT OFF (initial screen)               | 7A---8E (PRG 8)           |
|     |                    | 2. DISPLAY OFF                               | -----                     |
|     |                    | 3. DISPLAY ALL                               | -----                     |
|     |                    | 4. DISPLAY DIMMER (50%)                      | -----                     |
|     |                    | 5. CHECKED PATTERN                           | -----                     |
| 8   | MANUAL TEST        | 1. ALL                                       | 7A---00 (TAPE PLAY)       |
|     |                    | 2. MAIN L                                    | 7A---01 (TAPE RW)         |
|     |                    | 3. CENTER                                    | 7A---02 (TAPE FW)         |
|     |                    | 4. MAIN R                                    | 7A---03 (TAPE STOP)       |
|     |                    | 5. REAR R                                    | 7A---04 (TAPE PAUSE)      |
|     |                    | 6. REAR C                                    | 7A---05 (TAPE MUTE)       |
|     |                    | 7. REAR L                                    | 7A---06 (TAPE A/B)        |
|     |                    | 8. FRONT L                                   | 7A---07 (TAPE DIR A)      |
|     |                    | 9. FRONT R                                   | 7A---08 (CD PLAY)         |
|     |                    | 10. LFE                                      | 7A---09 (CD STOP)         |
| 9   | RS-232C            | 1. TX DATA                                   | -----                     |
|     |                    | 2. HARD FLOW                                 | -----                     |
| 10  | PRESET             | 1. INHIBIT (memory initialization inhibited) | -----                     |
|     |                    | 2. RESERVED (memory initialized)             | -----                     |
| 11  | FAN/AD             | 1. FAN HISTORY                               | -----                     |
|     |                    | 2. KY0, KY1(PANEL KEY)                       | -----                     |
|     |                    | 3. MTR, THM, PRD, PRV                        | 7A---56 (EFFECT)          |
| 12  | IF STATUS (0 – 18) | 1. SCPU                                      | -----                     |
|     |                    | 2. VER                                       | -----                     |
|     |                    | 3. SUM                                       | -----                     |
|     |                    | 4. CHS1                                      | -----                     |
|     |                    | 5. CHS2                                      | -----                     |
|     |                    | 6. CHS3                                      | -----                     |
|     |                    | 7. CHS4                                      | -----                     |
|     |                    | 8. CHS5                                      | -----                     |
|     |                    | 9. BSI1                                      | -----                     |
|     |                    | 10. BSI2                                     | -----                     |



| No. | DIAG menu     | Sub-menu                                                | Remote control code (key) |
|-----|---------------|---------------------------------------------------------|---------------------------|
| 12  | IF STATUS     | 11. BSI3                                                | -----                     |
|     |               | 12. BSI4                                                | -----                     |
|     |               | 13. BSID                                                | -----                     |
|     |               | 14. DIR5                                                | -----                     |
|     |               | 15. Y918                                                | -----                     |
|     |               | 16. Y908                                                | -----                     |
|     |               | 17. DSP6                                                | -----                     |
|     |               | 18. RAM1                                                | -----                     |
|     |               | 19. RAM2                                                | -----                     |
| 13  | DSP RAM CHECK | #1, #2 (DSP RAM check)                                  | -----                     |
| 14  | SUM/VER/PORT  | 1. M, S (main/sub checksum)                             | -----                     |
|     |               | 2. M, S (main/sub version)                              | -----                     |
|     |               | 3. PORT (setting confirmation of function setting port) | -----                     |
|     |               | 4. REC-OUT (confirmation of REC OUT port)               | -----                     |

## ● Starting DIAG

For DSP-AX1:

Press the "POWER" (STANDBY/ON) key of the main unit while pressing the "SET MENU+" key and the "NEXT" key located in the sealing panel of the main unit, and DIAG will be activated.

For RX-V1:

Press the "POWER" (STANDBY/ON) key of the main unit while pressing the "PROGRAM ▸" key and the "EFFECT" key located in the sealing panel of the main unit, and DIAG will be activated.

## ● Starting DIAG in the protection cancel mode

If the power supply, amplifier protection function is activated and hinders the trouble diagnosis, cancel the protection function as described below, and it will be possible to enter the DIAG mode. (The protection function other than the excess current detect function will be cancelled.)

For DSP-AX1:

Press the "POWER" (STANDBY/ON) key while pressing the "SET MENU+" key and the "NEXT" key. At this time, keep pressing the "SET MENU+" key and the "NEXT" for 3 seconds or longer.

For RX-V1:

Press the "POWER" (STANDBY/ON) key while pressing the "PROGRAM ▸" key and the "EFFECT" key. At this time, keep pressing the "PROGRAM ▸" key and the "EFFECT" key for 3 seconds or longer.

In this mode, " " in the FL display of the main unit flashes.

### CAUTION!

Using this product with the protection function cancelled may cause damage to itself. Use special care for this point when using this mode.

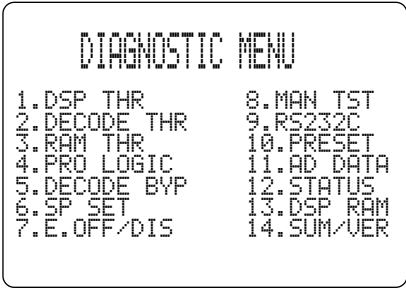
## ● Canceling DIAG

Turn off the power by pressing the "POWER" (STANDBY/ON) key of the main unit or the "STANDBY" key of the remote control unit.

CAUTION: When canceling this function, check that DIAG menu No.10 PRESET (memory initialization inhibited/reserved) has been set. (To keep the user memory, be sure to select "INHIBIT" (initialization inhibited) from the No.10 PRESET menu before canceling the DIAG function.)

● Display at the start of DIAG

The diagnostic menu appears on the monitor screen. (It remains on display until it is canceled.)



On the FL display of the main unit, an opening message (including the version and the history of protection function) appears for a few seconds followed by the diagnostic menu display of 1 DSP THROUGH: ANALOG BYPS.

Opening message

When there is no history of protection function (\*1)

Version of the main/sub microprocessor (1 alphabet)



Checksum of the main microprocessor

Checksum of the sub microprocessor

Checksum (4 figures consisting of alphabets and numbers)  
The checksum is obtained by adding 4M bits per 1 octo of the entire program code and expressing the result as a 4-figure hexadecimal data. (0xff is added for the area where no code has been entered and for the area other than ROM code.)

DIAG menu display



(\*1) If the history of the protection function has been recorded, the type of the protection function and the voltage value recorded last are displayed.

**In the case where the protection function works after DIAG has been started and the power is turned off ;**  
When the protection function (\*2) works, the history of the protection function appears on display and the power turns off. Repair the faulty parts according to the displayed history.

(\*2) When an excess current or any other faulty condition is found with the power source, DC, etc., the protection function forces the power to turn off.

```
I  PROTECT  X/X
M:XXXX / S:XXXX
```

#### I PROTECTION display

(When the power is turned on without an abnormality corrected, the protection function works the moment the power relay is turned on to shut off the power supply.)

**Cause:** There is an abnormal current flow to the power amplifier.

**Supplementary information:** If I PROTECTION function has worked after SP relay ON, a warning message "CHECK SP WIRES" appears the next time the power is turned on. This indicates that some trouble exists after the SP terminal, such as a short-circuit of the speaker cable.

```
PS PRT :000 X/X
M:XXXX / S:XXXX
```

#### PS PRT display

(When the power is turned on without an abnormality corrected, the protection function works about 1 second later to shut off the power supply. Display may not be provided, if there is an abnormality with the power supply for the display.)

**Cause:** There is an abnormality in the power supply section (voltage).

**Supplementary information:** As the power from following sources is detected, it is possible to determine where an abnormality exists.

Transformer secondary winding

VI X 2(CB704), YE x 2(CB482)

U, C only : GY x 2(CB481)

Stabilizing power source

±12, ±5V, +5D1, +5D2, +3.3, VP

```
DC PRT :000 X/X
M:XXXX / S:XXXX
```

#### DC PRT display

(When the power is turned on without an abnormality corrected, the protection function works about 3 seconds later to shut off the power supply.)

**Cause:** A DC output from the power amplifier is detected in the bad channel.

```
TMP PRT:000 X/X
M:XXXX / S:XXXX
```

#### TMP PRT display

(When the power is turned on without an abnormality corrected, the protection function works about 3 seconds later to shut off the power supply.)

**Cause:** The temperature of the heat sinks in the power amplifier is detected. When the temperature rises and an abnormality is detected, the power turns off.

Besides the above possible causes, the cause may exist in the disconnected connector or around CPU.  
PS PRT, DC PRT and TMP PRT displays include the abnormal A/D value in % (voltage value obtained by considering 5V as 100%). Concerning this value, refer to DIAG menu No.11 FAN/AD described on page 28.

#### ● History of protection function

When the protection function has worked, its history is stored in memory with a backup. Even when no abnormality is noted while the unit is being serviced, an abnormality which has occurred previously can be defined as long as the backup data has been stored.

The protection history is cleared when DIAG is canceled by selecting "RESERVED" (memory initialization) from the setting items of the DIAG menu No.10 PRESET or when the backup data is erased.

## ● Operation procedure of DIAG menu and SUB-MENU

There are No.1 to No.14 MENU items and some SUB-MENU items as well.

### DIAG menu selection

DSP-AX1 Main unit: PROGRAM ▷(forward)/◁(reverse) key

RX-V1 Main unit: PRESET TUNING + (forward)/-(reverse) key

### SUB-MENU selection

DSP-AX1 Main unit: SET MENU + (forward)/-(reverse) key

RX-V1 Main unit: PROGRAM ▷(forward)/◁(reverse) key

Remote control unit: Only the remote control key in the Menu List can directly call a sub menu.

## ● Functions during DIAG being set

In addition to the DIAG menu, functions as listed below are available.

- Input selection (including ZONE2), 6CH input
- REC OUT switching
- ZONE2 input, volume
- Front/Center/Rear/Sub-woofer level adjustment
- Muting
- Speaker A/B
- Power on/off operation
- Master volume

It is possible to set to the following volume values using the remote control unit only during DIAG being set.

| Volume value (dB) | Remove control code (key) |
|-------------------|---------------------------|
| 0                 | 7A---E0 (PAGE A)          |
| -21               | 7A---E1 (PAGE B)          |
| -35               | 7A---E2 (PAGE C)          |
| MUTE              | 7A---E3 (PAGE D)          |

- Functions related to the tuner and the set menu are not available.
- It is possible to confirm Menu No.12 IF STATUS while keeping the signal process (operation status) of each DIAG menu by using the INPUT MODE key of the main unit.

## ● Initial settings used to start DIAG function

Following initial settings are used when starting the DIAG function.

When the DIAG function is canceled, the settings before starting DIAG will be restored.

- Input, ZONE2 input: LD (6CH INPUT OFF)
- Master volume: -40dB
- ZONE2 volume: -6dB
- Front/Center/Rear/Sub-woofer level: 0dB
- Audio mute: OFF
- Speaker A/B: ON

## Details of DIAG menu

In each menu, "SPEAKERS" is always set to "LARGE", D-RANGE to "MAX", LFE LEVEL to 0dB (-10dB when DOLBY DIGITAL is used) and CENTER DELAY to 0ms unless otherwise specified.

### 1. DSP THROUGH

There are 3 sub menu items (ANALOG BYPS, DSP 0dB, FULL BIT).

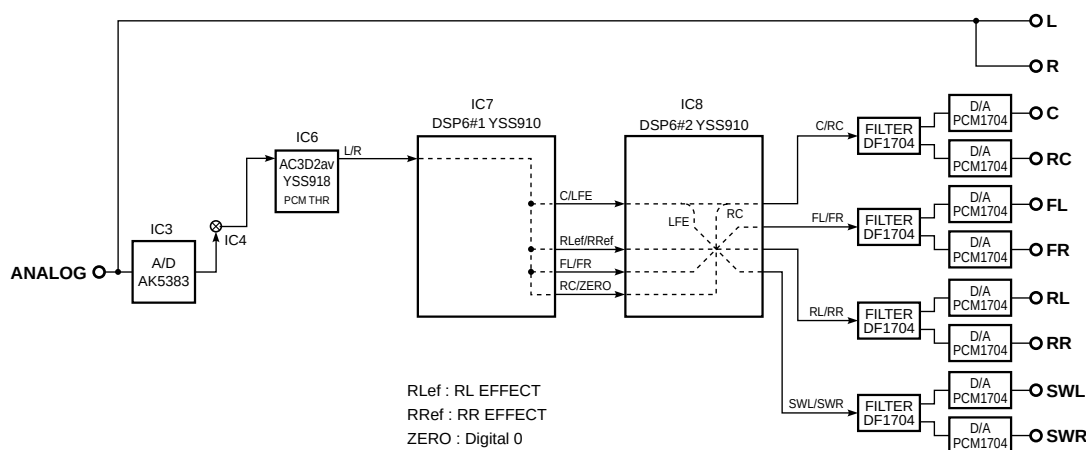
1. DSP THROUGH  
ANALOG BYPS

1. DSP THROUGH  
DSP 0dB

1. DSP THROUGH  
FULL BIT

#### ANALOG BYPS [Remote control code: 7A—90(PRG 9)]

- The input mode is fixed to use the analog (A/D) system.
- The L/R signal is output through the analog bypass without using the DSP section.
- C/RC, RL/RR, FL/FR, SWL/SWR signals are output using L/R through via DSP.



AC3D2av outputs signals using 2ch though. (L/F)

- DSP6#1 outputs the L/R input signals to C/LFE (SD611), RLef/RRref (SD613), FL/FR (SD614), RC (SD615, L only).
- DSP6#2 outputs the output signals from DSP6#1 to C/RC (SD621), RL/RR (SD623), FL/FR (SD622), SWL/SWR (SD624).

Note: (SDxxx) represents a terminal name of DSP6#1 and DSP6#2.

#### Reference

|                    |                    |
|--------------------|--------------------|
| CD ANALOG IN       | : - 20dBV, Both ch |
| VOLUME             | : MAX              |
| PRE OUT            |                    |
| MAIN L (1kHz)      | : - 3.7dBV         |
| MAIN R (1kHz)      | : - 3.7dBV         |
| CENTER (1kHz)      | : - 3.2dBV         |
| REAR CENTER (1kHz) | : - 3.4dBV         |
| FRONT L (1kHz)     | : - 3.5dBV         |
| FRONT R (1kHz)     | : - 3.4dBV         |
| REAR L (1kHz)      | : - 3.4dBV         |
| REAR R (1kHz)      | : - 3.3dBV         |
| SW L (50Hz)        | : - 3.3dBV         |
| SW R (50Hz)        | : - 3.3dBV         |
| SW MONO (50Hz)     | : + 2.7dBV         |

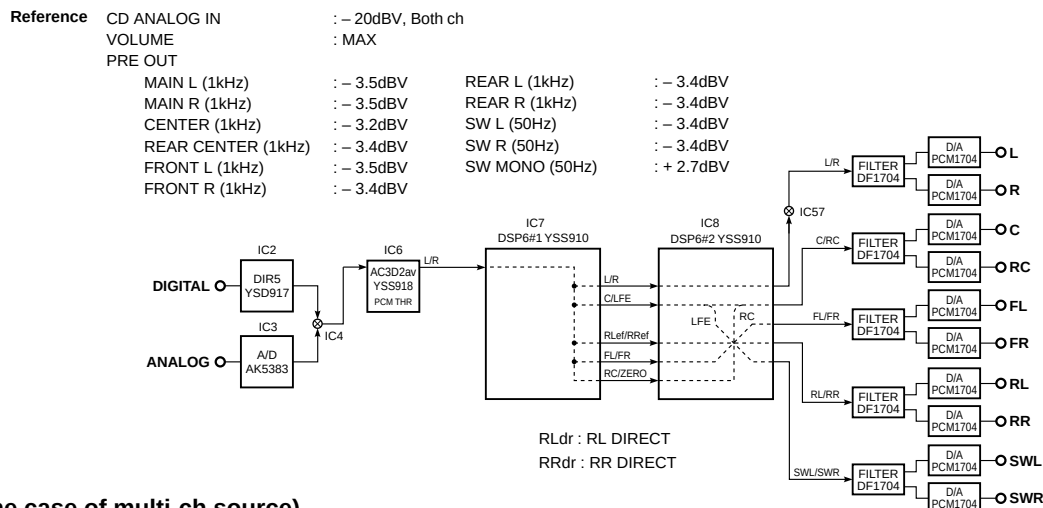
**DSP 0dB** [Remote control code: 7A—91 (PRG 10)]

The input signal is automatically identified and switched in the priority order of dts > DOLBY DIGITAL > PCM AUDIO > Analog (A/D) according to the signal detection.

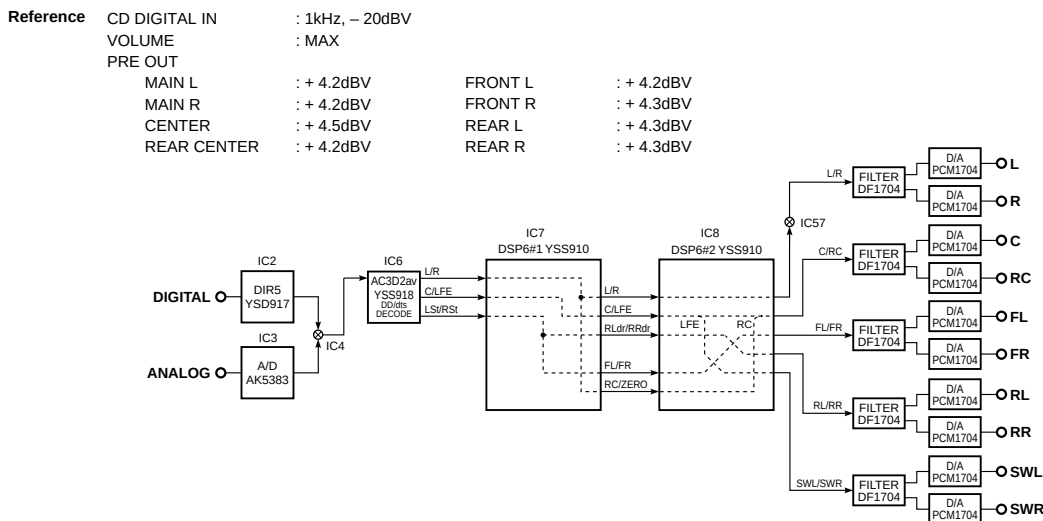
The L/R, C/LFE, FL/FR, RL/RR, RC signals are output through DSP.

**(In the case of 2-ch source)**

- AC3D2av outputs signals using 2ch though. (L/R)
- DSP6#1 outputs the L/R input signals to L/R (SD610), C/LFE (SD611), RLef/RRef (SD613), FL/FR (SD614), RC (SD615, L only).
- DSP6#2 outputs the output signals of DSP6#1 to L/R (SD620), C/RC (SD621), RL/RR (SD623), FL/FR (SD622), SWL/SWR (SD624).


**(In the case of multi-ch source)**

- AC3D2av outputs signals using DOLBY DIGITAL/dts decode operation.
- DSP6#1 outputs the L/R input signals to L/R (SD610), RC (SD615, L only), C/LFE to C/LFE (SD611), LSt/RSt to RLdr/RRdr (SD612), FL/FR (SD614) respectively.
- DSP6#2 outputs the output signals of DSP6#1 to L/R (SD620), C/RC (SD621), RL/RR (SD623), FL/FR (SD622), SWL/SWR (SD624).


**FULL BIT** [Remote control code: 7A—92 (PRG11)]

The head margin is unused and the digital data is output in full bit.

The same applies as "DSP 0dB" except that the digital data is output in full bit at D/A.

**Reference** CD ANALOG IN : -30dBV, Both ch  
VOLUME : MAX  
PRE OUT

|                              |                           |
|------------------------------|---------------------------|
| MAIN L (1kHz) : -7.5dBV      | REAR L (1kHz) : -1.4dBV   |
| MAIN R (1kHz) : -7.5dBV      | REAR R (1kHz) : -1.4dBV   |
| CENTER (1kHz) : -7.2dBV      | SW L (50Hz) : +7.5dBV     |
| REAR CENTER (1kHz) : -7.5dBV | SW R (50Hz) : +7.5dBV     |
| FRONT L (1kHz) : -7.5dBV     | SW MONO (50Hz) : +13.5dBV |
| FRONT R (1kHz) : -7.5dBV     |                           |

## 2. DECODER THR.

The input signal is automatically identified and switched in the priority order of dts > DOLBY DIGITAL > PCM AUDIO > Analog (A/D). There are two sub-menu items (YSS918/908, FULL BIT). This menu is used to check the signal passage of the decoder LSI (YSS918, YSS908).

2. DECODER THR.  
YSS918/908

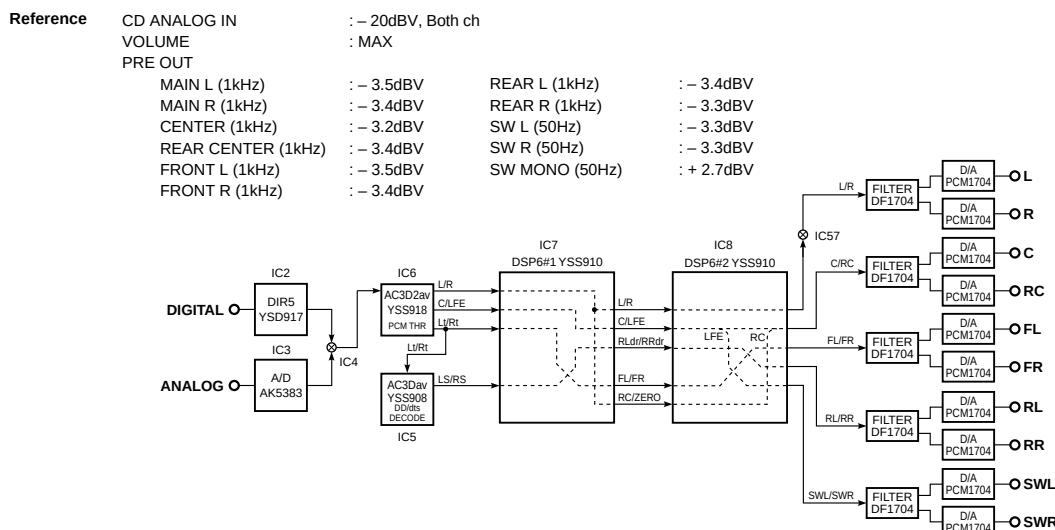
2. DECODER THR.  
FULL BIT

**YSS918/908** [Remote control code: 7A—93 (PRG12)]

(In the case of 2-ch source)

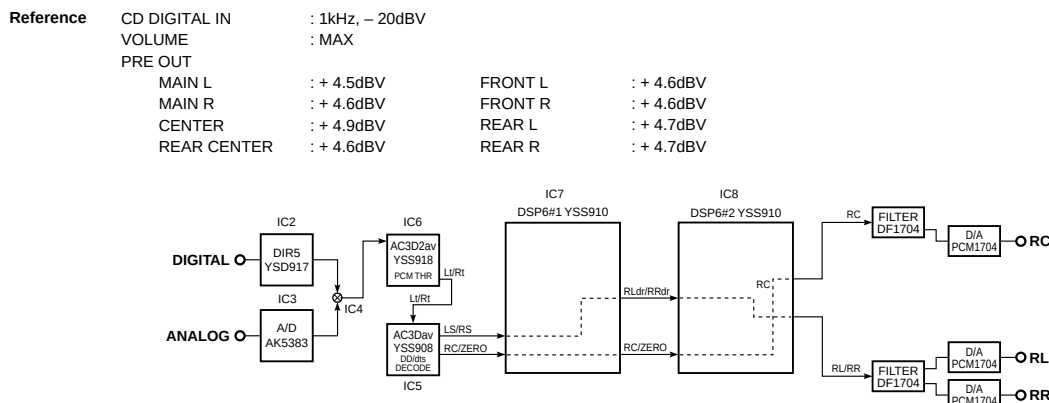
- AC3D2av outputs L/R input signals from L/R (SDA200, Lt/Rt (SDA21) and C/LFE (SDA22).
- AC3D2av outputs the Lt/Rt output signals of AC3D2av from LS/RS (SDA10).
- DSP6#1 outputs the L/R input signals to L/R (SD610) and RC (SD615, L only), C/LFE (SD611) input signals to C/LFE (SD611), Lt/Rt input signals to FL/FR (SD614) and LS/RS input signals to RLdr/RRdr (SD612) respectively.
- DSP6#2 outputs the output signals of DSP6#1 to L/R (SD620), C/RC (SD621), RL/RR (SD623), FL/FR (SD622) and SWL/SWR (SD624).

Note: (SDAxx) represents the terminal name of AC3Dav and AC3D2av.  
(SDxxx) represents the terminal name of DSP6#1 and DSP6#2.



(In the case of multi-ch source)

- AC3D2av outputs dts or DOLBY DIGITAL encoded input signals from Lt/Rt (SDA21) without decoding.
- AC3Dav processes Lt/Rt output signals of AC3D2av by dts or DOLBY DIGITAL decoding and outputs them to LS/RS (SDA10) and RC (SDA12, L only) through 3/0 down-mixing.
- DSP6#1 outputs the LS/RS input signals to RLdr/RRdr (SD612) and the RC (L only) input signals to RC (SD615, L only).
- DSP6#2 outputs the output signals of DSP6#1 to RC (SD621, R only) and RL/RR (SD623).



**FULL BIT** [Remote control code: 7A—10 (TUNER PRESET +)]

The head margin is unused and the digital data is output in full bit.

The same applies as YSS918/908 except that the digital data is output in full bit at D/A.

|                  |                    |                    |                |             |
|------------------|--------------------|--------------------|----------------|-------------|
| <b>Reference</b> | CD ANALOG IN       | : - 30dBV, Both ch |                |             |
|                  | VOLUME             | : MAX              |                |             |
|                  | PRE OUT            |                    |                |             |
|                  | MAIN L (1kHz)      | : - 7.5dBV         | REAR L (1kHz)  | : - 1.4dBV  |
|                  | MAIN R (1kHz)      | : - 7.5dBV         | REAR R (1kHz)  | : - 1.3dBV  |
|                  | CENTER (1kHz)      | : - 7.2dBV         | SW L (50Hz)    | : + 7.6dBV  |
|                  | REAR CENTER (1kHz) | : - 7.5dBV         | SW R (50Hz)    | : + 7.5dBV  |
|                  | FRONT L (1kHz)     | : - 7.5dBV         | SW MONO (50Hz) | : + 13.7dBV |
|                  | FRONT R (1kHz)     | : - 7.4dBV         |                |             |

**3. RAM THROUGH**

The input data is automatically identified and switched in the priority order of dts > DOLBY DIGITAL > PCM AUDIO > Analog (A/D) according to the signal detection.

The main L/R uses the analog through method when analog signals are input and the DSP through method when digital signals are input.

There are two sub-menu items (2ch/MULTI, FULL BIT).

3. RAM THROUGH  
2ch/MULTI

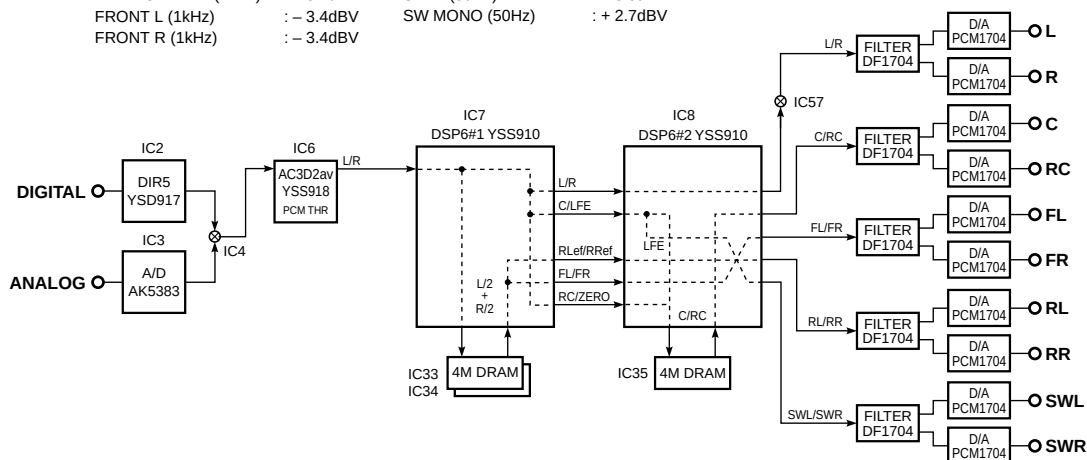
3. RAM THROUGH  
FULL BIT

**2ch/MULTI** [Remote control code: 7A—11 (TUNER PRESET -)]

(In the case of 2-ch source)

- AC3D2av outputs signals using 2ch though. (L/R)
- DSP6#1 outputs the L/R input signals to L/R (SD610), C/LFE (SD611) and RC (SD615, L only). Also, it outputs L/2 + R/2 to RLe/RRLe (SD613) and FL/FR (SD614) through the external RAM.
- DSP6#2 outputs the output signals of DSP6#1 to L/R (SD620), RL/RR (SD623), FL/FR (SD622), SWL/SWR (SD624). Also, it outputs C/RC to C/RC (SD621) through the external RAM.

|                  |                    |                    |                |            |
|------------------|--------------------|--------------------|----------------|------------|
| <b>Reference</b> | CD ANALOG IN       | : - 20dBV, Both ch |                |            |
|                  | VOLUME             | : MAX              |                |            |
|                  | PRE OUT            |                    |                |            |
|                  | MAIN L (1kHz)      | : - 3.5dBV         | REAR L (1kHz)  | : - 3.4dBV |
|                  | MAIN R (1kHz)      | : - 3.4dBV         | REAR R (1kHz)  | : - 3.3dBV |
|                  | CENTER (1kHz)      | : - 3.2dBV         | SW L (50Hz)    | : - 3.3dBV |
|                  | REAR CENTER (1kHz) | : - 3.4dBV         | SW R (50Hz)    | : - 3.3dBV |
|                  | FRONT L (1kHz)     | : - 3.4dBV         | SW MONO (50Hz) | : + 2.7dBV |
|                  | FRONT R (1kHz)     | : - 3.4dBV         |                |            |

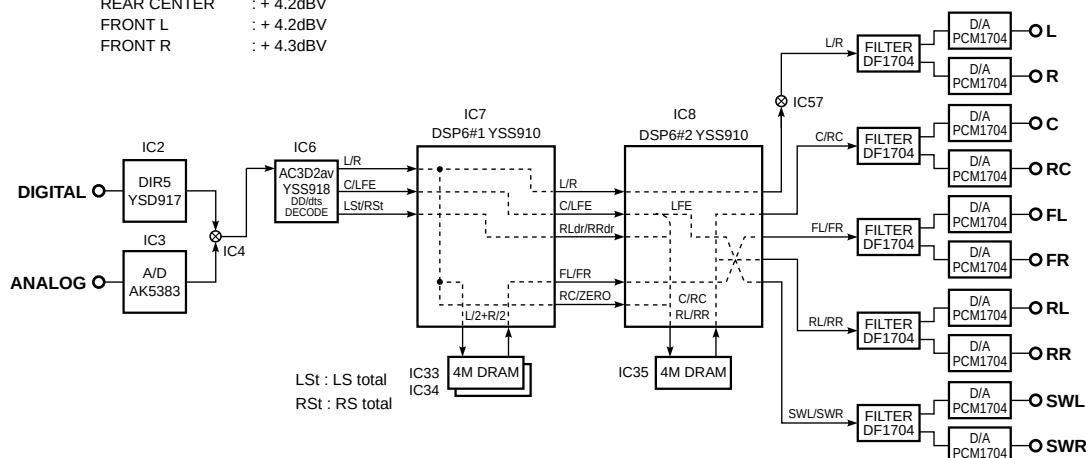




(In the case of multi-ch source)

- AC3D2av outputs signals using DOLBY DIGITAL/dts decode operation.
- DSP6#1 outputs the L/R signals to L/R (SD610), RC (SD615, L only), C/LFE to C/LFE (SD611), LSt/ RSt to RLdr/RRdr (SD612). Also, it outputs L/2 + R/2 to FL/FR (SD614) through the external RAM.
- DSP6#2 outputs the output signals of DSP6#1 to L/R (SD620), FL/FR (SD622), SWL/SWR (SD624). Also, it outputs C/RC and RL/RR to C/RC (SD621) and RL/RR (SD623) through the external RAM.

|                  |               |                 |        |            |
|------------------|---------------|-----------------|--------|------------|
| <b>Reference</b> | CD DIGITAL IN | : 1kHz, - 20dBV |        |            |
|                  | VOLUME        | : MAX           |        |            |
|                  | PRE OUT       |                 |        |            |
|                  | MAIN L        | : + 4.2dBV      | REAR L | : + 4.3dBV |
|                  | MAIN R        | : + 4.2dBV      | REAR R | : + 4.3dBV |
|                  | CENTER        | : + 4.5dBV      |        |            |
|                  | REAR CENTER   | : + 4.2dBV      |        |            |
|                  | FRONT L       | : + 4.2dBV      |        |            |
|                  | FRONT R       | : + 4.3dBV      |        |            |



**FULL BIT** [Remote control code: 7A—92 (TUNER A/B/C/D/E)]

The head margin is unused and the digital data is output in full bit.

The same applies as "2ch/MULTI" 0dB except that the digital data is output in full bit at D/A.

|                  |                    |                    |                |             |
|------------------|--------------------|--------------------|----------------|-------------|
| <b>Reference</b> | CD ANALOG IN       | : - 30dBV, Both ch |                |             |
|                  | VOLUME             | : MAX              |                |             |
|                  | PRE OUT            |                    |                |             |
|                  | MAIN L (1kHz)      | : - 7.5dBV         | REAR L (1kHz)  | : - 1.4dBV  |
|                  | MAIN R (1kHz)      | : - 7.5dBV         | REAR R (1kHz)  | : - 1.3dBV  |
|                  | CENTER (1kHz)      | : - 7.2dBV         | SW L (50Hz)    | : + 7.6dBV  |
|                  | REAR CENTER (1kHz) | : - 7.4dBV         | SW R (50Hz)    | : + 7.5dBV  |
|                  | FRONT L (1kHz)     | : - 7.5dBV         | SW MONO (50Hz) | : + 13.6dBV |
|                  | FRONT R (1kHz)     | : - 7.4dBV         |                |             |

## 4. PRO LOGIC

The input data is automatically identified in the priority order of PCM > Analog. DTS is inhibited.

There are three sub-menu items.

Either Pro-logic (auto input balance turned off ) or EFFECT OFF (analog through) is selected.

4. PRO LOGIC  
YSS918

4. PRO LOGIC  
YSS908

4. PRO LOGIC  
EFFECT OFF

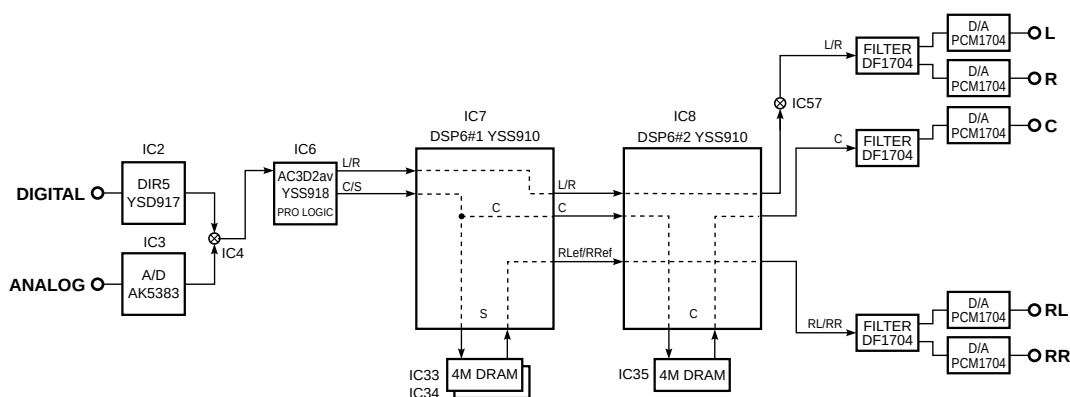
### YSS918 [Remote control code: 7A—9C (SET DOWN)]

When the analog, PCM audio or DOLBY DIGITAL 2/0 mode is used, L, R, C, S signals are pro-logic decoded in YSS918 and output.

When the DOLBY DIGITAL mode other than 2/0 is used, the pro logic function does not work and they are muted.

### (2-ch source) ... Muted in the case of multi-ch source

- AC3D2av outputs signals using PRO LOGIC decoding operation with the auto input balance off (with -3dB gain).
- DSP6#1 outputs the PRO LOGIC output signals to L/R (SD610), C(SD611, L only). Also, it passes the S signal through the external RAM and -3dB processing and outputs it to RLef/RRef (SD613).
- DSP6#2 outputs the output signals of DSP6#1 to L/R (SD620), RL/RR (SD623). Also, it outputs the C signal to C (SD621, L only) through the external RAM.



|                  |                    |                   |
|------------------|--------------------|-------------------|
| <b>Reference</b> | CD ANALOG IN       | : -20dBV, Both ch |
|                  | VOLUME             | : MAX             |
|                  | PRE OUT            |                   |
|                  | MAIN L (1kHz)      | : -43.0dBV        |
|                  | MAIN R (1kHz)      | : -39.0dBV        |
|                  | CENTER (1kHz)      | : -0.2dBV         |
|                  | REAR CENTER (1kHz) | : -47.5dBV        |
|                  | FRONT L (1kHz)     | : -∞ dBV          |
|                  | FRONT R (1kHz)     | : -∞ dBV          |
|                  | REAR L (1kHz)      | : -∞ dBV          |
|                  | REAR R (1kHz)      | : -∞ dBV          |
|                  | SW L (50Hz)        | : -∞ dBV          |
|                  | SW R (50Hz)        | : -∞ dBV          |
|                  | SW MONO (50Hz)     | : -44.8dBV        |

|  |                    |                     |
|--|--------------------|---------------------|
|  | CD ANALOG IN       | : -20dBV, L ch only |
|  | VOLUME             | : MAX               |
|  | PRE OUT            |                     |
|  | MAIN L (1kHz)      | : -3.5dBV           |
|  | MAIN R (1kHz)      | : -∞ dBV            |
|  | CENTER (1kHz)      | : -42.4dBV          |
|  | REAR CENTER (1kHz) | : -∞ dBV            |
|  | FRONT L (1kHz)     | : -∞ dBV            |
|  | FRONT R (1kHz)     | : -∞ dBV            |
|  | REAR L (1kHz)      | : -47.5dBV          |
|  | REAR R (1kHz)      | : -47.5dBV          |
|  | SW L (50Hz)        | : -∞ dBV            |
|  | SW R (50Hz)        | : -∞ dBV            |
|  | SW MONO (50Hz)     | : -44.8dBV          |

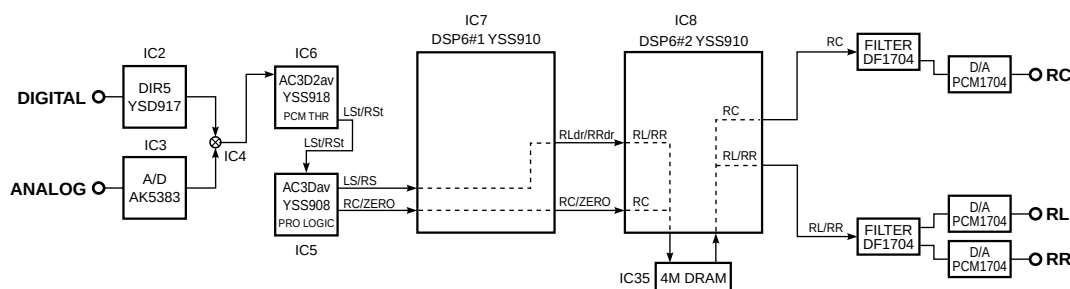
# YSS908 [Remote control code: 7A—9D (SET UP)]

When the analog, PCM audio or DOLBY DIGITAL 2/0 mode is used, LS, RS, RC signals are pro-logic decoded in YSS908 and output.

When the DOLBY DIGITAL mode other than 2/0 is used, the pro logic function does not work and they are muted.

## (2-ch source) ... Muted in the case of multi-ch source

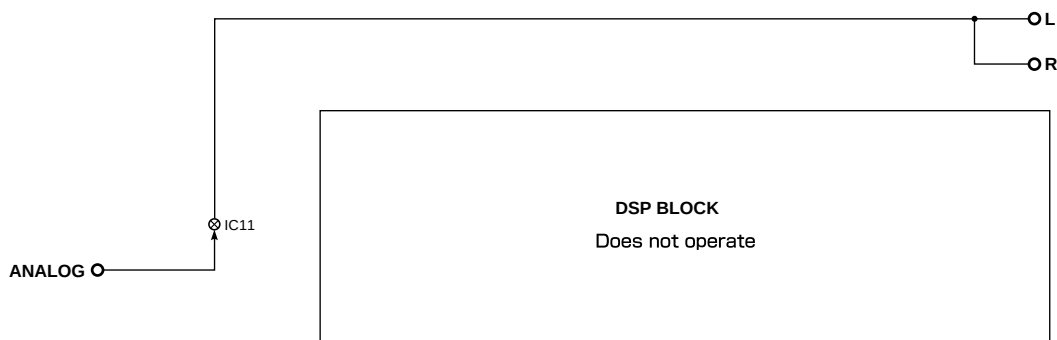
- AC3D2av outputs 2-ch input signals from LSt/RSt (SDA21).
- AC3D2av outputs signals using DOLBY 3 Stereo decoding operation with the auto input balance off (with -3dB gain).
- DSP6#1 outputs LS/RS to RLdr/RRdr (SD612) and RC to RC (SD615, L only) respectively.
- DSP6#2 outputs the output signals of DSP6#1 to RL/RR (SD623) and RC (SD621, R only) through the external RAM.



| Reference | CD ANALOG IN       |                        | CD ANALOG IN            |                        |
|-----------|--------------------|------------------------|-------------------------|------------------------|
|           | VOLUME             | : - 20dBV, Both ch     | VOLUME                  | : - 20dBV, L ch only   |
|           | PRE OUT            | : MAX                  | PRE OUT                 | : MAX                  |
|           | MAIN L (1kHz)      | : - ∞ dBV              | MAIN L (1kHz)           | : - ∞ dBV              |
|           | MAIN R (1kHz)      | : - ∞ dBV              | MAIN R (1kHz)           | : - ∞ dBV              |
|           | CENTER (1kHz/50Hz) | : - 0.5dBV/ - 2.0dBV   | CENTER (1kHz)           | : - ∞ dBV              |
|           | REAR CENTER (1kHz) | : - ∞ dBV              | REAR CENTER (1kHz/50Hz) | : - 42.6dBV/ - 13.6dBV |
|           | FRONT L (1kHz)     | : - ∞ dBV              | FRONT L (1kHz)          | : - ∞ dBV              |
|           | FRONT R (1kHz)     | : - ∞ dBV              | FRONT R (1kHz)          | : - ∞ dBV              |
|           | REAR L (1kHz/50Hz) | : - 43.1dBV/ - 12.2dBV | REAR L (1kHz/50Hz)      | : - 3.4dBV/ - 5.3dBV   |
|           | REAR R (1kHz/50Hz) | : - 38.7dBV/ - 12.1dBV | REAR R (1kHz/50Hz)      | : - ∞ dBV/ - 39.2dBV   |
|           | SW L (50Hz)        | : - ∞ dBV              | SW L (50Hz)             | : - ∞ dBV              |
|           | SW R (50Hz)        | : - ∞ dBV              | SW R (50Hz)             | : - ∞ dBV              |
|           | SW MONO (50Hz)     | : - 45.5dBV            | SW MONO (50Hz)          | : - 45.5dBV            |

## EFFECT OFF [Remote control code: 7A—9E (SET INC)]

- The input mode is fixed to Analog.
- The L/R signal is output through ANALOG MAIN BYPASS.



## 5. BYPASS

Only PCM and analog modes are used for input signals. The bypassing operation is used according to the menu setting. There are two sub-menu items (DECODER, DSP). This menu is useful when locating the faulty part by bypassing the decoder LSI and DSP6.

5. BYPASS  
DECODER

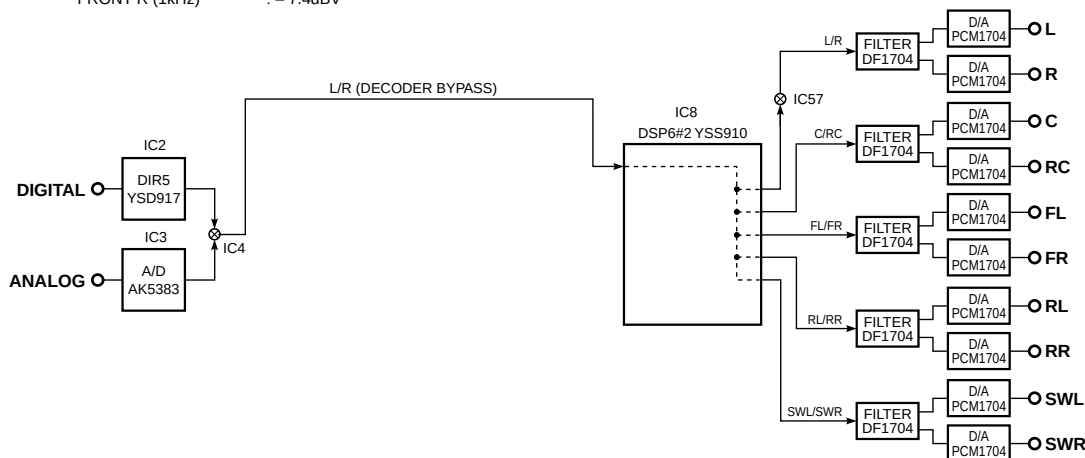
5. BYPASS  
DSP

**DECODER** [Remote control code: 7A—9F (SET DEC)]

**(2-ch source) ... Muted in the case of multi-ch source**

- AC3D2av, AC3Dav and DSP6#1 are muted.
- DIR5 or A/D output (SDAT) signals are input directly to DSP6#2 and output to L/R (SD620), C/RC (SD621), RL/RR (SD623), FL/FR (SD622) and SWL/SWR (SD624).

|           |                     |                      |
|-----------|---------------------|----------------------|
| Reference | CD ANALOG IN        | : -20dBV, Both ch    |
|           | VOLUME              | : MAX                |
|           | PRE OUT             |                      |
|           | MAIN L (1kHz)       | : -7.5dBV            |
|           | MAIN R (1kHz)       | : -7.5dBV            |
|           | CENTER (1kHz)       | : -7.2dBV            |
|           | REAR CENTER (1kHz)  | : -7.4dBV            |
|           | FRONT L (1kHz)      | : -7.5dBV            |
|           | FRONT R (1kHz)      | : -7.4dBV            |
|           | REAR L (1kHz)       | : -1.4dBV            |
|           | REAR R (1kHz)       | : -1.3dBV            |
|           | SW L (1kHz/50Hz)    | : +7.7dBV/ +7.5dBV   |
|           | SW R (1kHz/50Hz)    | : +7.7dBV/ +7.5dBV   |
|           | SW MONO (1kHz/50Hz) | : +13.8dBV/ +13.5dBV |

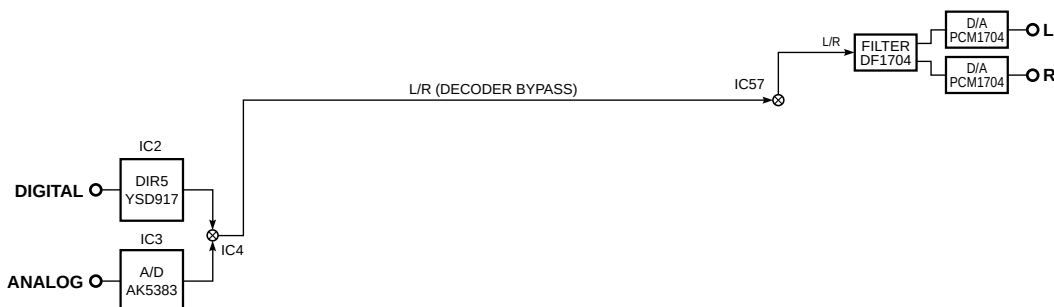


**DSP** [Remote control code: ----]

**(2-ch source) ... Muted in the case of multi-ch source**

- AC3D2av, AC3Dav, DSP6#1 and DSP6#2 are muted.
- The DIR5 or A/D output (SDAT) signal is input directly to DAC and L/R is reproduced.

|           |                    |                   |
|-----------|--------------------|-------------------|
| Reference | CD ANALOG IN       | : -20dBV, Both ch |
|           | VOLUME             | : MAX             |
|           | PRE OUT            |                   |
|           | MAIN L (1kHz)      | : -3.4dBV         |
|           | MAIN R (1kHz)      | : -3.4dBV         |
|           | CENTER (1kHz)      | : -∞ dBV          |
|           | REAR CENTER (1kHz) | : -∞ dBV          |
|           | FRONT L (1kHz)     | : -∞ dBV          |
|           | FRONT R (1kHz)     | : -∞ dBV          |
|           | REAR L (1kHz)      | : -∞ dBV          |
|           | REAR R (1kHz)      | : -∞ dBV          |
|           | SW L (50Hz)        | : -∞ dBV          |
|           | SW R (50Hz)        | : -∞ dBV          |
|           | SW MONO (50Hz)     | : -∞ dBV          |



## 6. SPEAKERS SET

The input signal is automatically identified in the priority order of dts > DOLBY DIGITAL > PCM > Analog. There are seven sub-menu items.

The signals output from the DSP are the same as 1. DSP THROUGH: DSP 0dB.

[Remote Control Code: 7A—88 (PRG 1)]

```
6. SPEAKERS SET
MAIN:SMALL 0dB
```

[Remote Control Code: 7A—89 (PRG 2)]

```
6. SPEAKERS SET
MAIN:LARGE -10
```

[Remote Control Code: 7A—8A (PRG 3)]

```
6. SPEAKERS SET
CENTER:NONE
```

[Remote Control Code: 7A—8B (PRG 4)]

```
6. SPEAKERS SET
LFE/BASS:MAIN
```

[Remote Control Code: 7A—8C (PRG 5)]

```
6. SPEAKERS SET
FRONT MIX:5ch
```

[Remote Control Code: 7A—8D (PRG 6)]

```
6. SPEAKERS SET
CENTER:SMALL
```

[Remote Control Code: 7A—8E (PRG 7)]

```
6. SPEAKERS SET
REAR:SMALL
```

The analog switch settings for each sub-menu are as shown in the table below.

| Sub-menu |                  | CENTER | REAR  | MAIN SP | MAIN LVL | LFE/BASS | FRONT MIX |
|----------|------------------|--------|-------|---------|----------|----------|-----------|
| 1        | MAIN : SMALL 0dB | LARGE  | LARGE | SMALL   | 0dB      | SWFR     | 7ch       |
| 2        | MAIN : LARGE -10 | LARGE  | LARGE | LARGE   | -10dB    | SWFR     | 7ch       |
| 3        | CENTER : NONE    | NONE   | LARGE | LARGE   | 0dB      | SWFR     | 7ch       |
| 4        | LFE/BASS : MAIN  | LARGE  | LARGE | LARGE   | 0dB      | MAIN     | 7ch       |
| 5        | FRONT MIX : 5ch  | LARGE  | LARGE | LARGE   | 0dB      | SWFR     | 5ch       |
| 6        | CENTER : SMALL   | SMALL  | LARGE | LARGE   | 0dB      | SWFR     | 7ch       |
| 7        | REAR : SMALL     | LARGE  | SMALL | LARGE   | 0dB      | SWFR     | 7ch       |

LARGE: Signals are output in all bandwidths.

SMALL: Only signals lower than 90Hz are mixed in the channel specified by LFE/BASS.

NONE: The center contents are distributed to the MAIN L/R channels after -3dB.

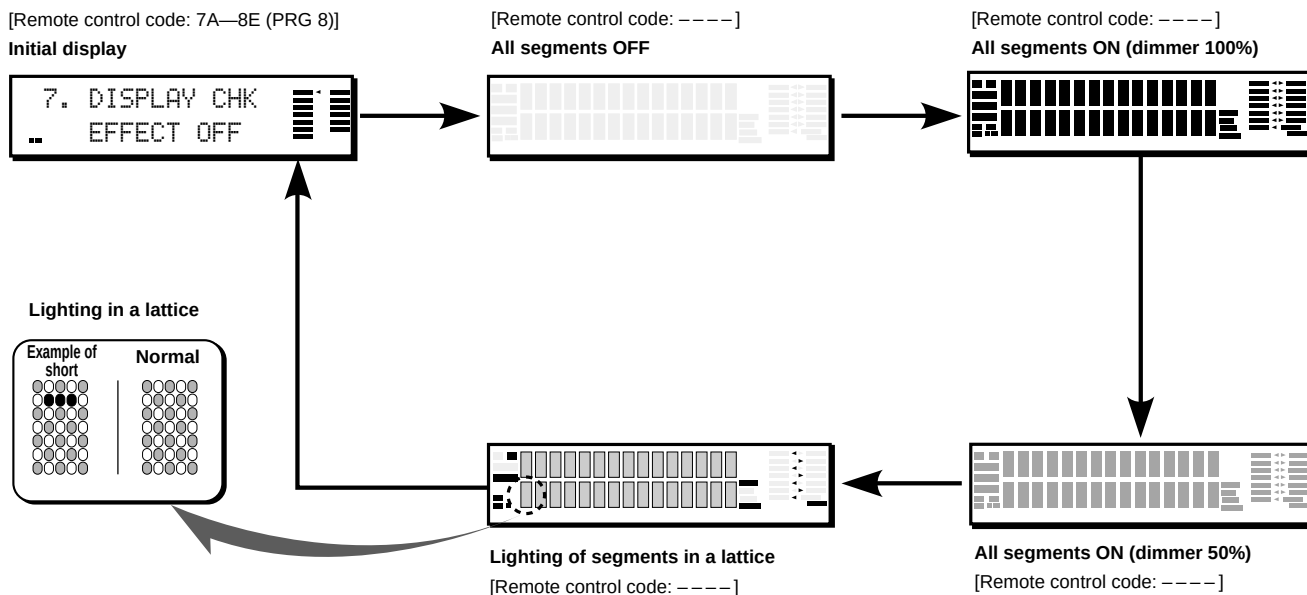
| Sub-menu |                  | Application                                                                                 |
|----------|------------------|---------------------------------------------------------------------------------------------|
| 1        | MAIN : SMALL 0dB | Confirmation of high/low pass filter characteristic and gain when BASS REDIRECTION is used. |
| 2        | MAIN : LARGE -10 | Confirmation of the effects of MAIN LEVEL function                                          |
| 3        | CENTER : NONE    | Confirmation of gain of CENTER MIX (Only CENTER contents are output from MAIN L/R.)         |
| 4        | LFE/BASS : MAIN  | Confirmation of gain of BASS MIX (Only LFE/BASS contents are output from MAIN L/R.)         |
| 5        | FRONT MIX : 5ch  | Confirmation of gain of FRONT MIX (Only FRONT contents are output from MAIN L/R.)           |
| 6        | CENTER : SMALL   | Confirmation of high/low pass filter characteristic and gain when BASS REDIRECTION is used. |
| 7        | REAR : SMALL     | Confirmation of high/low pass filter characteristic and gain when BASS REDIRECTION is used. |

## 7. DISPLAY CHK

This program is used to check lighting of the FL display which changes as shown below according to operation of the sub-menu.

The signals are processed in the same way as EFFECT OFF of No.4. (The L/R signal is output using ANALOG MAIN BYPASS setting.)

As for internal/external synchronization switching of super-imposing (image signals), forced external synchronization is selected by the microprocessor control.



Segment conditions of the FL driver (IC901, IC902) and the FL tube are checked by turning ON and OFF all segments. Next, the operation of the FL driver is checked by using the dimmer control. Then a short between segments next to each other is checked by turning ON and OFF all segments alternately (in a lattice). (In the above example, the center segment in the second row from the top is shorted.)

## 8. MANUAL TEST

The test noise is output by the noise generator with a built-in DSP through the channels specified by the sub-menu. There are ten sub-menu items.

```
8. MANUAL TEST
   ALL
```

**ALL** [Remote control code: 7A—00 (TAPE PLAY)]

Noise is output through all channels.

**MAIN L** [Remote control code: 7A—01 (TAPE RW)]

Noise is output through the MAIN L channel.

**CENTER** [Remote control code: 7A—02 (TAPE FW)]

Noise is output through the CENTER channel.

**MAIN R** [Remote control code: 7A—03 (TAPE STOP)]

Noise is output through the MAIN R channel.

**REAR R** [Remote control code: 7A—04 (TAPE PAUSE)]

Noise is output through the REAR R channel.

**REAR C** [Remote control code: 7A—05 (TAPE MUTE)]

Noise is output through the REAR CENTER channel.

**REAR L** [Remote control code: 7A—06 (TAPE A/B)]

Noise is output through the REAR L channel.

**FRONT L** [Remote control code: 7A—07 (TAPE DIR A)]

Noise is output through the FRONT L channel.

**FRONT R** [Remote control code: 7A—08 (CD PLAY)]

Noise is output through the FRONT R channel.

**LFE** [Remote control code: 7A—09 (CD STOP)]

Noise is output through the LFE (sub-woofer) channel.

## 9. RS-232C

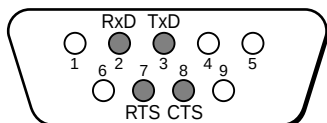
This menu is used to check transmission of the data and the flow port of the hardware.

With the power turned off, short between pins No.2 (Rx/D) and No.3 (Tx/D) and between pins No.7 (RTS) and No.8 (CTS) of the RS-232C terminal. (Be sure to turn off the power when shorting pins.)

Start DIAG and select the menu.

There are two sub-menu items.

The signals are processed in the same way as EFFECT OFF under item 4. PRO LOGIC. (The L/R signals are output using ANALOG MAIN BYPASS.)



```
9. RS-232C
Tx/D/Rx/D DATA:XX
```

### TxD/RxD DATA

This sub-menu is used to check transmission of the test data. "OK" appears when the data is transmitted properly and "NG" when it is not.

In this mode, NULL command transmission is continued after the test command is transmitted.

```
9. RS-232C
HARD FLOW :XX
```

### HARD FLOW

This sub-menu is used to check operation of the flow port of the hardware. "OK" appears when the check result is satisfactory and "NG" when it is not.

## 10. PRESET

This menu reserves and inhibits initialization of the back-up RAM (parameter, set menu contents, etc. for the sound field program). The input signals are automatically identified in the priority order of AC-3 > PCM > Analog. The signals are processed in the same way as EFFECT OFF of No.4.

10. PRESET  
INHIBIT

### INHIBIT (Initialization inhibited)

RAM initialization is not executed. Select INHIBIT to protect the values set by the user.

10. PRESET  
RESERVED

### RESERVED

Initialization of the back-up RAM is reserved and it is executed when the power is turned ON after canceling DIAG. RESERVED should be selected when shipping out of the factory or resetting RAM.

**CAUTION :** Before setting to the PRESET RESERVED, write down the existing preset memory content of the Tuner in a table as shown below. (This is because setting to the PRESET RESERVED will cause the user memory content to be erased.) (RX-V1 only)

| Preset group | P1 | P2 | P3 | P4 | P5 | P6 | P7 | P8 |
|--------------|----|----|----|----|----|----|----|----|
| A            |    |    |    |    |    |    |    |    |
| B            |    |    |    |    |    |    |    |    |
| C            |    |    |    |    |    |    |    |    |
| D            |    |    |    |    |    |    |    |    |
| E            |    |    |    |    |    |    |    |    |

### ● PRESET STATIONS

| STATION |     | FM FACTORY PRESET DATA (MHz) |            |      | STATION |     | AM FACTORY PRESET DATA (kHz) |               |
|---------|-----|------------------------------|------------|------|---------|-----|------------------------------|---------------|
| PAGE    | NO. | U, C, R, T                   | R, T, L, A | J    | PAGE    | NO. | U, C, R, T                   | R, T, L, A, J |
| A/C/E   | 1   | 87.5                         | 87.5       | 76.0 | B/D     | 1   | 630                          | 630           |
|         | 2   | 90.1                         | 90.1       | 83.0 |         | 2   | 1080                         | 1080          |
|         | 3   | 95.1                         | 95.1       | 84.0 |         | 3   | 1440                         | 1440          |
|         | 4   | 98.1                         | 98.1       | 86.0 |         | 4   | 530                          | 531           |
|         | 5   | 107.9                        | 108.0      | 90.0 |         | 5   | 1710                         | 1611          |
|         | 6   | 88.1                         | 88.1       | 78.0 |         | 6   | 900                          | 900           |
|         | 7   | 106.1                        | 106.1      | 88.0 |         | 7   | 1350                         | 1350          |
|         | 8   | 107.9                        | 108.0      | 82.1 |         | 8   | 1400                         | 1404          |



It also displays the history of the fan being driven. When in KY0/KY1 page, it is not possible to operate the keys of the main unit because the values of all keys are detected. But one click on the input selector of the main unit will cancel this function and sets to the next sub-menu. Clicking there more than once would change the input. If this has occurred, restore the input being tested. The signal processing state remains the same as that before executing this menu.

When there is a history of the fan operation: 1

- When the standard value is deviated by  $\pm 4\%$ , KEY A/D fails to function properly. In this case, check the constant of the partial pressure resistor, soldering condition, etc.

| KY1           |               | Standard value |
|---------------|---------------|----------------|
| DSP-AX1       | RX-V1         |                |
| EFFECT        | A/B/C/D/E     | 0              |
| —             | —             | 10             |
| DIAG(*1)      | DIAG(*2)      | 20             |
| SET MENU +    | PROGRAM ▷     | 30             |
| NEXT          | EFFECT        | 40             |
| 6CH INPUT     | 6CH INPUT     | 50             |
| SET MENU -    | PROGRAM ◁     | 60             |
| SPEAKERS A    | SPEAKERS B    | 70             |
| SPEAKERS B    | SPEAKERS A    | 80             |
| KEY OFF state | KEY OFF state | 100            |

(\*2) : "PROGRAM  $\triangleright$ " and "EFFECT"

When the value is out of the normal value range, the protection function works to turn off the power.

## 12. IF STATUS

Using this menu, the status data is displayed in the hexadecimal notation one after another.

During signal processing, the status before execution of this menu is maintained.

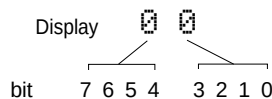
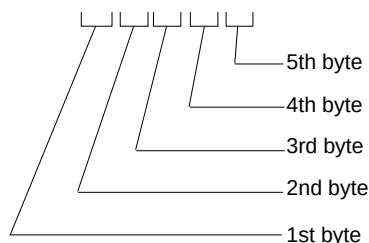
If the input mode is analog fixed in the menu before execution, it is necessary to change it to the digital mode according to the following procedure.

- 1) Select either DIAG menu No.2 or No.3 and enter a digital signal.
- 2) Menu No.12 can be selected by pressing the INPUT MODE key of the main unit. (The input mode will be fixed to the digital mode.)

There are ten sub-menu items.

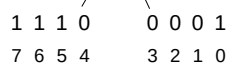
The following status information is displayed in the hexadecimal notation according to the sub-menu operation.

12. IF STATUS 0  
SCPU: 8503000510



| Display | bit |   |   |   |
|---------|-----|---|---|---|
|         | 3   | 2 | 1 | 0 |
| 0       | 0   | 0 | 0 | 0 |
| 1       | 0   | 0 | 0 | 1 |
| 2       | 0   | 0 | 1 | 0 |
| 3       | 0   | 0 | 1 | 1 |
| 4       | 0   | 1 | 0 | 0 |
| 5       | 0   | 1 | 0 | 1 |
| 6       | 0   | 1 | 1 | 0 |
| 7       | 0   | 1 | 1 | 1 |
| 8       | 1   | 0 | 0 | 0 |
| 9       | 1   | 0 | 0 | 1 |
| A       | 1   | 0 | 1 | 0 |
| B       | 1   | 0 | 1 | 1 |
| C       | 1   | 1 | 0 | 0 |
| D       | 1   | 1 | 0 | 1 |
| E       | 1   | 1 | 1 | 0 |
| F       | 1   | 1 | 1 | 1 |

Example: "E 1" reads as follows.



**IF STATUS 0:** Indicates the information communicated between sub-micro-processors.

### 1st byte

Indicates the communication time lag between the main microprocessor and the sub-microprocessor, malfunction (in display, etc.) caused by a communication error or some other reason, the input mode selected by the sub-microprocessor to deter the flickering effect and the head phone state.

|       |                                         |
|-------|-----------------------------------------|
| bit 7 | HEAD PHONE IN                           |
| bit 6 | 0                                       |
| bit 5 | EXT.DECODER IN                          |
| bit 4 | 0                                       |
| bit 3 | From 0000b, PHONO/TUNER/CD/MD/TAPE/DVD/ |
| bit 2 | LD/D-TV/CBL-SAT/VCR1/VCR2/VCR3/         |
| bit 1 | V-AUX/NONE/there after ERROR            |
| bit 0 |                                         |

### 2nd byte

Indicates the Fs information of the reproduction signals.

0x00 : analog

0x01 : 32kHz    0x02 : 44.1kHz    0x03 : 48kHz    0x04 : 64kHz    0x05 : 88kHz

0x06 : 96kHz    0x07 : Unknown

Other : Error

### 3rd byte

Indicates the audio code mode information of the reproduction signals.

0x00 : 1+1    0x01 : 1/0    0x02 : 2/0    0x03 : 3/0    0x04 : 2/1

0x05 : 3/1    0x06 : 2/2    0x07 : 3/2    0x08 : dts7.1

Other : Error

### 4th byte

Indicates the format information of the reproduction signals.

0x00 : analog (Unlock)

0x01 : Wrong digital (\*1)

0x02 : Digital Data

0x03 : IEC1937 Data

0x04 : PCM Audio

0x05 : Dolby Digital

0x06 : D.D.Karaoke

0x07 : D.D.EX

0x08 : RED dts

0x09 : ORANGE dts

0x0A : dts ES

Other : Error

(\*1): Digital reproduction cannot be used due to a commercial bit or 4ch audio reason. So analog reproduction is used.

### 5th byte

Indicates the information on the signal processing status.

|      |                                    |
|------|------------------------------------|
| bit7 | MUTE requested                     |
| bit6 | dtc flashing                       |
| bit5 | 6.1/ES sound field being processed |
| bit4 | RF-DEM mute pin                    |
| bit3 | MAIN commands all requested        |
| bit2 | THROUGH & BYPASS (*2)              |
| bit1 | 6.1/ES AUTO                        |
| bit0 | dtc analog muted                   |

(\*2): In the case of digital signals other than 32kHz, 44.1kHz and 48kHz, through processing is used for reproducible signals.

**IF STATUS 1:** Version information of sub-microprocessor (Asky code)

```
12.IF STATUS 1
VER.:41323541
```

**IF STATUS 2:** Checksum of sub-microprocessor (Asky code)

```
12.IF STATUS 2
SUM :46423732
```

**IF STATUS 3~7:** IEC60958 channel status information of input signals

```
12.IF STATUS 3
CHS1:0299000299
```

-----

```
12.IF STATUS 7
CHS5:00000000
```

**IF STATUS 8~11:** Bit stream information included in the DOLBY DIGITAL signal (indicated one by one from the 1st byte)

```
12.IF STATUS 8
BSI1:0000000000
```

-----

```
12.IF STATUS11
BSI4:000000FF00
```

**IF STATUS 12:** Bit stream information included in the dtc signal

```
12.IF STATUS12
BSID:FFFFFFFF
```

**IF STATUS 13:** Device status information of DIR5 (IC2)

```
12.IF STATUS13
DIR5:1A418000
```

**IF STATUS 14:** Device status information of YSS918 (IC6)

```
12.IF STATUS14
Y918:01014180
```

**IF STATUS 15:** Device status information of YSS908 (IC5)

```
12.IF STATUS15
Y908:00010100
```

**IF STATUS 16:** Device status information of DSP6 (IC7, IC8)

```
12.IF STATUS16
DSP6:00000000
```

**IF STATUS 17:** External RAM check status information of DSP6#1 (IC7)

```
12.IF STATUS17
RAM1:4E6F4572
```

**IF STATUS 18:** External RAM check status information of DSP6#2 (IC8)

```
12.IF STATUS18
RAM2:4E6F4572
```

### 13. DSP RAM CHECK

This menu is used to self-diagnose whether or not the external RAM (IC33, 34, 35) and DSP (IC7, 8) are connected properly, utilizing the CPU -Ext. RAM interface function included in DSP6. During signal processing, the status before execution of this menu is maintained.

13.DSP RAM CHECK  
#1:NoEr #2:NoEr

#### #1, #2

Checks the address bus and the data bus of DSP#1 (IC7 of DSP circuit board) and DSP#2 (IC8 of DSP circuit board), and indicates the connection condition. "NoEr" appears when no error is detected.

When an error is detected in the data bus;  
1619 (example): Indicates that there is an incorrect value between bits 16 and 19. If there are two or more incorrect values, priority is placed on the LSB side.

When an error is detected in the address bus;  
Ad01 (example): Indicates that the address bit 1 has an error.  
Ad17 (example): Indicates that the address bus bit 17 has an error. (With this product, however, it is possible that A8 and /OE are short-circuited.)

- Note that a bus error may be indicated also when there is an error with the terminal other than above buses.
- Detection for the bus check is executed immediately after resetting.  
An error which has occurred after starting DIAG cannot be detected.

### 14. SUM/VER /PORT

There are four sub-menu items.  
Indicates the checksum, version, port of the main microprocessor (IC27 of the function circuit board) as well as the checksum and version of the sub-microprocessor (IC1 of the DSP circuit board). The signals are processed in the same way as EFFECT OFF under item 4. PRO LOGIC. (The L/R signals are output using ANALOG MAIN BYPASS.)

**CAUTION :** When replacing the microprocessor, be sure to check the microprocessor compatibility before replacement. The microprocessor may not be suitable for replacement depending on its communication format. Use of a microprocessor whose communication format is not compatible with the existing one will cause some communication error between microprocessors.

14.SUM/VER/PORT  
M:51F5 / S:A3BB

#### Checksum of main/sub microprocessor

Checksum: The checksum is obtained by adding 4M bits per 1 octo of the entire program code and expressing the result as a 4-figure hexadecimal data. (0xff is added for the area where no code has been entered and for the area other than ROM code.)

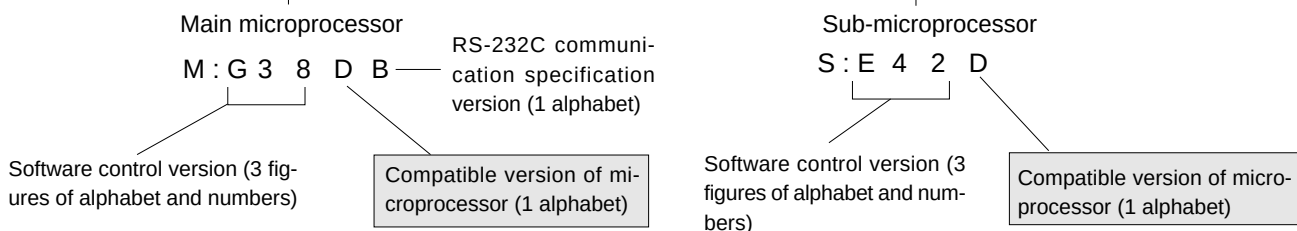
Checksum of sub-microprocessor  
(4 figures of alphabets and numbers)

Checksum of main microprocessor  
(4 figures of alphabets and numbers)

14.SUM/VER/PORT  
M:G38DB/ S:E42D

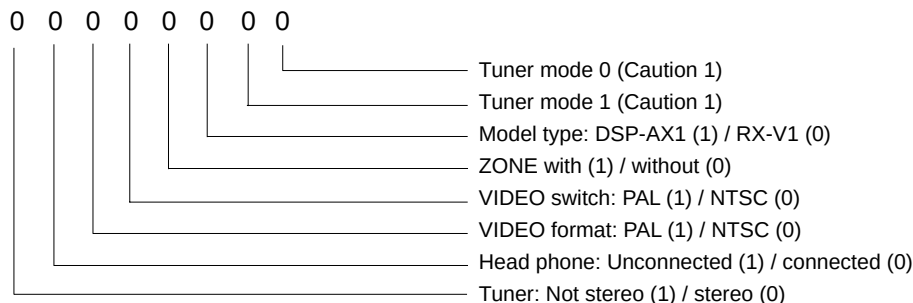
### Software version/compatible version/RS-232C version of main microprocessor Software version and compatible version of sub-microprocessor

The alphabet of the compatible version represents the communication format compatibility between the main and sub microprocessors. If the alphabet representing the communication format compatibility agrees, the microprocessors are interchangeable. If the alphabet is different, the replacement microprocessor will fail to function properly.



14.SUM/VER/PORT  
PORT: 00000000

### Port to check functions of the main microprocessor



(Caution 1)

| Tuner mode 0 | Tuner mode 1 | Tuner frequency                                  |
|--------------|--------------|--------------------------------------------------|
| 0            | 0            | AM : 531-1611kHz/9kHz FM : 76.0-90.0MHz/100kHz   |
| 0            | 1            | AM : 531-1611kHz/9kHz FM : 87.5-108.0MHz/50kHz   |
| 1            | 0            | AM : 530-1710kHz/10kHz FM : 87.5-107.9MHz/200kHz |
| 1            | 1            | DSP-AX1                                          |

### Port to check functions of the REC OUT

14.SUM/VER/PORT  
REC-OUT:0000

bit 3 2 1 0  
0 0 0 0

| REC OUT | bit |   |   |   |
|---------|-----|---|---|---|
|         | 3   | 2 | 1 | 0 |
| PHONO   | 0   | 1 | 1 | 1 |
| CD      | 0   | 1 | 1 | 0 |
| TUNER   | 0   | 1 | 0 | 0 |
| TAPE    | 0   | 1 | 0 | 1 |
| MD      | 0   | 0 | 0 | 1 |
| DVD     | 0   | 0 | 0 | 0 |
| SOURCE  | 0   | 0 | 1 | 0 |
| LD      | 0   | 0 | 1 | 1 |
| D-TV    | 1   | 0 | 1 | 1 |
| CBL/SAT | 1   | 0 | 1 | 0 |
| VCR1    | 1   | 0 | 0 | 0 |
| VCR2    | 1   | 0 | 0 | 1 |
| VCR3    | 1   | 1 | 0 | 1 |
| V-AUX   | 1   | 1 | 0 | 0 |

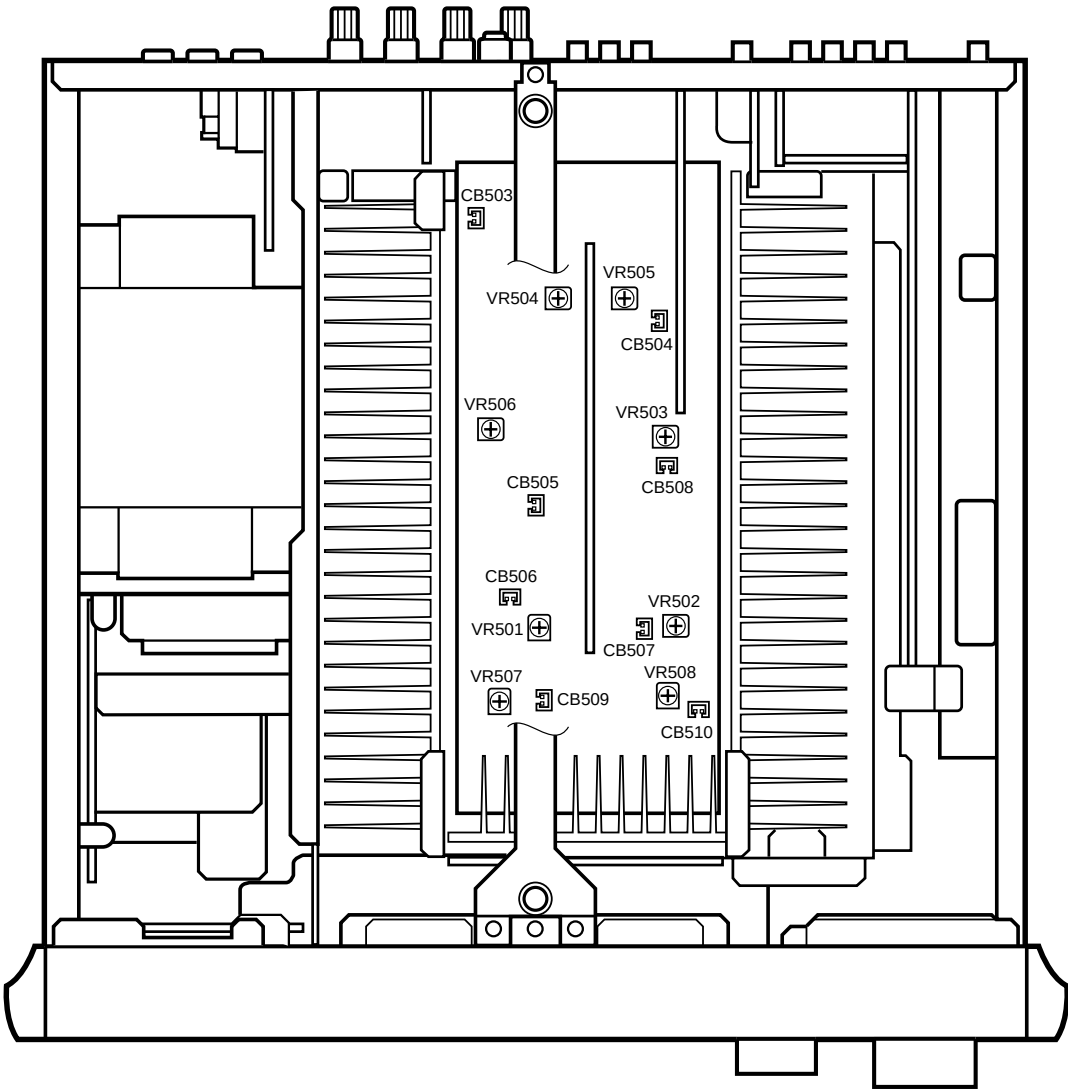
■ AMP ADJUSTMENTS

● IDLING CURRENT ADJUSTMENT

Before this adjustment, wait for 10 minutes with no signal applied after the power is turned ON.

| Item        | Test Point | Adjustment point | Rating (DC)     |
|-------------|------------|------------------|-----------------|
| MAIN L      | CB503      | VR504            | 4.0mV to 12.0mV |
| MAIN R      | CB504      | VR505            |                 |
| CENTER      | CB505      | VR506            |                 |
| REAR L      | CB506      | VR501            | 2.0mV to 6.0mV  |
| REAR R      | CB507      | VR502            |                 |
| REAR CENTER | CB508      | VR503            |                 |
| FRONT L     | CB509      | VR507            | 4.0mV to 12.0mV |
| FRONT R     | CB510      | VR508            |                 |

● Test Point



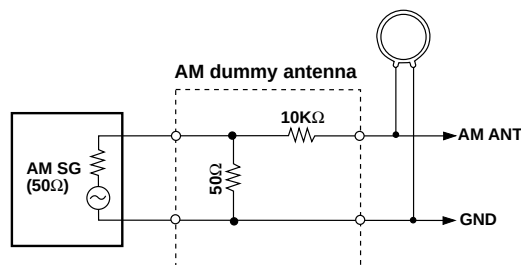
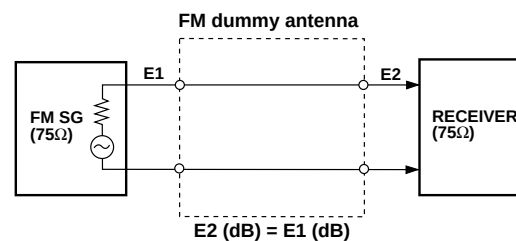
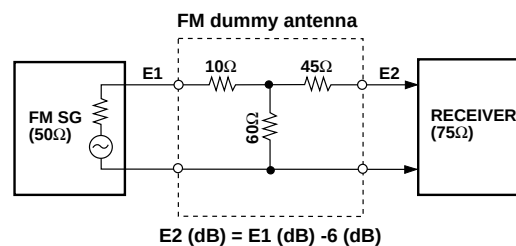
DSP-AX1/RX-V1

## ■ TUNER ADJUSTMENTS (RX-V1 only)

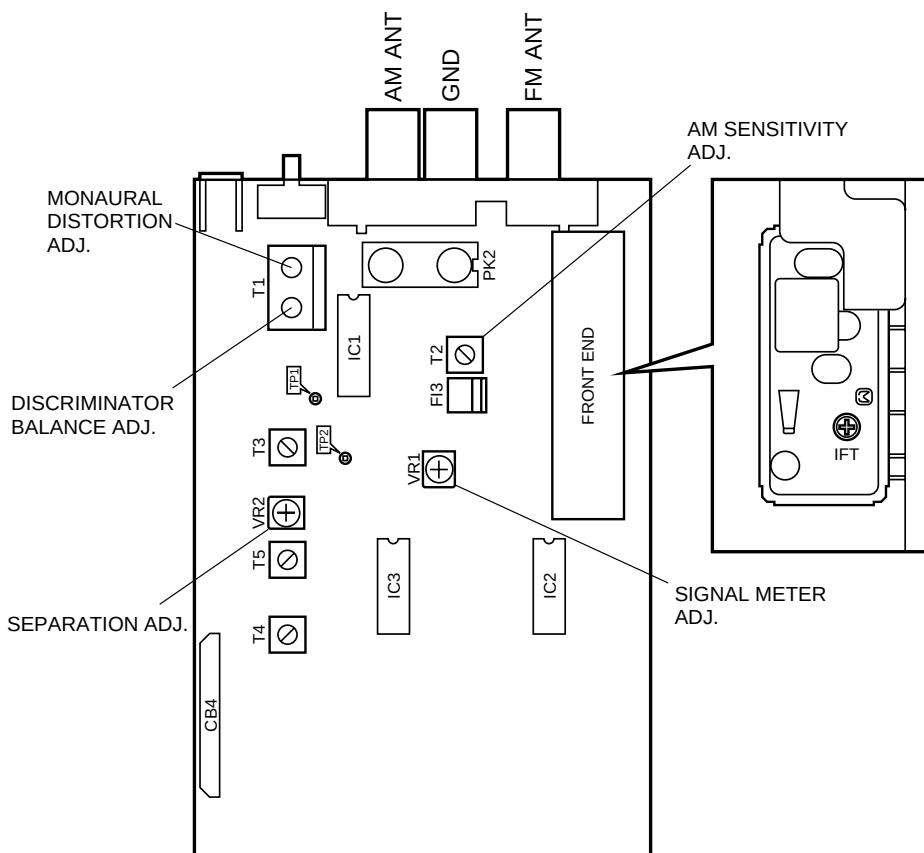
### ● Measuring Instruments

FM signal generator (FM SG)  
 Stereo signal generator (SSG)  
 AM signal generator (AM SG)  
 Distortion meter (DIST. M)  
 AC voltmeter (ACVM)  
 DC voltmeter (DCVM)  
 Oscilloscope  
 Low pass filter (YLF-15,  $f_c=15\text{kHz}$ )  
 Oscillator

### ● Dummy antenna



### ● Test point



## FM Adjustment

### ● Before Adjustment

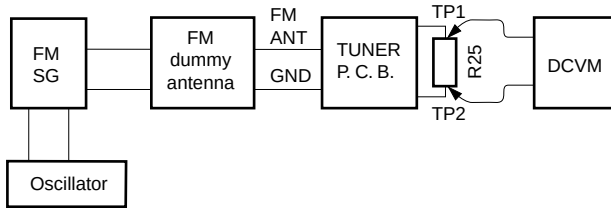
- 1) For dB,  $1\mu V=0dB\mu$   
**Example** :  $60dB\mu=1mV$
- 2) 100% modulation means that the frequency deviation is  $\pm 75kHz$ .

- 3) Install the Matching Transformer and connect FM SG.
- 4) Set each switch to the following position unless otherwise specified.

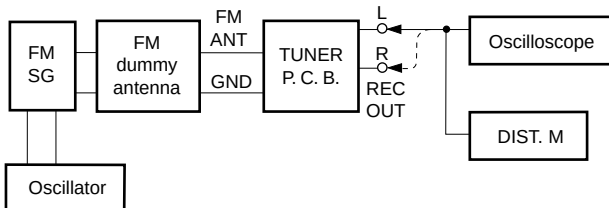
INPUT SELECTOR ..... TUNER  
TUNING MODE ..... AUTO

### ● Connection diagram (Measuring instruments)

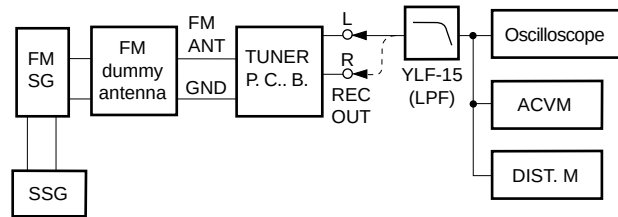
#### 1) Discriminator balance adjustment



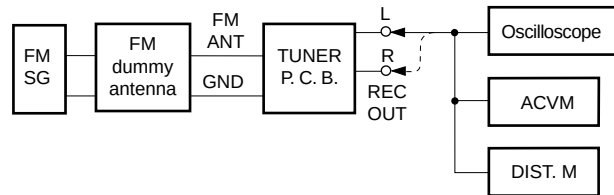
#### 2) Monaural distortion adjustment



#### 3) Stereo distortion adjustment/separation adjustment



#### 4) Sensitivity Verification



See page 34 for TP locations & adjustment points.

| Step | Adjustment item                           | Signal (ANT IN)                                                              | Reception frequency | Adjustment point          | Test point                                | Rating                                      |
|------|-------------------------------------------|------------------------------------------------------------------------------|---------------------|---------------------------|-------------------------------------------|---------------------------------------------|
| 1    | Rough adjustment of discriminator balance | FM ANT (75Ω)<br>98.1MHz $\pm 5kHz$<br>70dBμ<br>MONO 100Hz<br>100% modulation | 98.1MHz<br>* (A-4)  | T1<br>(IC side core)      | Both ends of R25<br>(Between TP1 and TP2) | DC 0V $\pm$ 100mV                           |
| 2    | Rough adjustment of monaural distortion   | Same as Step 1.                                                              | 98.1MHz<br>* (A-4)  | T1<br>(Antenna side core) | REC OUT L, R                              | Minimize the distortion.                    |
| 3    | Fine adjustment of discriminator balance  | Same as Step 1.                                                              | 98.1MHz<br>* (A-4)  | T1<br>(IC side core)      | Both ends of R25<br>(Between TP1 and TP2) | DC 0V $\pm$ 50mV                            |
| 4    | Fine adjustment of monaural distortion    | Same as Step 1.                                                              | 98.1MHz<br>* (A-4)  | T1<br>(Antenna side core) | REC OUT L, R                              | Minimize the distortion (to 0.25% or less). |
| 5    | Verification of discriminator balance     | Same as Step 1.                                                              | 98.1MHz<br>* (A-4)  | T1<br>(IC side core)      | Both ends of R25<br>(Between TP1 and TP2) | DC 0V $\pm$ 50mV                            |

\* : Execution of PRESET (Refer to page 27.) will facilitate setting reception frequency for adjustment.



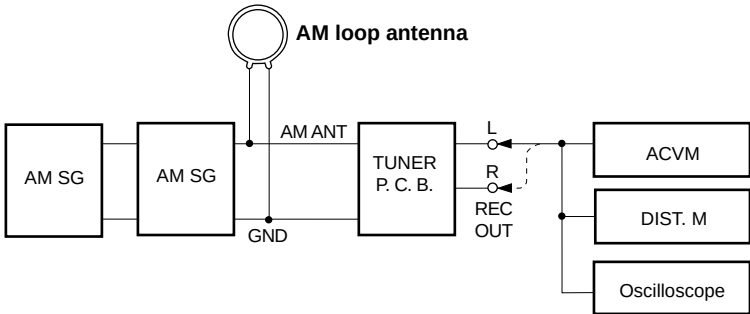
| Step | Adjustment item                     | Signal (ANT IN)                                                                | Reception frequency                                             | Adjusted point | Test point    | Rating                                                                                                                                                                                                                                  |
|------|-------------------------------------|--------------------------------------------------------------------------------|-----------------------------------------------------------------|----------------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6    | Adjustment of front end IFT         | FM ANT (75Ω)<br>98.1MHz ± 5kHz<br>30dBμ<br>MONO<br>1kHz,<br>100% modulation    | 98.1MHz<br>* (A-4)                                              | Front end IFT  | Pin 16 of IC1 | Adjust so that the DC voltage is maximum.<br><b>CAUTION</b> : Over-adjustment of the IFT core will reduce the sensitivity.<br>Maximum ±90°                                                                                              |
| 7    | Verification of monaural distortion | FM ANT (75Ω)<br>98.1MHz<br>70dBμ<br>MONO 1kHz,<br>100% modulation              | 98.1MHz<br>* (A-4)                                              |                | REC OUT L, R  | 0.4% or less                                                                                                                                                                                                                            |
| 8    | Verification of stereo distortion   | FM ANT (75Ω)<br>98.1MHz<br>70dBμ<br>Stereo L or R<br>1kHz,<br>100% modulation  | 98.1MHz<br>* (A-4)<br>* Tuning mode should be AUTO.             |                | REC OUT L, R  | 1% or less<br>•STEREO indicator should light.                                                                                                                                                                                           |
| 9    | Verification of sensitivity         | FM ANT (75Ω)<br>88.1MHz<br>98.1MHz<br>106.1MHz<br>MONO 1kHz<br>100% modulation | 88.1MHz<br>* (A-6)<br>98.1MHz<br>* (A-4)<br>106.1MHz<br>* (A-7) |                | ANT (75Ω)     | 1) Set the tuning mode to MAN'L MONO. (Muting OFF)<br>2) S/N should be 30dB at each frequency of 88.1MHz, 98.1MHz, and 106.1MHz.<br>3) Check to ensure that the voltage at the ANT terminal is 5dBμ or less.<br>(A only : 7dBμ or less) |
| 10   | Adjustment of Separation            | FM ANT (75Ω)<br>98.1MHz<br>70dBμ<br>Stereo L or R<br>1kHz,<br>100% modulation  | 98.1MHz<br>* (A-4)                                              | VR2            | REC OUT L, R  | With SSG output at L or R, the signal leakage level at the other channel should be minimized.<br>35dB or more                                                                                                                           |
| 11   | Adjustment of Signal meter          | FM ANT (75Ω)<br>98.1MHz<br>45dBμ<br>MONO 1kHz<br>30% modulation                | 98.1MHz<br>* (A-4)                                              | VR1            |               | Adjust so that all segments light.                                                                                                                                                                                                      |
|      |                                     | –10dBμ or less                                                                 |                                                                 |                |               | Check to ensure that signal meters turn OFF.                                                                                                                                                                                            |
| 12   | Verification of auto tuning         | FM ANT (75Ω)<br>98.1MHz<br>26dBμ<br>Stereo L or R<br>1kHz,<br>30% modulation   | 98.1MHz                                                         |                |               | <ul style="list-style-type: none"> <li>Automatic reception should be available when the tuning key is moved UP and DOWN.</li> <li>The stereo indicator should light.</li> <li>Audio muting should be applied during tuning.</li> </ul>  |

\* : Execution of PRESET (Refer to page 27.) will facilitate setting reception frequency for adjustment.

AM Adjustment (This should be done after FM adjustment.)

● Connection Diagram (Measuring instruments)

1) Adjustment of sensitivity



See page 34 for TP locations & adjustment points.

| Step | Adjustment item                      | Signal (ANT IN)                                          | Reception frequency                                           | Adjustment point | Test point | Rating                                                                                                                        |
|------|--------------------------------------|----------------------------------------------------------|---------------------------------------------------------------|------------------|------------|-------------------------------------------------------------------------------------------------------------------------------|
| 1    | Adjustment of sensitivity (1440Hz)   | AM ANT<br>1440kHz<br>50dBμ<br>1kHz<br>30% modulation     | 1440kHz<br>* (B-3)                                            | T2               | REC OUT    | Audio output should be maximized.                                                                                             |
| 2    | Verification of sensitivity (630kHz) | AM ANT<br>630kHz<br>50dBμ<br>1kHz<br>30% modulation      | 630kHz<br>* (B-1)                                             | T2               | REC OUT    | Audio output should be maximized.<br>Repeat the Step 1 and 2.                                                                 |
| 3    | Verification of sensitivity          | AM ANT<br>630kHz<br>1080kHz<br>1440kHz<br>30% modulation | 630kHz<br>* (B-1)<br>1080kHz<br>* (B-2)<br>1440kHz<br>* (B-3) |                  | AM ANT     | Distortion should be 10% or less at each frequency.<br>Check to ensure that the voltage at the ANT terminal is 54dBμ or less. |
| 4    | Verification of auto tuning          | AM ANT<br>60dBμ                                          |                                                               |                  |            | Auto reception should be available when the tuning key is moved UP and DOWN.                                                  |

\* : Execution of PRESET (Refer to page 27.) will facilitate setting reception frequency for adjustment.

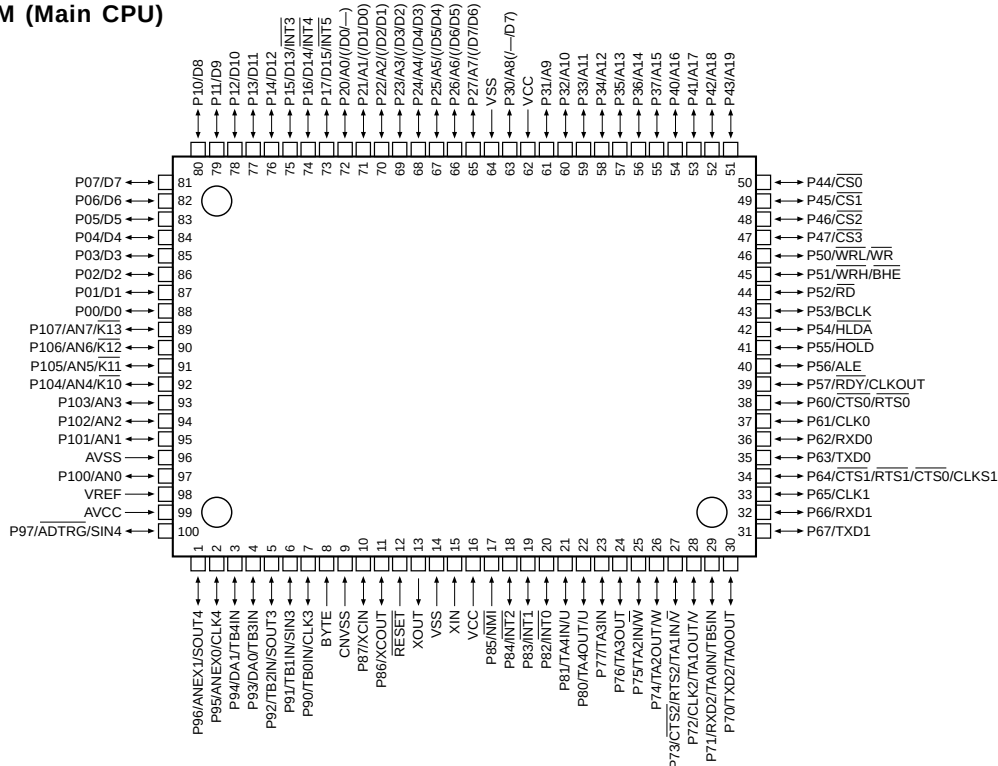


● ANODE CONNECTION

|      | 1GA~15GA | 16GA        |      | 1GB~15GB | 16GB      |
|------|----------|-------------|------|----------|-----------|
| P1A  | 1-1      | SLEEP       | P1B  | 1-1      | dtc       |
| P2A  | 2-1      | ZONE 2      | P2B  | 2-1      | VIRTUAL   |
| P3A  | 3-1      | ▷ (PHONO)   | P3B  | 3-1      | DIGITAL   |
| P4A  | 4-1      | ▷ (CD)      | P4B  | 4-1      | PRO LOGIC |
| P5A  | 5-1      | ▷ (TUNER)   | P5B  | 5-1      | DSP       |
| P6A  | 1-2      | ▷ (TAPE)    | P6B  | 1-2      | EX/ES     |
| P7A  | 2-2      | ▷ (MD)      | P7B  | 2-2      | PCM       |
| P8A  | 3-2      | ▷ (DVD)     | P8B  | 3-2      | -         |
| P9A  | 4-2      | ▷ (LD)      | P9B  | 4-2      | SPEAKERS  |
| P10A | 5-2      | ▷ (D-TV)    | P10B | 5-2      | A         |
| P11A | 1-3      | ▷ (CBL/SAT) | P11B | 1-3      | B         |
| P12A | 2-3      | ▷ (VCR1)    | P12B | 2-3      | HEADPHONE |
| P13A | 3-3      | ▷ (VCR2)    | P13B | 3-3      | DD        |
| P14A | 4-3      | ▷ (VCR3)    | P14B | 4-3      | -         |
| P15A | 5-3      | ▷ (V-AUX)   | P15B | 5-3      | -         |
| P16A | 1-4      | S1          | P16B | 1-4      | -         |
| P17A | 2-4      | STEREO      | P17B | 2-4      | -         |
| P18A | 3-4      | AUTO TUNING | P18B | 3-4      | -         |
| P19A | 4-4      | MEMORY      | P19B | 4-4      | -         |
| P20A | 5-4      | -           | P20B | 5-4      | -         |
| P21A | 1-5      | -           | P21B | 1-5      | -         |
| P22A | 2-5      | -           | P22B | 2-5      | -         |
| P23A | 3-5      | -           | P23B | 3-5      | -         |
| P24A | 4-5      | -           | P24B | 4-5      | -         |
| P25A | 5-5      | -           | P25B | 5-5      | -         |
| P26A | 1-6      | -           | P26B | 1-6      | -         |
| P27A | 2-6      | -           | P27B | 2-6      | -         |
| P28A | 3-6      | -           | P28B | 3-6      | -         |
| P29A | 4-6      | -           | P29B | 4-6      | -         |
| P30A | 5-6      | -           | P30B | 5-6      | -         |
| P31A | 1-7      | -           | P31B | 1-7      | -         |
| P32A | 2-7      | -           | P32B | 2-7      | -         |
| P33A | 3-7      | -           | P33B | 3-7      | -         |
| P34A | 4-7      | -           | P34B | 4-7      | -         |
| P35A | 5-7      | -           | P35B | 5-7      | -         |

## IC DATA

### IC27 : M30624FGFP (P.C.B. FUNCTION) 16 bit $\mu$ -COM (Main CPU)



| No. | PORT  | Name  | I/O     | Function                                  | Power On | Power Off | Backup |
|-----|-------|-------|---------|-------------------------------------------|----------|-----------|--------|
| 1   | SOUT4 | DTC   | O       | SDT for CS3310                            | SO       | OL        | OL     |
| 2   | CLK4  | CKC   | SCK     | SCK for CS3310                            | SCK      | OL        | OL     |
| 3   | DA1   | FAN   | DA      | Fan Control                               | I        | I         | OL     |
| 4   | P93   | /SBR  | O       | Reset for Sub CPU                         | O        | O         | OL     |
| 5   | SOUT3 | MTS   | SO      | CPU I/F Main to Sub                       | OL       | OL        | OL     |
| 6   | SIN3  | STM   | SI      | CPU I/F Sub to Main                       | I        | I         | OL     |
| 7   | CLK3  | MCBC  | SCK     | Bit Clock                                 | OL       | OL        | OL     |
| 8   | BYTE  | BYTE  | VSS     | Single Chip Mode : VSS                    | VSS      | VSS       | VSS    |
| 9   | CNVSS | CNVSS | VSS/VCC | Single Chip Mode : VSS, Flush Write : VCC | VSS      | VSS       | VSS    |
| 10  | P87   | TRQ   | I       | CPU I/F Transfer Request                  | I        | I         | OL     |
| 11  | P86   | MCWC  | I       | CPU I/F Word Clock                        | I        | I         | OL     |
| 12  | RESET | /RES  | I       | Reset                                     | ---      | ---       | ---    |
| 13  | XOUT  | XOUT  | OPEN    | Oscillator out                            | ---      | ---       | ---    |
| 14  | VSS   | VSS   | VSS     | Ground                                    | ---      | ---       | ---    |
| 15  | XIN   | XIN   | 12MHz   | Oscillator in                             | ---      | ---       | ---    |
| 16  | VCC   | VCC   | VCC     | + 5V                                      | ---      | ---       | ---    |
| 17  | NMI   | NMI   | VCC     | Not used (pull-up VCC)                    | I        | I         | I      |
| 18  | INT2  | PSW   | INT     | Power Switch (High Edge : Interrupt)      | I        | I         | OL     |
| 19  | INT1  | PDT   | INT     | Power Detect (Low Edge : Interrupt)       | I        | I         | I      |
| 20  | INT0  | REM2  | INT     | ZONE 2 Remote in (Low Edge : Interrupt)   | I        | I         | OL     |
| 21  | P81   | SCKA  | SCK     | SCK for Audio                             | O        | OL        | OL     |
| 22  | P80   | SDTA  | SO      | SDT for Audio                             | O        | OL        | OL     |
| 23  | P77   | CET   | O       | CE Toshiba for Audio                      | O        | OL        | OL     |
| 24  | P76   | CEL   | O       | CE Sanyo for Audio                        | O        | OL        | OL     |
| 25  | P75   | SPE   | O       | Speaker Relay Effect                      | O        | OL        | OL     |
| 26  | P74   | SPB   | O       | Speaker Relay B                           | O        | OL        | OL     |
| 27  | P73   | SPA   | O       | Speaker Relay A                           | O        | OL        | OL     |
| 28  | CLK2  | SCKN  | SCK     | SCK for Non Audio                         | SCK      | OL        | OL     |
| 29  | TB5IN | VSY   | TBIN5   | Video Vertical Sync (Connection pin 24)   | I        | I         | OL     |

**IC27 : M30624FGFP (P.C.B. FUNCTION)**
**16 bit  $\mu$ -COM (Main CPU)**

| No. | PORT | Name  | I/O     | Function                                    | Power On | Power Off | Backup |
|-----|------|-------|---------|---------------------------------------------|----------|-----------|--------|
| 30  | TXD2 | SDTN  | O       | SDT for Non Audio                           | SO       | OL        | OL     |
| 31  | TXD1 | TXDF  | FLASH   | Serial Write Data Transmision for Flash ROM | OL       | OL        | OL     |
| 32  | RXD1 | RXDF  | FLASH   | Serial Data Reception for Flash ROM         | OL       | OL        | OL     |
| 33  | CLK1 | CLKF  | FLASH   | SCK for Flash ROM                           | OL       | OL        | OL     |
| 34  | P64  | BUSY  | O/FLASH | 232C RTS out/Flash BUSY out                 | O        | OL        | OL     |
| 35  | TXD0 | TXDR  | ASO     | 232C Transmission Data                      | O        | O         | OL     |
| 36  | RXD0 | RXDR  | ASI     | 232C Reception Data                         | I        | I         | OL     |
| 37  | P61  | CEM0  | O       | CE for FL1                                  | O        | OL        | OL     |
| 38  | CTS0 | CTS   | I       | 232C CTS input                              | I        | I         | OL     |
| 39  | P57  | CEM1  | O       | CE for FL2                                  | O        | OL        | OL     |
| 40  | P56  | /FLR  | O       | FL IC Reset                                 | O        | OL        | OL     |
| 41  | HOLD | /HOLD | GND     | For Flash Write                             | I        | I         | I      |
| 42  | P54  | CES   | O       | CE for On Screen                            | I        | I         | OL     |
| 43  | P53  | E/I   | O       | Video Internal/External                     | O        | OL        | OL     |
| 44  | P52  |       | OPEN    | Not used                                    | OL       | OL        | OL     |
| 45  | P51  | /ST   | I       | Tuner Stereo                                | I        | I         | OL     |
| 46  | P50  |       | I       | For Flash Write                             | I        | I         | I      |
| 47  | P47  | SDTP  | SO      | SDT for Tuner PLL                           | O        | OL        | OL     |
| 48  | P46  | RDTP  | SI      | RDT for Tuner PLL                           | I        | I         | OL     |
| 49  | P45  | SCKP  | SCK     | SCK for Tuner PLL                           | O        | OL        | OL     |
| 50  | P44  | CEP   | O       | CE for Tuner PLL                            | O        | OL        | OL     |
| 51  | P43  | /TMT  | O       | Tuner Mute                                  | O        | OL        | OL     |
| 52  | P42  | CEC   | O       | CE for CS3310                               | O        | OL        | OL     |
| 53  | P41  | ISB   | I       | Input Selector B                            | I        | I         | OL     |
| 54  | P40  | ISA   | I       | Input Selector A                            | I        | I         | OL     |
| 55  | P37  |       | OPEN    | Not used                                    | OL       | OL        | OL     |
| 56  | P36  | P/N   | I       | PAL/NTSC SW (0 : NTSC, 1 : PAL)             | I        | I         | OL     |
| 57  | P35  | CMP1  | O       | Component 1                                 | O        | OL        | OL     |
| 58  | P34  | CMP0  | O       | Component 0                                 | O        | OL        | OL     |
| 59  | P33  | ZONE2 | I(PU)   | ZONE2 function (0 : present, 1 : absent)    | I(PU)    | I(PU)     | OL     |
| 60  | P32  | TYPE  | I(PU)   | Model detect (0 : RX-V1, 1 : DSP-AX1)       | I(PU)    | I(PU)     | OL     |
| 61  | P31  | TUN1  | I(PU)   | Tuner Mode 1 (Note 1)                       | I(PU)    | I(PU)     | OL     |
| 62  | VCC  | VCC   | VCC     | + 5V                                        | ---      | ---       | ---    |
| 63  | P30  | TUN0  | I(PU)   | Tuner Mode 0 (Note 1)                       | I(PU)    | I(PU)     | OL     |
| 64  | VSS  | VSS   | VSS     | Ground                                      | ---      | ---       | ---    |
| 65  | P27  |       | OPEN    | Not used                                    | OL       | OL        | OL     |
| 66  | P26  | /MLV  | O       | Main Level Select (0/-10dB)                 | O        | OL        | OL     |
| 67  | P25  | /Z2MT | O       | ZONE2 Mute                                  | O        | OL        | OL     |
| 68  | P24  | /HPMT | O       | Head Phone Mute                             | O        | OL        | OL     |
| 69  | P23  | /FMTF | O       | Full Mute (FL/FR)                           | O        | OL        | OL     |
| 70  | P22  | /FMTS | O       | Full Mute (SWL/SWR/SW MONO)                 | O        | OL        | OL     |
| 71  | P21  | /FMTC | O       | Full Mute (CENTER)                          | O        | OL        | OL     |
| 72  | P20  | /FMTM | O       | Full Mute (MAINL/R, RL/RC/RR)               | O        | OL        | OL     |
| 73  | INT5 | RXDR  | INT     | 232C Reception Data (Connection pin 29)     | I        | I         | OL     |
| 74  | INT4 | VSY   | INT     | Video Vertical Sync ((Low Edge : Interrupt) | I        | I         | OL     |
| 75  | INT3 | REM   | INT     | Remote in (Low Edge : Interrupt)            | I        | I         | OL     |
| 76  | P14  | CEB   | O       | CE for BU2092                               | O        | OL        | OL     |
| 77  | P13  | RSEL3 | I       | REC OUT Selector 3                          | I        | I         | OL     |
| 78  | P12  | RSEL2 | I       | REC OUT Selector 2                          | I        | I         | OL     |
| 79  | P11  | RSEL1 | I       | REC OUT Selector 1                          | I        | I         | OL     |
| 80  | P10  | RSEL0 | I       | REC OUT Selector 0                          | I        | I         | OL     |
| 81  | P07  | /HPI  | I       | Head Phone Detect                           | I        | I         | OL     |
| 82  | P06  | VCPN  | O       | NTSC/PAL Format (0 : NTSC, 1 : PAL)         | I        | I         | OL     |
| 83  | P05  | /CSM  | O       | Reset for CS3310                            | O        | OL        | OL     |
| 84  | P04  |       | O       | Not used                                    | OL       | OL        | OL     |

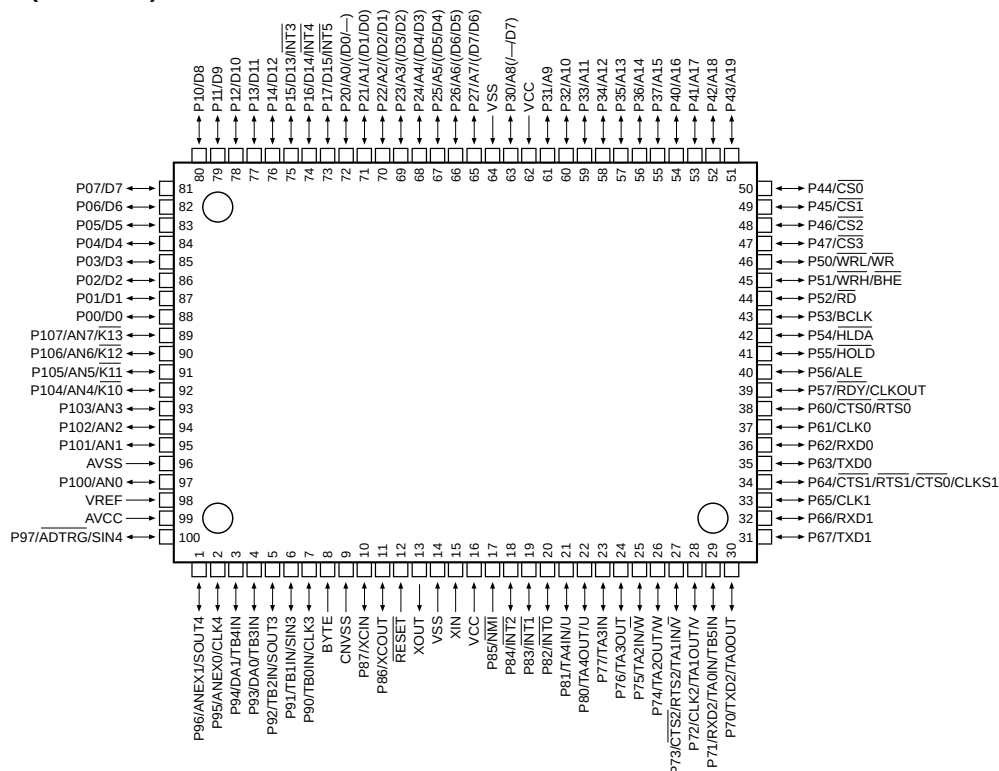
**IC27 : M30624FGFP (P.C.B. FUNCTION)**  
**16 bit  $\mu$ -COM (Main CPU)**

| No. | PORT | Name | I/O | Function                 | Power On | Power Off | Backup |
|-----|------|------|-----|--------------------------|----------|-----------|--------|
| 85  | P03  | PRY  | O   | Power Relay              | O        | OL        | OL     |
| 86  | P02  | VLRB | I   | Volume B                 | I        | I         | OL     |
| 87  | P01  | VLRA | I   | Volume A                 | I        | I         | OL     |
| 88  | P00  | PRI  | I   | I Protection             | I        | I         | OL     |
| 89  | AN7  | MTER | AD  | Tuner Meter              | I        | I         | I      |
| 90  | AN6  |      | AD  | Not used                 | I        | I         | I      |
| 91  | AN5  | KEY1 | AD  | Key State 1              | I        | I         | I      |
| 92  | AN4  | KEY0 | AD  | Key State 0              | I        | I         | I      |
| 93  | AN3  |      | AD  | Not used                 | I        | I         | I      |
| 94  | AN2  | THM  | AD  | Thermal Detect           | I        | I         | I      |
| 95  | AN1  | PRD  | AD  | DC Protection            | I        | I         | I      |
| 96  | AVSS | AVSS | VSS | Ground for AD            | VSS      | VSS       | VSS    |
| 97  | AN0  | PRV  | AD  | V Protection             | I        | I         | I      |
| 98  | VREF | VREF | VCC | Reference voltage for AD | VCC      | VCC       | VCC    |
| 99  | AVCC | AVCC | VCC | Power Supply for AD      | VCC      | VCC       | VCC    |
| 100 | P97  |      | O   | Not used                 | OL       | OL        | OL     |

**(Note 1) Pin 61, 63 Tuner Mode 0 and 1**

| Tuner Mode 1 | Tuner Mode 0 | Tuner Frequency              |                                 |
|--------------|--------------|------------------------------|---------------------------------|
| 0            | 0            | AM : 531-1611kHz(9kHz step)  | FM : 76.0-90.0MHz(100kHz step)  |
| 0            | 1            | AM : 530-1710kHz(10kHz step) | FM : 87.5-107.9MHz(200kHz step) |
| 1            | 0            | AM : 531-1611kHz(9kHz step)  | FM : 87.5-108.0MHz(50kHz step)  |
| 1            | 1            | DSP-AX1                      |                                 |

**IC1 : M30624FGFP (P.C.B. DSP)  
16 bit  $\mu$ -COM (Sub CPU)**

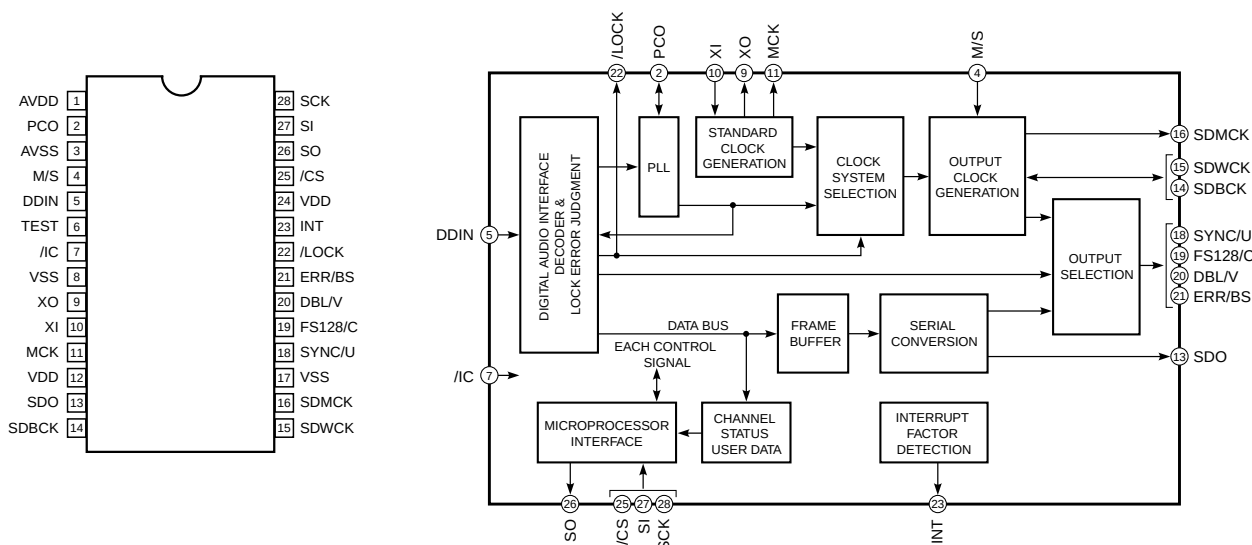


**IC1 : M30624FGFP (P.C.B. DSP)**
**16 bit  $\mu$ -COM (Sub CPU)**

| No. | PORT   | Name  | Function                                  | I/O | No. | PORT | Name   | Function                 | I/O |
|-----|--------|-------|-------------------------------------------|-----|-----|------|--------|--------------------------|-----|
| 1   | P96    | /CSA2 | CS for AC3D2av                            | O   | 51  | P43  | CA3    | DSP6 Address Bus 3       | O   |
| 2   | P95    | /CSA1 | CS for AC3Dav                             | O   | 52  | P42  | CA2    | DSP6 Address Bus 2       | O   |
| 3   | TB4IN  | DBL   | DIR5 Double Rate                          | I   | 53  | P41  | CA1    | DSP6 Address Bus 1       | O   |
| 4   | P93    | /CSD  | CS for DIR5                               | O   | 54  | P40  | CA0    | DSP6 Address Bus 0       | O   |
| 5   | SOUT   | SDM   | Tx for AC3Dav/AC3D2av/DIR5                | TXD | 55  | P37  | CD15   | DSP6 Data Bus 15         | I/O |
| 6   | SIN    | SDD   | Rx for AC3Dav/AC3D2av/DIR5                | RXD | 56  | P36  | CD14   | DSP6 Data Bus 14         | I/O |
| 7   | CLK3   | SCK   | CLK for AC3Dav/AC3D2av/DIR5               | CLK | 57  | P35  | CD13   | DSP6 Data Bus 13         | I/O |
| 8   | BYTE   | BYTE  | Single Chip Mode : VSS                    |     | 58  | P34  | CD12   | DSP6 Data Bus 12         | I/O |
| 9   | CNVSS  | CNVSS | Single Chip Mode : VSS, Flush Write : VCC |     | 59  | P33  | CD11   | DSP6 Data Bus 11         | I/O |
| 10  | P87    | NC    | –                                         | OL  | 60  | P32  | CD10   | DSP6 Data Bus 10         | I/O |
| 11  | P86    | NC    | –                                         | OL  | 61  | P31  | CD9    | DSP6 Data Bus 9          | I/O |
| 12  | /RESET | /RST  | Reset from Main                           | RST | 62  | VCC  | VCC    | +5V                      |     |
| 13  | XOUT   | XOUT  | 16MHz                                     |     | 63  | P30  | CD8    | DSP6 Data Bus 8          | I/O |
| 14  | VSS    | GND   | GND                                       |     | 64  | VSS  | VSS    | GND                      |     |
| 15  | XIN    | XIN   | 16MHz                                     |     | 65  | P27  | CD7    | DSP6 Data Bus 7          | I/O |
| 16  | VCC    | VCC   | +5V                                       |     | 66  | P26  | CD6    | DSP6 Data Bus 6          | I/O |
| 17  | P85    | /NMI  | +5V                                       | I   | 67  | P25  | CD5    | DSP6 Data Bus 5          | I/O |
| 18  | INT2   | NPCM  | AC3D2av Non PCM                           | IRQ | 68  | P24  | CD4    | DSP6 Data Bus 4          | I/O |
| 19  | INT1   | ERRA  | AC3D2av Mute                              | IRQ | 69  | P23  | CD3    | DSP6 Data Bus 3          | I/O |
| 20  | INT0   | IRQD  | DIR5 IRQ                                  | IRQ | 70  | P22  | CD2    | DSP6 Data Bus 2          | I/O |
| 21  | P81    | NC    | –                                         | OL  | 71  | P21  | CD1    | DSP6 Data Bus 1          | I/O |
| 22  | P80    | /ICD  | IC for AC3Dav/DIR/DA/AD/DEM               | O   | 72  | P20  | CD0    | DSP6 Data Bus 0          | I/O |
| 23  | P77    | 96SL  | fs 96kHz Select (Hi : 96kHz)              | O   | 73  | INT5 | /IRQ62 | DSP6 #2 IRQ              | IRQ |
| 24  | P76    | /DMT  | Digital Full Mute                         | O   | 74  | P16  |        | –                        | OL  |
| 25  | P75    | NC    | –                                         | OL  | 75  | INT3 | /IRQ61 | DSP6 #1 IRQ              | IRQ |
| 26  | P74    | TRQ   | CPU I/F Request                           | O   | 76  | P14  | /IC6   | DSP6 Initial Clear       | O   |
| 27  | P73    | MCWC  | CPU I/F Word Clock                        | O   | 77  | P13  |        | –                        | OL  |
| 28  | CLK2   | MCBC  | CPU I/F Bit Clock                         | CLK | 78  | P12  |        | –                        | OL  |
| 29  | RXD2   | MTS   | CPU I/F Main to Sub                       | RXD | 79  | P11  |        | –                        | OL  |
| 30  | TXD2   | STM   | CPU I/F Sub to Main                       | TXD | 80  | P10  |        | –                        | OL  |
| 31  | TXD1   | TXFL  | Tx for Flash                              | TXD | 81  | P07  |        | –                        | OL  |
| 32  | RXD1   | RXFL  | Rx for Flash                              | RXD | 82  | P06  |        | –                        | OL  |
| 33  | CLK1   | CLKFL | CLK for Flash                             | CLK | 83  | P05  |        | –                        | OL  |
| 34  | RTS1   | BSYFL | BUSY for Flash                            | RTS | 84  | P04  |        | –                        | OL  |
| 35  | P63    |       | –                                         | OL  | 85  | P03  |        | –                        | OL  |
| 36  | P62    |       | –                                         | OL  | 86  | P02  |        | –                        | OL  |
| 37  | P61    |       | –                                         | OL  | 87  | P01  |        | –                        | OL  |
| 38  | P60    |       | –                                         | OL  | 88  | P00  |        | –                        | OL  |
| 39  | P57    | /WT62 | DSP6 #2 Wait                              | I   | 89  | P107 |        | –                        | OL  |
| 40  | P56    | /WT61 | DSP6 #1 Wait                              | I   | 90  | P106 |        | –                        | OL  |
| 41  | P55    | /EPM  | GND for Flash                             | I   | 91  | P105 |        | –                        | OL  |
| 42  | P54    | /CS62 | DSP6 #2 Chip Select                       | O   | 92  | P104 | MUTO   | RF DEM MUTO              | I   |
| 43  | P53    | /CS61 | DSP6 #1 Chip Select                       | O   | 93  | P103 | CXCA   | CABLE Coaxial            | I   |
| 44  | P52    | /WR6  | DSP6 Write Enable                         | O   | 94  | P102 | CXDV   | DVD Coaxial              | I   |
| 45  | P51    | /RD6  | DSP6 Read Enable                          | O   | 95  | P101 | CXCD   | CD Coaxial               | I   |
| 46  | P50    | /CE   | +5V for Flash                             | I   | 96  | AVSS | AVSS   | GND for Analog           | I   |
| 47  | P47    | CA7   | DSP6 Address Bus 7                        | O   | 97  | AN0  |        | –                        | AD  |
| 48  | P46    | CA6   | DSP6 Address Bus 6                        | O   | 98  | VREF | VREF   | Reference voltage for AD |     |
| 49  | P45    | CA5   | DSP6 Address Bus 5                        | O   | 99  | AVCC | AVCC   | Power supply for Analog  |     |
| 50  | P44    | CA4   | DSP6 Address Bus 4                        | O   | 100 | P97  | /CSAS  | CS for AC3D2av Sub DSP   | O   |



**IC2 : YSD917 (P.C.B. DSP)**  
**DIR5 (Digital Format Interface Receiver)**



| No. | Name    | I/O  | Function                                                      |
|-----|---------|------|---------------------------------------------------------------|
| 1   | AVDD    |      | Analog power supply for PLL (+5V)                             |
| 2   | PCO     | A    | PLL filter connecting terminal                                |
| 3   | AVSS    |      | Analog ground                                                 |
| 4   | M/S     | Is+  | Master/slave mode selection                                   |
| 5   | DDIN    | Is   | Digital audio interface data input                            |
| 6   | TEST    | Is+  | Test terminal (to be open)                                    |
| 7   | /IC     | Is   | Initial clear input                                           |
| 8   | VSS     |      | Ground                                                        |
| 9   | XO      | O    | 24.576MHz crystal oscillator connecting terminal (output)     |
| 10  | XI      | I    | 24.576MHz crystal oscillator connecting terminal (input)      |
| 11  | MCK     | O    | 12.288MHz clock output terminal                               |
| 12  | VDD     |      | +5V power supply                                              |
| 13  | SDO     | O    | Serial data output                                            |
| 14  | SDBCK   | Is/O | Serial data bit clock input/output 64fs                       |
| 15  | SDWCK   | I/O  | Serial data word clock input/output fs                        |
| 16  | SDMCK   | O    | Serial data master clock output 256fs or 128fs                |
| 17  | VSS     |      | Ground                                                        |
| 18  | SYNC/U  | O    | Serial data synchronous timing output / user data output      |
| 19  | FS128/C | O    | Serial data master clock 128fs output / channel status output |
| 20  | DBL/V   | O    | Double rate clock output / validity flag output               |
| 21  | ERR/BS  | O    | Data error detect output / block start output                 |
| 22  | /LOCK   | O    | PLL lock detect output                                        |
| 23  | INT     | O    | Interrupt output                                              |
| 24  | VDD     |      | +5V power supply                                              |
| 25  | /CS     | I    | Microprocessor interface chip select input                    |
| 26  | SO      | Ot   | Microprocessor interface data output                          |
| 27  | SI      | I    | Microprocessor interface data input                           |
| 28  | SCK     | Is   | Microprocessor interface bit clock input                      |

**Is:** Schmidt trigger input terminal

**I+:** Input terminal with pull-up resistor

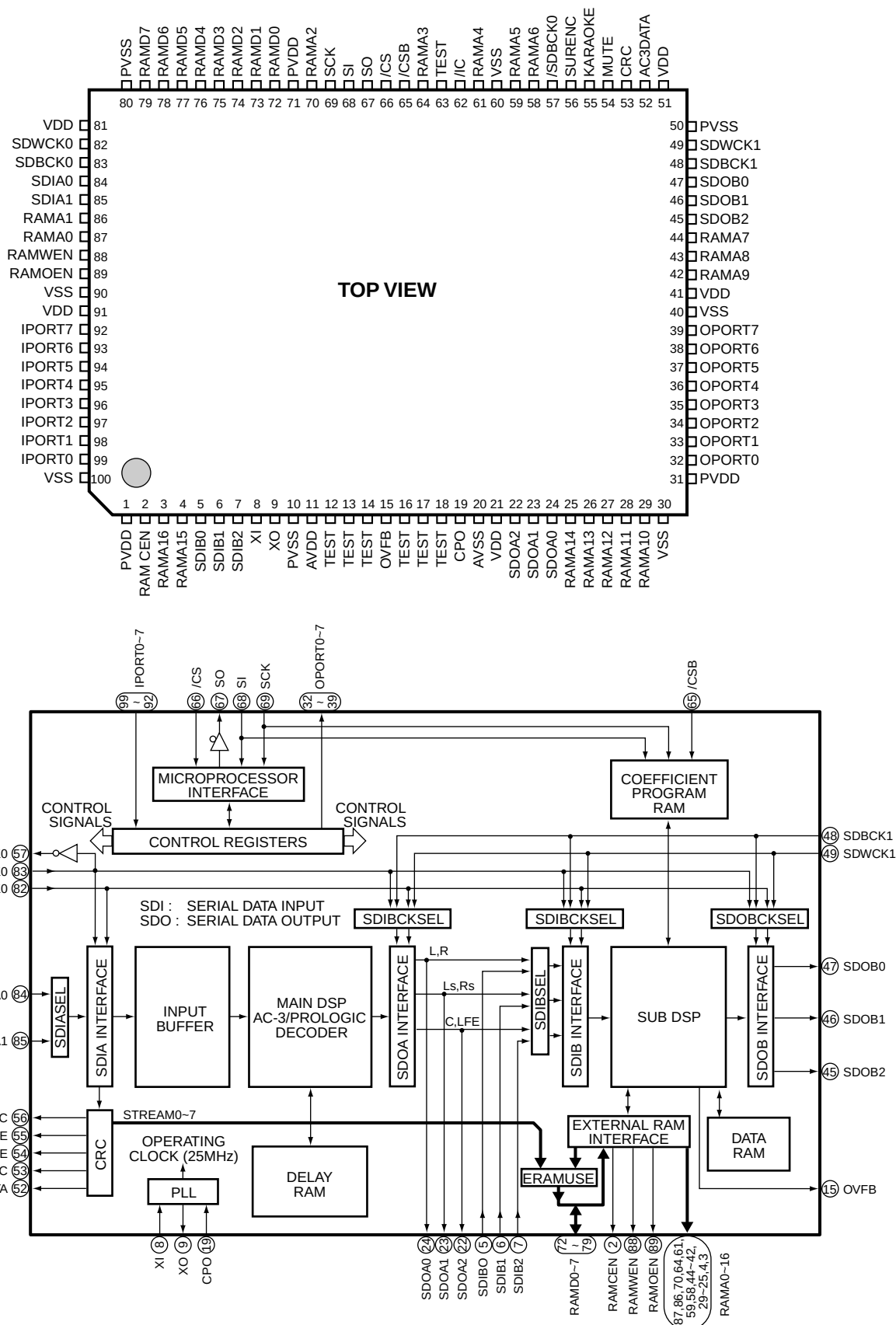
**O:** digital output terminal

**Ot:** Tri-state digital output terminal

**A:** Analog terminal

With SYNC/U, FS128, DBL/V and ERR/BS, select each function by setting the control register.

IC5 : YSS908-F (P.C.B. DSP)  
AC3Dav



DSP-AX1/RX-V1

## IC5 : YSS908 (P.C.B. DSP)

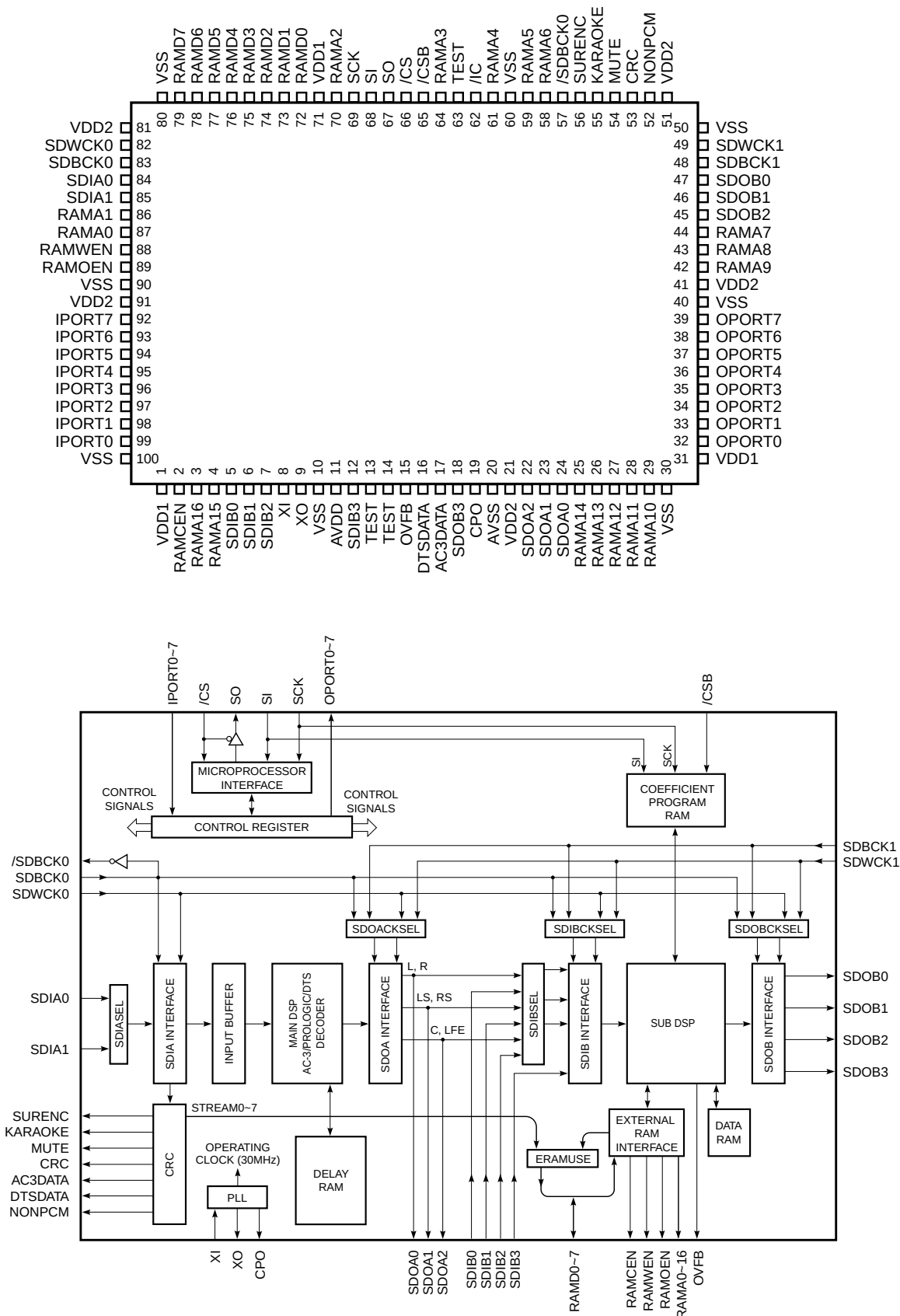
## AC3Dav

| No. | Name    | I/O | Function                                                                                |
|-----|---------|-----|-----------------------------------------------------------------------------------------|
| 1   | PVDD    |     | +5V power supply                                                                        |
| 2   | RAMCEN  | O   | External SRAM chip enable terminal                                                      |
| 3   | RAMA16  | O   | External SRAM address terminal 16                                                       |
| 4   | RAMA15  | O   | External SRAM address terminal 15                                                       |
| 5   | SDIB0   | I   | PCM input terminal 0 to Sub DSP                                                         |
| 6   | SDIB1   | I   | PCM input terminal 1 to Sub DSP                                                         |
| 7   | SDIB2   | I   | PCM input terminal 2 to Sub DSP                                                         |
| 8   | XI      | I   | Crystal oscillator connecting terminal (12.288MHz )                                     |
| 9   | XO      | O   | Crystal oscillator connecting terminal                                                  |
| 10  | PVSS    |     | Ground terminal (for digital)                                                           |
| 11  | AVDD    |     | +3V power terminal (for analog)                                                         |
| 12  | TEST    |     | Test terminal (unconnected)                                                             |
| 13  | TEST    |     | Test terminal (unconnected)                                                             |
| 14  | TEST    |     | Test terminal (unconnected)                                                             |
| 15  | OVFB    | O   | Sub DSP overflow detect terminal                                                        |
| 16  | TEST    |     | Test terminal (unconnected)                                                             |
| 17  | TEST    |     | Test terminal (unconnected)                                                             |
| 18  | TEST    |     | Test terminal (unconnected)                                                             |
| 19  | CPO     | O   | PLL output terminal (connected to external analog filter circuit)                       |
| 20  | AVSS    |     | Ground terminal (for PLL circuit)                                                       |
| 21  | VDD2    |     | +3.3V power terminal (for internal circuit)                                             |
| 22  | SDOA2   | O   | PCM output terminal from Main DSP (C/LFE output at AC-3/DTS, C/S output at Pro Logic)   |
| 23  | SDOA1   | O   | PCM output terminal from Main DSP (LS/RS output at AC-3/DTS, Lt/Rt output at Pro Logic) |
| 24  | SDOA0   | O   | PCM output terminal from Main DSP (L/R output at both AC-3/DTS and Pro Logic)           |
| 25  | RAMA14  | O   | External SRAM address terminal 14                                                       |
| 26  | RAMA13  | O   | External SRAM address terminal 13                                                       |
| 27  | RAMA12  | O   | External SRAM address terminal 12                                                       |
| 28  | RAMA11  | O   | External SRAM address terminal 11                                                       |
| 29  | RAMA10  | O   | External SRAM address terminal 10                                                       |
| 30  | VSS     |     | Ground terminal (for internal circuit)                                                  |
| 31  | PVDD    |     | +5V power terminal                                                                      |
| 32  | OPORT0  | O   | General purpose output terminal (L/R ch is shifted by +3dB at Dolby Pro Logic)          |
| 33  | OPORT1  | O   | General purpose output terminal (N.C.)                                                  |
| 34  | OPORT2  | O   | General purpose output terminal (N.C.)                                                  |
| 35  | OPORT3  | O   | General purpose output terminal (N.C.)                                                  |
| 36  | OPORT4  | O   | General purpose output terminal (N.C.)                                                  |
| 37  | OPORT5  | O   | General purpose output terminal (N.C.)                                                  |
| 38  | OPORT6  | O   | General purpose output terminal (N.C.)                                                  |
| 39  | OPORT7  | O   | General purpose output terminal (N.C.)                                                  |
| 40  | VSS     |     | Ground terminal (for internal circuit)                                                  |
| 41  | VDD     |     | +3V power terminal                                                                      |
| 42  | RAMA9   | O   | External SRAM address terminal 9                                                        |
| 43  | RAMA8   | O   | External SRAM address terminal 8                                                        |
| 44  | RAMA7   | O   | External SRAM address terminal 7                                                        |
| 45  | SDOB2   | O   | PCM output terminal from Sub DSP                                                        |
| 46  | SDOB1   | O   | PCM output terminal from Sub DSP                                                        |
| 47  | SDOB0   | O   | PCM output terminal from Sub DSP                                                        |
| 48  | SDBCK1  | I   | Bit clock input terminal for SDOA, SDIB, SDOB signals                                   |
| 49  | SDWCK1  | I   | Word clock input terminal for SDOA, SDIB, SDOB signals                                  |
| 50  | VSS     |     | Ground terminal                                                                         |
| 51  | VDD     |     | +3V power terminal                                                                      |
| 52  | AC3DATA | O   | AC-3 data output terminal, AC-3 bit stream data detect                                  |

**IC5 : YSS908 (P.C.B. DSP)**  
**AC3Dav**

| No. | Name    | I/O | Function                                                                     |
|-----|---------|-----|------------------------------------------------------------------------------|
| 53  | CRC     | O   | AC-3 CRC error detect terminal                                               |
| 54  | MUTE    | O   | Auto mute detect terminal                                                    |
| 55  | KARAOKE | O   | AC-3 KARAOKE data detect terminal                                            |
| 56  | SURENC  | O   | AC-3 2/0 mode Dolby surround encode input detect terminal                    |
| 57  | /SDBCK0 | O   | SDBCK0 invert clock output terminal                                          |
| 58  | RAMA6   | O   | External SRAM address terminal 6                                             |
| 59  | RAMA5   | O   | External SRAM address terminal 5                                             |
| 60  | VSS     |     | Ground terminal                                                              |
| 61  | RAMA4   | O   | External SRAM address terminal 4                                             |
| 62  | /IC     | I   | Initial clear terminal                                                       |
| 63  | TEST    |     | Test terminal (unconnected)                                                  |
| 64  | RAMA3   | O   | External SRAM address terminal 3                                             |
| 65  | /CSB    | I   | Sub DSP chip select input terminal                                           |
| 66  | /CS     | I   | Microprocessor interface chip select input terminal                          |
| 67  | SO      | O   | Microprocessor interface data output terminal                                |
| 68  | SI      | I   | Microprocessor interface and Sub DSP data input terminal                     |
| 69  | SCK     | I   | Microprocessor interface and Sub DSP clock input terminal                    |
| 70  | RAMA2   | O   | External SRAM address terminal 2                                             |
| 71  | PVDD    |     | +5V power terminal                                                           |
| 72  | RAMD0   | I/O | External SRAM data terminal (STREAM 0 output when external SRAM is not used) |
| 73  | RAMD1   | I/O | External SRAM data terminal (STREAM 1 output when external SRAM is not used) |
| 74  | RAMD2   | I/O | External SRAM data terminal (STREAM 2 output when external SRAM is not used) |
| 75  | RAMD3   | I/O | External SRAM data terminal (STREAM 3 output when external SRAM is not used) |
| 76  | RAMD4   | I/O | External SRAM data terminal (STREAM 4 output when external SRAM is not used) |
| 77  | RAMD5   | I/O | External SRAM data terminal (STREAM 5 output when external SRAM is not used) |
| 78  | RAMD6   | I/O | External SRAM data terminal (STREAM 6 output when external SRAM is not used) |
| 79  | RAMD7   | I/O | External SRAM data terminal (STREAM 7 output when external SRAM is not used) |
| 80  | PVSS    |     | Ground terminal                                                              |
| 81  | VDD2    |     | +3V power terminal                                                           |
| 82  | SDWCK0  | I   | Word clock input terminal for SDIA, SDOA, SDIB and SDOB signals              |
| 83  | SDBCK0  | I   | Bit clock input terminal for SDIA, SDOA, SDIB and SDOB signals               |
| 84  | SDIA0   | I   | AC-3/DTS bit stream (or PCM) data input terminal to Main DSP                 |
| 85  | SDIA1   | I   | AC-3/DTS bit stream (or PCM) data input terminal to Main DSP                 |
| 86  | RAMA1   | O   | External SRAM address terminal 1                                             |
| 87  | RAMA0   | O   | External SRAM address terminal 0                                             |
| 88  | RAMWEN  | O   | External SRAM write enable terminal                                          |
| 89  | RAMOEN  | O   | External SRAM output enable terminal                                         |
| 90  | VSS     |     | Ground terminal                                                              |
| 91  | VDD     |     | +3V power terminal                                                           |
| 92  | IPORT7  | I   | General purpose input terminal (GND)                                         |
| 93  | IPORT6  | I   | General purpose input terminal (GND)                                         |
| 94  | IPORT5  | I   | General purpose input terminal (GND)                                         |
| 95  | IPORT4  | I   | General purpose input terminal (GND)                                         |
| 96  | IPORT3  | I   | General purpose input terminal (GND)                                         |
| 97  | IPORT2  | I   | General purpose input terminal (GND)                                         |
| 98  | IPORT1  | I   | General purpose input terminal (GND)                                         |
| 99  | IPORT0  | I   | General purpose input terminal (GND)                                         |
| 100 | VSS     |     | Ground terminal                                                              |

IC6 : YSS918 (P.C.B. DSP)  
AC3D2av



**IC6 : YSS918 (P.C.B. DSP)**
**AC3D2av**

| No. | Name    | I/O | Function                                                                                |
|-----|---------|-----|-----------------------------------------------------------------------------------------|
| 1   | VDD     |     | +5V power supply (for terminal section)                                                 |
| 2   | RAMCEN  | O   | External SRAM chip enable terminal                                                      |
| 3   | RAMA16  | O   | External SRAM address terminal 16                                                       |
| 4   | RAMA15  | O   | External SRAM address terminal 15                                                       |
| 5   | SDIB0   | Itp | PCM input terminal 0 to Sub DSP                                                         |
| 6   | SDIB1   | Itp | PCM input terminal 1 to Sub DSP                                                         |
| 7   | SDIB2   | Itp | PCM input terminal 2 to Sub DSP                                                         |
| 8   | XI      | Ic  | Crystal oscillator connecting terminal (12.288MHz )                                     |
| 9   | XO      | O   | Crystal oscillator connecting terminal                                                  |
| 10  | VSS     |     | Ground terminal (for terminal section)                                                  |
| 11  | AVDD    |     | +3.3V power terminal (for PLL circuit)                                                  |
| 12  | SDIB3   | Itp | PCM input terminal 3 to Sub DSP                                                         |
| 13  | TEST    |     | Test terminal (unconnected)                                                             |
| 14  | TEST    |     | Test terminal (unconnected)                                                             |
| 15  | OVFB    | O   | Sub DSP overflow detect terminal                                                        |
| 16  | DTSDATA | O   | DTS data detect terminal                                                                |
| 17  | AC3DATA | O   | AC-3 data detect terminal                                                               |
| 18  | SDOB3   | O   | PCM output terminal from Sub DSP                                                        |
| 19  | CPO     | A   | PLL output terminal (connected to external analog filter circuit)                       |
| 20  | AVSS    |     | Ground terminal (for PLL circuit)                                                       |
| 21  | VDD2    |     | +3.3V power terminal (for internal circuit)                                             |
| 22  | SDOA2   | O   | PCM output terminal from Main DSP (C/LFE output at AC-3/DTS, C/S output at Pro Logic)   |
| 23  | SDOA1   | O   | PCM output terminal from Main DSP (LS/RS output at AC-3/DTS, Lt/Rt output at Pro Logic) |
| 24  | SDOA0   | O   | PCM output terminal from Main DSP (L/R output at both AC-3/DTS and Pro Logic)           |
| 25  | RAMA14  | O   | External SRAM address terminal 14                                                       |
| 26  | RAMA13  | O   | External SRAM address terminal 13                                                       |
| 27  | RAMA12  | O   | External SRAM address terminal 12                                                       |
| 28  | RAMA11  | O   | External SRAM address terminal 11                                                       |
| 29  | RAMA10  | O   | External SRAM address terminal 10                                                       |
| 30  | VSS     |     | Ground terminal (for internal circuit)                                                  |
| 31  | VDD1    |     | +5V power terminal (for terminal section)                                               |
| 32  | OPORT0  | O   | General purpose output terminal (ISL0 : DIGITAL INPUT SEL)                              |
| 33  | OPORT1  | O   | General purpose output terminal (ISL1 : DIGITAL INPUT SEL)                              |
| 34  | OPORT2  | O   | General purpose output terminal (ISL2 : DIGITAL INPUT SEL)                              |
| 35  | OPORT3  | O   | General purpose output terminal (RFSL : LD RF INPUT SEL)                                |
| 36  | OPORT4  | O   | General purpose output terminal (RSL0 : DIGITAL REC OUT SEL)                            |
| 37  | OPORT5  | O   | General purpose output terminal (RSL1 : DIGITAL REC OUT SEL)                            |
| 38  | OPORT6  | O   | General purpose output terminal (RSL2 : DIGITAL REC OUT SEL)                            |
| 39  | OPORT7  | O   | General purpose output terminal (ADSL : AD INPUT SEL)                                   |
| 40  | VSS     |     | Ground terminal (for internal circuit)                                                  |
| 41  | VDD2    |     | +3.3V power terminal (for internal circuit)                                             |
| 42  | RAMA9   | O   | External SRAM address terminal 9                                                        |
| 43  | RAMA8   | O   | External SRAM address terminal 8                                                        |
| 44  | RAMA7   | O   | External SRAM address terminal 7                                                        |
| 45  | SDOB2   | O   | PCM output terminal from Sub DSP                                                        |
| 46  | SDOB1   | O   | PCM output terminal from Sub DSP                                                        |
| 47  | SDOB0   | O   | PCM output terminal from Sub DSP                                                        |
| 48  | SDBCK1  | Itp | Bit clock input terminal for SDOA, SDIB, SDOB signals                                   |
| 49  | SDWCK1  | Itp | Word clock input terminal for SDOA, SDIB, SDOB signals                                  |
| 50  | VSS     |     | Ground terminal (for terminal section)                                                  |
| 51  | VDD2    |     | +3.3V power terminal (for internal circuit)                                             |
| 52  | NONPCM  | O   | Non-PCM data detect terminal                                                            |

**IC6 : YSS918 (P.C.B. DSP)**  
**AC3D2av**

| No. | Name    | I/O   | Function                                                                      |
|-----|---------|-------|-------------------------------------------------------------------------------|
| 53  | CRC     | O     | AC-3 CRC error detect terminal                                                |
| 54  | MUTE    | O     | Auto mute detect terminal                                                     |
| 55  | KARAOKE | O     | AC-3 KARAOKE data detect terminal                                             |
| 56  | SURENC  | O     | AC-3 2/0 mode Dolby surround encode input detect terminal                     |
| 57  | /SDBCK0 | O     | SDBCK0 invert clock output terminal                                           |
| 58  | RAMA6   | O     | External SRAM address terminal 6                                              |
| 59  | RAMA5   | O     | External SRAM address terminal 5                                              |
| 60  | VSS     |       | Ground terminal (for internal circuit)                                        |
| 61  | RAMA4   | O     | External SRAM address terminal 4                                              |
| 62  | /IC     | Ics   | Initial clear terminal                                                        |
| 63  | TEST    |       | Test terminal (unconnected)                                                   |
| 64  | RAMA3   | O     | External SRAM address terminal 3                                              |
| 65  | /CSB    | Itp   | Sub DSP chip select input terminal                                            |
| 66  | /CS     | Ics   | Microprocessor interface chip select input terminal                           |
| 67  | SO      | O*    | Microprocessor interface data output terminal                                 |
| 68  | SI      | Ics   | Microprocessor interface and Sub DSP data input terminal                      |
| 69  | SCK     | Ics   | Microprocessor interface and Sub DSP clock input terminal                     |
| 70  | RAMA2   | O     | External SRAM address terminal 2                                              |
| 71  | VDD1    |       | +5V power terminal (for terminal section)                                     |
| 72  | RAMD0   | Itp/O | External SRAM data terminal (STREAM 0 output when external SRAM is not used)  |
| 73  | RAMD1   | Itp/O | External SRAM data terminal (STREAM 1 output when external SRAM is not used)  |
| 74  | RAMD2   | Itp/O | External SRAM data terminal (STREAM 2 output when external SRAM is not used)  |
| 75  | RAMD3   | Itp/O | External SRAM data terminal (STREAM 3 output when external SRAM is not used)  |
| 76  | RAMD4   | Itp/O | External SRAM data terminal (STREAM 4 output when external SRAM is not used)  |
| 77  | RAMD5   | Itp/O | External SRAM data terminal (STREAM 5 output when external SRAM is not used)  |
| 78  | RAMD6   | Itp/O | External SRAM data terminal (STREAM 6 output when external SRAM is not used)  |
| 79  | RAMD7   | Itp/O | External SRAM data terminal (STREAM 7 output when external SRAM is not used)  |
| 80  | VSS     |       | Ground terminal (for terminal section)                                        |
| 81  | VDD2    |       | +3.3V power terminal (for internal circuit)                                   |
| 82  | SDWCK0  | It    | Word clock input terminal for SDIA, SDOA, SDIB and SDOB signals               |
| 83  | SDBCK0  | It    | Bit clock input terminal for SDIA, SDOA, SDIB and SDOB signals                |
| 84  | SDIA0   | It    | AC-3/DTS bit stream (or PCM) data input terminal to Main DSP                  |
| 85  | SDIA1   | It    | AC-3/DTS bit stream (or PCM) data input terminal to Main DSP                  |
| 86  | RAMA1   | O     | External SRAM address terminal 1                                              |
| 87  | RAMA0   | O     | External SRAM address terminal 0                                              |
| 88  | RAMWEN  | O     | External SRAM write enable terminal                                           |
| 89  | RAMOEN  | O     | External SRAM output enable terminal                                          |
| 90  | VSS     |       | Ground terminal                                                               |
| 91  | VDD2    |       | +3.3V power terminal (for internal circuit)                                   |
| 92  | IPORT7  | Itp   | General purpose input terminal (Used for IC YSS908/918 identification: +3.3V) |
| 93  | IPORT6  | Itp   | General purpose input terminal (GND)                                          |
| 94  | IPORT5  | Itp   | General purpose input terminal (GND)                                          |
| 95  | IPORT4  | Itp   | General purpose input terminal (GND)                                          |
| 96  | IPORT3  | Itp   | General purpose input terminal (GND)                                          |
| 97  | IPORT2  | Itp   | General purpose input terminal (GND)                                          |
| 98  | IPORT1  | Itp   | General purpose input terminal (GND)                                          |
| 99  | IPORT0  | Itp   | General purpose input terminal (GND)                                          |
| 100 | VSS     |       | Ground terminal                                                               |

Note) Listed below are symbols in the I/O column and their meanings.

Ic: CMOS level input terminal

Is: Schmidt trigger input terminal

O: Digital output terminal

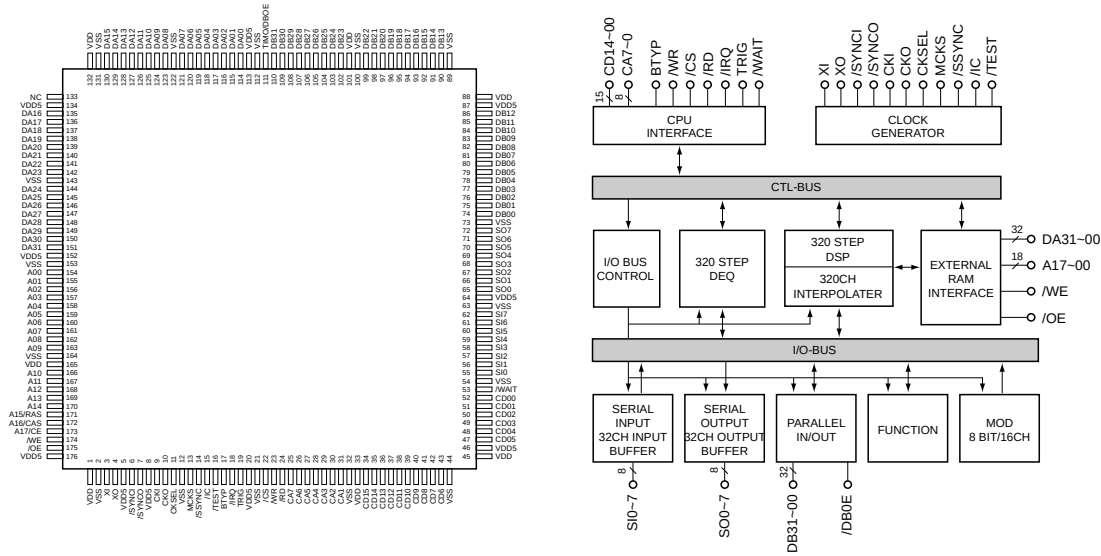
A: Analog input terminal

It: TTL level input terminal

Ip: Input terminal with pull-up resistor

O\*: Tri-state digital output terminal

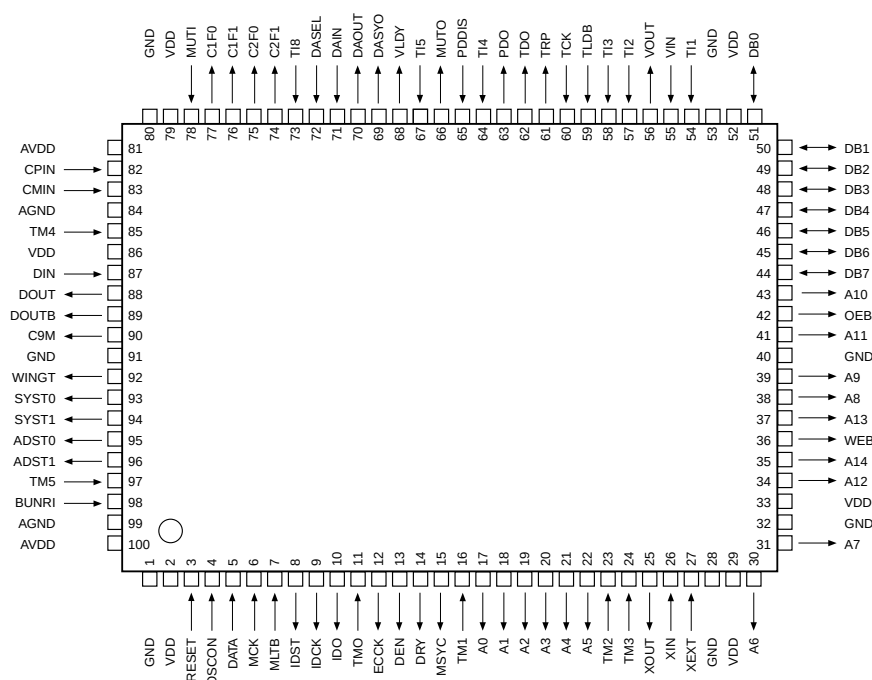
IC7, 8 : YSS910-S  
DSP6 (Digital Audio Processor)



| Name      | I/O  | Function                                                      |
|-----------|------|---------------------------------------------------------------|
| XI        | I    | System master clock input (60MHz or 30MHz)                    |
| XO        | O    | System master clock output (60MHz or 30MHz)                   |
| /SYNCl    | I    | System synchronous signal input                               |
| CKI       | I    | System clock input (30MHz)                                    |
| /SYNCO    | O    | System synchronous signal output                              |
| CKO       | O    | System clock output (30MHz)                                   |
| CKSEL     | I    | System master clock select (0:60MHz, 1: 30MHz)                |
| MCKS      | I    | Master clock input for serial I/O (128 x Fs)                  |
| /SSYNc    | I    | Synchronous signal input for serial I/O                       |
| /IC       | Is   | Initial clear                                                 |
| /TEST     | I+   | Test mode setting (0: Test, 1: Normal)                        |
| CD14-00   | I/O  | Host CPU data bus                                             |
| CA0/CD15  | I/O  | Host CPU address bus / data bus                               |
| CA7-1     | I    | Host CPU address bus                                          |
| BTYP      | I    | Host CPU data bus width select (0: 8 bit, 1: 16 bit)          |
| /CS       | Is+  | Chip select signal input                                      |
| /RD       | Is+  | Read signal input                                             |
| /WR       | Is+  | Write signal input                                            |
| /IRQ      | O    | IRQ output                                                    |
| TRIG      | I/O  | Transfer trigger signal input/output                          |
| /WAIT     | O    | WAIT output                                                   |
| SI7-0     | I+   | Serial data input                                             |
| SO7-0     | O    | Serial data output                                            |
| DB31-00   | I+/O | Parallel data bus                                             |
| TIMO/DBOE | I/O  | Timing signal output / parallel data bus output control input |
| DA31-00   | I+/O | External memory data bus                                      |
| A17/CE    | O    | External memory address (SRAM), /CE (PSRAM)                   |
| A16/CAS   | O    | External memory address (SRAM, PSRAM), /CAS (DRAM)            |
| A15/RAS   | O    | External memory address (SRAM, PSRAM), /RAS (DRAM)            |
| A14-12    | O    | External memory address (SRAM, PSRAM)                         |
| A11-00    | O    | External memory address (SRAM, PSRAM, DRAM)                   |
| /WE       | O    | External memory Write Enable signal                           |
| /OE       | O    | External memory Output Enable signal                          |
| (N.C.)    | —    | No connection                                                 |
| VDD5      | —    | +5V                                                           |
| VDD       | —    | +3.3V                                                         |
| VSS       | —    | Ground                                                        |



**IC24 : PM4007A (P.C.B. DSP)**  
**AC-3 RF Demodulator**



| No. | Name  | I/O | Function                                                                                                  |
|-----|-------|-----|-----------------------------------------------------------------------------------------------------------|
| 1   | GND   |     | Ground (0V)                                                                                               |
| 2   | VDD   |     | +5V power supply                                                                                          |
| 3   | RESET | I   | System resetting terminal (reset at "L")                                                                  |
| 4   | OSCON | I   | Oscillation control terminal. Oscillation ON at "H", set to "H" normally and to "L" when in standby state |
| 5   | DATA  | I   | IC test terminal, normally connected to ground (or unconnected)                                           |
| 6   | MCK   | I   | IC test terminal, normally connected to ground (or unconnected)                                           |
| 7   | MLTB  | I   | IC test terminal, normally connected to ground (or unconnected)                                           |
| 8   | IDST  | O   | Output terminal for IC test                                                                               |
| 9   | IDCK  | O   | Output terminal for IC test                                                                               |
| 10  | IDO   | O   | Output terminal for IC test                                                                               |
| 11  | TM0   | I   | IC test terminal, normally connected to ground (or unconnected)                                           |
| 12  | ECCK  | O   | Output terminal for IC test                                                                               |
| 13  | DEN   | O   | Output terminal for IC test                                                                               |
| 14  | DRY   | O   | Output terminal for IC test                                                                               |
| 15  | MSYC  | O   | Output terminal for IC test                                                                               |
| 16  | TM1   | I   | IC test terminal, normally connected to ground (or unconnected)                                           |
| 17  | A0    | O   | External RAM address output. Address 0 (LSB)                                                              |
| 18  | A1    | O   | External RAM address output. Address 1                                                                    |
| 19  | A2    | O   | External RAM address output. Address 2                                                                    |
| 20  | A3    | O   | External RAM address output. Address 3                                                                    |
| 21  | A4    | O   | External RAM address output. Address 4                                                                    |
| 22  | A5    | O   | External RAM address output. Address 5                                                                    |
| 23  | TM2   | I   | IC test terminal, normally connected to ground (or unconnected)                                           |
| 24  | TM3   | I   | IC test terminal, normally connected to ground (or unconnected)                                           |
| 25  | XOUT  | O   | Output terminal for IC test                                                                               |
| 26  | XIN   | I   | IC test terminal, normally connected to ground (or unconnected)                                           |
| 27  | XEXT  | I   | IC test terminal, normally connected to ground (or unconnected)                                           |
| 28  | GND   |     | Ground terminal (0V)                                                                                      |
| 29  | VDD   |     | +5V power supply                                                                                          |

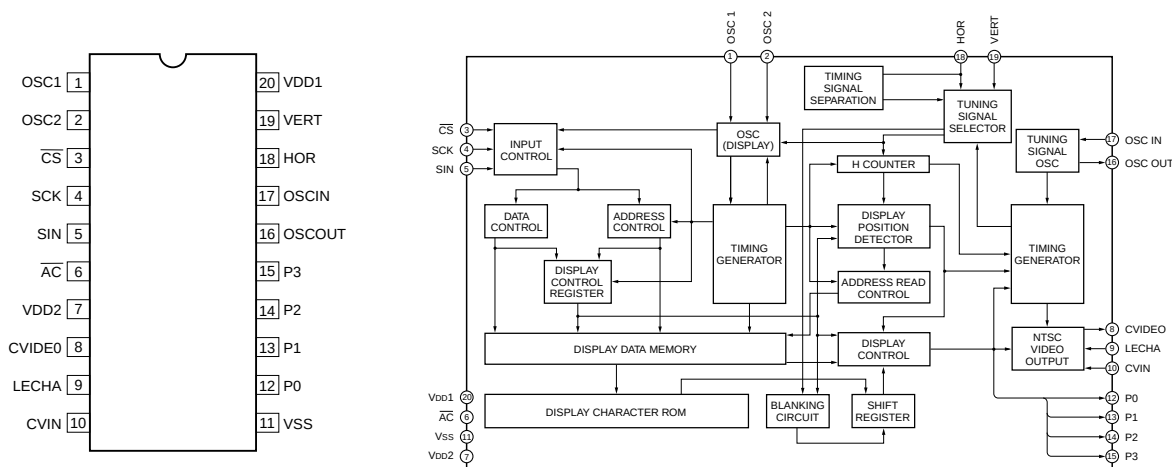
**IC24 : PM4007A (P.C.B. DSP)**
**AC-3 RF Demodulator**

| No. | Name  | I/O | Function                                                                                              |
|-----|-------|-----|-------------------------------------------------------------------------------------------------------|
| 30  | A6    | O   | External RAM address output. Address 6                                                                |
| 31  | A7    | O   | External RAM address output. Address 7                                                                |
| 32  | GND   |     | Ground terminal (0V)                                                                                  |
| 33  | VDD   |     | +5V power supply                                                                                      |
| 34  | A12   | O   | External RAM address output. Address 12                                                               |
| 35  | A14   | O   | External RAM address output. Address 14 (MSB)                                                         |
| 36  | WEB   | O   | External RAM write enable signal, active at "L"                                                       |
| 37  | A13   | O   | External RAM address output. Address 13                                                               |
| 38  | A8    | O   | External RAM address output. Address 8                                                                |
| 39  | A9    | O   | External RAM address output. Address 9                                                                |
| 40  | GND   |     | Ground terminal (0V)                                                                                  |
| 41  | A11   | O   | External RAM address output. Address 11                                                               |
| 42  | OEB   | O   | External RAM output enable signal, active at "L"                                                      |
| 43  | A10   | O   | External RAM address output. Address 10                                                               |
| 44  | DB7   | I/O | External RAM data terminal. Data bus 7                                                                |
| 45  | DB6   | I/O | External RAM data terminal. Data bus 6                                                                |
| 46  | DB5   | I/O | External RAM data terminal. Data bus 5                                                                |
| 47  | DB4   | I/O | External RAM data terminal. Data bus 4                                                                |
| 48  | DB3   | I/O | External RAM data terminal. Data bus 3                                                                |
| 49  | DB2   | I/O | External RAM data terminal. Data bus 2                                                                |
| 50  | DB1   | I/O | External RAM data terminal. Data bus 1                                                                |
| 51  | DB0   | I/O | External RAM data terminal. Data bus 0                                                                |
| 52  | VDD   |     | +5V power supply                                                                                      |
| 53  | GND   |     | Ground terminal (0V)                                                                                  |
| 54  | TI1   | I   | IC test terminal, normally connected to VDD                                                           |
| 55  | VIN   | I   | VCXO input                                                                                            |
| 56  | VOUT  | O   | VCXO output                                                                                           |
| 57  | TI2   | I   | IC test terminal, normally connected to GND (or unconnected)                                          |
| 58  | TI3   | I   | IC test terminal, normally connected to GND (or unconnected)                                          |
| 59  | TLDB  | I   | IC test terminal, normally connected to GND (or unconnected)                                          |
| 60  | TCK   | I   | IC test terminal, normally connected to GND (or unconnected)                                          |
| 61  | TRP   | O   | Output terminal for IC test                                                                           |
| 62  | TDO   | O   | Output terminal for IC test                                                                           |
| 63  | PDO   | O   | Output terminal for phase comparator (tri-state)                                                      |
| 64  | TI4   | I   | IC test terminal, normally connected to GND (or unconnected)                                          |
| 65  | PDDIS | I   | Input terminal to control PDO output. Output ON at "L"                                                |
| 66  | MUTO  | O   | Muting output. Muting available at "H". Setting becomes "H" when "MUTI=H" or AC-3 is asynchronous.    |
| 67  | TI5   | I   | IC test terminal, normally connected to GND (or unconnected)                                          |
| 68  | VLDY  | O   | Output terminal for IC test                                                                           |
| 69  | DASYO | O   | Output terminal for IC test                                                                           |
| 70  | DAOUT | O   | Digital out output (serial data stream output)                                                        |
| 71  | DAIN  | I   | Digital external input, through to DAOUT when DASEL is "H".                                           |
| 72  | DASEL | I   | Digital out select                                                                                    |
| 73  | TI8   | I   | IC test terminal, normally connected to GND (or unconnected)                                          |
| 74  | C2F1  | O   | Terminal used to indicate error condition after C2 correction, whether completely corrected or not.   |
| 75  | C2F0  | O   | Terminal used to indicate error condition after C2 correction, number of errors at C2.                |
| 76  | C1F1  | O   | Terminal used to indicate error condition after C1 correction, whether any error exists at C1 or not. |
| 77  | C1F0  | O   | Terminal used to indicate error condition after C1 correction, number of errors at C1.                |
| 78  | MUTI  | I   | Muting input. Muting available at "H"                                                                 |
| 79  | VDD   |     | +5V power supply                                                                                      |
| 80  | GND   |     | Ground terminal (0V)                                                                                  |

**IC24 : PM4007A (P.C.B. DSP)****AC-3 RF Demodulator**

| No. | Name  | I/O | Function                                                              |
|-----|-------|-----|-----------------------------------------------------------------------|
| 81  | AVDD  |     | +5V power supply for analog comparator                                |
| 82  | CPIN  | I   | Analog comparator input, positive side (Non-reverse side: QPSK input) |
| 83  | CMIN  | I   | Analog comparator input, negative side (reverse side)                 |
| 84  | AGND  |     | Ground terminal for analog comparator (0V)                            |
| 85  | TM4   | I   | IC test terminal, normally connected to GND (or unconnected)          |
| 86  | VDD   |     | +5V power supply                                                      |
| 87  | DIN   | I   | IC test terminal, normally connected to GND (or unconnected)          |
| 88  | DOUT  | O   | Analog comparator result output                                       |
| 89  | DOUTB | O   | Analog comparator result reverse output                               |
| 90  | C9M   | O   | 9.216MHz output, output divided into 2 at VIN (No.55 pin)             |
| 91  | GND   |     | Ground terminal (0V)                                                  |
| 92  | WINGT | O   | Output for IC test                                                    |
| 93  | SYST0 | O   | Output for IC test                                                    |
| 94  | SYST1 | O   | Output for IC test                                                    |
| 95  | ADST0 | O   | Output for IC test                                                    |
| 96  | ADST1 | O   | Output for IC test                                                    |
| 97  | TM5   | I   | IC test terminal, normally connected to GND (or unconnected)          |
| 98  | BUNRI | I   | IC test terminal, normally connected to GND (or unconnected)          |
| 99  | AGND  |     | Ground terminal (0V) for 46.08MHz oscillator                          |
| 100 | AVDD  |     | +5V power supply for 46.08MHz oscillator                              |

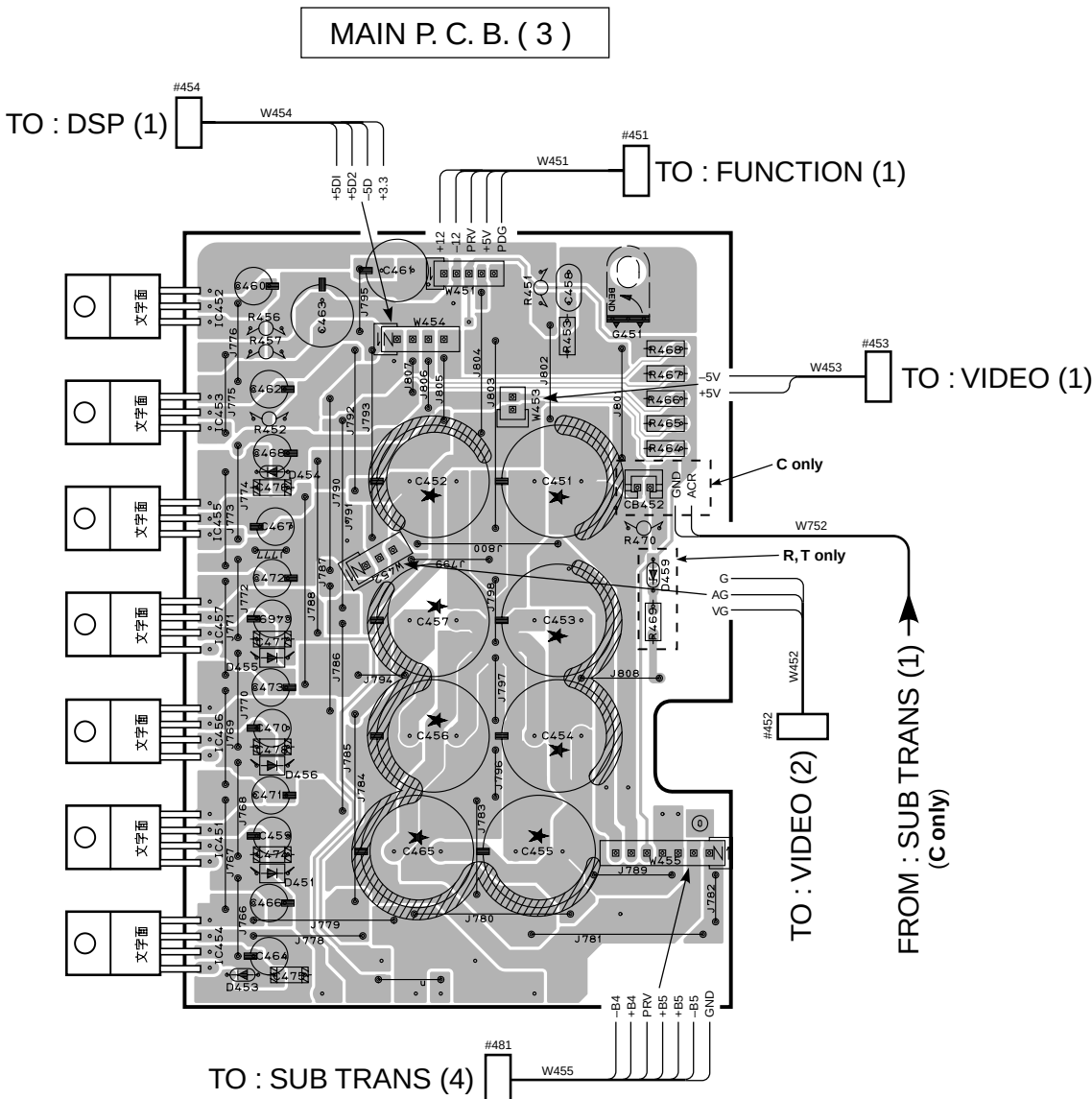
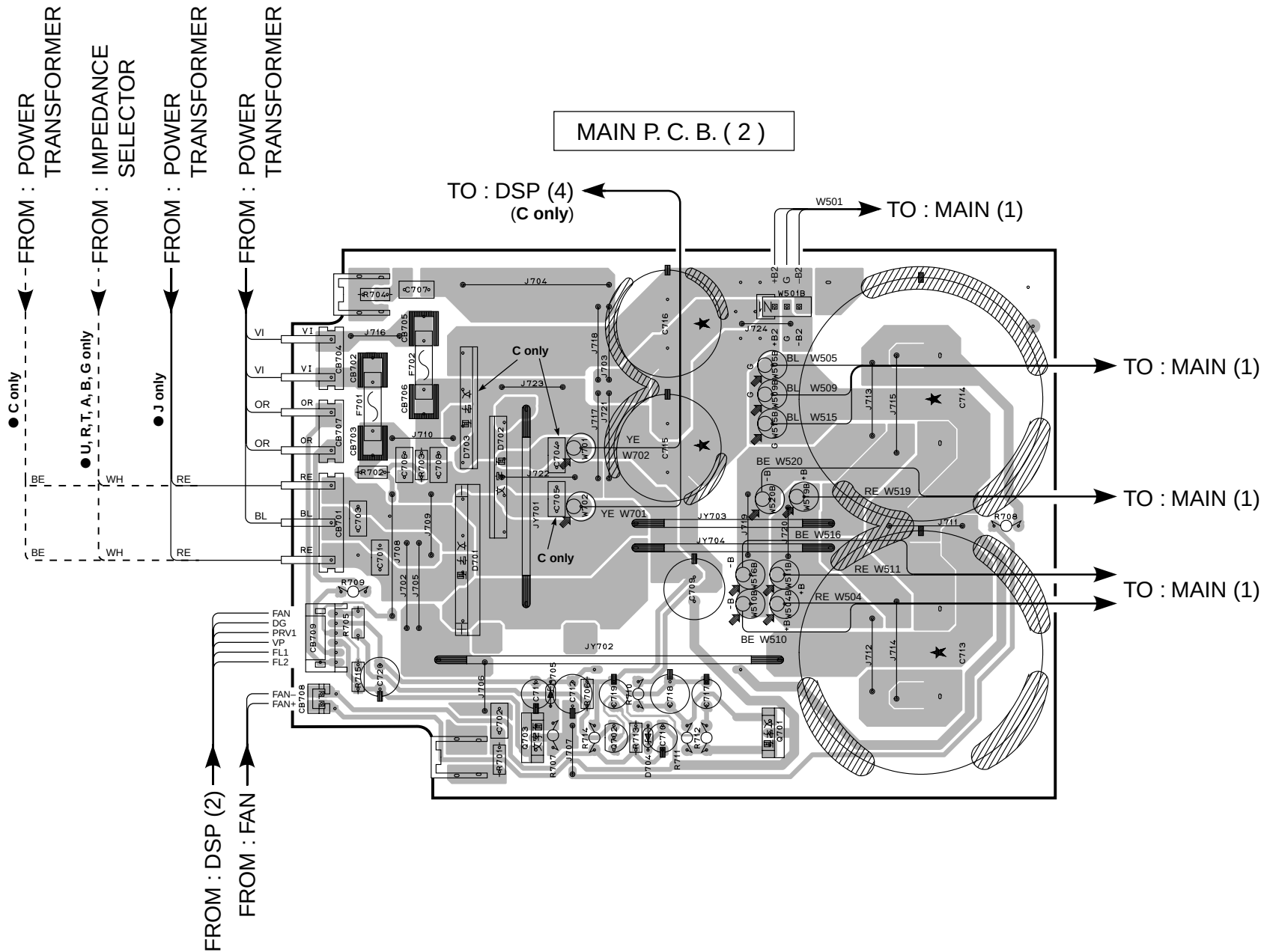
IC12 : M35013-079SP (P.C.B. VIDEO)  
Superimpose



| Pin No.  | Symbol          | Terminal name                                             | Function                                                                                                                                                                                                                                                        |
|----------|-----------------|-----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1<br>2   | OSC1<br>OSC2    | External terminal for oscillation circuit                 | External terminal of oscillation circuit for display.<br>The standard oscillation frequency is about 7MHz.<br>The display position in the horizontal direction and width of characters on the TV screen are determined according to this oscillation frequency. |
| 3        | $\overline{CS}$ | Chip select input                                         | Chip select terminal<br>"L" is set when the serial data is transferred.<br>Hysteresis input. A pull-up resistor is built in.                                                                                                                                    |
| 4        | SCK             | Serial clock input                                        | When $\overline{CS}$ terminal is "L", the SIN serial data is taken in at the SCK rise.<br>Hysteresis input. A pull-up resistor is built in.                                                                                                                     |
| 5        | SIN             | Serial data input                                         | The data and addresses for the display control register and display data memory are input in serial form.<br>Hysteresis input. A pull-up resistor is built in.                                                                                                  |
| 6        | $\overline{AC}$ | Auto clear input                                          | The IC internal circuit is reset when in "L" state.<br>Hysteresis input. A pull-up resistor is built in.                                                                                                                                                        |
| 7        | VDD2            | Power supply terminal                                     | Analog type power supply terminal that should be connected to +5V.                                                                                                                                                                                              |
| 8        | CVIDEO          | Composite video signal output                             | Output terminal for composite video signal<br>2Vp-p composite video signal is output.<br>When making a superimposition, the character output and other features are superimposed on the composite video signals input through the CVIN terminal.                |
| 9        | LECHA           | Character level input                                     | Input terminal to determine the output level for the characters in the composite video signals. The color of characters is white.                                                                                                                               |
| 10       | CVIN            | Video input                                               | Input terminal for external composite video signals.<br>When making a superimposition, the character output and other features are superimposed on these composite video signals.                                                                               |
| 11       | VSS             | Ground terminal                                           | Connection to GND is made by using this terminal.                                                                                                                                                                                                               |
| 12       | P0              | Port 0 output                                             | Port terminal output or character background signals (BLNK1*) are output.<br>The polarity can be selected when determining the font ROM.                                                                                                                        |
| 13       | P1              | Port 1 output                                             | Port terminal output or character background signals (CO1*) are output.<br>The polarity can be selected when determining the font ROM.                                                                                                                          |
| 14       | P2              | Port 2 output                                             | Port terminal output or character background signals (BLNK2*) are output.<br>The polarity can be selected when determining the font ROM.                                                                                                                        |
| 15       | P3              | Port 3 output                                             | Port terminal output or character background signals (CO2*) are output.<br>The polarity can be selected when determining the font ROM.                                                                                                                          |
| 16<br>17 | OSCOUT<br>OSCIN | Oscillation circuit for generation of synchronous signals | External terminal of the oscillation circuit for generation of synchronous signals.<br>The oscillation frequency is 14.32MHz when the NTSC system is used and 17.73MHz when the PAL system is used.                                                             |
| 18       | HOR*            | Horizontal synchronous signal input                       | Horizontal synchronous signals are input.<br>Hysteresis input<br>The polarity can be selected when determining the font ROM.                                                                                                                                    |
| 19       | VERT*           | Vertical synchronous signal input                         | Vertical synchronous signals are input.<br>Hysteresis input<br>The polarity can be selected when determining the font ROM.                                                                                                                                      |
| 20       | VDD1            | Power supply terminal                                     | Digital type power supply terminal that should be connected to +5V.                                                                                                                                                                                             |



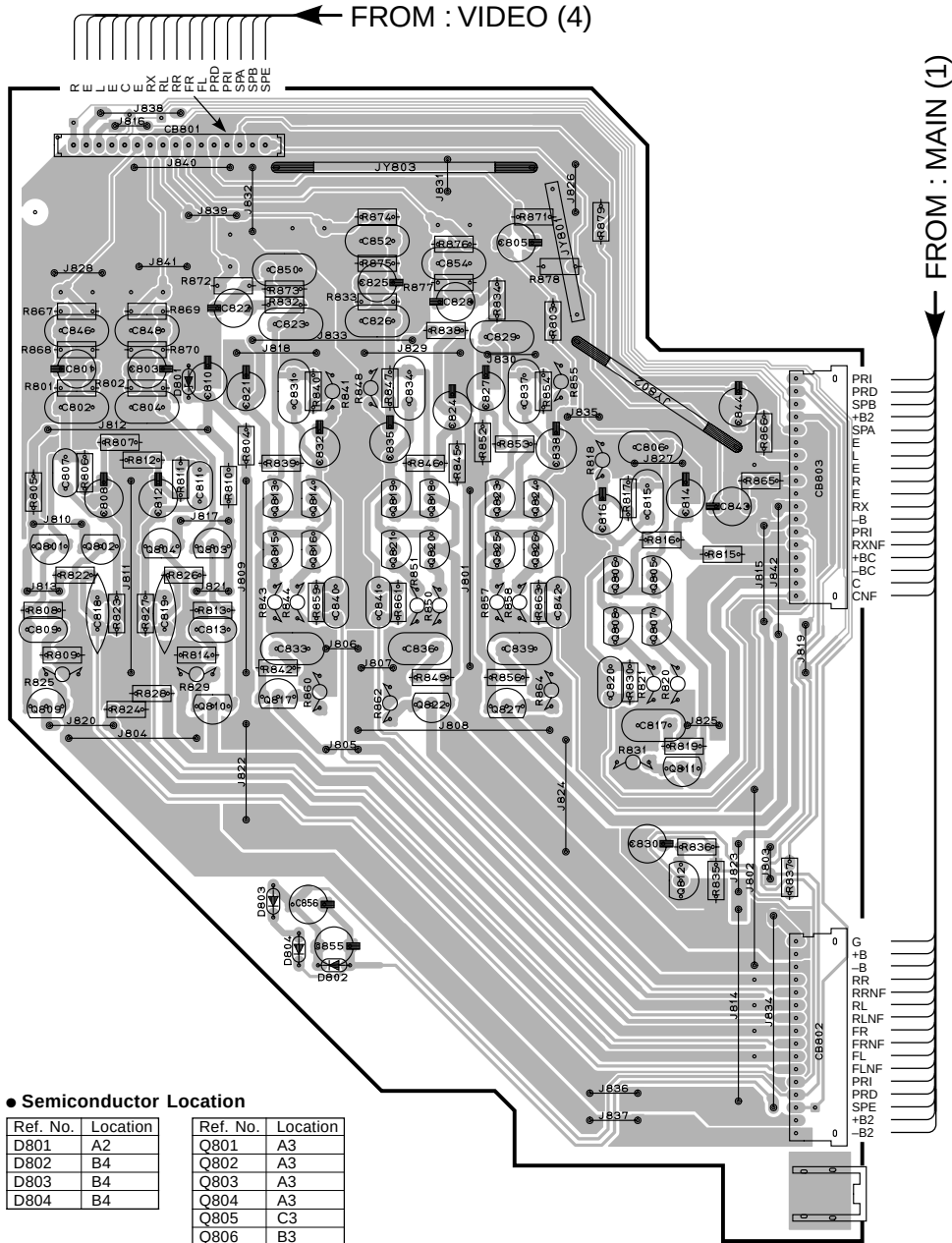
PRINTED CIRCUIT BOARD (Foil side)





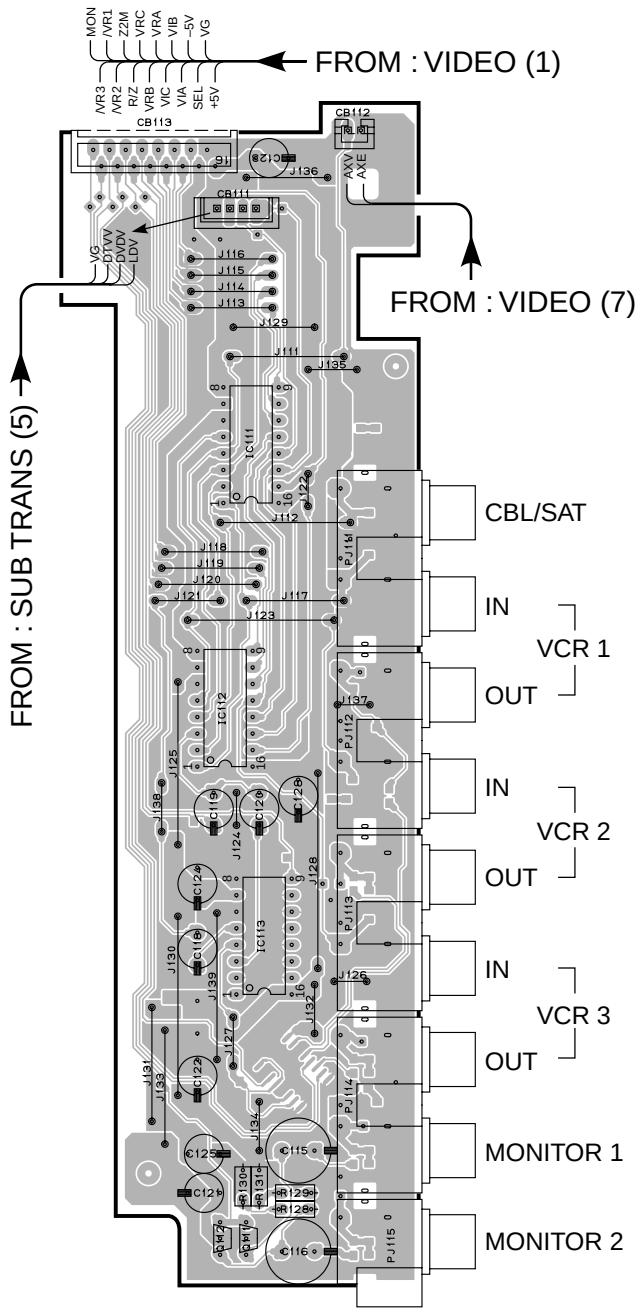
PRINTED CIRCUIT BOARD (Foil side)

SUB TRANS P. C. B. ( 2 )



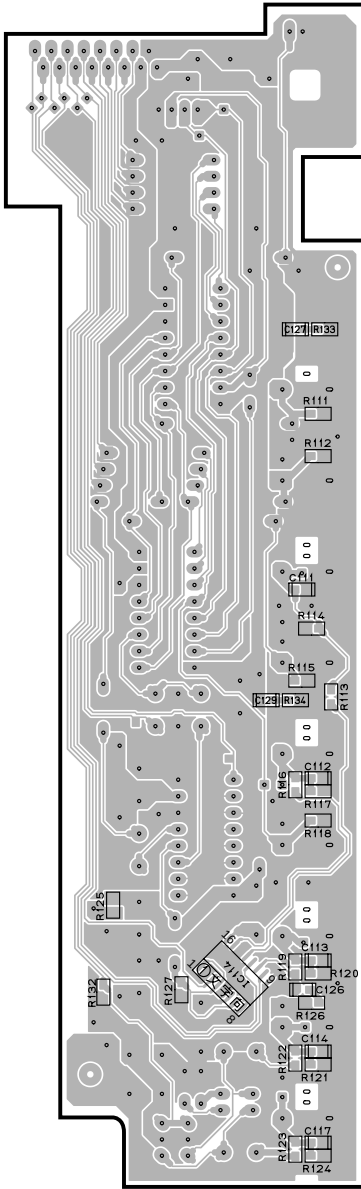
SUB TRANS P. C. B. ( 3 )

(Lead Type Device)



SUB TRANS P. C. B. ( 3 )

(Surface Mount Device)



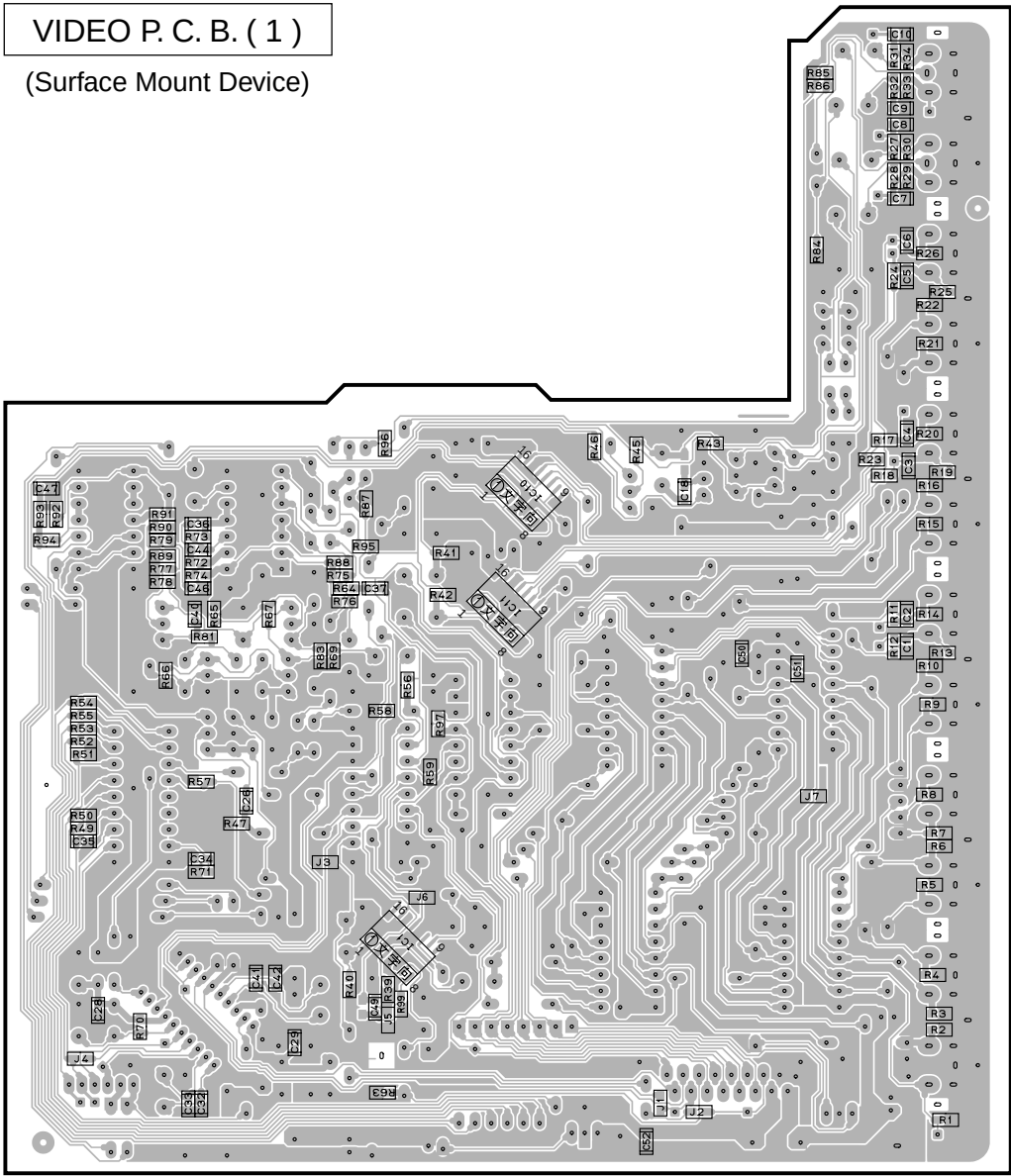
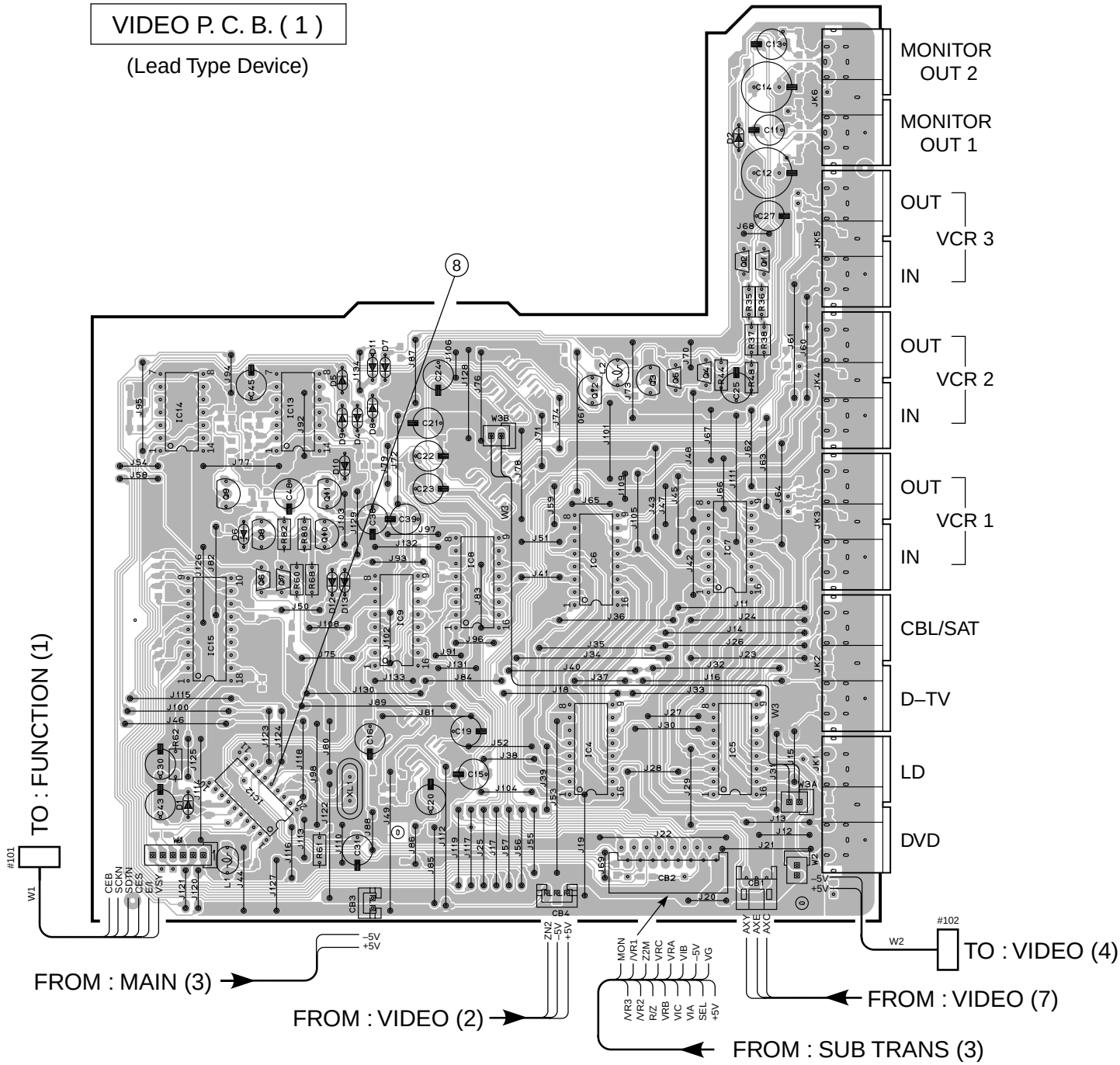
Semiconductor Location

| Ref. No. | Location |
|----------|----------|
| IC111    | E3       |
| IC112    | E3       |
| IC113    | E4       |
| IC114    | G4       |
| Q111     | E5       |
| Q112     | E5       |





PRINTED CIRCUIT BOARD (Foil side)



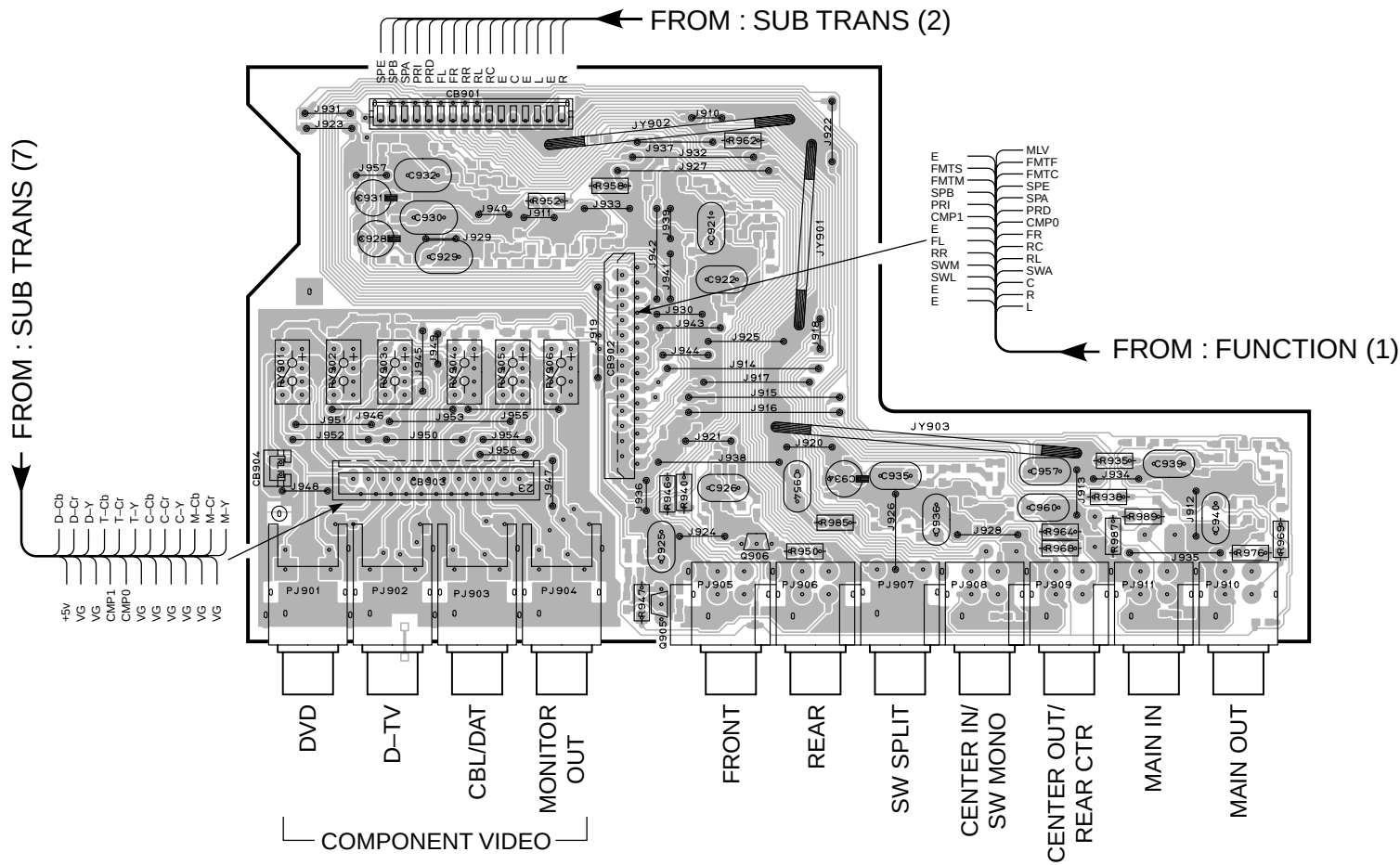
Semiconductor Location

| Ref. No. | Location | Ref. No. | Location | Ref. No. | Location |
|----------|----------|----------|----------|----------|----------|
| D1       | A4       | IC1      | F4       | Q1       | C2       |
| D2       | C2       | IC4      | C4       | Q2       | C2       |
| D4       | B3       | IC5      | C4       | Q3       | C2       |
| D5       | B2       | IC6      | C3       | Q4       | C2       |
| D6       | B3       | IC7      | C3       | Q5       | C2       |
| D7       | B2       | IC8      | B3       | Q6       | B3       |
| D8       | B2       | IC9      | B3       | Q7       | B3       |
| D9       | B3       | IC10     | G2       | Q8       | B3       |
| D10      | B2       | IC11     | G3       | Q9       | B3       |
| D11      | B2       | IC12     | B4       | Q10      | B3       |
| D12      | B3       | IC13     | B2       | Q11      | B3       |
| D13      | B3       | IC14     | A2       | Q12      | C2       |
|          |          | IC15     | B3       |          |          |

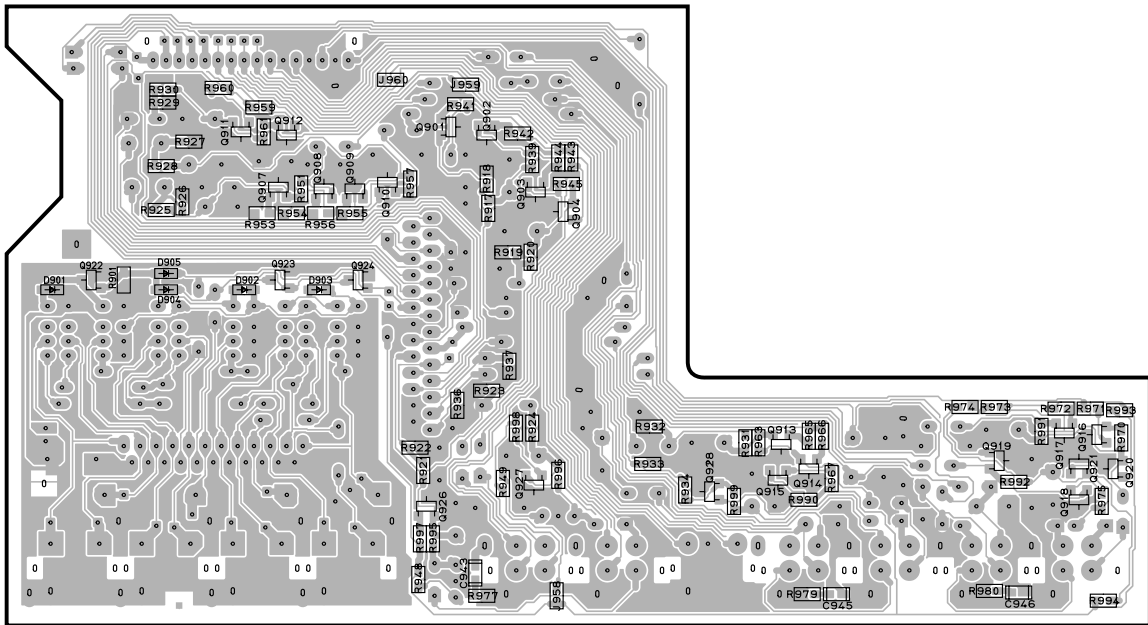


PRINTED CIRCUIT BOARD (Foil side)

VIDEO P. C. B. ( 4 ) (Lead Type Device)



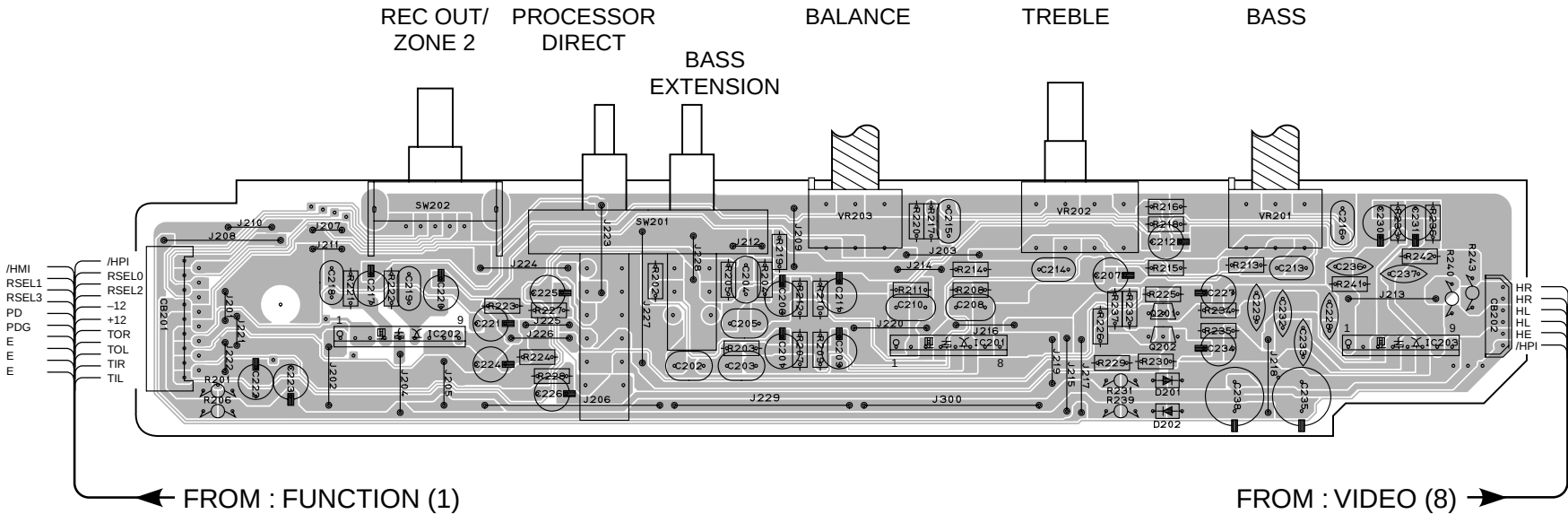
VIDEO P. C. B. ( 4 ) (Surface Mount Device)



● Semiconductor Location

| Ref. No. | Location | Ref. No. | Location | Ref. No. | Location |
|----------|----------|----------|----------|----------|----------|
| D201     | D5       | Q201     | D5       | Q201     | D5       |
| D202     | D5       | Q202     | D5       | Q202     | D5       |
| D901     | E2       | Q901     | F2       | Q901     | F2       |
| D902     | F2       | Q902     | F2       | Q902     | F2       |
| D903     | F2       | Q903     | F2       | Q903     | F2       |
| D904     | F2       | Q904     | G2       | Q904     | G2       |
| D905     | F2       | Q905     | C3       | Q905     | C3       |
|          |          | Q906     | C3       | Q906     | C3       |
|          |          | Q907     | F2       | Q907     | F2       |
|          |          | Q908     | F2       | Q908     | F2       |
|          |          | Q909     | F2       | Q909     | F2       |
|          |          | Q910     | F2       | Q910     | F2       |
|          |          | Q911     | F2       | Q911     | F2       |
|          |          | Q912     | F2       | Q912     | F2       |
|          |          | Q913     | G3       | Q913     | G3       |
|          |          | Q914     | G3       | Q914     | G3       |
|          |          | Q915     | G3       | Q915     | G3       |
|          |          | Q916     | H3       | Q916     | H3       |
|          |          | Q917     | H3       | Q917     | H3       |
|          |          | Q918     | H3       | Q918     | H3       |
|          |          | Q919     | H3       | Q919     | H3       |
|          |          | Q920     | H3       | Q920     | H3       |
|          |          | Q921     | H3       | Q921     | H3       |
|          |          | Q922     | E2       | Q922     | E2       |
|          |          | Q923     | F2       | Q923     | F2       |
|          |          | Q924     | F2       | Q924     | F2       |
|          |          | Q926     | F3       | Q926     | F3       |
|          |          | Q927     | F3       | Q927     | F3       |
|          |          | Q928     | G3       | Q928     | G3       |

VIDEO P. C. B. ( 8 )



PHONES

FROM : VIDEO (5)

## ■ PRINTED CIRCUIT BOARD (Foil side)

1

## ● DSP-AX1

VIDEO P. C. B. ( 6 )

(Lead Type Device)

◁ PROGRAM ▷

6 CH  
INPUT

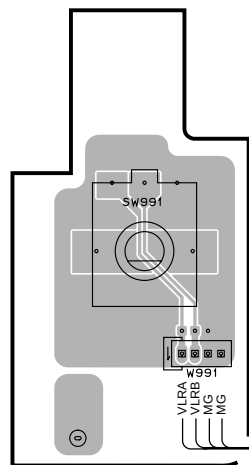
- SET MENU +

W351  
TO : DSP (2)

2

VIDEO P. C. B. ( 9 )

VOLUME



EFFECT

NEXT

B A  
SPEAKERS

## ● DSP-AX1

VIDEO P. C. B. ( 6 )

(Surface Mount Device)

3

4

## ● RX-V1

VIDEO P. C. B. ( 6 )

(Lead Type Device)

TUNING  
MODE

FM/AM

◁PRESET/TUNING▷

6 CH  
INPUT

◁ PROGRAM ▷

W351  
TO : DSP (2)

VIDEO P. C. B. ( 10 )

MEMORY

PRESET/  
TUNING

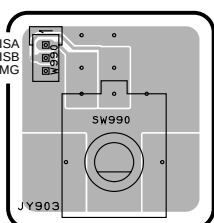
A/B/C/D/E

EFFECT

B A  
SPEAKERS

5

TO : FUNCTION (1)

INPUT  
SELECTOR

## ● RX-V1

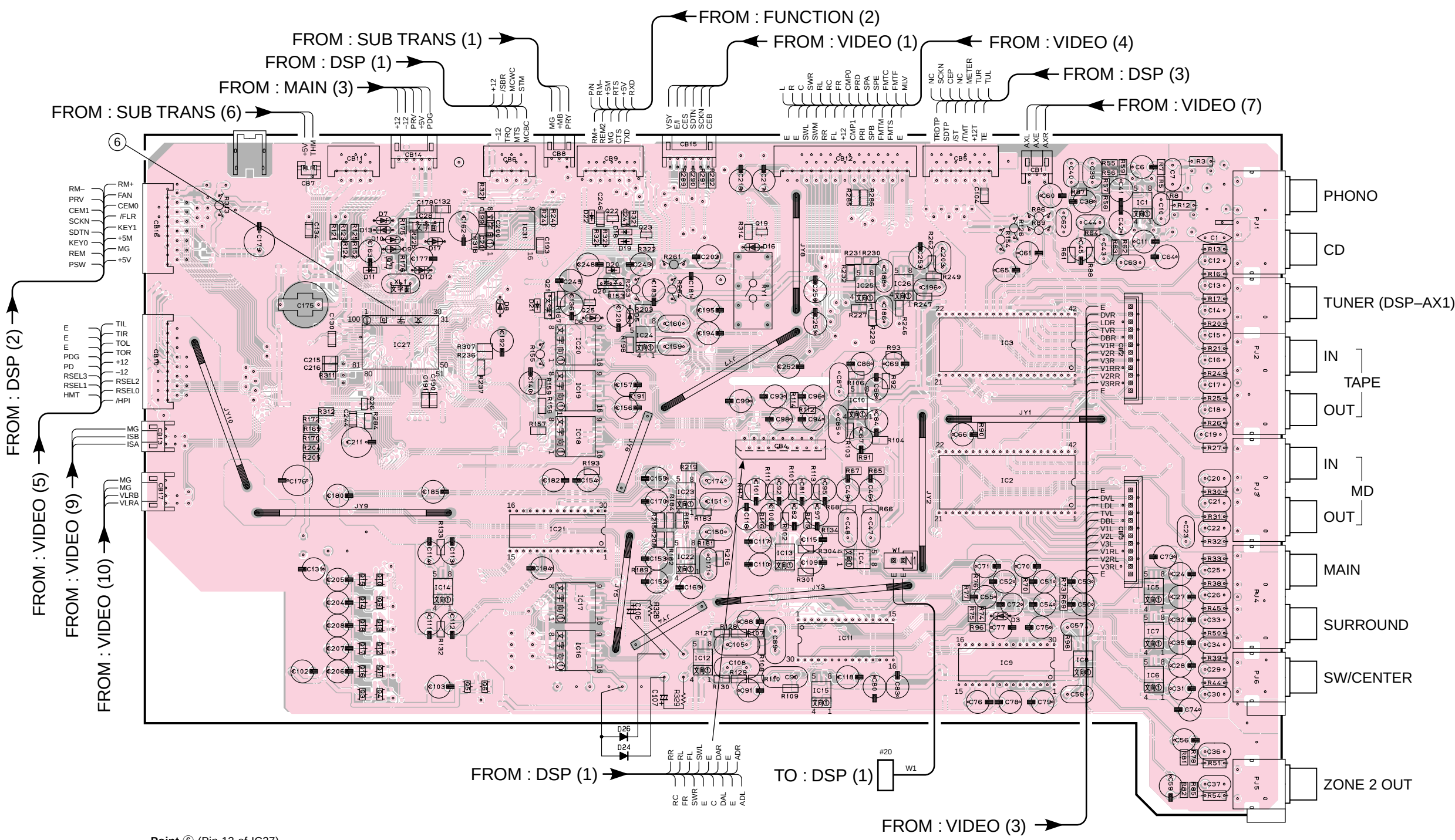
VIDEO P. C. B. ( 6 )

(Surface Mount Device)

6

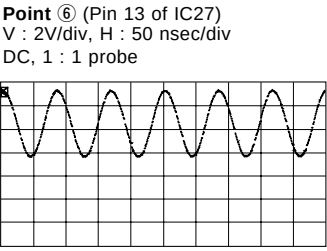
PRINTED CIRCUIT BOARD (Foil side)

FUNCTION P. C. B. ( 1 ) (Lead Type Device)



Semiconductor Location

| Ref. No. | Location |
|----------|----------|
| D3       | E4       |
| D5       | D3       |
| D6       | C3       |
| D7       | C2       |
| D8       | C3       |
| D9       | C3       |
| D10      | C2       |
| D11      | B3       |
| D12      | C3       |
| D13      | C2       |
| D16      | D3       |
| D17      | C2       |
| D18      | D2       |
| D19      | D2       |
| D20      | D3       |
| D21      | C3       |
| D22      | C2       |
| IC1      | F2       |
| IC2      | E4       |
| IC3      | E3       |
| IC4      | E4       |
| IC5      | F4       |
| IC6      | F4       |
| IC7      | F4       |
| IC8      | F4       |
| IC9      | E4       |
| IC10     | E3       |
| IC11     | E4       |
| IC12     | D4       |
| IC13     | D4       |
| IC14     | C4       |
| IC15     | D5       |
| IC16     | C4       |
| IC17     | C4       |
| IC18     | C3       |
| IC19     | C3       |
| IC20     | C3       |
| IC21     | C4       |
| IC22     | D4       |
| IC23     | D4       |
| IC24     | D3       |
| IC25     | E3       |
| IC26     | E3       |
| IC27     | C3       |
| IC28     | C2       |
| IC31     | C2       |
| Q3       | B5       |
| Q4       | B5       |
| Q5       | C4       |
| Q6       | C4       |
| Q7       | C3       |
| Q9       | B4       |
| Q10      | B4       |
| Q11      | B4       |
| Q12      | B4       |
| Q13      | B4       |
| Q14      | B4       |
| Q15      | B4       |
| Q16      | B4       |
| Q17      | B4       |
| Q18      | B4       |
| Q19      | D2       |
| Q20      | D3       |
| Q21      | C3       |
| Q22      | D2       |
| Q23      | D2       |
| Q25      | C3       |
| Q26      | B3       |



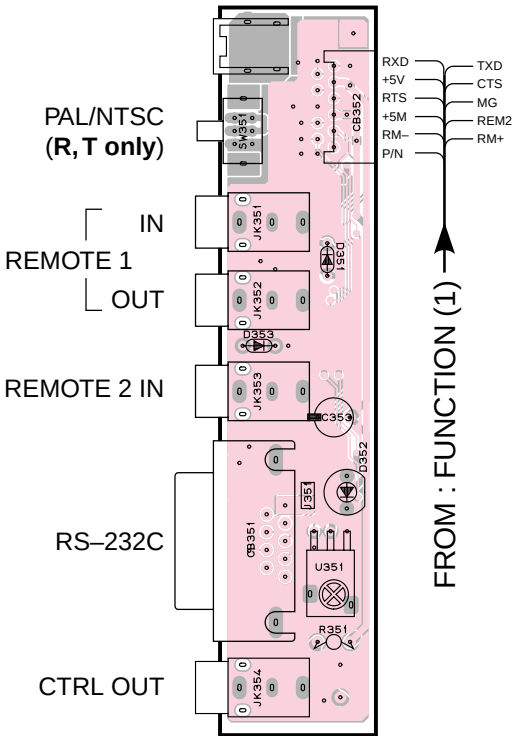


PRINTED CIRCUIT BOARD (Foil side)

FUNCTION P. C. B. ( 1 ) (Surface Mount Device)

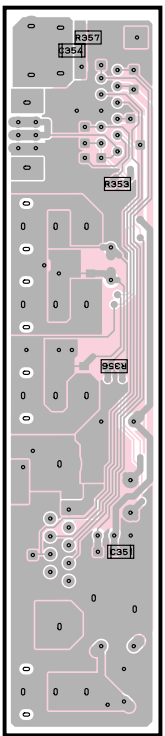
FUNCTION P. C. B. ( 2 )

(Lead Type Device)



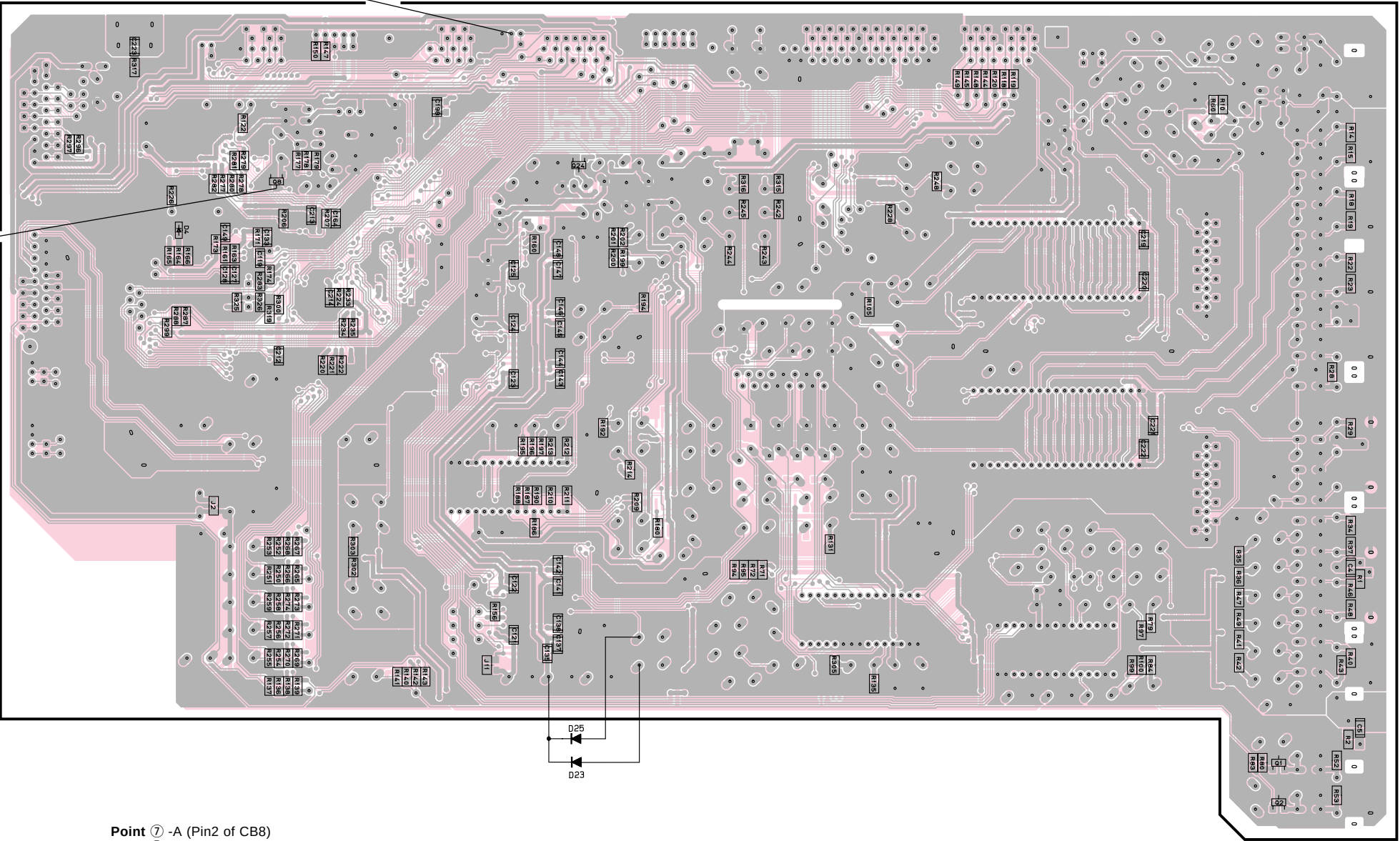
FUNCTION P. C. B. ( 2 )

(Surface Mount Device)

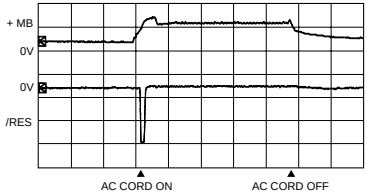


⑦-A

⑦-B



Point ⑦ -A (Pin2 of CB8)  
Point ⑦ -B (Collector of Q8)  
V : 2V/div (+ MB)  
V : 2V/div (/RES)  
DC, 1 : 1 probe, H : 1 sec/div



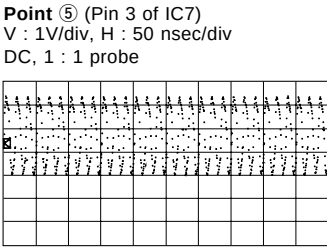
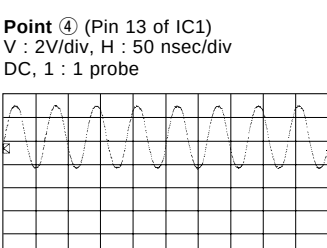
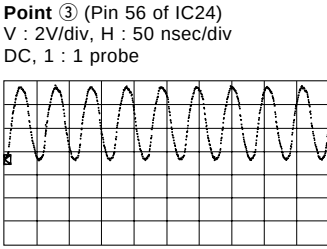
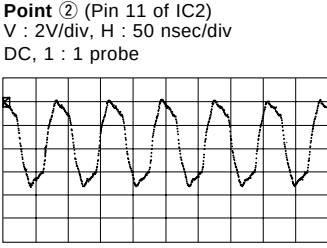
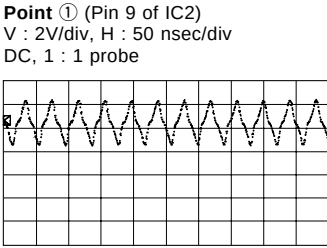
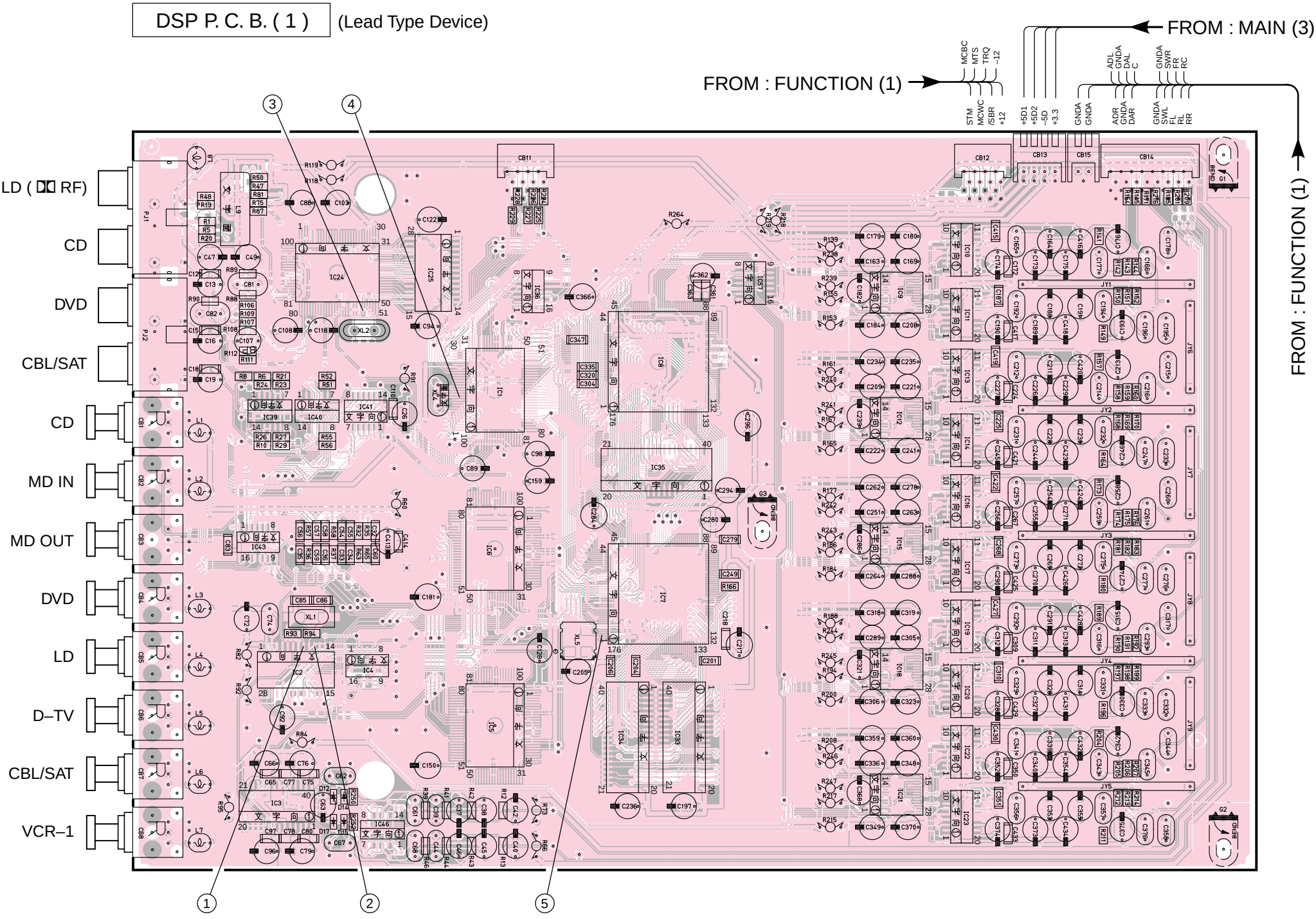
Semiconductor Location

| Ref. No. | Location |
|----------|----------|
| D4       | B3       |
| D351     | G2       |
| D352     | G3       |
| D353     | G2       |
| Q1       | F5       |
| Q2       | F5       |
| Q8       | B3       |
| Q24      | C3       |

PRINTED CIRCUIT BOARD (Foil side)

Semiconductor Location

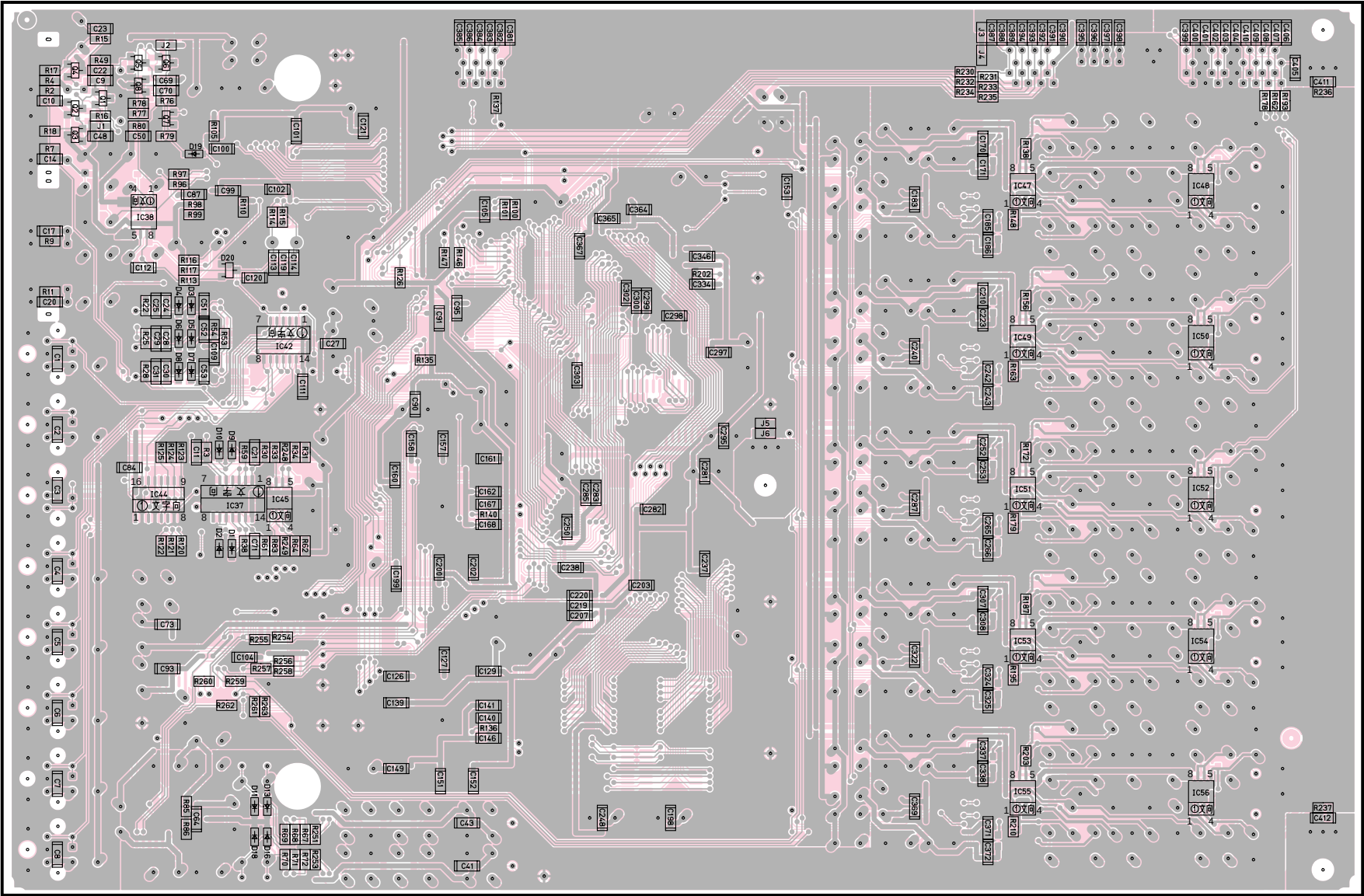
| Ref. No. | Location |
|----------|----------|
| D12      | C5       |
| D14      | C5       |
| D15      | C5       |
| D17      | C5       |
| IC1      | C3       |
| IC2      | C4       |
| IC3      | C5       |
| IC4      | C4       |
| IC5      | C4       |
| IC6      | C4       |
| IC7      | D4       |
| IC8      | D3       |
| IC9      | E2       |
| IC10     | E2       |
| IC11     | E3       |
| IC12     | E3       |
| IC13     | E3       |
| IC14     | E3       |
| IC15     | E4       |
| IC16     | E3       |
| IC17     | E4       |
| IC18     | E4       |
| IC19     | E4       |
| IC20     | E4       |
| IC21     | E5       |
| IC22     | E4       |
| IC23     | E5       |
| IC24     | C2       |
| IC25     | C2       |
| IC33     | D4       |
| IC34     | D4       |
| IC35     | D3       |
| IC36     | D2       |
| IC39     | C3       |
| IC40     | C3       |
| IC41     | C3       |
| IC43     | C4       |
| IC46     | C5       |
| IC57     | E2       |





PRINTED CIRCUIT BOARD (Foil side)

DSP P. C. B. ( 1 ) (Surface Mount Device)



Semiconductor Location

| Ref. No. | Location |
|----------|----------|
| D1       | C4       |
| D2       | C4       |
| D3       | B3       |
| D4       | B3       |
| D5       | B3       |
| D6       | B3       |
| D7       | B3       |
| D8       | B3       |
| D9       | C3       |
| D10      | C3       |
| D11      | C5       |
| D13      | C5       |
| D16      | C5       |
| D18      | C5       |
| D19      | B2       |
| D20      | C3       |
| IC37     | C4       |
| IC38     | B3       |
| IC42     | C3       |
| IC44     | B3       |
| IC45     | C4       |
| IC47     | E2       |
| IC48     | F2       |
| IC49     | E3       |
| IC50     | F3       |
| IC51     | E3       |
| IC52     | F3       |
| IC53     | E4       |
| IC54     | F4       |
| IC55     | E4       |
| IC56     | F4       |
| Q1       | B2       |
| Q2       | B2       |
| Q3       | B2       |
| Q4       | B2       |
| Q5       | B2       |
| Q6       | B2       |
| Q7       | B2       |
| Q8       | B2       |



PRINTED CIRCUIT BOARD (Foil side)

There are two types of Tuner P.C.B. assembly for this model in terms of construction of components.

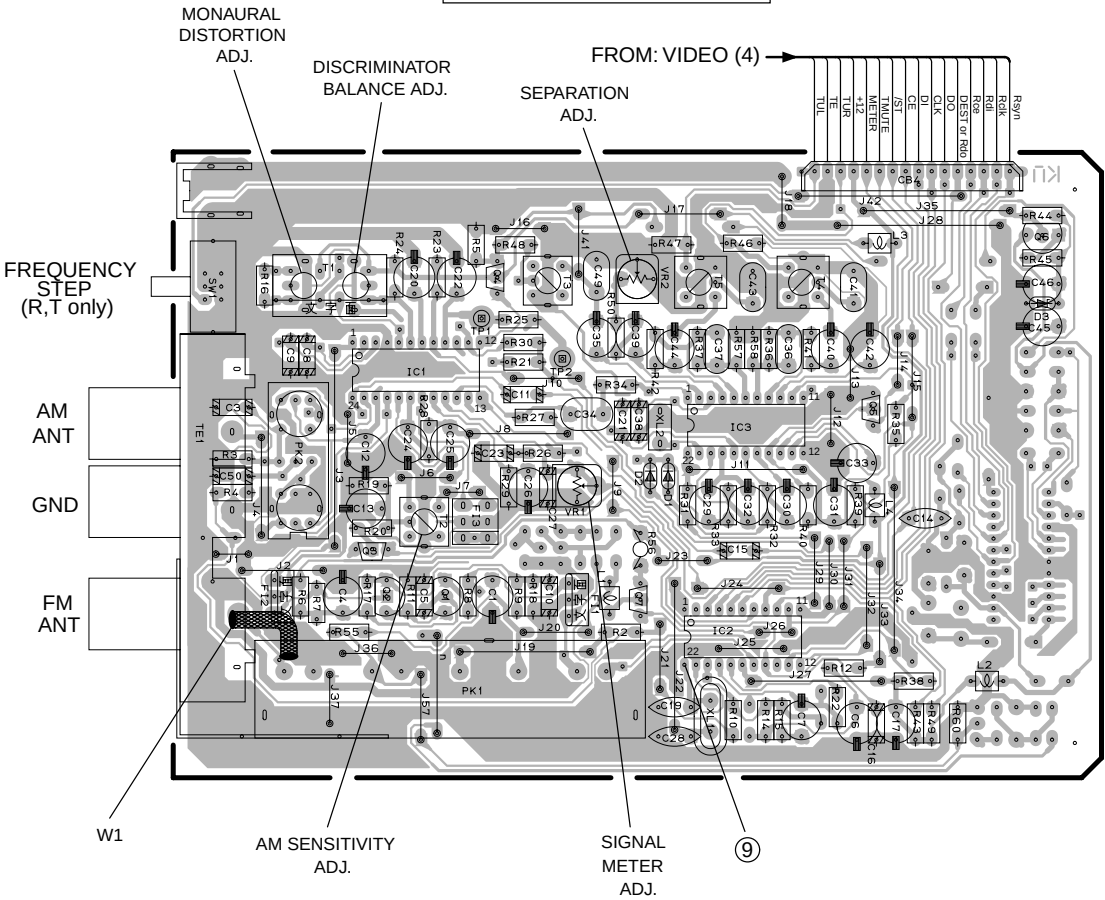
One uses the Lead Type Device only and the other uses the Lead Type device and Surface Mount Device (SMD).

These P.C.B. assemblies are interchangeable.

P.C.B. ASS'Y TUNER LIST

| Model | Markets | Lead Type | Lead & SMD |
|-------|---------|-----------|------------|
| RX-V1 | U, C    | V2518600  | V2519300   |
| RX-V1 | A       | V2518800  | V2519500   |
|       |         |           |            |

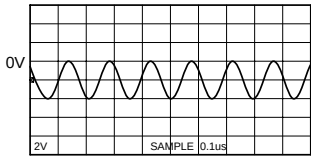
TUNER P.C.B. (Lead Type)



Point ⑨ (Pin22 of IC2)

V : 2V/div      H : 0.1 μsec/div

DC range      1 : 1 probe



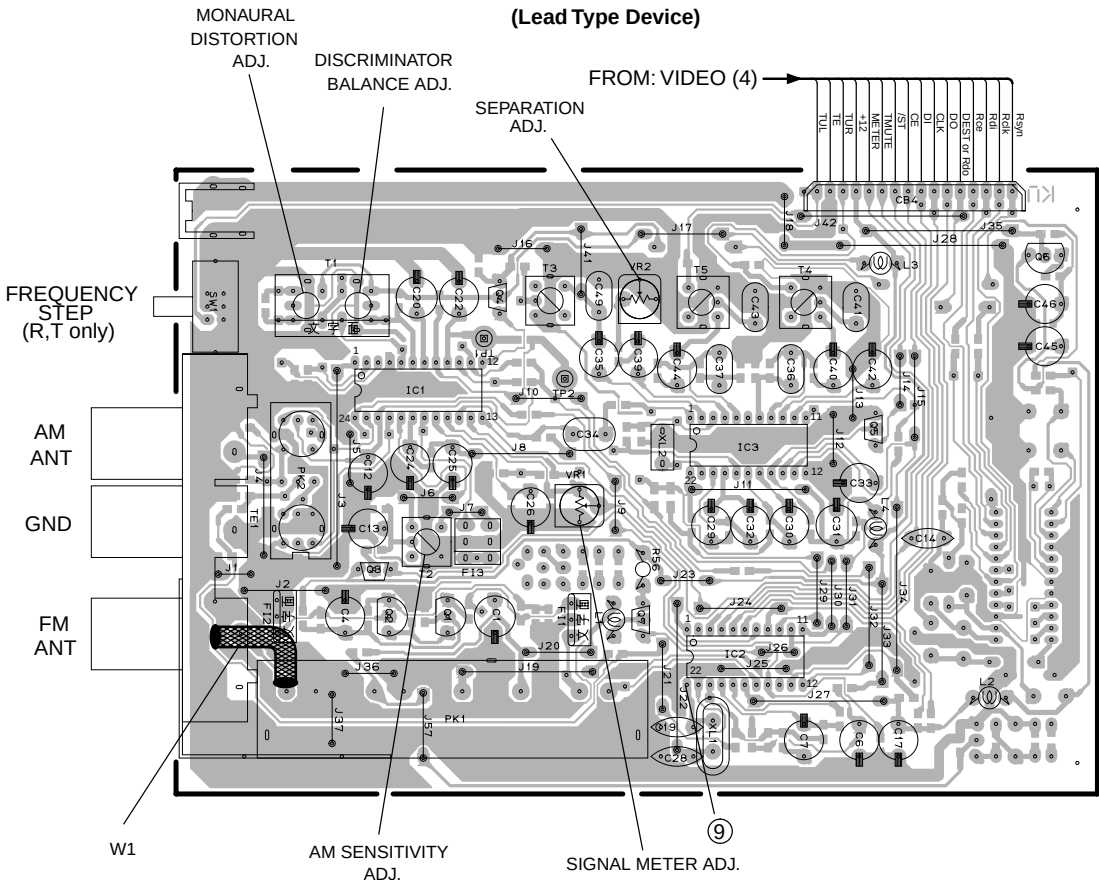
CIRCUIT CHANGES BY MARKET.

|                     | J | U, C | R, T | A, B, G, L |
|---------------------|---|------|------|------------|
| R48, 55, 57, 58, 60 | X | X    | X    | O          |
| T3                  | X | X    | X    | O          |
| J41                 | O | O    | O    | X          |
| J42                 | X | X    | O    | X          |
| SW1                 | X | X    | O    | X          |

O : USED

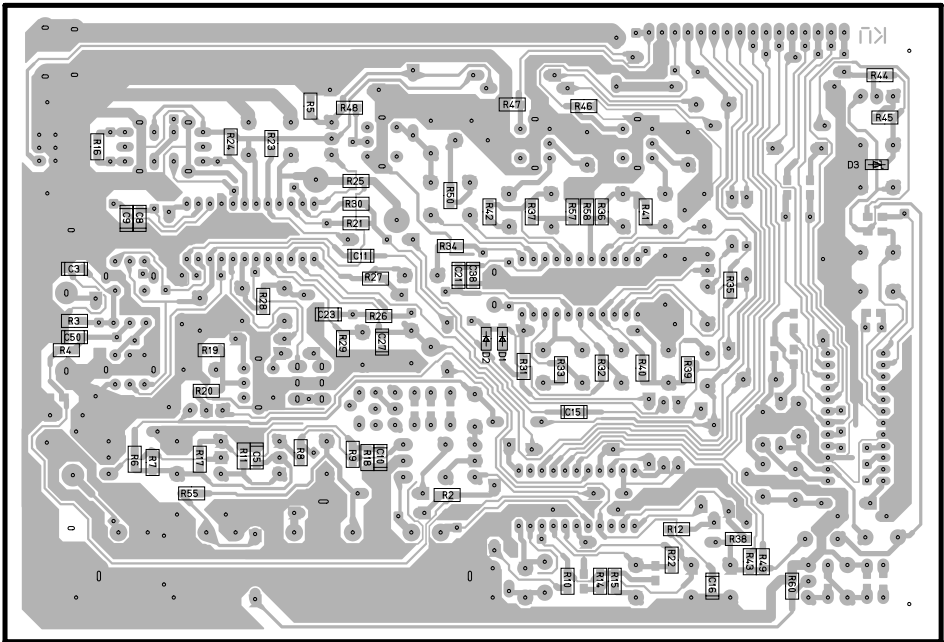
X : NOT USED

TUNER P.C.B. (Lead Type & SMD)

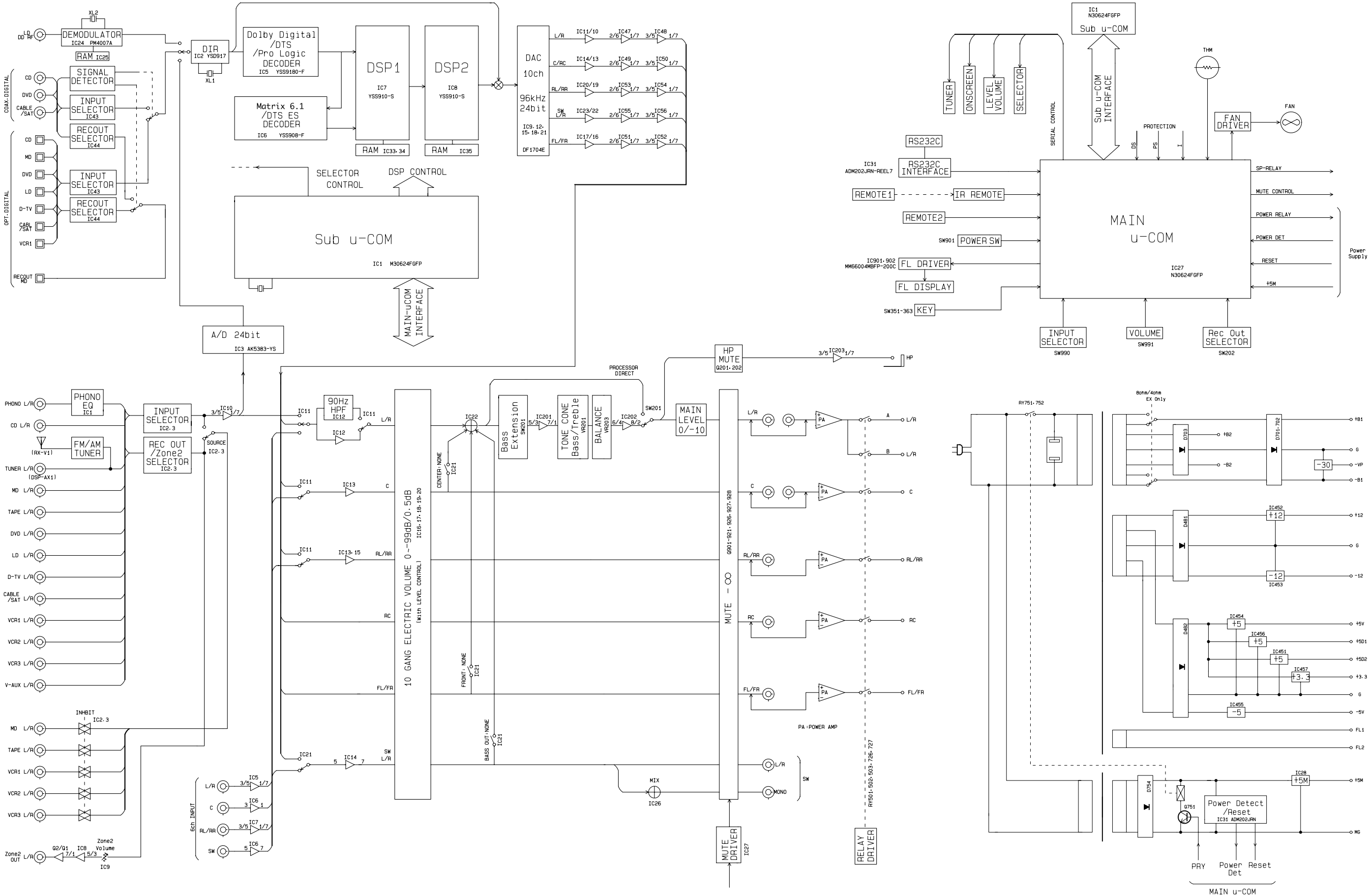


TUNER P.C.B. (Lead Type & SMD)

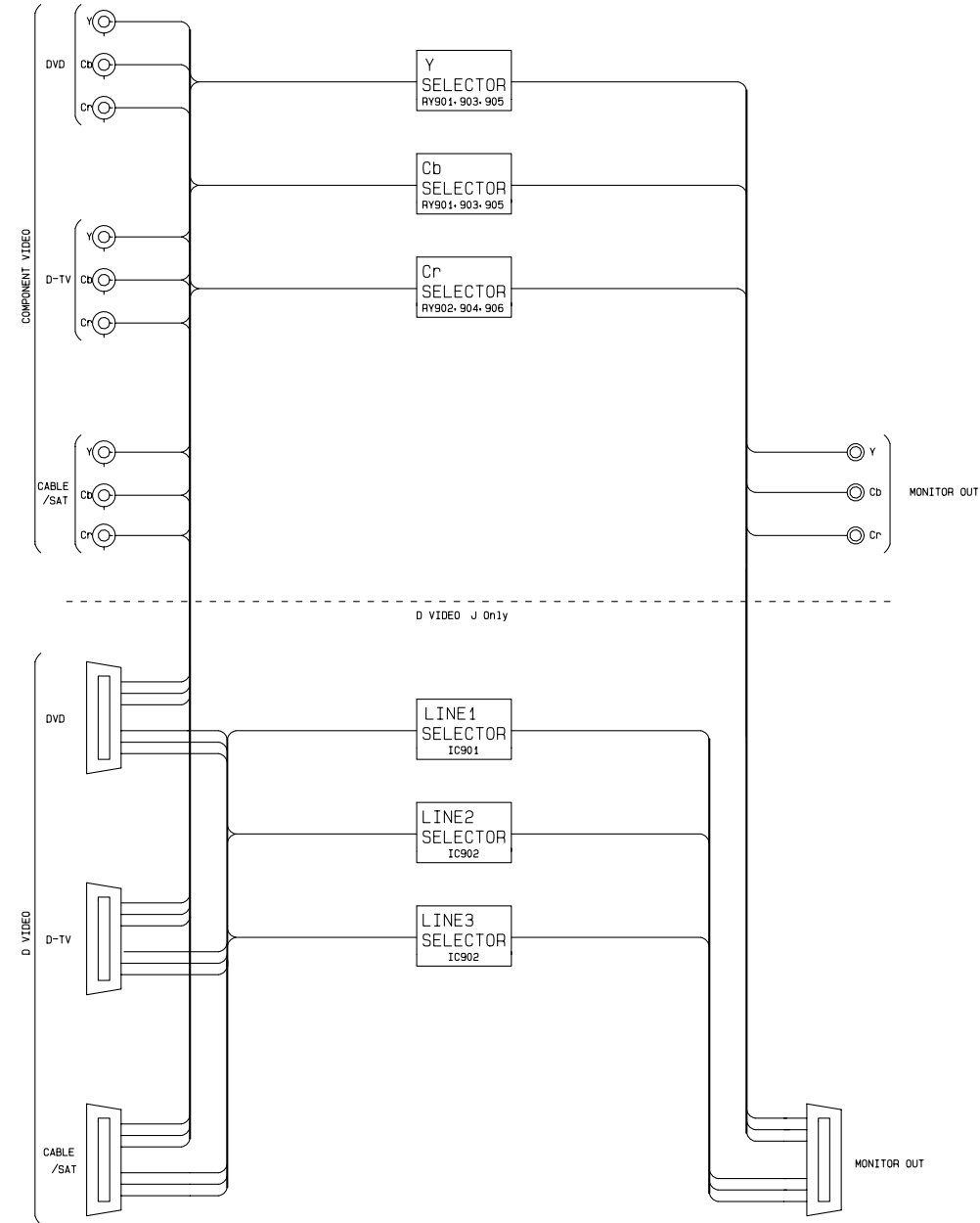
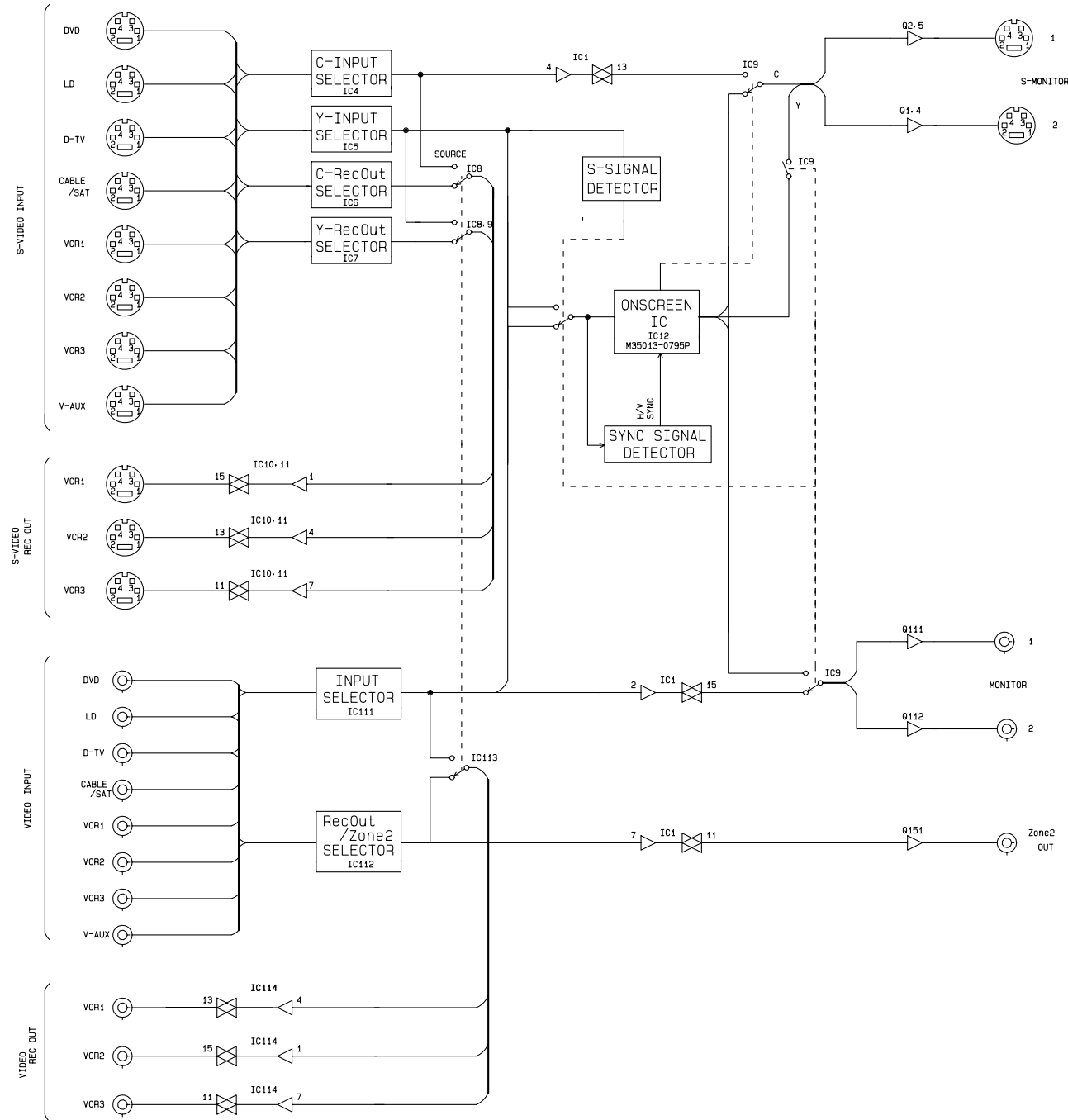
(Surface Mount Device)



■ BLOCK DIAGRAM

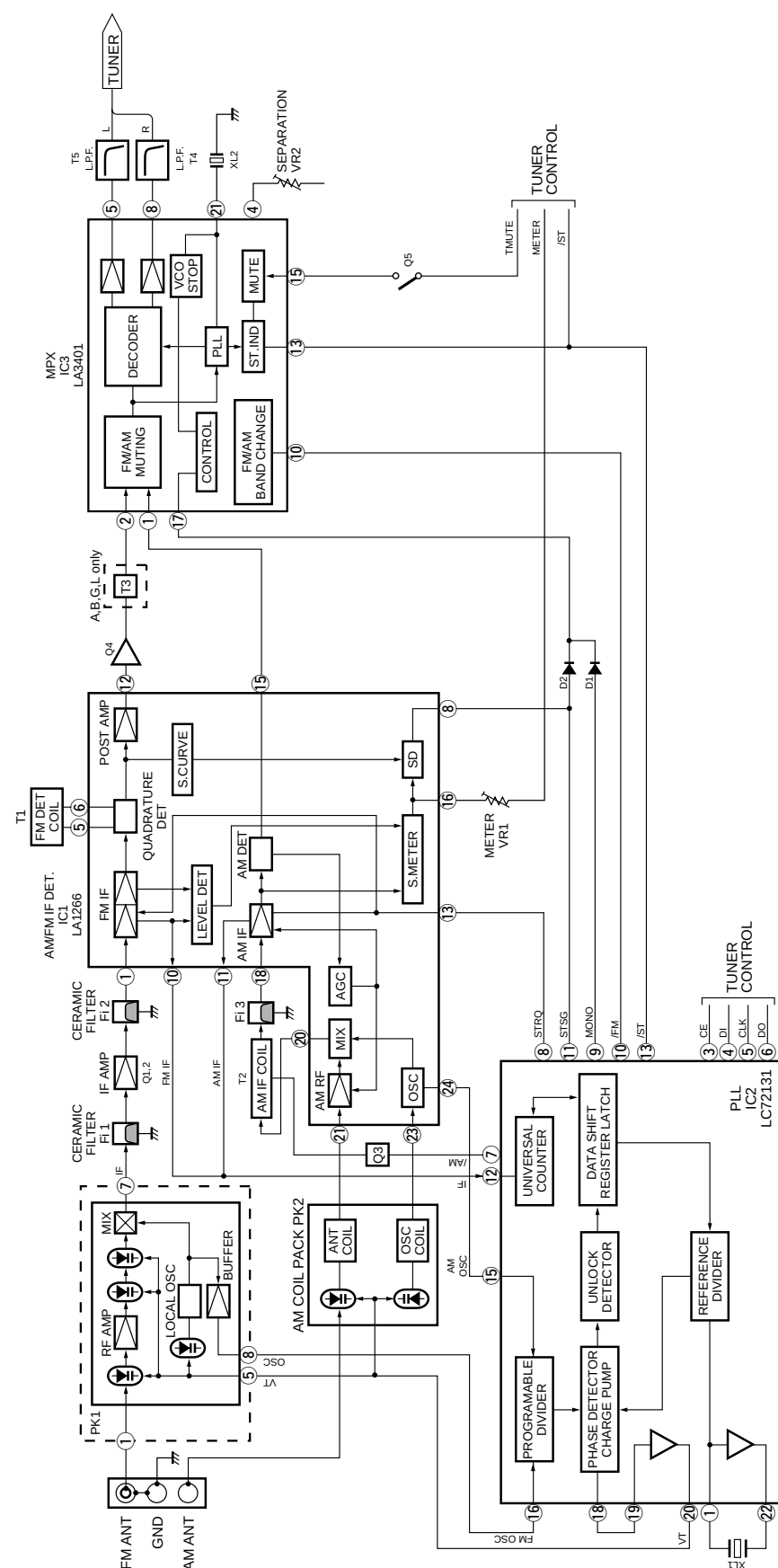


■ BLOCK DIAGRAM



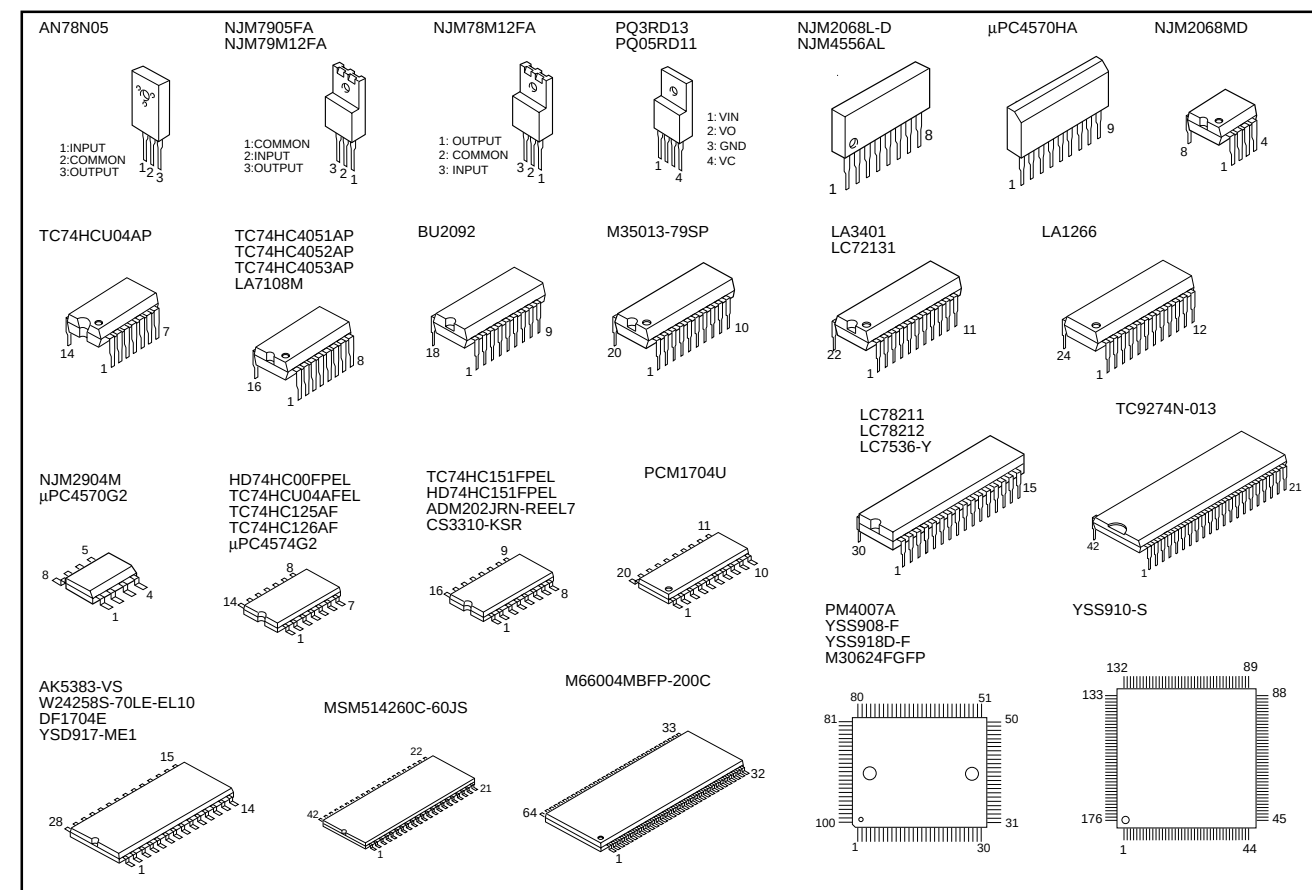
## DSP-AX1/RX-V1

### ■ BLOCK DIAGRAM (TUNER : RX-V1 only)

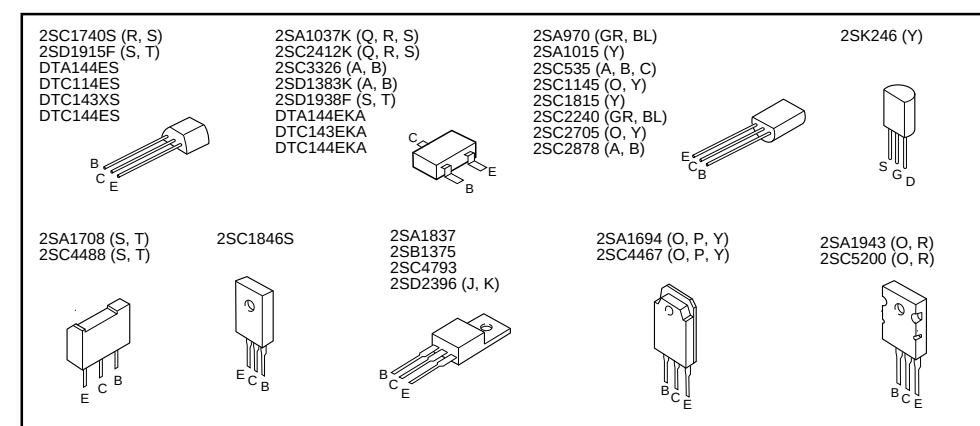


## ■ PIN CONNECTION DIAGRAM

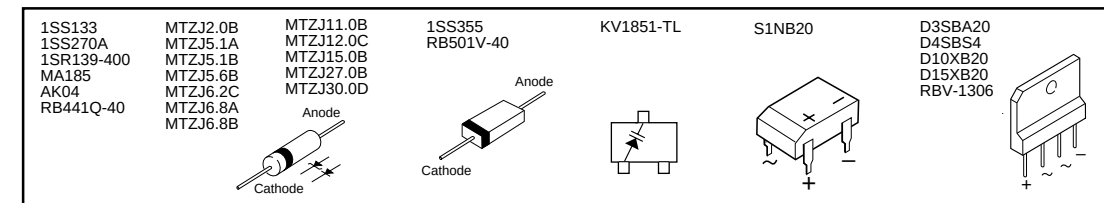
- ICs



## ● Transistors

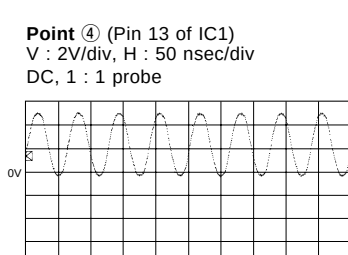
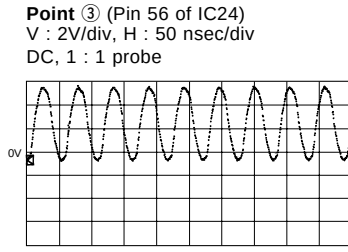
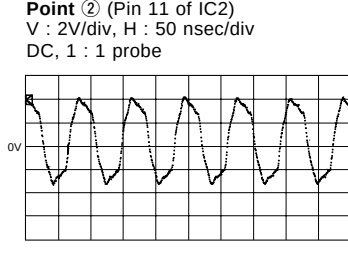
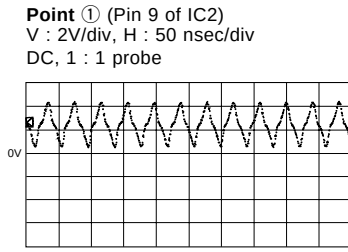
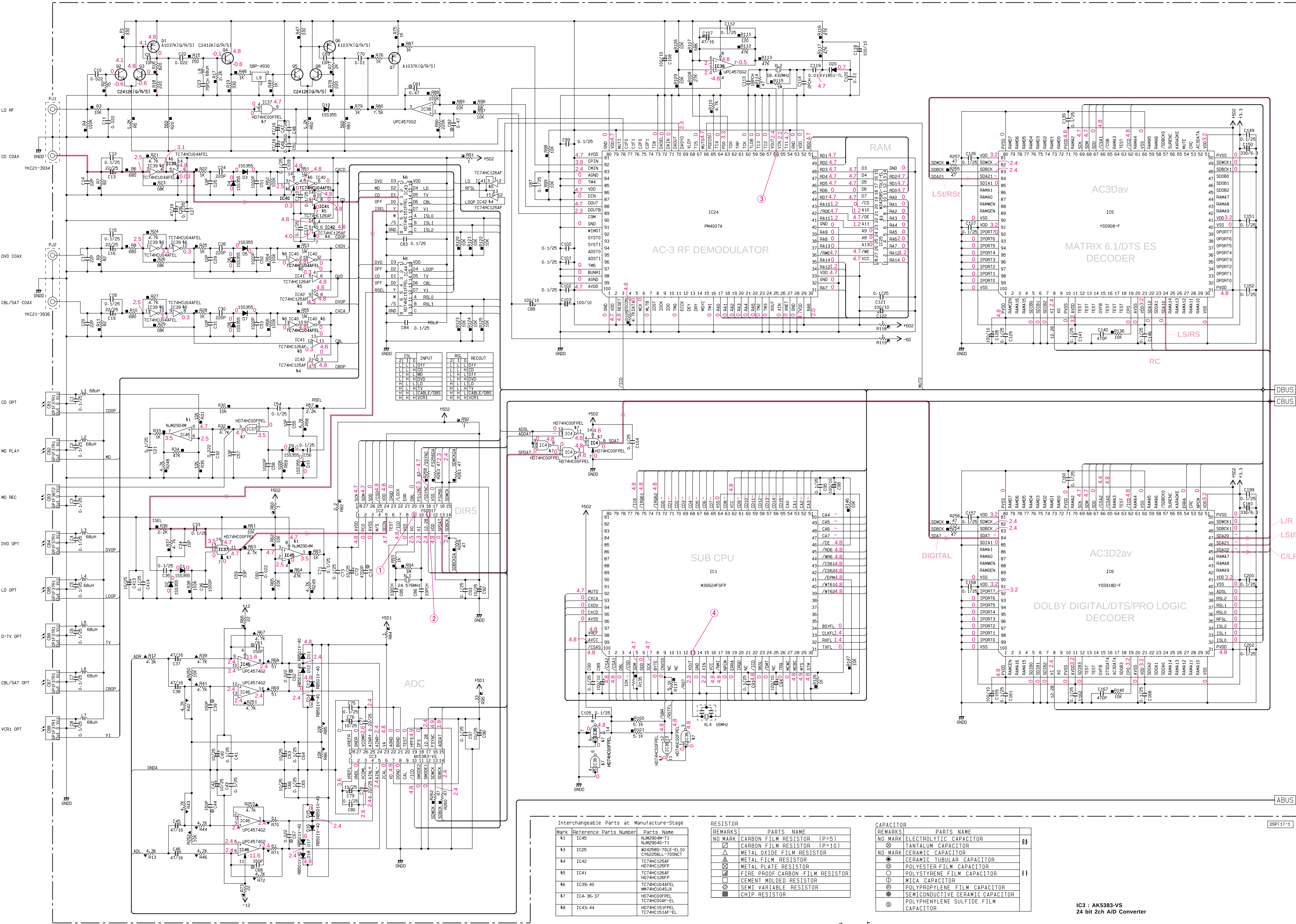


## ● Diodes



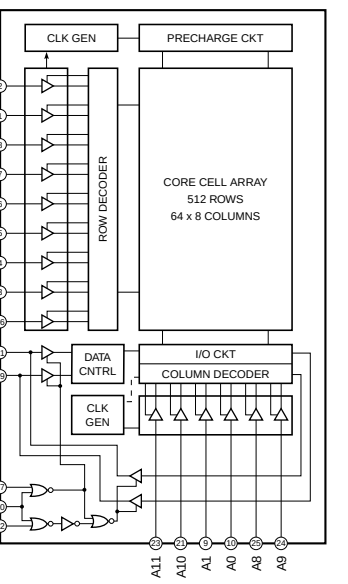
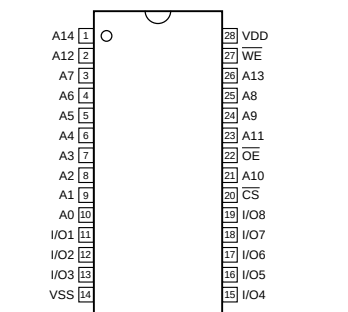


■ SCHEMATIC DIAGRAM (DSP(1)-1)



IC25 : W242585-70LE-EL10

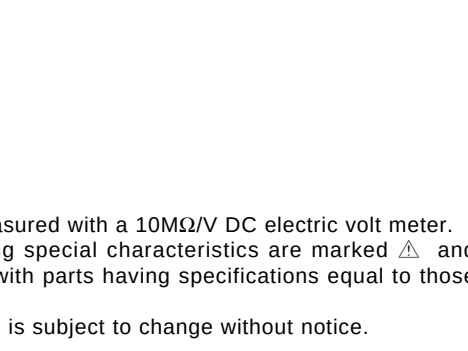
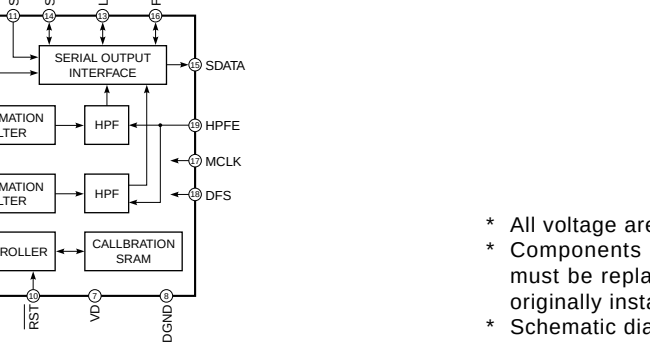
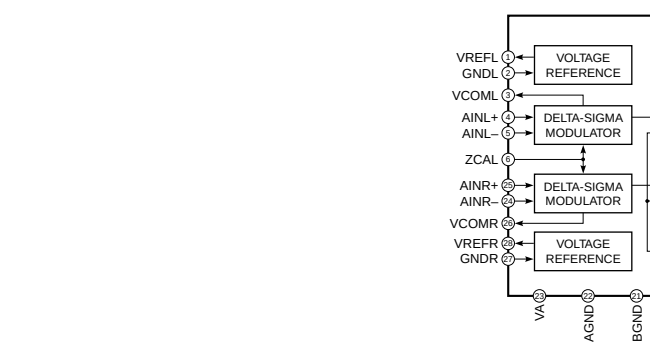
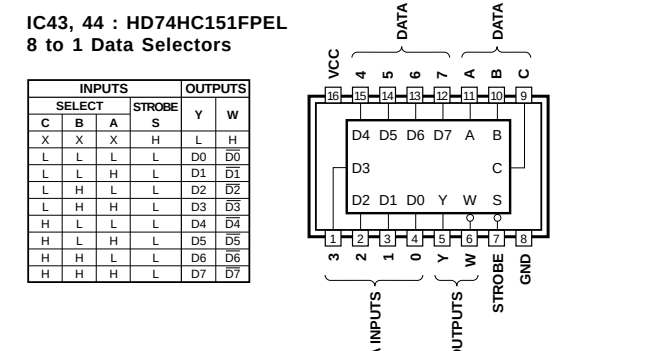
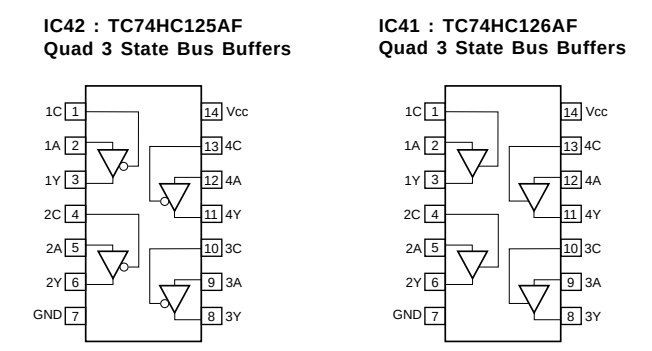
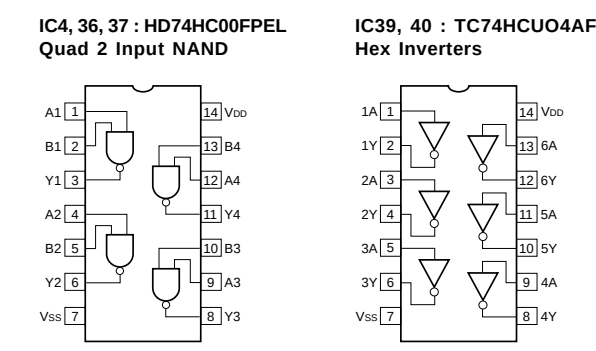
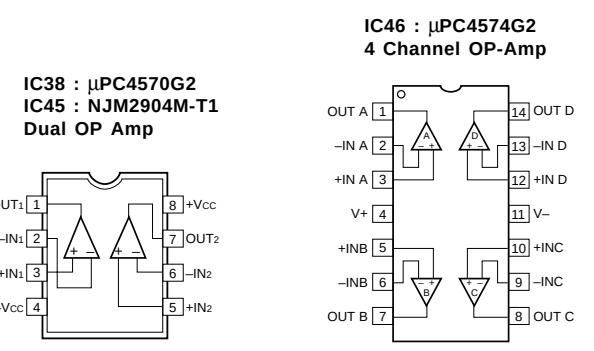
32K X 8 bits Static RAM



| Interchangeable Parts at Manufacturer-Stage |                        |                   |
|---------------------------------------------|------------------------|-------------------|
| Mark                                        | Reference Parts Number | Parts Name        |
| 41                                          | IC46                   | NJM2904M-T1       |
| 43                                          | IC25                   | W242585-70LE-EL10 |
| 44                                          | IC42                   | TC74HC125AF       |
| 45                                          | IC41                   | TC74HC126AF       |
| 46                                          | IC39-40                | TC74HC04AFEL      |
| 47                                          | IC4-36-37              | HD74HC00FPEL      |
| 48                                          | IC43-44                | HD74HC151FPEL     |

| REMARKS |                                 |
|---------|---------------------------------|
| NO MARK | CARBON FILM RESISTOR (P=5)      |
| NO MARK | CARBON FILM RESISTOR (P=10)     |
| NO MARK | METAL OXIDE FILM RESISTOR       |
| NO MARK | METAL FILM RESISTOR             |
| NO MARK | METAL PLATE RESISTOR            |
| NO MARK | FIRE-PROOF CARBON FILM RESISTOR |
| NO MARK | CEMENT MOLDED RESISTOR          |
| NO MARK | SEMI VARIABLE RESISTOR          |
| NO MARK | CHIP RESISTOR                   |

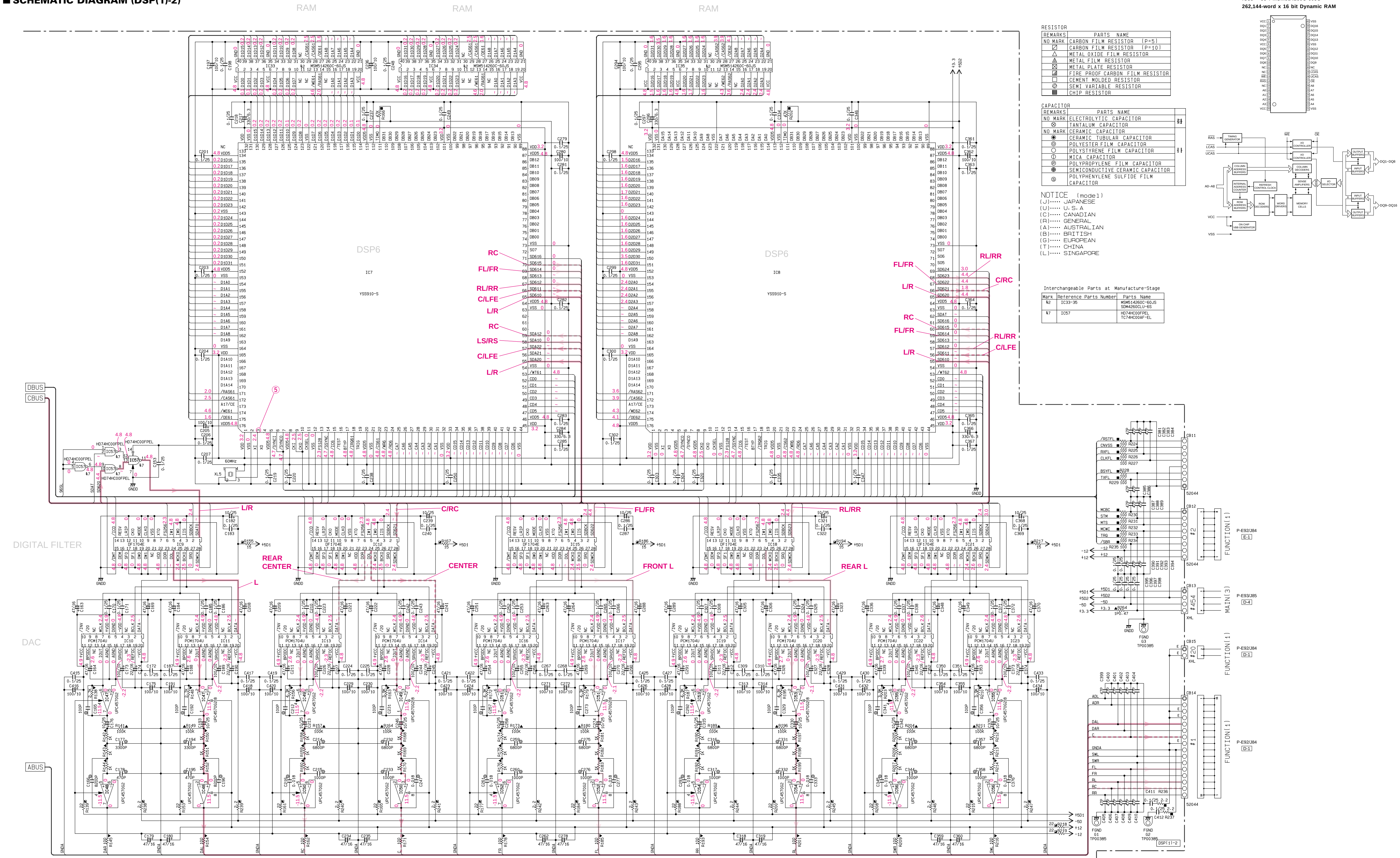
| CAPACITOR |                                      |
|-----------|--------------------------------------|
| NO MARK   | ELECTROLYTIC CAPACITOR               |
| NO MARK   | TANTALUM CAPACITOR                   |
| NO MARK   | CERAMIC CAPACITOR                    |
| NO MARK   | CERAMIC TUBULAR CAPACITOR            |
| NO MARK   | POLYESTER FILM CAPACITOR             |
| NO MARK   | POLYSTYRENE FILM CAPACITOR           |
| NO MARK   | MICA CAPACITOR                       |
| NO MARK   | POLYPROPYLENE FILM CAPACITOR         |
| NO MARK   | SEMICONDUCTIVE CERAMIC CAPACITOR     |
| NO MARK   | POLYPHENYLENE SULFIDE FILM CAPACITOR |



\* All voltage are measured with a 10M $\Omega$ /V DC electric volt meter.  
\* Components having special characteristics are marked  $\Delta$ . and must be replaced with parts having specifications equal to those originally installed.  
\* Schematic diagram is subject to change without notice.



## ■ SCHEMATIC DIAGRAM (DSP(1)-2)

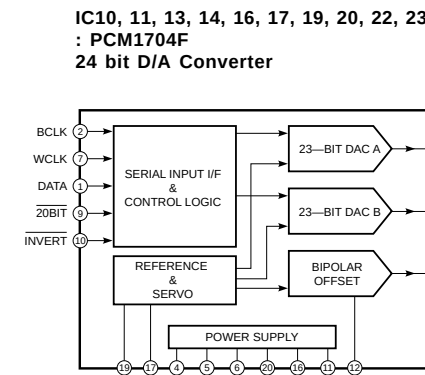
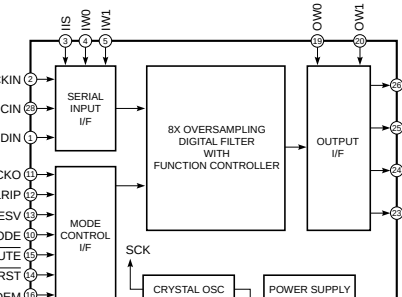
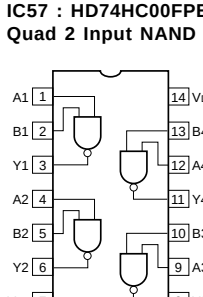
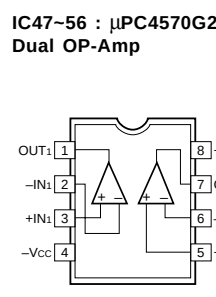
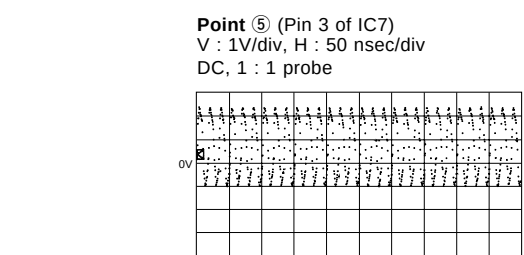
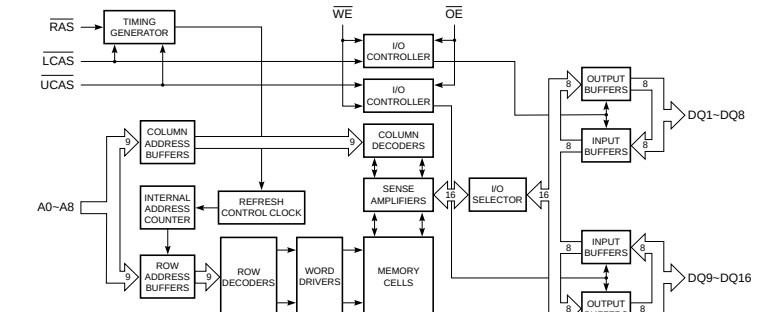
IC33 ~ 35 : MSM514260C-60JS  
262,144-word x 16 bit Dynamic RAM

| REMARKS | PARTS NAME                      |
|---------|---------------------------------|
| NO MARK | CARBON FILM RESISTOR (P=5)      |
| □       | CARBON FILM RESISTOR (P=10)     |
| △       | METAL OXIDE FILM RESISTOR       |
| ■       | METAL FILM RESISTOR             |
| □       | METAL PLATE RESISTOR            |
| □       | FIRE PROOF CARBON FILM RESISTOR |
| □       | CEMENT MOLDED RESISTOR          |
| □       | SEMI VARIABLE RESISTOR          |
| □       | CHIP RESISTOR                   |

| REMARKS | PARTS NAME                           |
|---------|--------------------------------------|
| NO MARK | ELECTROLYTIC CAPACITOR               |
| □       | TANTALUM CAPACITOR                   |
| ○       | CERAMIC CAPACITOR                    |
| ○       | CERAMIC TUBULAR CAPACITOR            |
| ○       | POLYESTER FILM CAPACITOR             |
| ○       | POLYSTYRENE FILM CAPACITOR           |
| ○       | MICA CAPACITOR                       |
| ○       | POLYPROPYLENE FILM CAPACITOR         |
| ○       | SEMICONDUCTIVE CERAMIC CAPACITOR     |
| ○       | POLYPHENYLENE SULFIDE FILM CAPACITOR |

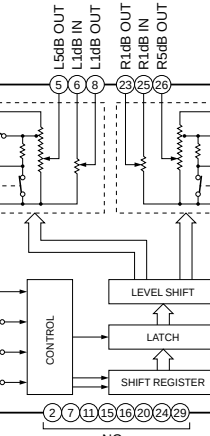
NOTICE (model)  
(J)..... JAPANESE  
(U)..... U.S.A  
(C)..... CANADIAN  
(R)..... GENERAL  
(A)..... AUSTRALIAN  
(B)..... BRITISH  
(T)..... EUROPEAN  
(L)..... SINGAPORE

| Mark | Reference Parts Number | Parts Name      |
|------|------------------------|-----------------|
| 42   | IC33-35                | MSM514260C-60JS |
| 47   | IC57                   | HD74HC00FPEL    |



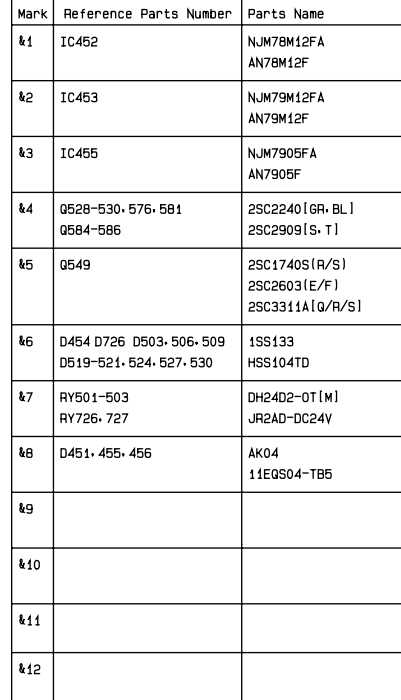
- \* All voltage are measured with a 10MΩ/V DC electric volt meter.
- \* Components having special characteristics are marked △ and must be replaced with parts having specifications equal to those originally installed.
- \* Schematic diagram is subject to change without notice.





**E-92/J-84**



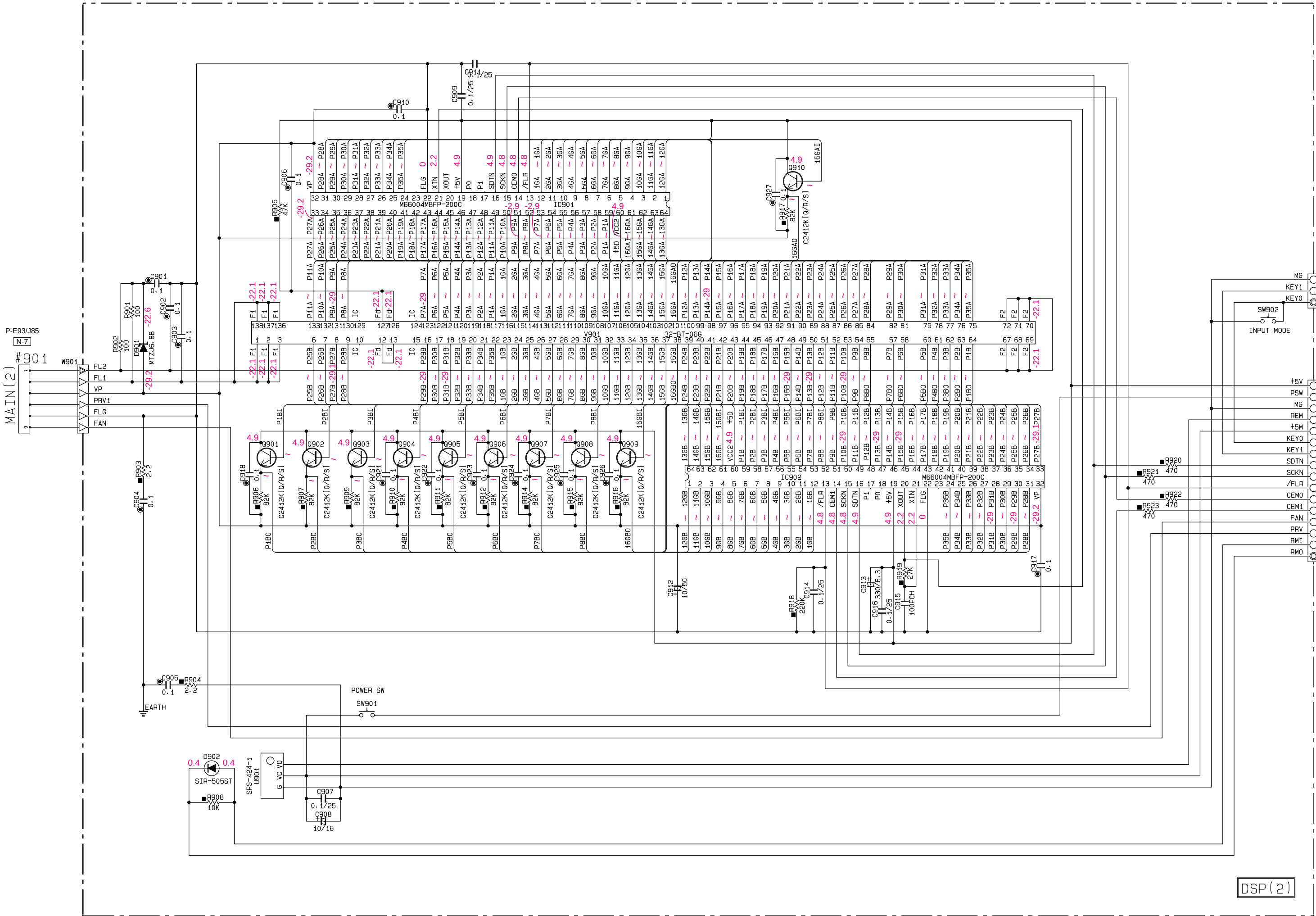


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NOTICE (model)
(J).... JAPANESE
(U).... U. S. A
(R).... CANADIAN
(C).... GENERAL
(A).... AUSTRALIAN
(B).... BRITISH
(G).... EUROPEAN
(T).... CHINA
(L).... SINGAPORE
```

- \* All voltage are measured with a 10MΩ/VC electric volt meter.
- \* Components having special characteristics are marked  and must be replaced with parts having specifications equal to those originally installed.
- \* Schematic diagram is subject to change without notice.



■ SCHEMATIC DIAGRAM (DSP(2))



| REMARKS | PARTS NAME                      |
|---------|---------------------------------|
| NO MARK | CARBON FILM RESISTOR (P=5)      |
| □       | CARBON FILM RESISTOR (P=10)     |
| △       | METAL OXIDE FILM RESISTOR       |
| ▲       | METAL FILM RESISTOR             |
| ⊠       | METAL PLATE RESISTOR            |
| ▣       | FIRE PROOF CARBON FILM RESISTOR |
| □       | CEMENT MOLDED RESISTOR          |
| ⊗       | SEMI VARIABLE RESISTOR          |
| ■       | CHIP RESISTOR                   |

| REMARKS | PARTS NAME                           |
|---------|--------------------------------------|
| NO MARK | ELECTROLYTIC CAPACITOR               |
| ⊗       | TANTALUM CAPACITOR                   |
| NO MARK | CERAMIC CAPACITOR                    |
| ●       | CERAMIC TUBULAR CAPACITOR            |
| ⊙       | POLYESTER FILM CAPACITOR             |
| ○       | POLYSTYRENE FILM CAPACITOR           |
| ⊖       | MICA CAPACITOR                       |
| ⊕       | POLYPROPYLENE FILM CAPACITOR         |
| ●       | SEMICONDUCTIVE CERAMIC CAPACITOR     |
| ⊙       | POLYPHENYLENE SULFIDE FILM CAPACITOR |

NOTICE (model)  
(J)..... JAPANESE  
(U)..... U. S. A  
(C)..... CANADIAN  
(R)..... GENERAL  
(A)..... AUSTRALIAN  
(B)..... BRITISH  
(G)..... EUROPEAN  
(T)..... CHINA  
(L)..... SINGAPORE

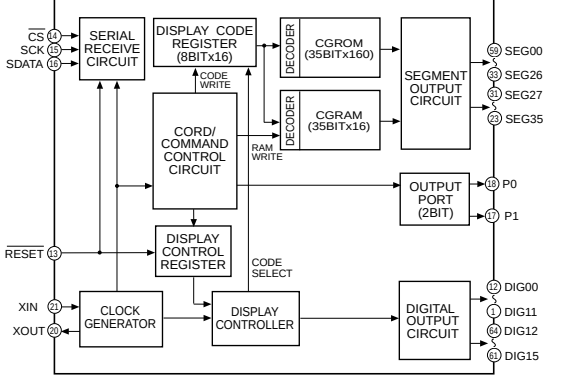
CIRCUIT CHANGES BY MARKET.

| s   | Parts Number | J. R. T. B. G | U. A    | C       | Memo               |
|-----|--------------|---------------|---------|---------|--------------------|
| 941 | CB941        | X             | V096370 | V096370 | Tuner I/F Board    |
| 942 | CB942        | X             | VM92360 | VM92360 | Tuner I/F Board    |
| 801 | SW801        | X             | X       | VZ07550 | Impedance Selector |
| 802 | CB801-802    | X             | X       | LA00200 | Impedance Selector |

Interchangeable Parts at Manufacture-Stage

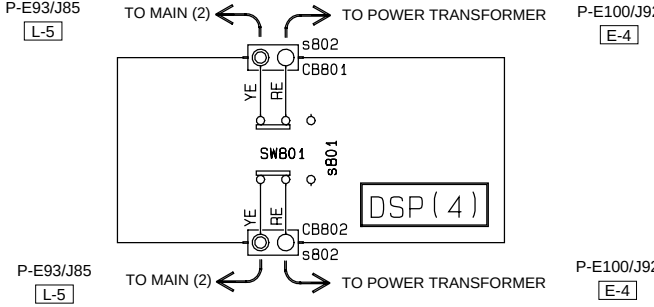
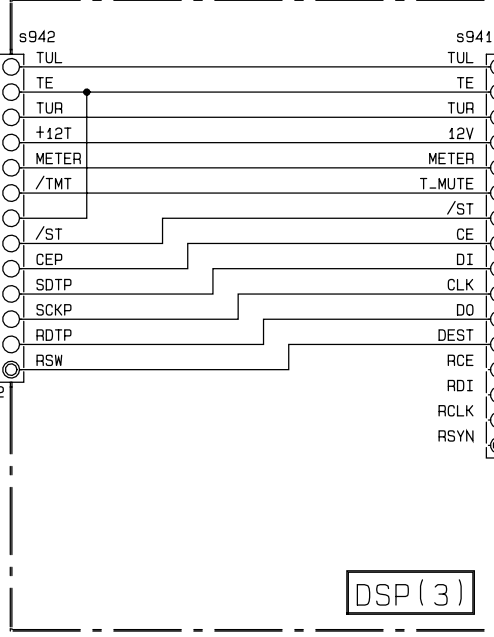
| Mark | Reference Parts Number | Parts Name |
|------|------------------------|------------|
|      |                        |            |

IC901, 902 : M66004MBFP-200C  
FL Display Driver

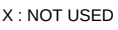


VIDEO(6)

FUNCTION(1)



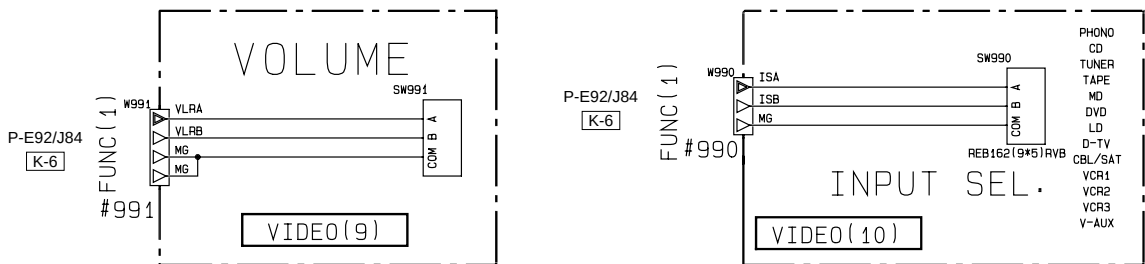
\* All voltage are measured with a 10MΩ/V DC electric volt meter.  
\* Components having special characteristics are marked △ and must be replaced with parts having specifications equal to those originally installed.  
\* Schematic diagram is subject to change without notice.



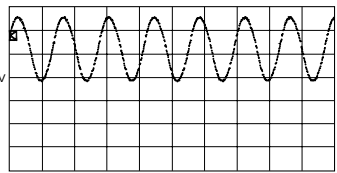
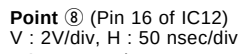
NOTICE (model)  
(J)..... JAPANESE  
(U)..... U. S. A  
(C)..... CANADIAN  
(R)..... GENERAL  
(A)..... AUSTRALIAN  
(B)..... BRITISH  
(G)..... EUROPEAN  
(T)..... CHINA  
(L)..... SINGAPORE

| CAPACITOR |                                      |   |
|-----------|--------------------------------------|---|
| REMARKS   | PARTS NAME                           |   |
| NO MARK   | ELECTROLYTIC CAPACITOR               | 料 |
| ⊗         | TANTALUM CAPACITOR                   |   |
| NO MARK   | CERAMIC CAPACITOR                    |   |
| ●         | CERAMIC TUBULAR CAPACITOR            |   |
| ○         | POLYESTER FILM CAPACITOR             |   |
| ○         | POLYSTYRENE FILM CAPACITOR           | 料 |
| ①         | MICA CAPACITOR                       |   |
| ⊕         | POLYPROPYLENE FILM CAPACITOR         |   |
| ●         | SEMICONDUCTIVE CERAMIC CAPACITOR     |   |
| ⊙         | POLYPHENYLENE SULFIDE FILM CAPACITOR |   |

| Interchangeable Parts at Manufacture-Stage |                              |                                      |  |
|--------------------------------------------|------------------------------|--------------------------------------|--|
| Mark                                       | Reference Parts Number       | Parts Name                           |  |
| k1                                         | IC13-13                      | TC74HC044P<br>M74HC04GN              |  |
| k2                                         | 06                           | DTC114ES<br>UM411<br>DTC114ESA       |  |
| k3                                         | D1-2, 4, 6, 7-13             | 15S133<br>HSS104TD                   |  |
| k4                                         | PJ151-193                    | LRP6520-A215<br>YK21-3325            |  |
| k5                                         | PJ152-154                    | LRP6520-A25B<br>YK21-3757            |  |
| k6                                         | C218-219                     | UM65210 100p/50<br>VY95490 100p/50   |  |
| k7                                         | C214-215                     | UM65422 0.022/50<br>UA35422 0.022/50 |  |
| k8                                         | SW351-354-357-359<br>362-363 | EV9114<br>SWH90A14A                  |  |
| k9                                         |                              |                                      |  |
| k10                                        |                              |                                      |  |
| k11                                        |                              |                                      |  |
| k12                                        |                              |                                      |  |



IC15 : BU2092  
Serial In/Parallel Out Driver

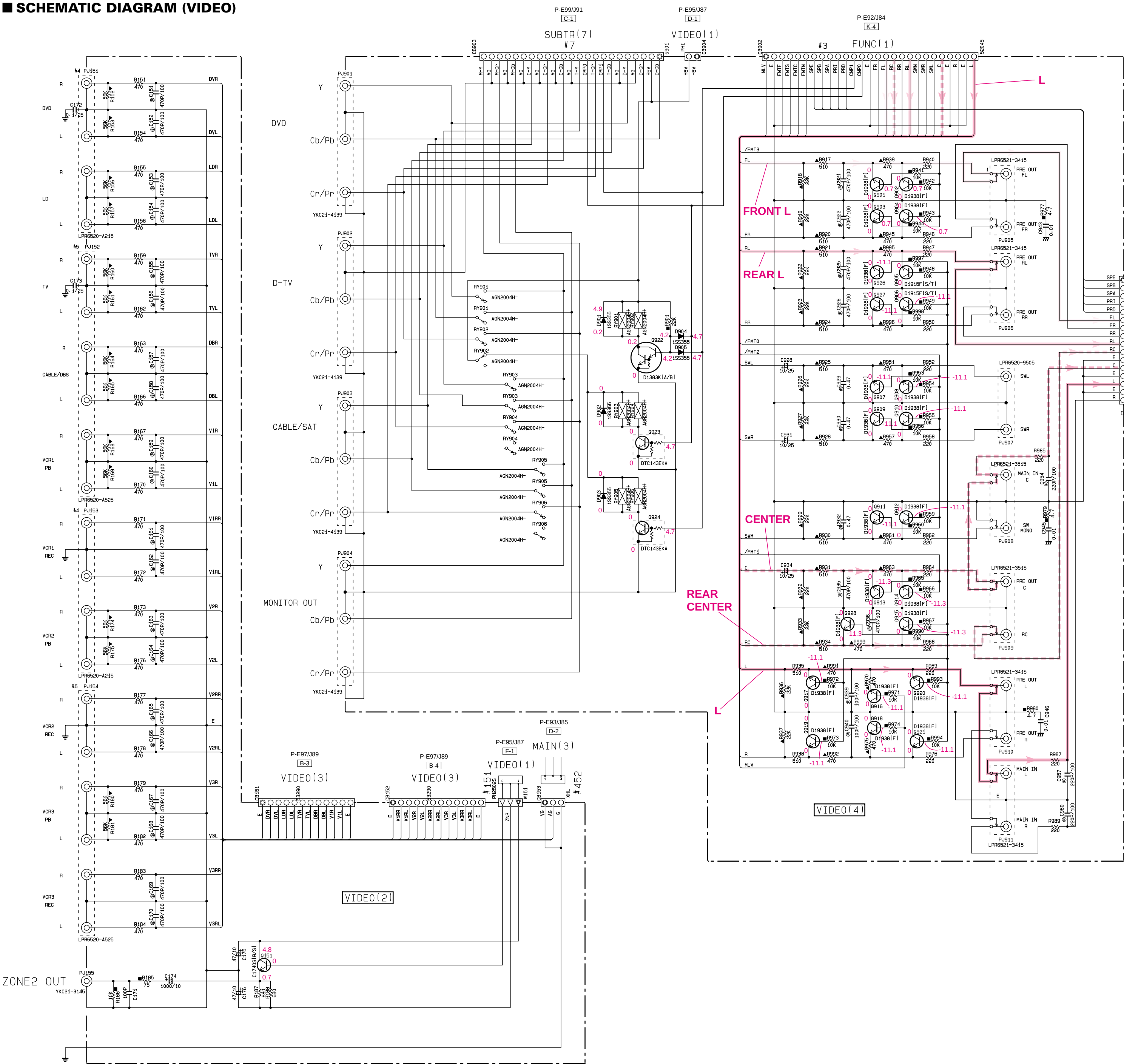


| CONTROL INPUTS     |              |               |               | "O" CHANNEL                                                                |
|--------------------|--------------|---------------|---------------|----------------------------------------------------------------------------|
| INHIBIT<br>(Pin 6) | C<br>(Pin 9) | B<br>(Pin 10) | A<br>(Pin 11) | 0X (Pin 12), 0Y (Pin 2), 0Z (Pin 5)<br>1X (Pin 13), 1Y (Pin 1), 1Z (Pin 5) |
| L                  | L            | L             | L             | 0X, 0Y, 0Z                                                                 |
| L                  | L            | L             | H             | 1X, 0Y, 0Z                                                                 |
| L                  | L            | H             | L             | 0X, 1Y, 0Z                                                                 |
| L                  | L            | H             | H             | 1X, 1Y, 0Z                                                                 |
| L                  | H            | L             | L             | 0X, 0Y, 1Z                                                                 |
| L                  | H            | L             | H             | 1X, 0Y, 1Z                                                                 |
| L                  | H            | H             | L             | 0X, 1Y, 1Z                                                                 |
| L                  | H            | H             | H             | 1X, 1Y, 1Z                                                                 |
| H                  | *            | *             | *             | NOTE                                                                       |

- \* All voltage are measured with a 10MΩ/V DC electric volt meter.
- \* Components having special characteristics are marked  and must be replaced with parts having specifications equal to those originally installed.
- \* Schematic diagram is subject to change without notice.



SCHEMATIC DIAGRAM (VIDEO)



CIRCUIT CHANGES BY MARKET.

| s   | Parts Number      | J                  | U-C                | R-T                | A                    | B                    | G                    |
|-----|-------------------|--------------------|--------------------|--------------------|----------------------|----------------------|----------------------|
| 1   | XL1               | 14.3181MHz VJ98090 | 14.3181MHz VJ98090 | 14.3181MHz VJ98090 | 17.734475MHz VJ98090 | 17.734475MHz VJ98090 | 17.734475MHz VJ98090 |
| 2   | C41               | CH 20P VJ90020     | CH 20P VJ90020     | CH 20P VJ90020     | CK 2P VJ89870        | CK 2P VJ89870        | CK 2P VJ89870        |
| 3   | C42               | CH 15P VJ89890     | CH 15P VJ89890     | CH 15P VJ89890     | CJ 3P VJ89890        | CJ 3P VJ89890        | CJ 3P VJ89890        |
| 4   | C18               | 1500P UB05315      | 1500P UB05315      | 1500P UB05315      | 820P UB05282         | 820P UB05282         | 820P UB05282         |
| 351 | R354              | X                  | 1.8K 0.1 R025618   | X                  | 1.8K 0.1 R025618     | X                    | X                    |
| 352 | R355              | X                  | 2.7K 0.1 R025627   | X                  | 2.7K 0.1 R025627     | X                    | X                    |
| 353 | R356              | X                  | 3.9K 0.1 R025633   | X                  | 3.9K 0.1 R025633     | X                    | X                    |
| 354 | R361              | X                  | 4.7K 0.1 R025647   | X                  | 4.7K 0.1 R025647     | X                    | X                    |
| 355 | SW355-356 350-351 | X                  | EV011A SKHYB4014A  | X                  | EV011A SKHYB4014A    | X                    | X                    |
| 901 | CB903             | FE-VN 23P V486550  | X                  | X                  | X                    | X                    | X                    |

NOTICE (model1)

(J)..... JAPANESE  
(U)..... U. S. A  
(C)..... CANADIAN  
(R)..... GENERAL  
(A)..... AUSTRALIAN  
(B)..... BRITISH  
(G)..... EUROPEAN  
(T)..... CHINA  
(L)..... SINGAPORE

CAPACITOR

| REMARKS | PARTS NAME                           |
|---------|--------------------------------------|
| NO MARK | ELECTROLYTIC CAPACITOR               |
| NO MARK | TANTALUM CAPACITOR                   |
| NO MARK | CERAMIC CAPACITOR                    |
| ⊙       | CERAMIC TUBULAR CAPACITOR            |
| ○       | POLYESTER FILM CAPACITOR             |
| ⊖       | POLYSTYRENE FILM CAPACITOR           |
| Ⓜ       | MICA CAPACITOR                       |
| Ⓢ       | POLYPROPYLENE FILM CAPACITOR         |
| Ⓢ       | SEMICONDUCTIVE CERAMIC CAPACITOR     |
| Ⓢ       | POLYPHENYLENE SULFIDE FILM CAPACITOR |

RESISTOR

| REMARKS | PARTS NAME                      |
|---------|---------------------------------|
| NO MARK | CARBON FILM RESISTOR (P=5)      |
| ⊠       | CARBON FILM RESISTOR (P=10)     |
| ⊠       | METAL OXIDE FILM RESISTOR       |
| ⊠       | METAL FILM RESISTOR             |
| ⊠       | METAL PLATE RESISTOR            |
| ⊠       | FIRE PROOF CARBON FILM RESISTOR |
| ⊠       | CEMENT MOLDED RESISTOR          |
| ⊠       | SEMI VARIABLE RESISTOR          |
| ⊠       | CHIP RESISTOR                   |

Interchangeable Parts at Manufacture-Stage

| Mark | Reference Parts Number     | Parts Name                           |
|------|----------------------------|--------------------------------------|
| Ⓜ1   | IC13-14                    | TC74HC0404P<br>MM74HC0404N           |
| Ⓜ2   | 06                         | DT114ES<br>UN4211<br>DT114ESA        |
| Ⓜ3   | D1-2, 4, 5, 7-13           | 1SS133<br>HSS104TD                   |
| Ⓜ4   | PJ151-153                  | LPR6520-A215<br>YKC21-3325           |
| Ⓜ5   | PJ152-154                  | LPR6520-A525<br>YKC21-3757           |
| Ⓜ6   | C218-219                   | UA65210 100P/50<br>VY95490 100p/50   |
| Ⓜ7   | C214-215                   | UA65422 0.022/50<br>UA35422 0.022/50 |
| Ⓜ8   | SW351-354, 357-359 350-353 | EV011A<br>SKHYB4014A                 |
| Ⓜ9   |                            |                                      |
| Ⓜ10  |                            |                                      |
| Ⓜ11  |                            |                                      |
| Ⓜ12  |                            |                                      |

\* All voltage are measured with a 10MΩ/V DC electric volt meter.  
\* Components having special characteristics are marked Δ and must be replaced with parts having specifications equal to those originally installed.  
\* Schematic diagram is subject to change without notice.

■ SCHEMATIC DIAGRAM (VIDEO)

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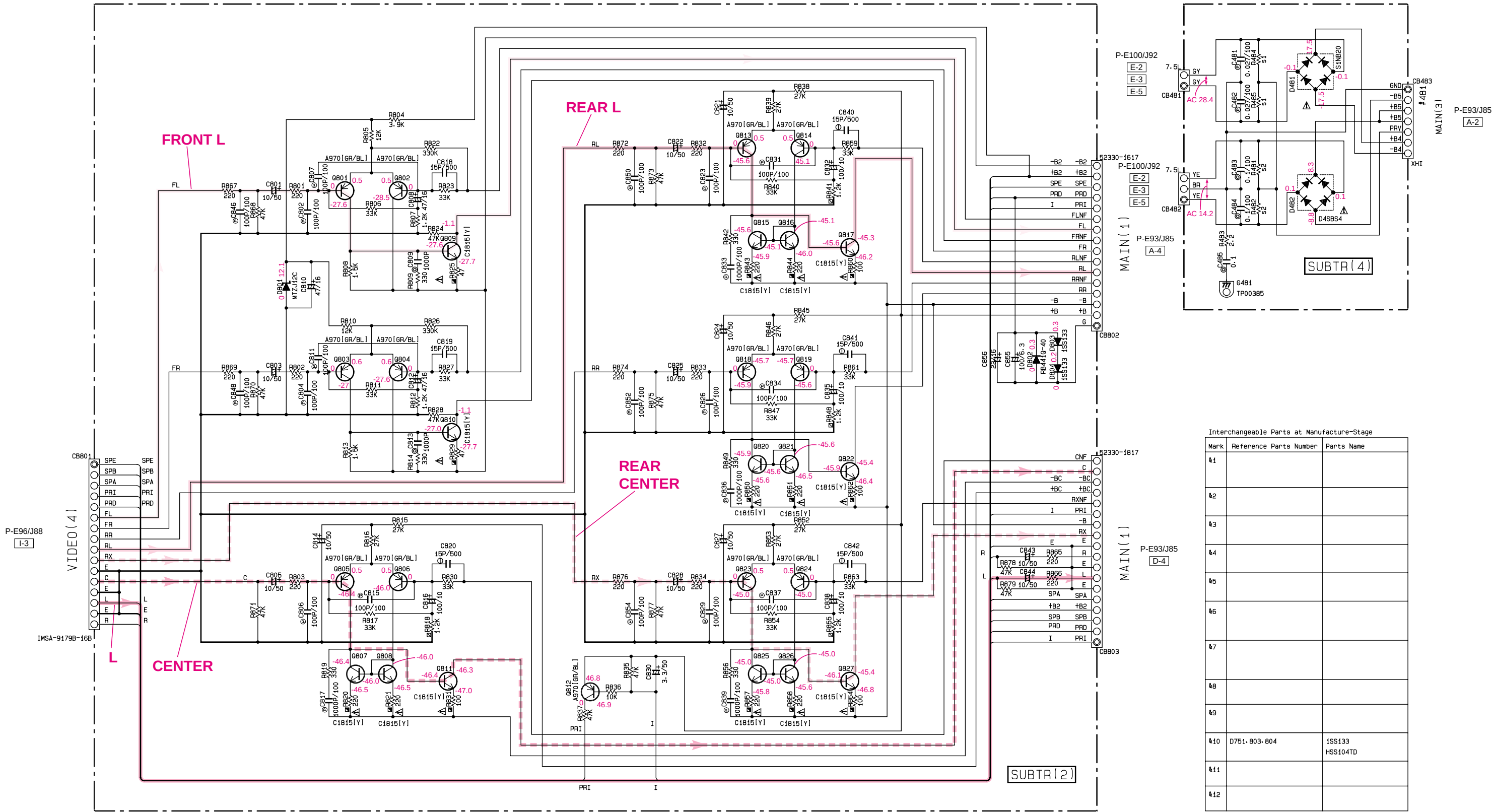
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SCHEMATIC DIAGRAM (SUB TRANS)



| s  | Reference No | J              | U              | C              | A-T            | A              | B              | G              |
|----|--------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| s1 | R484-485     | X              | 82K<br>HF45782 | 82K<br>HF45782 | X              | X              | X              | X              |
| s2 | R481-482     | 33K<br>HF45733 | 56K<br>HF45756 | 56K<br>HF45756 | 33K<br>HF45733 | 33K<br>HF45733 | 33K<br>HF45733 | 33K<br>HF45733 |

| REMARKS | PARTS NAME                           |
|---------|--------------------------------------|
| NO MARK | ELECTROLYTIC CAPACITOR               |
| ⊗       | TANTALUM CAPACITOR                   |
| NO MARK | CERAMIC CAPACITOR                    |
| ⊙       | CERAMIC TUBULAR CAPACITOR            |
| ⊖       | POLYESTER FILM CAPACITOR             |
| ○       | POLYSTYRENE FILM CAPACITOR           |
| ⊕       | MICA CAPACITOR                       |
| ⊗       | POLYPROPYLENE FILM CAPACITOR         |
| ●       | SEMICONDUCTIVE CERAMIC CAPACITOR     |
| ⊖       | POLYPHENYLENE SULFIDE FILM CAPACITOR |

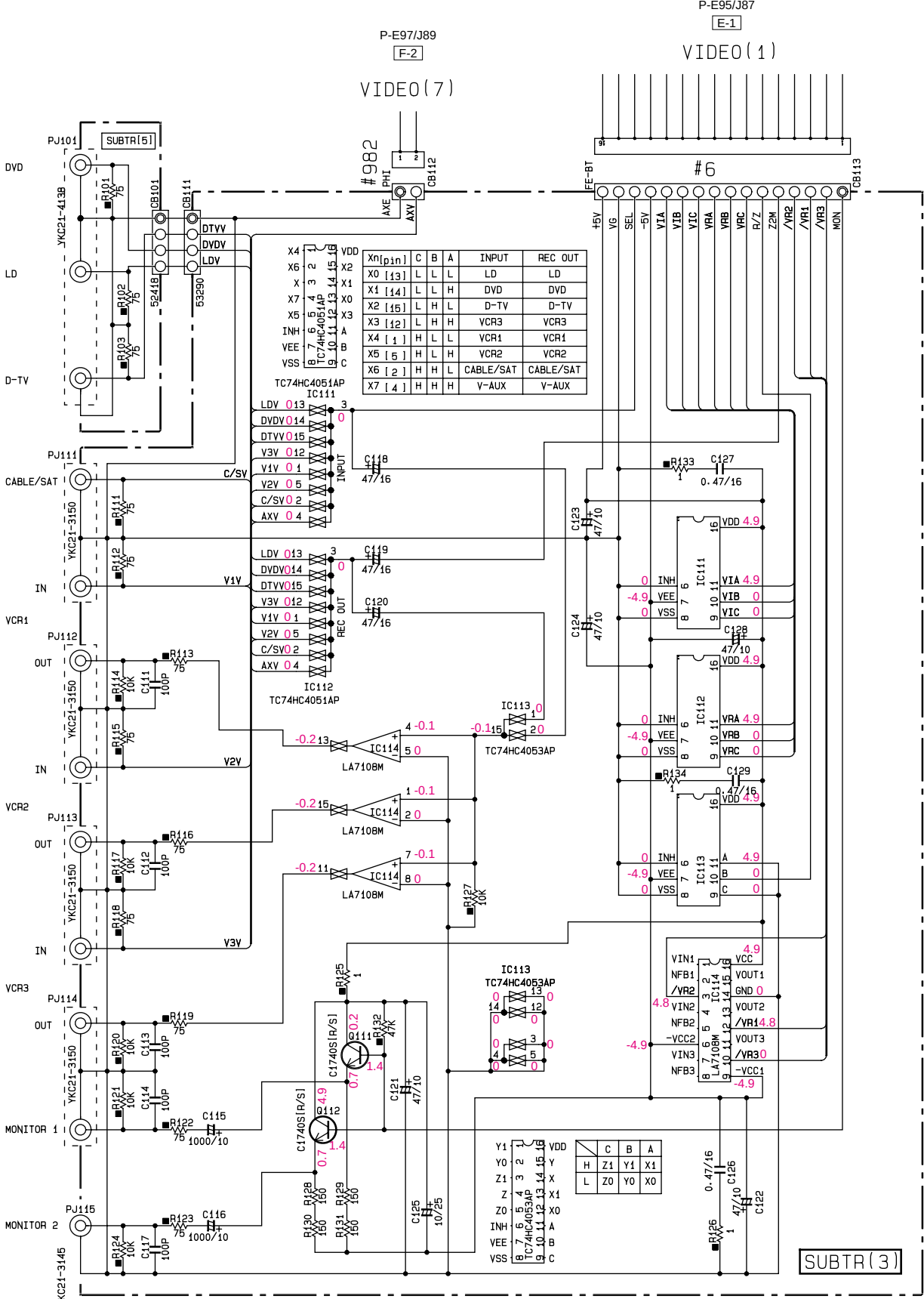
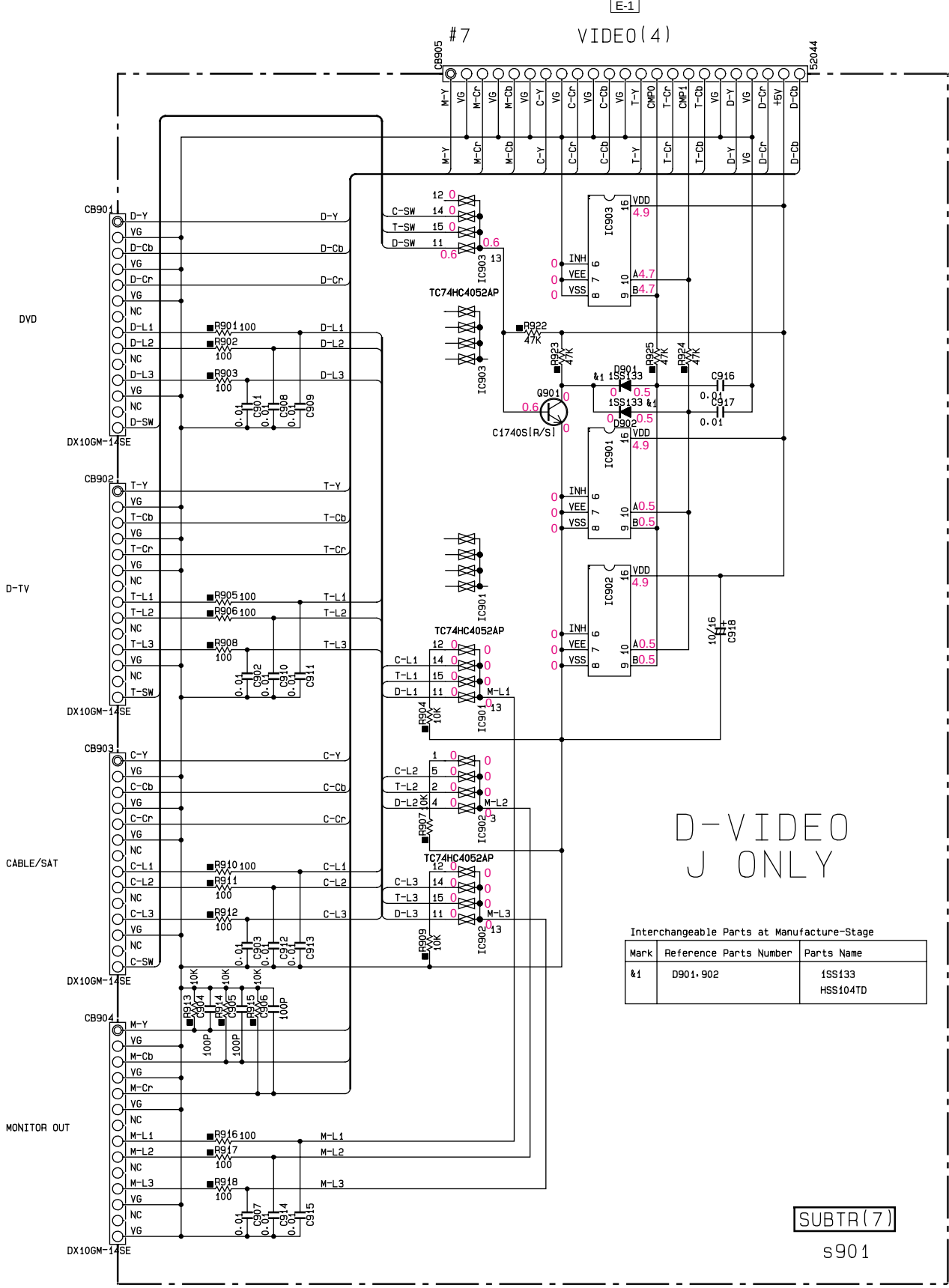
| REMARKS | PARTS NAME                      |
|---------|---------------------------------|
| NO MARK | CARBON FILM RESISTOR (P=5)      |
| ⊗       | CARBON FILM RESISTOR (P=10)     |
| △       | METAL OXIDE FILM RESISTOR       |
| △       | METAL FILM RESISTOR             |
| ⊗       | METAL PLATE RESISTOR            |
| ⊗       | FIRE PROOF CARBON FILM RESISTOR |
| ⊗       | CEMENT MOLDED RESISTOR          |
| ⊗       | SEMI VARIABLE RESISTOR          |
| ■       | CHIP RESISTOR                   |

NOTICE (model)  
(J)..... JAPANESE  
(U)..... U. S. A  
(C)..... CANADIAN  
(R)..... GENERAL  
(A)..... AUSTRALIAN  
(B)..... BRITISH  
(G)..... EUROPEAN  
(T)..... CHINA  
(L)..... SINGAPORE

\* All voltage are measured with a 10MΩ/V DC electric volt meter.  
\* Components having special characteristics are marked △ and must be replaced with parts having specifications equal to those originally installed.  
\* Schematic diagram is subject to change without notice.



■ SCHEMATIC DIAGRAM (SUB TRANS)



Interchangeable Parts at Manufacture-Stage

| Mark | Reference Parts Number | Parts Name         |
|------|------------------------|--------------------|
| k1   |                        |                    |
| k2   |                        |                    |
| k3   |                        |                    |
| k4   |                        |                    |
| k5   |                        |                    |
| k6   |                        |                    |
| k7   |                        |                    |
| k8   |                        |                    |
| k9   |                        |                    |
| k10  | D751-803-804           | 1SS133<br>HSS104TD |
| k11  |                        |                    |
| k12  |                        |                    |

CIRCUIT CHANGES BY MARKET.

| Mark | Reference No | J | U | C | R-T | A | B | G |
|------|--------------|---|---|---|-----|---|---|---|
| 901  | SUBTR(7)     | ○ | × | × | ×   | × | × | × |

X : NOT USED  
O : USED

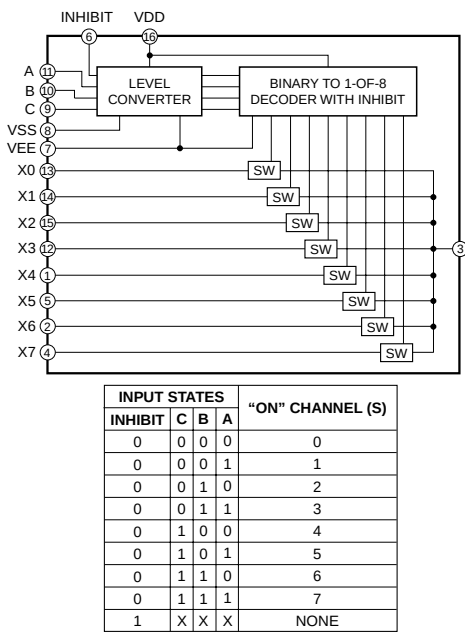
CAPACITOR

| REMARKS | PARTS NAME                           |
|---------|--------------------------------------|
| NO MARK | ELECTROLYTIC CAPACITOR               |
| ⊗       | TANTALUM CAPACITOR                   |
| NO MARK | CERAMIC CAPACITOR                    |
| ●       | CERAMIC TUBULAR CAPACITOR            |
| ⊙       | POLYESTER FILM CAPACITOR             |
| ○       | POLYSTYRENE FILM CAPACITOR           |
| ①       | MICA CAPACITOR                       |
| ②       | POLYPROPYLENE FILM CAPACITOR         |
| ●       | SEMICONDUCTIVE CERAMIC CAPACITOR     |
| ⊙       | POLYPHENYLENE SULFIDE FILM CAPACITOR |

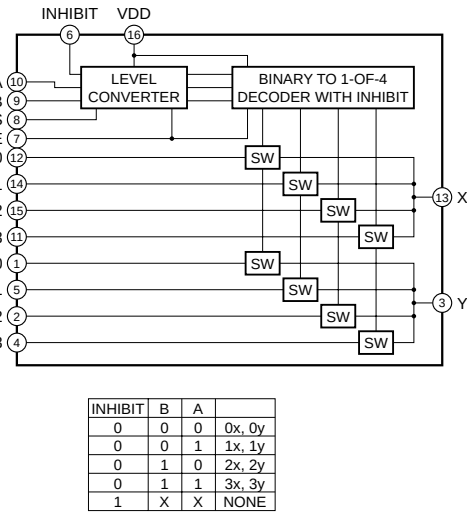
RESISTOR

| REMARKS | PARTS NAME                      |
|---------|---------------------------------|
| NO MARK | CARBON FILM RESISTOR (P=5)      |
| ⊗       | CARBON FILM RESISTOR (P=10)     |
| △       | METAL OXIDE FILM RESISTOR       |
| ●       | METAL FILM RESISTOR             |
| ⊙       | METAL PLATE RESISTOR            |
| ⊞       | FIRE PROOF CARBON FILM RESISTOR |
| □       | CEMENT MOLDED RESISTOR          |
| ⊗       | SEMI VARIABLE RESISTOR          |
| ■       | CHIP RESISTOR                   |

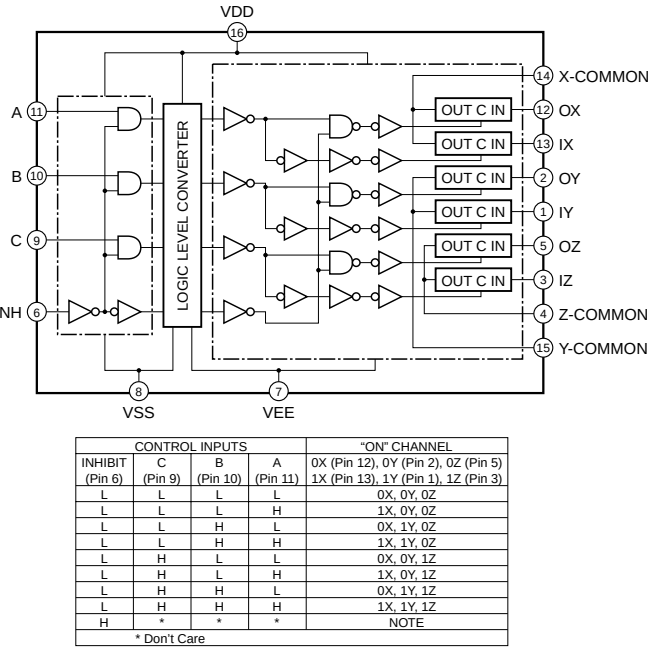
IC111, 112 : TC74HC4051AP  
Analog Multiplexer/Demultiplexer



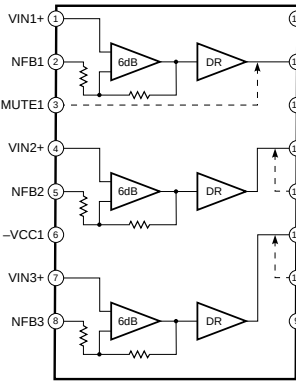
IC901-903 : TC74HC4052AP  
Analog Multiplexers/Demultiplexers



IC113 : TC74HC4053AP  
Triple 2-Channel Multiplexer/Demultiplexer



IC114 : LA7108M  
75Ω Video Driver



NOTICE (model)  
(J)..... JAPANESE  
(U)..... U.S.A  
(C)..... CANADIAN  
(R)..... GENERAL  
(A)..... AUSTRALIAN  
(B)..... BRITISH  
(G)..... EUROPEAN  
(T)..... CHINA  
(L)..... SINGAPORE

\* All voltage are measured with a 10MΩ/V DC electric volt meter.  
\* Components having special characteristics are marked △ and must be replaced with parts having specifications equal to those originally installed.  
\* Schematic diagram is subject to change without notice.



## 2

8

**E-100/J-92**

■ SCHEMATIC DIAGRAM (TUNER : RX-V1 only)

| CAPACITOR |                                  |   |
|-----------|----------------------------------|---|
| REMARKS   | PARTS NAME                       |   |
| NO MARK   | ELECTROLYTIC CAPACITOR           | ⌑ |
| NO MARK   | TANTALUM CAPACITOR               | ⌑ |
| ⊙         | CERAMIC CAPACITOR                |   |
| ⊙         | CERAMIC TUBULAR CAPACITOR        |   |
| ⊙         | POLYSTYRENE FILM CAPACITOR       |   |
| ⊙         | POLYSTYRENE FILM CAPACITOR       |   |
| ⊙         | MICA CAPACITOR                   |   |
| ⊙         | POLYPROPYLENE FILM CAPACITOR     |   |
| ⊙         | SEMICONDUCTIVE CERAMIC CAPACITOR |   |

| RESISTOR |                                 |  |
|----------|---------------------------------|--|
| REMARKS  | PARTS NAME                      |  |
| NO MARK  | CARBON FILM RESISTOR (P=5)      |  |
| ⊠        | CARBON FILM RESISTOR (P=10)     |  |
| ⊠        | METAL OXIDE FILM RESISTOR       |  |
| ⊠        | METAL FILM RESISTOR             |  |
| ⊠        | METAL PLATE RESISTOR            |  |
| ⊠        | FIRE PROOF CARBON FILM RESISTOR |  |
| ⊠        | CEMENT MOLDED RESISTOR          |  |
| ⊠        | SEMI VARIABLE RESISTOR          |  |
| ⊠        | CHIP RESISTOR                   |  |

NOTICE (model)

(J)..... JAPANESE  
(U)..... U. S. A  
(C)..... CANADIAN  
(R)..... GENERAL  
(A)..... AUSTRALIAN  
(B)..... BRITISH  
(G)..... EUROPEAN  
(T)..... CHINA  
(L)..... SINGAPORE

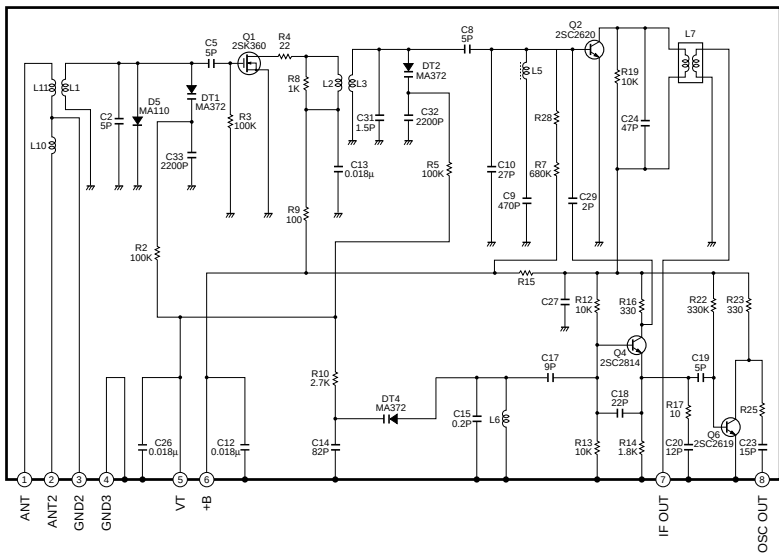
| Interchangeable Parts at Manufacture-Stage |                        |                            |
|--------------------------------------------|------------------------|----------------------------|
| Mark                                       | Reference Parts Number | Parts Name                 |
| k1                                         | D1.2                   | HSS104<br>1SS133<br>1SS176 |

CIRCUIT CHANGES BY MARKET.

| S  | J         | U.C              | R-T              | A-B-G-L         |
|----|-----------|------------------|------------------|-----------------|
| 1  | V251850   | V251860          | V251870          | V251880         |
| 2  | R48       | V290910          | V290910          | V271670         |
| 3  | T3        |                  |                  | XYA2<br>VT48680 |
| 4  | J41       | ○                | ○                |                 |
| 5  | C49       | 2200P<br>UA95322 | 2200P<br>UA95322 | 120P<br>UA95212 |
| 6  | R60       | 22K              | 22K              | 1K              |
| 7  | C36-37    | 680P<br>UA95268  | 1000P<br>UA95310 | 270P<br>UA95227 |
| 8  | R36-37    | 75K              | 75K              | 180K            |
| 9  | SW1       |                  |                  | V560260         |
| 10 | J42       |                  | ○                |                 |
| 11 |           |                  |                  |                 |
| 12 | R55-57-58 |                  |                  | 270K            |
| 13 | R60       |                  |                  | 180K            |
| 14 | R34       | 10K              | 10K              | 27K             |

○ : USED  
□ : NOT USED

PK1 : ENV-172C8G1R (V2909100) U, C, R, T models



# PARTS LIST

## ■ ELECTRICAL PARTS

### ■ WARNING

Components having special characteristics are marked  $\triangle$  and must be replaced with parts having specifications equal to those originally installed.

- Carbon resistors (1/6W or 1/4W) are not included in the ELECTRICAL PARTS List. For the parts No. of the carbon resistors, refer to last page.
- Chip resistors are listed on page 128.

### ABBREVIATIONS IN THIS LIST ARE AS FOLLOWS :

|            |                                |            |                                |
|------------|--------------------------------|------------|--------------------------------|
| C.A.EL.CHP | : CHIP ALUMI. ELECTROLYTIC CAP | L.EMIT     | : LIGHT EMITTING MODULE        |
| C.CE       | : CERAMIC CAP                  | LED.DSPLY  | : LED DISPLAY                  |
| C.CE.ARRAY | : CERAMIC CAP ARRAY            | LED.INFRD  | : LED, INFRARED                |
| C.CE.CHP   | : CHIP CERAMIC CAP             | MODUL.RF   | : MODULATOR, RF                |
| C.CE.ML    | : MULTILAYER CERAMIC CAP       | PHOT.CPL   | : PHOTO COUPLER                |
| C.CE.M.CHP | : CHIP MULTILAYER CERAMIC CAP  | PHOT.INTR  | : PHOTO INTERRUPTER            |
| C.CE.SAFTY | : RECOGNIZED CERAMIC CAP       | PHOT.RFLCT | : PHOTO REFLECTOR              |
| C.CE.TUBLR | : CERAMIC TUBULAR CAP          | PIN.TEST   | : PIN, TEST POINT              |
| C.CE.SMI   | : SEMI CONDUCTIVE CERAMIC CAP  | PLST.RIVET | : PLASTIC RIVET                |
| C.EL       | : ELECTROLYTIC CAP             | R.ARRAY    | : RESISTOR ARRAY               |
| C.MICA     | : MICA CAP                     | R.CAR      | : CARBON RESISTOR              |
| C.ML.FLM   | : MULTILAYER FILM CAP          | R.CAR.CHP  | : CHIP RESISTOR                |
| C.MP       | : METALLIZED PAPER CAP         | R.CAR.FP   | : FLAME PROOF CARBON RESISTOR  |
| C.MYLAR    | : MYLAR FILM CAP               | R.FUS      | : FUSABLE RESISTOR             |
| C.MYLAR.ML | : MULTILAYER MYLAR FILM CAP    | R.MTL.CHP  | : CHIP METAL FILM RESISTOR     |
| C.PAPER    | : PAPER CAPACITOR              | R.MTL.FLM  | : METAL FILM RESISTOR          |
| C.PLS      | : POLYSTYRENE FILM CAP         | R.MTL.OXD  | : METAL OXIDE FILM RESISTOR    |
| C.POL      | : POLYESTER FILM CAP           | R.MTL.PLAT | : METAL PLATE RESISTOR         |
| C.POLY     | : POLYETHYLENE FILM CAP        | RSNR.CE    | : CERAMIC RESONATOR            |
| C.PP       | : POLYPROPYLENE FILM CAP       | RSNR.CRYS  | : CRYSTAL RESONATOR            |
| C.TNTL     | : TANTALUM CAP                 | R.TW.CEM   | : TWIN CEMENT FIXED RESISTOR   |
| C.TNTL.CHP | : CHIP TANTALUM CAP            | R.WW       | : WIRE WOUND RESISTOR          |
| C.TRIM     | : TRIMMER CAP                  | SCR.BND.HD | : BIND HEAD B-TITE SCREW       |
| CN         | : CONNECTOR                    | SCR.BW.HD  | : BW HEAD TAPPING SCREW        |
| CN.BS.PIN  | : CONNECTOR, BASE PIN          | SCR.CUP    | : CUP TITE SCREW               |
| CN.CANNON  | : CONNECTOR, CANNON            | SCR.TERM   | : SCREW TERMINAL               |
| CN.DIN     | : CONNECTOR, DIN               | SCR.TR     | : SCREW, TRANSISTOR            |
| CN.FLAT    | : CONNECTOR, FLAT CABLE        | SUPRT.PCB  | : SUPPORT, P.C.B.              |
| CN.POST    | : CONNECTOR, BASE POST         | SURG.PRTCT | : SURGE PROTECTOR              |
| COIL.MX.AM | : COIL, AM MIX                 | SW.TACT    | : TACT SWITCH                  |
| COIL.AT.FM | : COIL, FM ANTENNA             | SW.LEAF    | : LEAF SWITCH                  |
| COIL.DT.FM | : COIL, FM DETECT              | SW.LEVER   | : LEVER SWITCH                 |
| COIL.MX.FM | : COIL, FM MIX                 | SW.MICRO   | : MICRO SWITCH                 |
| COIL.OUTPT | : OUTPUT COIL                  | SW.PUSH    | : PUSH SWITCH                  |
| DIOD.ARRAY | : DIODE ARRAY                  | SW.RT.ENC  | : ROTARY ENCODER               |
| DIODE.BRG  | : DIODE BRIDGE                 | SW.RT.MTR  | : ROTARY SWITCH WITH MOTOR     |
| DIODE.CHP  | : CHIP DIODE                   | SW.RT      | : ROTARY SWITCH                |
| DIODE.VAR  | : VARACTOR DIODE               | SW.SLIDE   | : SLIDE SWITCH                 |
| DIOD.Z.CHP | : CHIP ZENER DIODE             | TERM.SP    | : SPEAKER TERMINAL             |
| DIODE.ZENR | : ZENER DIODE                  | TERM.WRAP  | : WRAPPING TERMINAL            |
| DSCR.CE    | : CERAMIC DISCRIMINATOR        | THRMST.CHP | : CHIP THERMISTOR              |
| FER.BEAD   | : FERRITE BEADS                | TR.CHP     | : CHIP TRANSISTOR              |
| FER.CORE   | : FERRITE CORE                 | TR.DGT     | : DIGITAL TRANSISTOR           |
| FET.CHP    | : CHIP FET                     | TR.DGT.CHP | : CHIP DIGITAL TRANSISTOR      |
| FL.DSPLY   | : FLUORESCENT DISPLAY          | TRANS      | : TRANSFORMER                  |
| FLTR.CE    | : CERAMIC FILTER               | TRANS.PULS | : PULSE TRANSFORMER            |
| FLTR.COMB  | : COMB FILTER MODULE           | TRANS.PWR  | : POWER TRANSFORMER ASS'y      |
| FLTR.LC.RF | : LC FILTER, EMI               | TUNER.AM   | : TUNER PACK, AM               |
| GND.MTL    | : GROUND PLATE                 | TUNER.FM   | : TUNER PACK, FM               |
| GND.TERM   | : GROUND TERMINAL              | TUNER.PK   | : FRONT-END TUNER PACK         |
| HOLDER.FUS | : FUSE HOLDER                  | VR         | : ROTARY POTENTIOMETER         |
| IC.PRTCT   | : IC PROTECTOR                 | VR.MTR     | : POTENTIOMETER WITH MOTOR     |
| JUMPER.CN  | : JUMPER CONNECTOR             | VR.SW      | : POTENTIOMETER WITH ROTARY SW |
| JUMPER.TST | : JUMPER, TEST POINT           | VR.SLIDE   | : SLIDE POTENTIOMETER          |
| L.DTCT     | : LIGHT DETECTING MODULE       | VR.TRIM    | : TRIMMER POTENTIOMETER        |

**Note)** Those parts marked with “#” are not included in the P.C.B. ass'y.

P.C.B. MAIN

| Schm Ref.  | PART NO. | Description              |
|------------|----------|--------------------------|
| * V5001000 | P.C.B.   | MAIN(U)                  |
| * V5001100 | P.C.B.   | MAIN(C)                  |
| * V5001200 | P.C.B.   | MAIN(RT)                 |
| * V5001300 | P.C.B.   | MAIN(A)                  |
| * V5001400 | P.C.B.   | MAIN(BG)                 |
| CB452      | VD004500 | CN.BS.PIN 2P(C)          |
| * CB501    | V4807200 | CN.BS.PIN 16P            |
| * CB502    | V4807300 | CN.BS.PIN 18P            |
| CB503      | VD004500 | CN.BS.PIN 2P             |
| CB504      | VD004500 | CN.BS.PIN 2P             |
| CB505      | VD004500 | CN.BS.PIN 2P             |
| CB506      | VD004500 | CN.BS.PIN 2P             |
| CB507      | VD004500 | CN.BS.PIN 2P             |
| CB508      | VD004500 | CN.BS.PIN 2P             |
| CB509      | VD004500 | CN.BS.PIN 2P             |
| CB510      | VD004500 | CN.BS.PIN 2P             |
| CB701      | LA002400 | TERM.WRAP 3P L-753B      |
| CB702      | VP206500 | HOLDER.FUS EYF-52BC      |
| CB703      | VP206500 | HOLDER.FUS EYF-52BC      |
| CB704      | LA002390 | TERM.WRAP 2P             |
| CB705      | VP206500 | HOLDER.FUS EYF-52BC      |
| CB706      | VP206500 | HOLDER.FUS EYF-52BC      |
| CB707      | LA002390 | TERM.WRAP 2P             |
| CB708      | VD004500 | CN.BS.PIN 2P             |
| CB709      | VB858500 | CN.BS.PIN 6P             |
| * C451     | UU149680 | C.EL 6800uF 25V          |
| * C452     | UU149680 | C.EL 6800uF 25V          |
| * C453     | UU13A100 | C.EL 10000uF 16V         |
| * C454     | UU13A100 | C.EL 10000uF 16V         |
| * C455     | UU13A100 | C.EL 10000uF 16V         |
| * C456     | UU139680 | C.EL 6800uF 16V          |
| * C457     | UU13A100 | C.EL 10000uF 16V         |
| C458       | VR168300 | C.MYLAR.ML ECQ-V1H104JL3 |
| * C459     | UU137470 | C.EL 47uF 16V            |
| * C460     | UU166100 | C.EL 1uF 50V             |
| * C461     | UU139100 | C.EL 1000uF 16V          |
| * C462     | UU166100 | C.EL 1uF 50V             |
| * C463     | UU139100 | C.EL 1000uF 16V          |
| * C464     | UU137470 | C.EL 47uF 16V            |
| * C465     | UU13A100 | C.EL 10000uF 16V         |
| * C466     | UU166100 | C.EL 1uF 50V             |
| * C467     | UU166100 | C.EL 1uF 50V             |
| * C468     | UU137470 | C.EL 47uF 16V            |
| * C469     | UU137470 | C.EL 47uF 16V            |
| * C470     | UU137470 | C.EL 47uF 16V            |
| * C471     | UU166100 | C.EL 1uF 50V             |
| * C472     | UU166100 | C.EL 1uF 50V             |
| * C473     | UU166100 | C.EL 1uF 50V             |
| C474       | VH053100 | C.CE.TUBLR 0.1uF 50V     |
| C475       | VH053100 | C.CE.TUBLR 0.1uF 50V     |
| C476       | VH053100 | C.CE.TUBLR 0.1uF 50V     |
| C477       | VH053100 | C.CE.TUBLR 0.1uF 50V     |
| C478       | VH053100 | C.CE.TUBLR 0.1uF 50V     |

\* New Parts

| Schm Ref. | PART NO. | Description           |
|-----------|----------|-----------------------|
| * C501    | UU167220 | C.EL 22uF 50V         |
| * C502    | UU197470 | C.EL 47uF 100V        |
| * C503    | UU167220 | C.EL 22uF 50V         |
| * C504    | UU167220 | C.EL 22uF 50V         |
| C505      | FU452100 | C.MICA 100pF 500V     |
| C506      | FU452100 | C.MICA 100pF 500V     |
| C507      | FU452100 | C.MICA 100pF 500V     |
| C508      | FU452100 | C.MICA 100pF 500V     |
| C509      | FU452100 | C.MICA 100pF 500V     |
| C510      | FU452100 | C.MICA 100pF 500V     |
| C511      | VR325300 | C.MYLAR 0.047uF 100V  |
| C512      | UT454100 | C.PP 0.01uF 100V      |
| * C513    | UU197100 | C.EL 10uF 100V        |
| C514      | VR325300 | C.MYLAR 0.047uF 100V  |
| * C515    | UU197100 | C.EL 10uF 100V        |
| C516      | UT454100 | C.PP 0.01uF 100V      |
| C517      | VR325300 | C.MYLAR 0.047uF 100V  |
| * C518    | UU167100 | C.EL 10uF 50V         |
| C519      | UT452100 | C.PP 100pF 100V       |
| * C520    | UU197470 | C.EL 47uF 100V        |
| C521      | UT453100 | C.PP 1000pF 100V      |
| * C522    | UU167100 | C.EL 10uF 50V         |
| C523      | UT452100 | C.PP 100pF 100V       |
| * C524    | UU197470 | C.EL 47uF 100V        |
| C525      | UT453100 | C.PP 1000pF 100V      |
| C526      | FU451150 | C.MICA 15pF 500V      |
| C527      | UT452100 | C.PP 100pF 100V       |
| * C528    | UU128100 | C.EL 100uF 10V        |
| * C529    | UU167220 | C.EL 22uF 50V         |
| C530      | FU451150 | C.MICA 15pF 500V      |
| C531      | UT452100 | C.PP 100pF 100V       |
| * C532    | UU128100 | C.EL 100uF 10V        |
| * C533    | UU167220 | C.EL 22uF 50V         |
| * C534    | UU167220 | C.EL 22uF 50V         |
| * C535    | UU197470 | C.EL 47uF 100V        |
| C536      | FU452100 | C.MICA 100pF 500V     |
| C537      | FU452100 | C.MICA 100pF 500V     |
| C538      | FU452100 | C.MICA 100pF 500V     |
| C539      | FU452100 | C.MICA 100pF 500V     |
| C540      | FU452100 | C.MICA 100pF 500V     |
| C541      | FU452100 | C.MICA 100pF 500V     |
| C542      | VR325000 | C.MYLAR 100pF 100V    |
| * C543    | UU167470 | C.EL 47uF 50V         |
| * C544    | UU167470 | C.EL 47uF 50V         |
| C545      | VR325000 | C.MYLAR 100pF 100V    |
| C546      | VR325000 | C.MYLAR 100pF 100V    |
| * C547    | UU167470 | C.EL 47uF 50V         |
| * C548    | UU168100 | C.EL 100uF 50V        |
| * C549    | UU167470 | C.EL 47uF 50V         |
| C550      | VR325000 | C.MYLAR 100pF 100V    |
| C551      | UT454100 | C.PP 0.01uF 100V      |
| C552      | VR325300 | C.MYLAR 0.047uF 100V  |
| C553      | VE326200 | C.MYLAR.ML 0.15uF 50V |

\* New Parts

## P.C.B. MAIN

| Schm Ref. | PART NO. | Description             |
|-----------|----------|-------------------------|
| C554      | UT454100 | C.PP 0.01uF 100V        |
| C555      | UT454100 | C.PP 0.01uF 100V        |
| C556      | VR325300 | C.MYLAR 0.047uF 100V    |
| C557      | VE326200 | C.MYLAR.ML 0.15uF 50V   |
| C558      | UT454100 | C.PP 0.01uF 100V        |
| C559      | VR325300 | C.MYLAR 0.047uF 100V    |
| C560      | VE326200 | C.MYLAR.ML 0.15uF 50V   |
| C561      | UA654220 | C.MYLAR 0.022uF 50V     |
| * C562    | UU167470 | C.EL 47uF 50V           |
| * C563    | UU167470 | C.EL 47uF 50V           |
| C564      | UA654220 | C.MYLAR 0.022uF 50V     |
| * C565    | UU197100 | C.EL 10uF 100V          |
| C566      | VE324800 | C.MYLAR.ML 0.01uF 50V   |
| * C567    | UU197100 | C.EL 10uF 100V          |
| * C568    | UU197100 | C.EL 10uF 100V          |
| C569      | VE324800 | C.MYLAR.ML 0.01uF 50V   |
| * C570    | UU197100 | C.EL 10uF 100V          |
| C571      | VE324800 | C.MYLAR.ML 0.01uF 50V   |
| C701      | Vi862200 | C.POLY 0.1uF 100V       |
| C702      | Vi862200 | C.POLY 0.1uF 100V       |
| C703      | Vi862200 | C.POLY 0.1uF 100V       |
| C704      | Vi862200 | C.POLY 0.1uF 100V(C)    |
| C705      | Vi862200 | C.POLY 0.1uF 100V(C)    |
| C706      | Vi862200 | C.POLY 0.1uF 100V       |
| C707      | Vi862200 | C.POLY 0.1uF 100V       |
| C708      | Vi862200 | C.POLY 0.1uF 100V       |
| * C709    | UU159100 | C.EL 1000uF 35V         |
| * C710    | UU166100 | C.EL 1uF 50V            |
| * C711    | UU167100 | C.EL 10uF 50V           |
| * C712    | UU177470 | C.EL 47uF 63V           |
| C713      | VZ726000 | C.EL 27000uF 71V        |
| C714      | VZ726000 | C.EL 27000uF 71V        |
| * C715    | V5089400 | C.EL 6800uF 45V         |
| * C716    | V5089400 | C.EL 6800uF 45V         |
| * C717    | UU166470 | C.EL 4.7uF 50V          |
| * C718    | UU168100 | C.EL 100uF 50V          |
| * C719    | UU137100 | C.EL 10uF 16V           |
| * C720    | UU168100 | C.EL 100uF 50V          |
| C728      | FG244220 | C.CE 0.022uF 50V(RTABG) |
| C728      | UA654220 | C.MYLAR 0.022uF 50V(UC) |
| C729      | FG244220 | C.CE 0.022uF 50V(RTABG) |
| C729      | UA654220 | C.MYLAR 0.022uF 50V(UC) |
| C732      | FG244220 | C.CE 0.022uF 50V(RTABG) |
| C732      | UA654220 | C.MYLAR 0.022uF 50V(UC) |
| C733      | FG244220 | C.CE 0.022uF 50V(RTABG) |
| C733      | UA654220 | C.MYLAR 0.022uF 50V(UC) |
| C740      | FG244220 | C.CE 0.022uF 50V(RTABG) |
| C740      | UA654220 | C.MYLAR 0.022uF 50V(UC) |
| C741      | FG244220 | C.CE 0.022uF 50V(RTABG) |
| C741      | UA654220 | C.MYLAR 0.022uF 50V(UC) |
| C742      | FG244220 | C.CE 0.022uF 50V(RTABG) |
| C742      | UA654220 | C.MYLAR 0.022uF 50V(UC) |
| C743      | FG244220 | C.CE 0.022uF 50V(RTABG) |

\* New Parts

| Schm Ref. | PART NO. | Description                       |
|-----------|----------|-----------------------------------|
| C743      | UA654220 | C.MYLAR 0.022uF 50V(UC)           |
| C744      | FG244220 | C.CE 0.022uF 50V(RTABG)           |
| C744      | UA654220 | C.MYLAR 0.022uF 50V(UC)           |
| C745      | FG244220 | C.CE 0.022uF 50V(RTABG)           |
| C745      | UA654220 | C.MYLAR 0.022uF 50V(UC)           |
| D451      | VU391800 | DIODE.SHOT AK04 WK                |
| D453      | VU647200 | DIODE.SHOT RB441Q-40 T-77         |
| D454      | iF004600 | DIODE 1SS133                      |
| D455      | VU391800 | DIODE.SHOT AK04 WK                |
| D456      | VU391800 | DIODE.SHOT AK04 WK                |
| D459      | VG440800 | DIODE.ZENR MTZJ15B 15V(RT)        |
| D501      | VG435100 | DIODE.ZENR MTZJ2.0B 2.0V          |
| D503      | iF004600 | DIODE 1SS133                      |
| D504      | VG435100 | DIODE.ZENR MTZJ2.0B 2.0V          |
| D506      | iF004600 | DIODE 1SS133                      |
| D507      | VG435100 | DIODE.ZENR MTZJ2.0B 2.0V          |
| D509      | iF004600 | DIODE 1SS133                      |
| D510      | VG435100 | DIODE.ZENR MTZJ2.0B 2.0V          |
| D511      | VG435100 | DIODE.ZENR MTZJ2.0B 2.0V          |
| D512      | VG435100 | DIODE.ZENR MTZJ2.0B 2.0V          |
| D513      | VC398400 | DIODE MA185                       |
| D514      | VC398400 | DIODE MA185                       |
| D515      | VC398400 | DIODE MA185                       |
| D516      | VC398400 | DIODE MA185                       |
| D517      | VC398400 | DIODE MA185                       |
| D518      | VC398400 | DIODE MA185                       |
| D519      | iF004600 | DIODE 1SS133                      |
| D520      | iF004600 | DIODE 1SS133                      |
| D521      | iF004600 | DIODE 1SS133                      |
| D522      | VG435100 | DIODE.ZENR MTZJ2.0B 2.0V          |
| D524      | iF004600 | DIODE 1SS133                      |
| D525      | VG435100 | DIODE.ZENR MTZJ2.0B 2.0V          |
| D527      | iF004600 | DIODE 1SS133                      |
| D528      | VG435100 | DIODE.ZENR MTZJ2.0B 2.0V          |
| D530      | iF004600 | DIODE 1SS133                      |
| D531      | VG435100 | DIODE.ZENR MTZJ2.0B 2.0V          |
| D532      | VG435100 | DIODE.ZENR MTZJ2.0B 2.0V          |
| D533      | VG435100 | DIODE.ZENR MTZJ2.0B 2.0V          |
| D534      | VN008700 | DIODE 1SS270A                     |
| D535      | VN008700 | DIODE 1SS270A                     |
| D536      | VN008700 | DIODE 1SS270A                     |
| D537      | VN008700 | DIODE 1SS270A                     |
| D538      | VC398400 | DIODE MA185                       |
| D539      | VC398400 | DIODE MA185                       |
| D540      | VC398400 | DIODE MA185                       |
| D541      | VC398400 | DIODE MA185                       |
| D542      | VC398400 | DIODE MA185                       |
| D543      | VC398400 | DIODE MA185                       |
| D701      | V2261600 | DIODE.BRG RBV1306 13A600V(C)      |
| D701      | VZ755200 | DIODE.BRG D15XB20 15A200V(URTABG) |
| D702      | V2954200 | DIODE.BRG D10XB20 10A200V(C)      |
| D703      | VN011300 | DIODE.BRG D3SBA20 4A 200V         |
| D704      | VG442900 | DIODE.ZENR MTZJ27B 27V            |



\* New Parts

## P.C.B. MAIN

| Schm Ref. | PART NO. | Description                        |
|-----------|----------|------------------------------------|
|           | D705     | VG443500 DIODE.ZENR MTZJ30D 30V    |
|           | D726     | iF004600 DIODE 1SS133              |
| △         | F701     | VS823100 FUSE 6.0A 125V(UC)        |
| △ *       | F701     | VT943300 FUSE TH 6.30A S(RTABG)    |
| △         | F702     | VS823100 FUSE 6.0A 125V(UC)        |
| △ *       | F702     | VT943300 FUSE TH 6.30A S(RTABG)    |
|           | G451     | VR463400 TERM.GND D3.5 TP00385     |
|           | G501     | VR463400 TERM.GND D3.5 TP00385     |
|           | HS701    | VZ681300 HEAT.SINK PWR             |
| △         | IC451    | XU814A00 IC PQ05RD11 +5V 1.0A      |
| △         | IC452    | XJ602A00 IC NJM78M12FA             |
| △         | IC453    | XD343A00 IC NJM79M12FA             |
| △         | IC454    | XU814A00 IC PQ05RD11 +5V 1.0A      |
| △         | IC455    | XK309A00 IC NJM7905FA -5V          |
| △         | IC456    | XU814A00 IC PQ05RD11 +5V 1.0A      |
| △ *       | IC457    | XY045A00 IC PQ3RD13 3.3V 1.0A      |
|           | L501     | GD900470 COIL 1.5uH                |
|           | L502     | GD900470 COIL 1.5uH                |
|           | L503     | GD900470 COIL 1.5uH                |
|           | L504     | GD900470 COIL 1.5uH                |
|           | L505     | VC664100 COIL 0.95uH               |
|           | L506     | VC664100 COIL 0.95uH               |
|           | L507     | VC664100 COIL 0.95uH               |
|           | L726     | VU751000 COIL 1.5uH                |
|           | Q501     | VE198700 TR 2SA1145 O,Y            |
|           | Q502     | VE198800 TR 2SC2705 O,Y            |
|           | Q503     | VE198700 TR 2SA1145 O,Y            |
|           | Q504     | VE198800 TR 2SC2705 O,Y            |
|           | Q505     | VE198700 TR 2SA1145 O,Y            |
|           | Q506     | VE198800 TR 2SC2705 O,Y            |
|           | Q507     | VE198800 TR 2SC2705 O,Y            |
| #         | Q508     | VC398100 TR 2SC1846 S              |
|           | Q509     | VE198700 TR 2SA1145 O,Y            |
|           | Q510     | VE198800 TR 2SC2705 O,Y            |
| #         | Q511     | VC398100 TR 2SC1846 S              |
|           | Q512     | VE198700 TR 2SA1145 O,Y            |
|           | Q513     | VE198800 TR 2SC2705 O,Y            |
| #         | Q514     | VC398100 TR 2SC1846 S              |
|           | Q515     | VE198700 TR 2SA1145 O,Y            |
| △         | Q516A    | iX632610 TR 2SA1837 O,Y            |
| △         | Q516C    | iX632620 TR 2SC4793 O,Y            |
| △ #       | Q517     | V4863600 TR.PAIR 2SA1943/C5200 O,R |
| △         | Q520A    | iX632610 TR 2SA1837 O,Y            |
| △         | Q520C    | iX632620 TR 2SC4793 O,Y            |
| △ #       | Q521     | V4863600 TR.PAIR 2SA1943/C5200 O,R |
| △         | Q524A    | iX632610 TR 2SA1837 O,Y            |
| △         | Q524C    | iX632620 TR 2SC4793 O,Y            |
| △ #       | Q525     | V4863600 TR.PAIR 2SA1943/C5200 O,R |
|           | Q528     | iC224030 TR 2SC2240 GR,BL          |
|           | Q529     | iC224030 TR 2SC2240 GR,BL          |
|           | Q530     | iC224030 TR 2SC2240 GR,BL          |
|           | Q531     | iA097000 TR 2SA970 GR,BL           |
|           | Q532     | iA097000 TR 2SA970 GR,BL           |

\* New Parts

| Schm Ref. | PART NO. | Description                        |
|-----------|----------|------------------------------------|
|           | Q533     | VD488500 TR.DGT DTC143XS           |
|           | Q534     | VD488500 TR.DGT DTC143XS           |
|           | Q535     | VE198700 TR 2SA1145 O,Y            |
|           | Q536     | iA097000 TR 2SA970 GR,BL           |
|           | Q537     | VE198800 TR 2SC2705 O,Y            |
|           | Q538     | iC1815C0 TR 2SC1815 Y              |
|           | Q539     | iC1815C0 TR 2SC1815 Y              |
|           | Q540     | iC1815C0 TR 2SC1815 Y              |
|           | Q541     | VE198700 TR 2SA1145 O,Y            |
|           | Q542     | iA097000 TR 2SA970 GR,BL           |
|           | Q543     | VE198800 TR 2SC2705 O,Y            |
|           | Q544     | iC1815C0 TR 2SC1815 Y              |
|           | Q545     | iC1815C0 TR 2SC1815 Y              |
|           | Q546     | iC1815C0 TR 2SC1815 Y              |
|           | Q547     | VE198700 TR 2SA1145 O,Y            |
|           | Q548     | VE198800 TR 2SC2705 O,Y            |
|           | Q549     | iC174020 TR 2SC1740S R,S           |
|           | Q550     | VD488500 TR.DGT DTC143XS           |
|           | Q551     | VE198800 TR 2SC2705 O,Y            |
| #         | Q552     | VC398100 TR 2SC1846 S              |
|           | Q553     | VE198700 TR 2SA1145 O,Y            |
|           | Q554     | VE198800 TR 2SC2705 O,Y            |
| #         | Q555     | VC398100 TR 2SC1846 S              |
|           | Q556     | VE198700 TR 2SA1145 O,Y            |
|           | Q557     | VE198800 TR 2SC2705 O,Y            |
| #         | Q558     | VC398100 TR 2SC1846 S              |
|           | Q559     | VE198700 TR 2SA1145 O,Y            |
| △ #       | Q560     | VC398100 TR 2SC1846 S              |
| △ #       | Q561     | VC398100 TR 2SC1846 S              |
| △         | Q562A    | iX632610 TR 2SA1837 O,Y            |
| △         | Q562C    | iX632620 TR 2SC4793 O,Y            |
| △ #       | Q563     | V4863600 TR.PAIR 2SA1943/C5200 O,R |
| △ #       | Q566     | V4863600 TR.PAIR 2SA1943/C5200 O,R |
| △         | Q567A    | iX632610 TR 2SA1837 O,Y            |
| △         | Q567C    | iX632620 TR 2SC4793 O,Y            |
| △ #       | Q570     | V4863600 TR.PAIR 2SA1943/C5200 O,R |
| △         | Q571A    | iX632610 TR 2SA1837 O,Y            |
| △         | Q571C    | iX632620 TR 2SC4793 O,Y            |
| △         | Q574     | VP872700 TR 2SC4488 S,T            |
| #         | Q575A    | iX615750 TR 2SA1694 O,P,Y          |
| #         | Q575C    | iX615760 TR 2SC4467 O,P,Y          |
|           | Q576     | iC224030 TR 2SC2240 GR,BL          |
| △         | Q578     | VP872600 TR 2SA1708 S,T            |
| △         | Q579     | VP872700 TR 2SC4488 S,T            |
| #         | Q580A    | iX615750 TR 2SA1694 O,P,Y          |
| #         | Q580C    | iX615760 TR 2SC4467 O,P,Y          |
|           | Q581     | iC224030 TR 2SC2240 GR,BL          |
| △         | Q583     | VP872600 TR 2SA1708 S,T            |
|           | Q584     | iC224030 TR 2SC2240 GR,BL          |
|           | Q585     | iC224030 TR 2SC2240 GR,BL          |
|           | Q586     | iC224030 TR 2SC2240 GR,BL          |
| △         | Q701     | VS548300 TR 2SB1375                |
|           | Q702     | iC1815C0 TR 2SC1815 Y              |

\* New Parts



## P.C.B. MAIN

| Schm Ref. | PART NO. | Description              |
|-----------|----------|--------------------------|
| △ Q703    | VS548300 | TR 2SB1375               |
| △ R451    | VP939700 | R.MTL.FLM 4.7Ω 1W        |
| △ R452    | VP939700 | R.MTL.FLM 4.7Ω 1W        |
| △ R456    | VP939500 | R.MTL.FLM 1Ω 1W          |
| △ R457    | VP939500 | R.MTL.FLM 1Ω 1W          |
| △ R470    | HL315330 | R.MTL.OXD 330Ω 1W(C)     |
| R501      | VK188500 | R.FUS 390Ω 1/4W          |
| R502      | HV457150 | R.CAR.FP 15KΩ 1/4W       |
| R503      | HV457150 | R.CAR.FP 15KΩ 1/4W       |
| R504      | HV457150 | R.CAR.FP 15KΩ 1/4W       |
| △ R505    | HV455680 | R.CAR.FP 680Ω 1/4W       |
| R506      | VK188500 | R.FUS 390Ω 1/4W          |
| R507      | HV457150 | R.CAR.FP 15KΩ 1/4W       |
| R508      | HV457150 | R.CAR.FP 15KΩ 1/4W       |
| R509      | HV457150 | R.CAR.FP 15KΩ 1/4W       |
| △ R510    | HV455680 | R.CAR.FP 680Ω 1/4W       |
| R511      | VK188500 | R.FUS 390Ω 1/4W          |
| R512      | HV457150 | R.CAR.FP 15KΩ 1/4W       |
| R513      | HV457150 | R.CAR.FP 15KΩ 1/4W       |
| R514      | HV457150 | R.CAR.FP 15KΩ 1/4W       |
| △ R515    | HV455680 | R.CAR.FP 680Ω 1/4W       |
| △ R516    | VK189500 | R.FUS 3.3KΩ 1/4W         |
| △ R517    | VK189100 | R.FUS 1.2KΩ 1/4W         |
| △ R518    | VK188700 | R.FUS 560Ω 1/4W          |
| △ R519    | HV454470 | R.CAR.FP 47Ω 1/4W        |
| △ R520    | VK189500 | R.FUS 3.3KΩ 1/4W         |
| △ R521    | VK189100 | R.FUS 1.2KΩ 1/4W         |
| △ R522    | VK188700 | R.FUS 560Ω 1/4W          |
| △ R523    | VK189500 | R.FUS 3.3KΩ 1/4W         |
| △ R524    | VK189100 | R.FUS 1.2KΩ 1/4W         |
| △ R525    | VK188700 | R.FUS 560Ω 1/4W          |
| △ R526    | HV453470 | R.CAR.FP 4.7Ω 1/4W       |
| △ R528    | HZ003780 | R.MTL.PLAT 0.22Ω+0.22 5W |
| △ R530    | VK188400 | R.FUS 330Ω 1/4W          |
| △ R532    | HV453470 | R.CAR.FP 4.7Ω 1/4W       |
| △ R533    | HV453470 | R.CAR.FP 4.7Ω 1/4W       |
| △ R535    | HZ003780 | R.MTL.PLAT 0.22Ω+0.22 5W |
| △ R537    | VK188400 | R.FUS 330Ω 1/4W          |
| △ R539    | HV453470 | R.CAR.FP 4.7Ω 1/4W       |
| △ R540    | HV453470 | R.CAR.FP 4.7Ω 1/4W       |
| △ R542    | HZ003780 | R.MTL.PLAT 0.22Ω+0.22 5W |
| △ R544    | VK188400 | R.FUS 330Ω 1/4W          |
| △ R546    | HV453470 | R.CAR.FP 4.7Ω 1/4W       |
| △ R549    | HV453470 | R.CAR.FP 4.7Ω 1/4W       |
| △ R551    | VE009700 | R.FUS 4.7Ω 1/4W          |
| △ R553    | HV453470 | R.CAR.FP 4.7Ω 1/4W       |
| △ R554    | VE009700 | R.FUS 4.7Ω 1/4W          |
| △ R557    | HV453470 | R.CAR.FP 4.7Ω 1/4W       |
| R559      | HV454100 | R.CAR.FP 10Ω 1/4W        |
| R561      | HV454100 | R.CAR.FP 10Ω 1/4W        |
| △ R566    | HL315150 | R.MTL.OXD 150Ω 1W        |
| △ R567    | HL315150 | R.MTL.OXD 150Ω 1W        |
| △ R568    | VK188500 | R.FUS 390Ω 1/4W          |

\* New Parts

| Schm Ref. | PART NO. | Description         |
|-----------|----------|---------------------|
| △ R574    | HV455220 | R.CAR.FP 220Ω 1/4W  |
| △ R575    | HV455220 | R.CAR.FP 220Ω 1/4W  |
| △ R576    | HV455100 | R.CAR.FP 100Ω 1/4W  |
| △ R577    | VK188500 | R.FUS 390Ω 1/4W     |
| △ R583    | HV455220 | R.CAR.FP 220Ω 1/4W  |
| △ R584    | HV455220 | R.CAR.FP 220Ω 1/4W  |
| △ R585    | HV455100 | R.CAR.FP 100Ω 1/4W  |
| △ R586    | VK188500 | R.FUS 390Ω 1/4W     |
| △ R587    | HL324470 | R.MTL.OXD 47Ω 2W    |
| R589      | HV457150 | R.CAR.FP 15KΩ 1/4W  |
| △ R590    | VK189500 | R.FUS 3.3KΩ 1/4W    |
| R591      | HV457150 | R.CAR.FP 15KΩ 1/4W  |
| R592      | HV457150 | R.CAR.FP 15KΩ 1/4W  |
| △ R593    | VK189100 | R.FUS 1.2KΩ 1/4W    |
| △ R594    | VK188700 | R.FUS 560Ω 1/4W     |
| △ R595    | HV455680 | R.CAR.FP 680Ω 1/4W  |
| △ R596    | HV454470 | R.CAR.FP 47Ω 1/4W   |
| R597      | HV457150 | R.CAR.FP 15KΩ 1/4W  |
| △ R598    | VK189500 | R.FUS 3.3KΩ 1/4W    |
| R599      | HV457150 | R.CAR.FP 15KΩ 1/4W  |
| R600      | HV457150 | R.CAR.FP 15KΩ 1/4W  |
| △ R601    | VK189100 | R.FUS 1.2KΩ 1/4W    |
| △ R602    | VK188700 | R.FUS 560Ω 1/4W     |
| △ R603    | HV455680 | R.CAR.FP 680Ω 1/4W  |
| △ R604    | HV454470 | R.CAR.FP 47Ω 1/4W   |
| R605      | HV457150 | R.CAR.FP 15KΩ 1/4W  |
| △ R606    | VK189500 | R.FUS 3.3KΩ 1/4W    |
| R607      | HV457150 | R.CAR.FP 15KΩ 1/4W  |
| R608      | HV457150 | R.CAR.FP 15KΩ 1/4W  |
| △ R609    | VK189100 | R.FUS 1.2KΩ 1/4W    |
| △ R610    | VK188700 | R.FUS 560Ω 1/4W     |
| △ R611    | HV455680 | R.CAR.FP 680Ω 1/4W  |
| △ R612    | HV454470 | R.CAR.FP 47Ω 1/4W   |
| △ R615    | HV456270 | R.CAR.FP 2.7KΩ 1/4W |
| △ R616    | VK188800 | R.FUS 680Ω 1/4W     |
| △ R619    | HV456270 | R.CAR.FP 2.7KΩ 1/4W |
| △ R620    | VK188800 | R.FUS 680Ω 1/4W     |
| △ R621    | HV454470 | R.CAR.FP 47Ω 1/4W   |
| △ R622    | HV453470 | R.CAR.FP 4.7Ω 1/4W  |
| △* R623   | V4863500 | R.WW 0.22Ω 5W       |
| △* R624   | V4863500 | R.WW 0.22Ω 5W       |
| △ R625    | VK188400 | R.FUS 330Ω 1/4W     |
| △ R626    | HV453470 | R.CAR.FP 4.7Ω 1/4W  |
| △ R627    | HV453470 | R.CAR.FP 4.7Ω 1/4W  |
| △* R628   | V4863500 | R.WW 0.22Ω 5W       |
| △* R629   | V4863500 | R.WW 0.22Ω 5W       |
| △ R630    | VK188400 | R.FUS 330Ω 1/4W     |
| △ R631    | HV453470 | R.CAR.FP 4.7Ω 1/4W  |
| △ R632    | HV453470 | R.CAR.FP 4.7Ω 1/4W  |
| △* R633   | V4863500 | R.WW 0.22Ω 5W       |
| △* R634   | V4863500 | R.WW 0.22Ω 5W       |
| △ R635    | VK188400 | R.FUS 330Ω 1/4W     |
| △ R636    | HV453470 | R.CAR.FP 4.7Ω 1/4W  |

\* New Parts



## P.C.B. MAIN &amp; VIDEO

| Schm Ref. | PART NO. | Description                 |
|-----------|----------|-----------------------------|
| △ R637    | HV453470 | R.CAR.FP 4.7Ω 1/4W          |
| △ R640    | VK188400 | R.FUS 330Ω 1/4W             |
| △ R641    | HZ003780 | R.MTL.PLAT 0.22Ω+0.22 5W    |
| △ R643    | HV453470 | R.CAR.FP 4.7Ω 1/4W          |
| △ R646    | HV453470 | R.CAR.FP 4.7Ω 1/4W          |
| △ R649    | VK188400 | R.FUS 330Ω 1/4W             |
| △ R650    | HZ003780 | R.MTL.PLAT 0.22Ω+0.22 5W    |
| △ R652    | HV453470 | R.CAR.FP 4.7Ω 1/4W          |
| △ R655    | VE009700 | R.FUS 4.7Ω 1/4W             |
| △ R659    | HV453470 | R.CAR.FP 4.7Ω 1/4W          |
| △ R661    | VE009700 | R.FUS 4.7Ω 1/4W             |
| △ R664    | VE009700 | R.FUS 4.7Ω 1/4W             |
| △ R668    | HV453470 | R.CAR.FP 4.7Ω 1/4W          |
| △ R670    | VE009700 | R.FUS 4.7Ω 1/4W             |
| △ R676    | HV453470 | R.CAR.FP 4.7Ω 1/4W          |
| △ R679    | HV454100 | R.CAR.FP 10Ω 1/4W           |
| △ R680    | HL314100 | R.MTL.OXD 10Ω 1W            |
| △ R681    | HL314100 | R.MTL.OXD 10Ω 1W            |
| △ R683    | HV454100 | R.CAR.FP 10Ω 1/4W           |
| △ R685    | HL314100 | R.MTL.OXD 10Ω 1W            |
| △ R688    | HL314100 | R.MTL.OXD 10Ω 1W            |
| △ R691    | HL314100 | R.MTL.OXD 10Ω 1W            |
| △ R707    | HV456820 | R.CAR.FP 8.2KΩ 1/4W         |
| △ R708    | HV455100 | R.CAR.FP 100Ω 1/4W          |
| △ R709    | HV453220 | R.CAR.FP 2.2Ω 1/4W          |
| △ R710    | HL314330 | R.MTL.OXD 33Ω 1W            |
| △ R711    | HV456330 | R.CAR.FP 3.3KΩ 1/4W         |
| △ R712    | HV456470 | R.CAR.FP 4.7KΩ 1/4W         |
| △ R714    | HL314100 | R.MTL.OXD 10Ω 1W            |
| △ R730    | HV454100 | R.CAR.FP 10Ω 1/4W           |
|           | RY501    | VK438300 RELAY DH24D2-OT/M2 |
|           | RY502    | VK438300 RELAY DH24D2-OT/M2 |
|           | RY503    | VK438300 RELAY DH24D2-OT/M2 |
|           | RY726    | VK438300 RELAY DH24D2-OT/M2 |
|           | RY727    | VK438300 RELAY DH24D2-OT/M2 |
| * TE726   | V4185300 | TERM.SP 4P(UCRTA)           |
| * TE726   | V4185400 | TERM.SP 4P(BG)              |
| * TE727   | V4185300 | TERM.SP 4P(UCRTA)           |
| * TE727   | V4185400 | TERM.SP 4P(BG)              |
| * TE728   | V4870200 | TERM.SP 8P(UCRTA)           |
| * TE728   | V4870300 | TERM.SP 8P(BG)              |
| * TE729   | V4870000 | TERM.SP 4P(UCRTA)           |
| * TE729   | V4870100 | TERM.SP 4P(BG)              |
|           | VR501    | VJ692700 VR.TRIM B330Ω      |
|           | VR502    | VJ692700 VR.TRIM B330Ω      |
|           | VR503    | VJ692700 VR.TRIM B330Ω      |
|           | VR504    | VJ692700 VR.TRIM B330Ω      |
|           | VR505    | VJ692700 VR.TRIM B330Ω      |
|           | VR506    | VJ692700 VR.TRIM B330Ω      |
|           | VR507    | VJ692900 VR.TRIM B680Ω      |
|           | VR508    | VJ692900 VR.TRIM B680Ω      |
|           |          | V3750100 PIN L=50           |
|           |          | BB071360 SCR.TERM 8.3x13    |

\* New Parts

| Schm Ref. | PART NO. | Description                          |
|-----------|----------|--------------------------------------|
|           | VK697600 | SCR.BND.HD 3x10 SP ZMC2-Y            |
| *         | V5001600 | P.C.B. VIDEO(UC)                     |
| *         | V5001700 | P.C.B. VIDEO(RT)                     |
| *         | V5001800 | P.C.B. VIDEO(A)                      |
| *         | V5001900 | P.C.B. VIDEO(BG)                     |
|           | CB1      | VB858200 CN.BS.PIN 3P                |
|           | CB2      | VQ044700 CN.BS.PIN 16P               |
|           | CB3      | VD004500 CN.BS.PIN 2P                |
|           | CB4      | VD004600 CN.BS.PIN 3P                |
|           | CB151    | VQ963300 CN.BS.PIN 12P               |
|           | CB152    | VQ963300 CN.BS.PIN 12P               |
|           | CB153    | LB919030 CN.BS.PIN 3P                |
|           | CB201    | VF982300 CN.BS.PIN 17P               |
|           | CB202    | VQ960900 CN.BS.PIN 6P                |
|           | CB261    | VQ962700 CN.BS.PIN 6P                |
|           | CB331    | VQ961500 CN.BS.PIN 12P               |
|           | CB332    | VQ961500 CN.BS.PIN 12P               |
|           | CB333    | VQ961500 CN.BS.PIN 12P               |
|           | CB334    | VQ961500 CN.BS.PIN 12P               |
| *         | CB901    | V4477700 CN.SOCKET 16P               |
|           | CB902    | VQ047800 CN.BS.PIN 27P               |
|           | CB904    | VD004500 CN.BS.PIN 2P                |
|           | C1       | UB052100 C.CE.M.CHP 100pF 50V        |
|           | C2       | UB052100 C.CE.M.CHP 100pF 50V        |
|           | C3       | UB052100 C.CE.M.CHP 100pF 50V        |
|           | C4       | UB052100 C.CE.M.CHP 100pF 50V        |
|           | C5       | UB052100 C.CE.M.CHP 100pF 50V        |
|           | C6       | UB052100 C.CE.M.CHP 100pF 50V        |
|           | C7       | UB052100 C.CE.M.CHP 100pF 50V        |
|           | C8       | UB052100 C.CE.M.CHP 100pF 50V        |
|           | C9       | UB052100 C.CE.M.CHP 100pF 50V        |
|           | C10      | UB052100 C.CE.M.CHP 100pF 50V        |
| *         | C11      | UU147100 C.EL 10uF 25V               |
| *         | C12      | UU129100 C.EL 1000uF 10V             |
| *         | C13      | UU147100 C.EL 10uF 25V               |
| *         | C14      | UU129100 C.EL 1000uF 10V             |
| *         | C15      | UU137470 C.EL 47uF 16V               |
| *         | C16      | UU137470 C.EL 47uF 16V               |
|           | C18      | UB052820 C.CE.M.CHP 820pF 50V(ABG)   |
|           | C18      | UB053150 C.CE.M.CHP 1500pF 50V(UCRT) |
| *         | C19      | UU127470 C.EL 47uF 10V               |
| *         | C20      | UU127470 C.EL 47uF 10V               |
| *         | C21      | UU127470 C.EL 47uF 10V               |
| *         | C22      | UU137470 C.EL 47uF 16V               |
| *         | C23      | UU137470 C.EL 47uF 16V               |
| *         | C24      | UU127470 C.EL 47uF 10V               |
| *         | C25      | UU127470 C.EL 47uF 10V               |
|           | C26      | UB052820 C.CE.M.CHP 820pF 50V        |
| *         | C27      | UU127470 C.EL 47uF 10V               |
|           | C28      | UB245100 C.CE.M.CHP 0.1uF 25V        |

\* New Parts

## P.C.B. VIDEO

| Schm Ref. | PART NO. | Description               |
|-----------|----------|---------------------------|
| * C29     | UB245100 | C.CE.M.CHP 0.1uF 25V      |
| * C30     | UU127470 | C.EL 47uF 10V             |
| * C31     | UU127470 | C.EL 47uF 10V             |
| * C32     | VJ900600 | C.CE.M.CHP 30pF 50V       |
| * C33     | VJ900600 | C.CE.M.CHP 30pF 50V       |
| C34       | UB245100 | C.CE.M.CHP 0.1uF 25V      |
| C35       | UB052470 | C.CE.M.CHP 470pF 50V      |
| C36       | UB052120 | C.CE.M.CHP 120pF 50V      |
| C37       | UB044100 | C.CE.M.CHP 0.01uF 50V     |
| * C38     | UU127470 | C.EL 47uF 10V             |
| * C39     | UU147100 | C.EL 10uF 25V             |
| C40       | UB052820 | C.CE.M.CHP 820pF 50V      |
| C41       | VJ898700 | C.CE.M.CHP 2pF 50V(ABG)   |
| C41       | VJ900200 | C.CE.M.CHP 20pF 50V(UCRT) |
| * C42     | VJ898800 | C.CE.M.CHP 3pF 50V(ABG)   |
| C42       | VJ899900 | C.CE.M.CHP 15pF 50V(UCRT) |
| * C43     | UU166470 | C.EL 4.7uF 50V            |
| C44       | UB052220 | C.CE.M.CHP 220pF 50V      |
| * C45     | UU147100 | C.EL 10uF 25V             |
| * C46     | VJ900600 | C.CE.M.CHP 30pF 50V       |
| C47       | UB052470 | C.CE.M.CHP 470pF 50V      |
| * C48     | UU166470 | C.EL 4.7uF 50V            |
| C49       | VJ899900 | C.CE.M.CHP 15pF 50V       |
| C50       | UB245100 | C.CE.M.CHP 0.1uF 25V      |
| C51       | UB245100 | C.CE.M.CHP 0.1uF 25V      |
| C52       | UB245100 | C.CE.M.CHP 0.1uF 25V      |
| C151      | UP652470 | C.POL 470pF 100V          |
| C152      | UP652470 | C.POL 470pF 100V          |
| C153      | UP652470 | C.POL 470pF 100V          |
| C154      | UP652470 | C.POL 470pF 100V          |
| C155      | UP652470 | C.POL 470pF 100V          |
| C156      | UP652470 | C.POL 470pF 100V          |
| C157      | UP652470 | C.POL 470pF 100V          |
| C158      | UP652470 | C.POL 470pF 100V          |
| C159      | UP652470 | C.POL 470pF 100V          |
| C160      | UP652470 | C.POL 470pF 100V          |
| C161      | UP652470 | C.POL 470pF 100V          |
| C162      | UP652470 | C.POL 470pF 100V          |
| C163      | UP652470 | C.POL 470pF 100V          |
| C164      | UP652470 | C.POL 470pF 100V          |
| C165      | UP652470 | C.POL 470pF 100V          |
| C166      | UP652470 | C.POL 470pF 100V          |
| C167      | UP652470 | C.POL 470pF 100V          |
| C168      | UP652470 | C.POL 470pF 100V          |
| C169      | UP652470 | C.POL 470pF 100V          |
| C170      | UP652470 | C.POL 470pF 100V          |
| C171      | UB052100 | C.CE.M.CHP 100pF 50V      |
| C172      | UB245100 | C.CE.M.CHP 0.1uF 25V      |
| C173      | UB245100 | C.CE.M.CHP 0.1uF 25V      |
| * C174    | UU129100 | C.EL 1000uF 10V           |
| * C175    | UU127470 | C.EL 47uF 10V             |
| * C176    | UU127470 | C.EL 47uF 10V             |
| * C201    | UU166100 | C.EL 1uF 50V              |

\* New Parts

| Schm Ref. | PART NO. | Description              |
|-----------|----------|--------------------------|
| * C202    | VZ001600 | C.MYLAR 0.047pF 50V      |
| * C203    | VZ001600 | C.MYLAR 0.047pF 50V      |
| * C204    | VZ001600 | C.MYLAR 0.047pF 50V      |
| * C205    | VZ001600 | C.MYLAR 0.047pF 50V      |
| * C206    | UU166100 | C.EL 1uF 50V             |
| * C207    | UU137470 | C.EL 47uF 16V            |
| C208      | VQ645600 | C.MYLAR 100pF 50V        |
| * C209    | UU166100 | C.EL 1uF 50V             |
| C210      | VQ645600 | C.MYLAR 100pF 50V        |
| * C211    | UU166100 | C.EL 1uF 50V             |
| * C212    | UU137470 | C.EL 47uF 16V            |
| C213      | VZ002000 | C.MYLAR 0.1uF 50V        |
| C214      | UA654220 | C.MYLAR 0.022uF 50V      |
| C215      | UA654220 | C.MYLAR 0.022uF 50V      |
| C216      | VZ002000 | C.MYLAR 0.1uF 50V        |
| * C217    | UU137100 | C.EL 10uF 16V            |
| C218      | VQ645600 | C.MYLAR 100pF 50V        |
| C219      | VQ645600 | C.MYLAR 100pF 50V        |
| * C220    | UU137100 | C.EL 10uF 16V            |
| * C221    | UU137100 | C.EL 10uF 16V            |
| * C222    | UU147220 | C.EL 22uF 25V            |
| * C223    | UU147220 | C.EL 22uF 25V            |
| * C224    | UU137100 | C.EL 10uF 16V            |
| * C225    | UU137100 | C.EL 10uF 16V            |
| * C226    | UU137100 | C.EL 10uF 16V            |
| * C227    | UU137330 | C.EL 33uF 16V            |
| C228      | FG212100 | C.CE 100pF 50V           |
| C229      | FG212100 | C.CE 100pF 50V           |
| * C230    | UU118100 | C.EL 100uF 6.3V          |
| * C231    | UU118100 | C.EL 100uF 6.3V          |
| C232      | FG212100 | C.CE 100pF 50V           |
| C233      | FG212100 | C.CE 100pF 50V           |
| * C234    | UU137330 | C.EL 33uF 16V            |
| * C235    | UU139100 | C.EL 1000uF 16V          |
| C236      | FG251220 | C.CE 22pF 50V            |
| C237      | FG251220 | C.CE 22pF 50V            |
| * C238    | UU139100 | C.EL 1000uF 16V          |
| C261      | VF467000 | C.CE.TUBLR 1000pF 50V    |
| C262      | VF467000 | C.CE.TUBLR 1000pF 50V    |
| C263      | VF467000 | C.CE.TUBLR 1000pF 50V    |
| C264      | VF467300 | C.CE.TUBLR 0.01uF 16V    |
| C381      | VF466900 | C.CE.TUBLR 470pF 50V     |
| C382      | VF467300 | C.CE.TUBLR 0.01uF 16V    |
| C383      | VF466900 | C.CE.TUBLR 470pF 50V     |
| C384      | VF467300 | C.CE.TUBLR 0.01uF 16V    |
| C921      | UT452470 | C.PP 470pF 100V          |
| C922      | UT452470 | C.PP 470pF 100V          |
| C925      | UT452470 | C.PP 470pF 100V          |
| C926      | UT452470 | C.PP 470pF 100V          |
| * C928    | UU147100 | C.EL 10uF 25V            |
| C929      | VR169200 | C.MYLAR.ML ECQ-V1H474JL3 |
| C930      | VR169200 | C.MYLAR.ML ECQ-V1H474JL3 |
| * C931    | UU147100 | C.EL 10uF 25V            |

\* New Parts

**P.C.B. VIDEO**

| Schm Ref. | PART NO. | Description              |
|-----------|----------|--------------------------|
| C932      | VR169200 | C.MYLAR.ML ECQ-V1H474JL3 |
| * C934    | UU147100 | C.EL 10uF 25V            |
| C935      | UT452470 | C.PP 470pF 100V          |
| C936      | UT452470 | C.PP 470pF 100V          |
| * C939    | V5376400 | C.PP 100pF 100V          |
| * C940    | V5376400 | C.PP 100pF 100V          |
| C943      | UB044100 | C.CE.M.CHP 0.01uF 50V    |
| C945      | UB044100 | C.CE.M.CHP 0.01uF 50V    |
| C946      | UB044100 | C.CE.M.CHP 0.01uF 50V    |
| * C954    | V5376500 | C.PP 220pF 100V          |
| * C957    | V5376500 | C.PP 220pF 100V          |
| * C960    | V5376500 | C.PP 220pF 100V          |
| D1        | iF004600 | DIODE 1SS133             |
| D2        | iF004600 | DIODE 1SS133             |
| D4        | iF004600 | DIODE 1SS133             |
| D5        | iF004600 | DIODE 1SS133             |
| D6        | VG435100 | DIODE.ZENR MTZJ2.0B 2.0V |
| D7        | iF004600 | DIODE 1SS133             |
| D8        | iF004600 | DIODE 1SS133             |
| D9        | iF004600 | DIODE 1SS133             |
| D10       | iF004600 | DIODE 1SS133             |
| D11       | iF004600 | DIODE 1SS133             |
| D12       | iF004600 | DIODE 1SS133             |
| D13       | iF004600 | DIODE 1SS133             |
| D201      | VU264100 | DIODE 1SR139-400         |
| D202      | VU264100 | DIODE 1SR139-400         |
| D901      | VT332900 | DIODE 1SS355             |
| D902      | VT332900 | DIODE 1SS355             |
| D903      | VT332900 | DIODE 1SS355             |
| D904      | VT332900 | DIODE 1SS355             |
| D905      | VT332900 | DIODE 1SS355             |
| * IC1     | XW911A00 | IC LA7108M VIDEO AMP     |
| IC4       | XL493A00 | IC TC74HC4051AP          |
| IC5       | XL493A00 | IC TC74HC4051AP          |
| IC6       | XL493A00 | IC TC74HC4051AP          |
| IC7       | XL493A00 | IC TC74HC4051AP          |
| IC8       | iR405300 | IC TC74HC4053AP          |
| IC9       | iR405300 | IC TC74HC4053AP          |
| * IC10    | XW911A00 | IC LA7108M VIDEO AMP     |
| * IC11    | XW911A00 | IC LA7108M VIDEO AMP     |
| * IC12    | XW460A00 | IC M35013-079SP          |
| IC13      | iG142200 | IC TC74HCU04AP           |
| IC14      | iG142200 | IC TC74HCU04AP           |
| * IC15    | XW416A00 | IC BU2092 SER/PAR        |
| IC201     | XM356A00 | IC NJM2068LD             |
| IC202     | XB247301 | IC uPC4570HA             |
| IC203     | XP844A00 | IC NJM4556AL             |
| JK1       | VU144900 | CN.DIN 2P                |
| JK2       | VU144900 | CN.DIN 2P                |
| JK3       | VU144900 | CN.DIN 2P                |
| JK4       | VU144900 | CN.DIN 2P                |
| JK5       | VU144900 | CN.DIN 2P                |
| JK6       | VU144500 | CN.DIN 2P                |

\* New Parts

| Schm Ref. | PART NO. | Description           |
|-----------|----------|-----------------------|
| * JK261   | V4164400 | JACK.PHONE YKB21-5209 |
| JK381     | V2589500 | CN 1P                 |
| L1        | V2725700 | COIL 15uH             |
| L2        | V3233700 | COIL 1.5uH            |
| * PJ151   | V4806900 | JACK.PIN 4P           |
| * PJ152   | V4806800 | JACK.PIN 6P           |
| * PJ153   | V4806900 | JACK.PIN 4P           |
| * PJ154   | V4806800 | JACK.PIN 6P           |
| PJ155     | VU144200 | JACK.PIN 1P           |
| PJ381     | VU459400 | JACK.PIN 3P           |
| * PJ901   | V4583900 | JACK.PIN 3P           |
| * PJ902   | V4583900 | JACK.PIN 3P           |
| * PJ903   | V4583900 | JACK.PIN 3P           |
| * PJ904   | V4583900 | JACK.PIN 3P           |
| * PJ905   | V4548500 | JACK.PIN 2P           |
| * PJ906   | V4548500 | JACK.PIN 2P           |
| * PJ907   | V4912200 | JACK.PIN 2P           |
| * PJ908   | V4806700 | JACK.PIN 2P           |
| * PJ909   | V4806700 | JACK.PIN 2P           |
| * PJ910   | V4548500 | JACK.PIN 2P           |
| * PJ911   | V4548500 | JACK.PIN 2P           |
| Q1        | iC174020 | TR 2SC1740S R,S       |
| Q2        | iC174020 | TR 2SC1740S R,S       |
| Q3        | iC287820 | TR 2SC2878 A,B        |
| Q4        | iC174020 | TR 2SC1740S R,S       |
| Q5        | iC174020 | TR 2SC1740S R,S       |
| Q6        | VD678700 | TR.DGT DTC114ES       |
| Q7        | iC174020 | TR 2SC1740S R,S       |
| Q8        | iA101521 | TR 2SA1015 Y          |
| Q9        | iC224030 | TR 2SC2240 GR,BL      |
| Q10       | iC053540 | TR 2SC535 A,B,C       |
| Q11       | iC224030 | TR 2SC2240 GR,BL      |
| Q12       | iC287820 | TR 2SC2878 A,B        |
| Q151      | iC174020 | TR 2SC1740S R,S       |
| Q201      | VK432900 | TR 2SD1915F S,T       |
| Q202      | VK432900 | TR 2SD1915F S,T       |
| Q901      | VZ725900 | TR 2SD1938F S,T       |
| Q902      | VZ725900 | TR 2SD1938F S,T       |
| Q903      | VZ725900 | TR 2SD1938F S,T       |
| Q904      | VZ725900 | TR 2SD1938F S,T       |
| Q905      | VK432900 | TR 2SD1915F S,T       |
| Q906      | VK432900 | TR 2SD1915F S,T       |
| Q907      | VZ725900 | TR 2SD1938F S,T       |
| Q908      | VZ725900 | TR 2SD1938F S,T       |
| Q909      | VZ725900 | TR 2SD1938F S,T       |
| Q910      | VZ725900 | TR 2SD1938F S,T       |
| Q911      | VZ725900 | TR 2SD1938F S,T       |
| Q912      | VZ725900 | TR 2SD1938F S,T       |
| Q913      | VZ725900 | TR 2SD1938F S,T       |
| Q914      | VZ725900 | TR 2SD1938F S,T       |
| Q915      | VZ725900 | TR 2SD1938F S,T       |
| Q916      | VZ725900 | TR 2SD1938F S,T       |
| Q917      | VZ725900 | TR 2SD1938F S,T       |

\* New Parts

## P.C.B. VIDEO

| Schm Ref. | PART NO. | Description          |
|-----------|----------|----------------------|
| Q918      | VZ725900 | TR 2SD1938F S,T      |
| Q919      | VZ725900 | TR 2SD1938F S,T      |
| Q920      | VZ725900 | TR 2SD1938F S,T      |
| Q921      | VZ725900 | TR 2SD1938F S,T      |
| * Q922    | V5224700 | TR 2SD1383K A,B      |
| * Q923    | VV655600 | TR.DGT DTC143EKA TP  |
| * Q924    | VV655600 | TR.DGT DTC143EKA TP  |
| Q926      | VZ725900 | TR 2SD1938F S,T      |
| Q927      | VZ725900 | TR 2SD1938F S,T      |
| Q928      | VZ725900 | TR 2SD1938F S,T      |
| R152      | Vi199200 | R.MTL.CHP 56KΩ 1/10W |
| R153      | Vi199200 | R.MTL.CHP 56KΩ 1/10W |
| R156      | Vi199200 | R.MTL.CHP 56KΩ 1/10W |
| R157      | Vi199200 | R.MTL.CHP 56KΩ 1/10W |
| R160      | Vi199200 | R.MTL.CHP 56KΩ 1/10W |
| R161      | Vi199200 | R.MTL.CHP 56KΩ 1/10W |
| R164      | Vi199200 | R.MTL.CHP 56KΩ 1/10W |
| R165      | Vi199200 | R.MTL.CHP 56KΩ 1/10W |
| R168      | Vi199200 | R.MTL.CHP 56KΩ 1/10W |
| R169      | Vi199200 | R.MTL.CHP 56KΩ 1/10W |
| R174      | Vi199200 | R.MTL.CHP 56KΩ 1/10W |
| R175      | Vi199200 | R.MTL.CHP 56KΩ 1/10W |
| R180      | Vi199200 | R.MTL.CHP 56KΩ 1/10W |
| R181      | Vi199200 | R.MTL.CHP 56KΩ 1/10W |
| R201      | HV453330 | R.CAR.FP 3.3Ω 1/4W   |
| R206      | HV453330 | R.CAR.FP 3.3Ω 1/4W   |
| R231      | HV455220 | R.CAR.FP 220Ω 1/4W   |
| R239      | HV455220 | R.CAR.FP 220Ω 1/4W   |
| R240      | HV455100 | R.CAR.FP 100Ω 1/4W   |
| R243      | HV455100 | R.CAR.FP 100Ω 1/4W   |
| R917      | Vi194200 | R.MTL.CHP 510Ω 1/10W |
| R918      | Vi198200 | R.MTL.CHP 22KΩ 1/10W |
| R919      | Vi198200 | R.MTL.CHP 22KΩ 1/10W |
| R920      | Vi194200 | R.MTL.CHP 510Ω 1/10W |
| R921      | Vi194200 | R.MTL.CHP 510Ω 1/10W |
| R922      | Vi198200 | R.MTL.CHP 22KΩ 1/10W |
| R923      | Vi198200 | R.MTL.CHP 22KΩ 1/10W |
| R924      | Vi194200 | R.MTL.CHP 510Ω 1/10W |
| R925      | Vi194200 | R.MTL.CHP 510Ω 1/10W |
| R926      | Vi198200 | R.MTL.CHP 22KΩ 1/10W |
| R927      | Vi198200 | R.MTL.CHP 22KΩ 1/10W |
| R928      | Vi194200 | R.MTL.CHP 510Ω 1/10W |
| R929      | Vi198200 | R.MTL.CHP 22KΩ 1/10W |
| R930      | Vi194200 | R.MTL.CHP 510Ω 1/10W |
| R931      | Vi194200 | R.MTL.CHP 510Ω 1/10W |
| R932      | Vi198200 | R.MTL.CHP 22KΩ 1/10W |
| R933      | Vi198200 | R.MTL.CHP 22KΩ 1/10W |
| R934      | Vi194200 | R.MTL.CHP 510Ω 1/10W |
| R936      | Vi198200 | R.MTL.CHP 22KΩ 1/10W |
| R937      | Vi198200 | R.MTL.CHP 22KΩ 1/10W |
| R939      | Vi194100 | R.MTL.CHP 470Ω 1/10W |
| R945      | Vi194100 | R.MTL.CHP 470Ω 1/10W |
| R951      | Vi194100 | R.MTL.CHP 470Ω 1/10W |

\* New Parts

| Schm Ref. | PART NO. | Description                  |
|-----------|----------|------------------------------|
| R957      | Vi194100 | R.MTL.CHP 470Ω 1/10W         |
| R961      | Vi194100 | R.MTL.CHP 470Ω 1/10W         |
| R963      | Vi194100 | R.MTL.CHP 470Ω 1/10W         |
| R970      | Vi194100 | R.MTL.CHP 470Ω 1/10W         |
| R975      | Vi194100 | R.MTL.CHP 470Ω 1/10W         |
| R991      | Vi194100 | R.MTL.CHP 470Ω 1/10W         |
| R992      | Vi194100 | R.MTL.CHP 470Ω 1/10W         |
| R995      | Vi194100 | R.MTL.CHP 470Ω 1/10W         |
| R996      | Vi194100 | R.MTL.CHP 470Ω 1/10W         |
| R999      | Vi194100 | R.MTL.CHP 470Ω 1/10W         |
| * RY901   | V4785600 | RELAY DC AGN2004H            |
| * RY902   | V4785600 | RELAY DC AGN2004H            |
| * RY903   | V4785600 | RELAY DC AGN2004H            |
| * RY904   | V4785600 | RELAY DC AGN2004H            |
| * RY905   | V4785600 | RELAY DC AGN2004H            |
| * RY906   | V4785600 | RELAY DC AGN2004H            |
| * SW201   | V4746100 | SW.PUSH SPUN22 2             |
| * SW202   | V4104600 | SW.RT.ENC SDB161PH20F-1-4-14 |
| * SW351   | V4757100 | SW.TACT EVQ11A               |
| * SW352   | V4757100 | SW.TACT EVQ11A               |
| * SW353   | V4757100 | SW.TACT EVQ11A               |
| * SW354   | V4757100 | SW.TACT EVQ11A               |
| * SW355   | V4757100 | SW.TACT EVQ11A(UCA)          |
| * SW356   | V4757100 | SW.TACT EVQ11A(UCA)          |
| * SW357   | V4757100 | SW.TACT EVQ11A               |
| * SW358   | V4757100 | SW.TACT EVQ11A               |
| * SW359   | V4757100 | SW.TACT EVQ11A               |
| * SW360   | V4757100 | SW.TACT EVQ11A(UCA)          |
| * SW361   | V4757100 | SW.TACT EVQ11A(UCA)          |
| * SW362   | V4757100 | SW.TACT EVQ11A               |
| * SW363   | V4757100 | SW.TACT EVQ11A               |
| * SW990   | V5089500 | SW.RT.ENC REB162(9X5)RVB     |
| * SW991   | V4859300 | SW.RT.ENC                    |
| * VR201   | V4104700 | VR 16KΩ                      |
| * VR202   | V4104800 | VR 20KΩ                      |
| VR203     | VU145000 | VR MN30KΩ                    |
| XL1       | VD980900 | RSNR.CRYS 14.3181MHz(UCRT)   |
| XL1       | VV949900 | RSNR.CRYS 17.734475MHz(ABG)  |
|           | V3750100 | PIN L=50                     |
|           | BB071360 | SCR.TERM 8.3x13              |

\* New Parts

## P.C.B. SUB TRANS

| Schm Ref.  | PART NO. | Description               |
|------------|----------|---------------------------|
| * V5002100 | P.C.B.   | SUB TRANS.(U)             |
| * V5002200 | P.C.B.   | SUB TRANS.(C)             |
| * V5002300 | P.C.B.   | SUB TRANS.(RT)            |
| * V5002400 | P.C.B.   | SUB TRANS.(A)             |
| * V5003500 | P.C.B.   | SUB TRANS.(B)             |
| * V5003600 | P.C.B.   | SUB TRANS.(G)             |
| CB101      | VQ960700 | CN 4P                     |
| CB111      | VQ962500 | CN.BS.PIN 4P              |
| CB112      | VD004500 | CN.BS.PIN 2P              |
| * CB113    | V4864900 | CN.BS.PIN 16P             |
| CB481      | LA002390 | TERM.WRAP 2P              |
| CB482      | LA002400 | TERM.WRAP 3P L-753B       |
| CB483      | VL845100 | CN.BS.PIN 7P              |
| CB751      | VG879900 | CN.BS.PIN 2P              |
| CB753      | VS996100 | HOLDER.FUS EYF64BC(UCRT)  |
| CB754      | VP206500 | HOLDER.FUS EYF-52BC(ABG)  |
| CB755      | VP206500 | HOLDER.FUS EYF-52BC(ABG)  |
| CB755      | VS996100 | HOLDER.FUS EYF64BC(UCRT)  |
| CB756      | LA002410 | TERM.WRAP 2P              |
| CB757      | VP206500 | HOLDER.FUS EYF-52BC(RTG)  |
| CB758      | VP206500 | HOLDER.FUS EYF-52BC(RTG)  |
| CB759      | LA002410 | TERM.WRAP 2P(RT)          |
| * CB801    | V4476100 | CN.BS.PIN 16P             |
| C111       | UB052100 | C.CE.M.CHP 100pF 50V      |
| C112       | UB052100 | C.CE.M.CHP 100pF 50V      |
| C113       | UB052100 | C.CE.M.CHP 100pF 50V      |
| C114       | UB052100 | C.CE.M.CHP 100pF 50V      |
| * C115     | UU129100 | C.EL 1000uF 10V           |
| * C116     | UU129100 | C.EL 1000uF 10V           |
| C117       | UB052100 | C.CE.M.CHP 100pF 50V      |
| * C118     | UU137470 | C.EL 47uF 16V             |
| * C119     | UU137470 | C.EL 47uF 16V             |
| * C120     | UU137470 | C.EL 47uF 16V             |
| * C121     | UU127470 | C.EL 47uF 10V             |
| * C122     | UU127470 | C.EL 47uF 10V             |
| * C123     | UU127470 | C.EL 47uF 10V             |
| * C124     | UU127470 | C.EL 47uF 10V             |
| * C125     | UU147100 | C.EL 10uF 25V             |
| C126       | UB445470 | C.CE.M.CHP 0.47uF 16V     |
| C127       | UB445470 | C.CE.M.CHP 0.47uF 16V     |
| * C128     | UU127470 | C.EL 47uF 10V             |
| C129       | UB445470 | C.CE.M.CHP 0.47uF 16V     |
| C481       | UT454270 | C.PP 0.027uF 100V         |
| C482       | UT454270 | C.PP 0.027uF 100V         |
| C483       | Vi862200 | C.POLY 0.1uF 100V         |
| C484       | Vi862200 | C.POLY 0.1uF 100V         |
| C485       | VR168300 | C.MYLAR.ML ECQ-V1H104JL3  |
| * C751     | UU149100 | C.EL 1000uF 25V           |
| * C752     | UU147100 | C.EL 10uF 25V(RT)         |
| * C753     | UU167100 | C.EL 10uF 50V(RT)         |
| * C754     | UU197470 | C.EL 47uF 100V(RT)        |
| C755       | Vi716700 | C.MYLAR 0.01uF 50V(UCABG) |
| C756       | Vi716700 | C.MYLAR 0.01uF 50V(RT)    |

\* New Parts

| Schm Ref. | PART NO. | Description            |
|-----------|----------|------------------------|
| C757      | Vi716700 | C.MYLAR 0.01uF 50V(RT) |
| C758      | VV975400 | C.CE 0.01uF 275V       |
| C759      | VV975400 | C.CE 0.01uF 275V(C)    |
| * C801    | UU167100 | C.EL 10uF 50V          |
| * C802    | V5376400 | C.PP 100pF 100V        |
| * C803    | UU167100 | C.EL 10uF 50V          |
| * C804    | V5376400 | C.PP 100pF 100V        |
| * C805    | UU167100 | C.EL 10uF 50V          |
| * C806    | V5376400 | C.PP 100pF 100V        |
| * C807    | V5376400 | C.PP 100pF 100V        |
| * C808    | UU137470 | C.EL 47uF 16V          |
| C809      | UA653100 | C.MYLAR 1000pF 50V     |
| * C810    | UU137470 | C.EL 47uF 16V          |
| * C811    | V5376400 | C.PP 100pF 100V        |
| * C812    | UU137470 | C.EL 47uF 16V          |
| C813      | UA653100 | C.MYLAR 1000pF 50V     |
| * C814    | UU167100 | C.EL 10uF 50V          |
| * C815    | V5376400 | C.PP 100pF 100V        |
| * C816    | UU128100 | C.EL 100uF 10V         |
| C817      | UT453100 | C.PP 1000pF 100V       |
| C818      | VR516400 | C.CE 15pF 500V         |
| C819      | VR516400 | C.CE 15pF 500V         |
| C820      | FU451150 | C.MICA 15pF 500V       |
| * C821    | UU167100 | C.EL 10uF 50V          |
| * C822    | UU167100 | C.EL 10uF 50V          |
| * C823    | V5376400 | C.PP 100pF 100V        |
| * C824    | UU167100 | C.EL 10uF 50V          |
| * C825    | UU167100 | C.EL 10uF 50V          |
| * C826    | V5376400 | C.PP 100pF 100V        |
| * C827    | UU167100 | C.EL 10uF 50V          |
| * C828    | UU167100 | C.EL 10uF 50V          |
| * C829    | V5376400 | C.PP 100pF 100V        |
| * C830    | UU166330 | C.EL 3.3uF 50V         |
| * C831    | V5376400 | C.PP 100pF 100V        |
| * C832    | UU128100 | C.EL 100uF 10V         |
| C833      | UT453100 | C.PP 1000pF 100V       |
| * C834    | V5376400 | C.PP 100pF 100V        |
| * C835    | UU128100 | C.EL 100uF 10V         |
| C836      | UT453100 | C.PP 1000pF 100V       |
| * C837    | V5376400 | C.PP 100pF 100V        |
| * C838    | UU128100 | C.EL 100uF 10V         |
| C839      | UT453100 | C.PP 1000pF 100V       |
| C840      | FU451150 | C.MICA 15pF 500V       |
| C841      | FU451150 | C.MICA 15pF 500V       |
| C842      | FU451150 | C.MICA 15pF 500V       |
| * C843    | UU167100 | C.EL 10uF 50V          |
| * C844    | UU167100 | C.EL 10uF 50V          |
| * C846    | V5376400 | C.PP 100pF 100V        |
| * C848    | V5376400 | C.PP 100pF 100V        |
| * C850    | V5376400 | C.PP 100pF 100V        |
| * C852    | V5376400 | C.PP 100pF 100V        |
| * C854    | V5376400 | C.PP 100pF 100V        |
| * C855    | UU118100 | C.EL 100uF 6.3V        |

\* New Parts

## P.C.B. SUB TRANS

| Schm Ref. | PART NO. | Description                |
|-----------|----------|----------------------------|
| * C856    | UU137220 | C.EL 22uF 16V              |
| △ D481    | VR253700 | DIODE.BRG S1NB20 1.0A 200V |
| △ * D482  | V4870400 | DIODE.BRG D4SBS4 4.0A      |
| D751      | iF004600 | DIODE 1SS133               |
| D752      | iF004600 | DIODE 1SS133(RT)           |
| D753      | VU264100 | DIODE 1SR139-400(RT)       |
| △ D754    | VR253700 | DIODE.BRG S1NB20 1.0A 200V |
| D755      | VG439900 | DIODE.ZENR MTZJ11B 11V(RT) |
| D756      | iF004600 | DIODE 1SS133(C)            |
| D801      | VG440300 | DIODE.ZENR MTZJ12C 12V     |
| D802      | VU647200 | DIODE.SHOT RB441Q-40 T-77  |
| D803      | iF004600 | DIODE 1SS133               |
| D804      | iF004600 | DIODE 1SS133               |
| △ F751    | KB001760 | FUSE 6.3A 250V(ABG)        |
| △ F751    | VU238300 | FUSE 12A 250V(UCRT)        |
| △ F752    | KB001760 | FUSE 6.3A 250V(RT)         |
| △ F752    | VT942900 | FUSE TH2.5A 250V(G)        |
| * HS481   | V4804600 | HEAT.SINK DPS35-40         |
| HS751     | VS605900 | HEAT.SINK DPS15-45(RT)     |
| IC111     | XL493A00 | IC TC74HC4051AP            |
| IC112     | XL493A00 | IC TC74HC4051AP            |
| IC113     | iR405300 | IC TC74HC4053AP            |
| * IC114   | XW911A00 | IC LA7108M VIDEO AMP       |
| * PJ101   | V4715500 | JACK.PIN 3P                |
| PJ111     | VL834600 | JACK.PIN 2P                |
| PJ112     | VL834600 | JACK.PIN 2P                |
| PJ113     | VL834600 | JACK.PIN 2P                |
| PJ114     | VL834600 | JACK.PIN 2P                |
| PJ115     | VU144200 | JACK.PIN 1P                |
| Q111      | iC174020 | TR 2SC1740S R,S            |
| Q112      | iC174020 | TR 2SC1740S R,S            |
| Q751      | VD488500 | TR.DGT DTC143XS            |
| △ Q752    | VR510800 | TR 2SD2396 J,K(RT)         |
| △ Q753    | VR510800 | TR 2SD2396 J,K(RT)         |
| Q754      | iE102620 | FET 2SK246 Y(RT)           |
| Q755      | iC174020 | TR 2SC1740S R,S            |
| Q756      | iC174020 | TR 2SC1740S R,S(C)         |
| Q801      | iA097000 | TR 2SA970 GR,BL            |
| Q802      | iA097000 | TR 2SA970 GR,BL            |
| Q803      | iA097000 | TR 2SA970 GR,BL            |
| Q804      | iA097000 | TR 2SA970 GR,BL            |
| Q805      | iA097000 | TR 2SA970 GR,BL            |
| Q806      | iA097000 | TR 2SA970 GR,BL            |
| Q807      | iC1815C0 | TR 2SC1815 Y               |
| Q808      | iC1815C0 | TR 2SC1815 Y               |
| Q809      | iC1815C0 | TR 2SC1815 Y               |
| Q810      | iC1815C0 | TR 2SC1815 Y               |
| Q811      | iC1815C0 | TR 2SC1815 Y               |
| Q812      | iA097000 | TR 2SA970 GR,BL            |
| Q813      | iA097000 | TR 2SA970 GR,BL            |
| Q814      | iA097000 | TR 2SA970 GR,BL            |
| Q815      | iC1815C0 | TR 2SC1815 Y               |
| Q816      | iC1815C0 | TR 2SC1815 Y               |

\* New Parts

| Schm Ref. | PART NO. | Description               |
|-----------|----------|---------------------------|
| Q817      | iC1815C0 | TR 2SC1815 Y              |
| Q818      | iA097000 | TR 2SA970 GR,BL           |
| Q819      | iA097000 | TR 2SA970 GR,BL           |
| Q820      | iC1815C0 | TR 2SC1815 Y              |
| Q821      | iC1815C0 | TR 2SC1815 Y              |
| Q822      | iC1815C0 | TR 2SC1815 Y              |
| Q823      | iA097000 | TR 2SA970 GR,BL           |
| Q824      | iA097000 | TR 2SA970 GR,BL           |
| Q825      | iC1815C0 | TR 2SC1815 Y              |
| Q826      | iC1815C0 | TR 2SC1815 Y              |
| Q827      | iC1815C0 | TR 2SC1815 Y              |
| △ R820    | HV455220 | R.CAR.FP 220Ω 1/4W        |
| △ R821    | HV455220 | R.CAR.FP 220Ω 1/4W        |
| △ R825    | HV454470 | R.CAR.FP 47Ω 1/4W         |
| △ R829    | HV454470 | R.CAR.FP 47Ω 1/4W         |
| △ R831    | HV455100 | R.CAR.FP 100Ω 1/4W        |
| △ R843    | HV455220 | R.CAR.FP 220Ω 1/4W        |
| △ R844    | HV455220 | R.CAR.FP 220Ω 1/4W        |
| △ R850    | HV455220 | R.CAR.FP 220Ω 1/4W        |
| △ R851    | HV455220 | R.CAR.FP 220Ω 1/4W        |
| △ R857    | HV455220 | R.CAR.FP 220Ω 1/4W        |
| △ R858    | HV455220 | R.CAR.FP 220Ω 1/4W        |
| △ R860    | HV455100 | R.CAR.FP 100Ω 1/4W        |
| △ R862    | HV455100 | R.CAR.FP 100Ω 1/4W        |
| △ R864    | HV455100 | R.CAR.FP 100Ω 1/4W        |
| △ RY751   | V2695300 | RELAY DC DG12D1-O/M-II    |
| △ RY752   | V2712300 | RELAY DC SDT-S-112LMR(C)  |
| △ * T751  | XW973A00 | TRANS.PWR (UC)            |
| △ * T751  | XW974A00 | TRANS.PWR (RT)            |
| △ * T751  | XW975A00 | TRANS.PWR (A)             |
| △ * T751  | XW976A00 | TRANS.PWR (BG)            |
| △ * TE751 | V4746500 | OUTLET.AC 3P(RT)          |
| △ TE751   | VT915000 | OUTLET.AC 2P(A)           |
| △ TE751   | VU543300 | OUTLET.AC 1P(B)           |
| △ TE751   | VV118800 | OUTLET.AC 3P(UC)          |
| △ TE751   | VV118800 | OUTLET.AC 3P(UC)          |
| △ TE751   | VV119000 | OUTLET.AC 3P(G)           |
| TH601     | VM842400 | POSISTOR PTH9M04 BE/90°C  |
|           | BB071360 | SCR.TERM 8.3x13           |
|           | VK697600 | SCR.BND.HD 3x10 SP ZMC2-Y |

\* New Parts

P.C.B. FUNCTION

| Schm Ref.  | PART NO. | Description            |
|------------|----------|------------------------|
| * V5002600 | P.C.B.   | FUNCTION(UC)           |
| * V5002700 | P.C.B.   | FUNCTION(RT)           |
| * V5002800 | P.C.B.   | FUNCTION(A)            |
| * V5002900 | P.C.B.   | FUNCTION(BG)           |
| CB1        | VB858200 | CN.BS.PIN 3P           |
| CB2        | VQ963300 | CN.BS.PIN 12P          |
| CB3        | VQ963300 | CN.BS.PIN 12P          |
| CB4        | VM859700 | CN.BS.PIN 16P          |
| CB5        | VQ044600 | CN.BS.PIN 13P(UCA)     |
| CB6        | VP682300 | CN.BS.PIN 8P           |
| CB7        | VD004500 | CN.BS.PIN 2P           |
| CB8        | VB858200 | CN.BS.PIN 3P           |
| CB9        | VQ044500 | CN.BS.PIN 11P          |
| CB10       | VF982300 | CN.BS.PIN 17P          |
| CB11       | VP682300 | CN.BS.PIN 8P           |
| CB12       | VQ045600 | CN.BS.PIN 27P          |
| CB13       | VB858200 | CN.BS.PIN 3P           |
| CB14       | VB858400 | CN.BS.PIN 5P           |
| CB15       | VB858500 | CN.BS.PIN 6P           |
| CB16       | VQ044700 | CN.BS.PIN 16P          |
| CB17       | VB858300 | CN.BS.PIN 4P           |
| * CB351    | V3768800 | SOCKET 17LE-23090-28   |
| CB352      | VQ044500 | CN.BS.PIN 11P          |
| C1         | VD930900 | C.CE.SMI 0.1uF 25V     |
| C4         | UB245100 | C.CE.M.CHP 0.1uF 25V   |
| C5         | UB245100 | C.CE.M.CHP 0.1uF 25V   |
| * C6       | UU166100 | C.EL 1uF 50V           |
| C7         | UP652220 | C.POL 220pF 100V       |
| C10        | UP652220 | C.POL 220pF 100V       |
| * C11      | UU166100 | C.EL 1uF 50V           |
| C12        | UP652470 | C.POL 470pF 100V       |
| C13        | UP652470 | C.POL 470pF 100V       |
| C14        | UP652470 | C.POL 470pF 100V(RTBG) |
| C15        | UP652470 | C.POL 470pF 100V(RTBG) |
| C16        | UP652470 | C.POL 470pF 100V       |
| C17        | UP652470 | C.POL 470pF 100V       |
| C18        | UP652470 | C.POL 470pF 100V       |
| C19        | UP652470 | C.POL 470pF 100V       |
| C20        | UP652470 | C.POL 470pF 100V       |
| C21        | UP652470 | C.POL 470pF 100V       |
| C22        | UP652470 | C.POL 470pF 100V       |
| C23        | UP652470 | C.POL 470pF 100V       |
| * C24      | UU166470 | C.EL 4.7uF 50V         |
| C25        | UP652470 | C.POL 470pF 100V       |
| C26        | UP652470 | C.POL 470pF 100V       |
| * C27      | UU166470 | C.EL 4.7uF 50V         |
| * C28      | UU166470 | C.EL 4.7uF 50V         |
| C29        | UP652470 | C.POL 470pF 100V       |
| C30        | UP652470 | C.POL 470pF 100V       |
| * C31      | UU166470 | C.EL 4.7uF 50V         |
| * C32      | UU166470 | C.EL 4.7uF 50V         |
| C33        | UP652470 | C.POL 470pF 100V       |
| C34        | UP652470 | C.POL 470pF 100V       |

\* New Parts

| Schm Ref. | PART NO. | Description         |
|-----------|----------|---------------------|
| * C35     | UU166470 | C.EL 4.7uF 50V      |
| C36       | UP652470 | C.POL 470pF 100V    |
| C37       | UP652470 | C.POL 470pF 100V    |
| * C38     | UU147100 | C.EL 10uF 25V       |
| C39       | UA654390 | C.MYLAR 0.039uF 50V |
| C40       | UA654110 | C.MYLAR 0.011uF 50V |
| * C41     | UU118220 | C.EL 220uF 6.3V     |
| * C42     | UU118220 | C.EL 220uF 6.3V     |
| C43       | UA654390 | C.MYLAR 0.039uF 50V |
| C44       | UA654110 | C.MYLAR 0.011uF 50V |
| * C45     | UU147100 | C.EL 10uF 25V       |
| * C46     | UU166220 | C.EL 2.2uF 50V      |
| C47       | UP652100 | C.POL 100pF 100V    |
| C48       | UP652100 | C.POL 100pF 100V    |
| * C49     | UU166220 | C.EL 2.2uF 50V      |
| * C50     | UU147100 | C.EL 10uF 25V       |
| * C51     | UU147100 | C.EL 10uF 25V       |
| * C52     | UU147100 | C.EL 10uF 25V       |
| * C53     | UU147100 | C.EL 10uF 25V       |
| * C54     | UU147100 | C.EL 10uF 25V       |
| * C55     | UU147100 | C.EL 10uF 25V       |
| * C56     | UU137470 | C.EL 47uF 16V       |
| C57       | UP652100 | C.POL 100pF 100V    |
| C58       | UP652100 | C.POL 100pF 100V    |
| * C59     | UU137470 | C.EL 47uF 16V       |
| * C60     | UU138100 | C.EL 100uF 16V      |
| * C61     | UU137470 | C.EL 47uF 16V       |
| C62       | UA653100 | C.MYLAR 1000pF 50V  |
| C63       | UA653100 | C.MYLAR 1000pF 50V  |
| * C64     | UU138100 | C.EL 100uF 16V      |
| * C65     | UU137470 | C.EL 47uF 16V       |
| * C66     | UU147100 | C.EL 10uF 25V       |
| * C67     | UU166470 | C.EL 4.7uF 50V      |
| * C68     | UU166470 | C.EL 4.7uF 50V      |
| * C69     | UU147100 | C.EL 10uF 25V       |
| * C70     | UU147100 | C.EL 10uF 25V       |
| * C71     | UU147100 | C.EL 10uF 25V       |
| * C72     | UU147100 | C.EL 10uF 25V       |
| * C73     | UU137470 | C.EL 47uF 16V       |
| * C74     | UU137470 | C.EL 47uF 16V       |
| * C75     | UU166100 | C.EL 1uF 50V        |
| * C76     | UU137470 | C.EL 47uF 16V       |
| * C77     | UU166100 | C.EL 1uF 50V        |
| * C78     | UU137470 | C.EL 47uF 16V       |
| * C79     | UU166100 | C.EL 1uF 50V        |
| * C80     | UU137470 | C.EL 47uF 16V       |
| * C81     | UU147100 | C.EL 10uF 25V       |
| * C82     | UU147100 | C.EL 10uF 25V       |
| * C83     | UU137470 | C.EL 47uF 16V       |
| * C84     | UU166470 | C.EL 4.7uF 50V      |
| C85       | UP652100 | C.POL 100pF 100V    |
| * C86     | UU166470 | C.EL 4.7uF 50V      |
| C87       | UP652100 | C.POL 100pF 100V    |

\* New Parts



## P.C.B. FUNCTION

| Schm Ref. | PART NO. | Description |         |          |
|-----------|----------|-------------|---------|----------|
| * C88     | UU137220 | C.EL        | 22uF    | 16V      |
| C89       | UP654270 | C.POL       | 0.027uF | 100V     |
| C90       | UP654270 | C.POL       | 0.027uF | 100V     |
| * C91     | UU137220 | C.EL        | 22uF    | 16V      |
| * C92     | UU147100 | C.EL        | 10uF    | 25V      |
| * C93     | UU147100 | C.EL        | 10uF    | 25V      |
| * C94     | UU147100 | C.EL        | 10uF    | 25V      |
| * C95     | UU147100 | C.EL        | 10uF    | 25V      |
| * C96     | UU147100 | C.EL        | 10uF    | 25V      |
| * C97     | UU147100 | C.EL        | 10uF    | 25V      |
| * C98     | UU147100 | C.EL        | 10uF    | 25V      |
| * C99     | UU147100 | C.EL        | 10uF    | 25V      |
| * C100    | UU147100 | C.EL        | 10uF    | 25V      |
| * C101    | UU147100 | C.EL        | 10uF    | 25V      |
| * C102    | UU166220 | C.EL        | 2.2uF   | 50V      |
| * C103    | UU166220 | C.EL        | 2.2uF   | 50V      |
| C104      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V(UCA) |
| C105      | UP654270 | C.POL       | 0.027uF | 100V     |
| * C106    | UU147100 | C.EL        | 10uF    | 25V      |
| * C107    | UU147100 | C.EL        | 10uF    | 25V      |
| C108      | UP654270 | C.POL       | 0.027uF | 100V     |
| * C109    | UU147100 | C.EL        | 10uF    | 25V      |
| * C110    | UU147100 | C.EL        | 10uF    | 25V      |
| * C111    | UU147100 | C.EL        | 10uF    | 25V      |
| * C112    | UU147100 | C.EL        | 10uF    | 25V      |
| * C113    | UU147100 | C.EL        | 10uF    | 25V      |
| * C114    | UU147100 | C.EL        | 10uF    | 25V      |
| * C115    | UU147100 | C.EL        | 10uF    | 25V      |
| * C116    | UU147100 | C.EL        | 10uF    | 25V      |
| * C117    | UU147100 | C.EL        | 10uF    | 25V      |
| * C118    | UU147100 | C.EL        | 10uF    | 25V      |
| C119      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V      |
| * C120    | UU118100 | C.EL        | 100uF   | 6.3V     |
| C121      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V      |
| C122      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V      |
| C123      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V      |
| C124      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V      |
| C125      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V      |
| C127      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V      |
| C128      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V      |
| C130      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V      |
| * C131    | UU118100 | C.EL        | 100uF   | 6.3V     |
| C132      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V      |
| C133      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V      |
| C134      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V      |
| C135      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V      |
| * C136    | UU118100 | C.EL        | 100uF   | 6.3V     |
| C137      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V      |
| C138      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V      |
| * C140    | UU137470 | C.EL        | 47uF    | 16V      |
| C141      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V      |
| C142      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V      |
| C143      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V      |

\* New Parts

| Schm Ref. | PART NO. | Description |         |            |
|-----------|----------|-------------|---------|------------|
| C144      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V        |
| C145      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V        |
| C146      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V        |
| C147      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V        |
| C148      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V        |
| C149      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V        |
| C150      | UP652100 | C.POL       | 100pF   | 100V       |
| C151      | UP652100 | C.POL       | 100pF   | 100V       |
| * C152    | UU147100 | C.EL        | 10uF    | 25V        |
| * C153    | UU147100 | C.EL        | 10uF    | 25V        |
| * C154    | UU147100 | C.EL        | 10uF    | 25V        |
| * C155    | UU147100 | C.EL        | 10uF    | 25V        |
| * C156    | UU137470 | C.EL        | 47uF    | 16V        |
| * C157    | UU137470 | C.EL        | 47uF    | 16V        |
| C159      | UP652100 | C.POL       | 100pF   | 100V       |
| C160      | UP652100 | C.POL       | 100pF   | 100V       |
| * C162    | UU147100 | C.EL        | 10uF    | 25V(UCABG) |
| * C162    | UU168100 | C.EL        | 100uF   | 50V(RT)    |
| * C163    | UU165470 | C.EL        | 0.47uF  | 50V        |
| C164      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V        |
| * C165    | UU137470 | C.EL        | 47uF    | 16V        |
| * C170    | UU137470 | C.EL        | 47uF    | 16V        |
| C171      | UP652100 | C.POL       | 100pF   | 100V       |
| C174      | UP652100 | C.POL       | 100pF   | 100V       |
| C175      | VU545000 | C.EL        | 47000uF | 5.5V       |
| * C176    | UU119100 | C.EL        | 1000uF  | 6.3V       |
| * C177    | UU137470 | C.EL        | 47uF    | 16V        |
| C178      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V        |
| * C179    | UU119100 | C.EL        | 1000uF  | 6.3V       |
| * C180    | UU147100 | C.EL        | 10uF    | 25V        |
| * C181    | UU137470 | C.EL        | 47uF    | 16V        |
| * C182    | UU137470 | C.EL        | 47uF    | 16V        |
| * C183    | UU137470 | C.EL        | 47uF    | 16V        |
| * C184    | UU137470 | C.EL        | 47uF    | 16V        |
| * C185    | UU147100 | C.EL        | 10uF    | 25V        |
| C186      | UP652100 | C.POL       | 100pF   | 100V       |
| C188      | UP652100 | C.POL       | 100pF   | 100V       |
| C190      | UB013100 | C.CE.M.CHP  | 1000pF  | 50V        |
| C191      | UB013100 | C.CE.M.CHP  | 1000pF  | 50V        |
| * C192    | UU118100 | C.EL        | 100uF   | 6.3V       |
| C193      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V        |
| * C194    | UU147100 | C.EL        | 10uF    | 25V        |
| * C195    | UU147100 | C.EL        | 10uF    | 25V        |
| C196      | UP652100 | C.POL       | 100pF   | 100V       |
| C198      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V        |
| C199      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V        |
| C200      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V        |
| C201      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V        |
| * C202    | UU138100 | C.EL        | 100uF   | 16V        |
| C203      | UP652100 | C.POL       | 100pF   | 100V       |
| * C204    | UU166220 | C.EL        | 2.2uF   | 50V        |
| * C205    | UU166220 | C.EL        | 2.2uF   | 50V        |
| * C206    | UU166220 | C.EL        | 2.2uF   | 50V        |

\* New Parts

**P.C.B. FUNCTION**

| Schm Ref. | PART NO. | Description                   |
|-----------|----------|-------------------------------|
| * C207    | UU166220 | C.EL 2.2uF 50V                |
| * C208    | UU166220 | C.EL 2.2uF 50V                |
| * C211    | UU119100 | C.EL 1000uF 6.3V              |
| C212      | UB245100 | C.CE.M.CHP 0.1uF 25V          |
| C213      | UB245100 | C.CE.M.CHP 0.1uF 25V          |
| C214      | UB245100 | C.CE.M.CHP 0.1uF 25V          |
| C215      | UB013100 | C.CE.M.CHP 1000pF 50V         |
| C216      | UB013100 | C.CE.M.CHP 1000pF 50V         |
| * C217    | UU137220 | C.EL 22uF 16V                 |
| * C218    | UU137220 | C.EL 22uF 16V                 |
| C219      | UB245100 | C.CE.M.CHP 0.1uF 25V          |
| C220      | UB245100 | C.CE.M.CHP 0.1uF 25V          |
| C221      | UB245100 | C.CE.M.CHP 0.1uF 25V          |
| C222      | UB245100 | C.CE.M.CHP 0.1uF 25V          |
| C223      | UB245100 | C.CE.M.CHP 0.1uF 25V          |
| C244      | UB245100 | C.CE.M.CHP 0.1uF 25V          |
| * C245    | UU166100 | C.EL 1uF 50V                  |
| C246      | UB245100 | C.CE.M.CHP 0.1uF 25V          |
| C247      | UB245100 | C.CE.M.CHP 0.1uF 25V          |
| * C248    | UU147100 | C.EL 10uF 25V                 |
| * C249    | UU147100 | C.EL 10uF 25V                 |
| * C250    | UU147100 | C.EL 10uF 25V                 |
| * C251    | UU147100 | C.EL 10uF 25V                 |
| * C252    | UU147100 | C.EL 10uF 25V                 |
| * C253    | UU147100 | C.EL 10uF 25V                 |
| C351      | UB245100 | C.CE.M.CHP 0.1uF 25V          |
| * C353    | UU118100 | C.EL 100uF 6.3V               |
| C354      | UB245100 | C.CE.M.CHP 0.1uF 25V          |
| D3        | VG437400 | DIODE.ZENR MTZJ5.1B 5.1V      |
| D4        | VT332900 | DIODE 1SS355                  |
| D5        | VG437700 | DIODE.ZENR MTZJ5.6B 5.6V      |
| D6        | VG437700 | DIODE.ZENR MTZJ5.6B 5.6V      |
| D7        | VG437300 | DIODE.ZENR MTZJ5.1A 5.1V      |
| D8        | VG437300 | DIODE.ZENR MTZJ5.1A 5.1V      |
| D9        | iF004600 | DIODE 1SS133                  |
| D10       | VG438100 | DIODE.ZENR MTZJ6.2C 6.2V(RT)  |
| D10       | VG438200 | DIODE.ZENR MTZJ6.8A6.8V(UCABG |
| D11       | VT332900 | DIODE 1SS355                  |
| D12       | iF004600 | DIODE 1SS133                  |
| D13       | iF004600 | DIODE 1SS133                  |
| D16       | iF004600 | DIODE 1SS133                  |
| D17       | iF004600 | DIODE 1SS133                  |
| D18       | VT332900 | DIODE 1SS355                  |
| D19       | VT332900 | DIODE 1SS355                  |
| D20       | VT332900 | DIODE 1SS355                  |
| D21       | VT332900 | DIODE 1SS355                  |
| D22       | VT332900 | DIODE 1SS355                  |
| D351      | iF004600 | DIODE 1SS133                  |
| * D352    | V2598200 | LED SIR-505ST                 |
| D353      | iF004600 | DIODE 1SS133                  |
| IC1       | XJ553A00 | IC NJM2068MD                  |
| * IC2     | XW192A00 | IC TC9274N-XXX                |
| * IC3     | XW192A00 | IC TC9274N-XXX                |

\* New Parts

| Schm Ref. | PART NO. | Description          |
|-----------|----------|----------------------|
| IC4       | XF291A00 | IC uPC4570G2         |
| IC5       | XF291A00 | IC uPC4570G2         |
| IC6       | XF291A00 | IC uPC4570G2         |
| IC7       | XF291A00 | IC uPC4570G2         |
| IC8       | XF291A00 | IC uPC4570G2         |
| IC9       | XS884A00 | IC LC7536Y           |
| IC10      | XF291A00 | IC uPC4570G2         |
| IC11      | XP894A00 | IC LC78211           |
| IC12      | XF291A00 | IC uPC4570G2         |
| IC13      | XF291A00 | IC uPC4570G2         |
| IC14      | XF291A00 | IC uPC4570G2         |
| IC15      | XF291A00 | IC uPC4570G2         |
| * IC16    | XW173A00 | IC CS3310-KS         |
| * IC17    | XW173A00 | IC CS3310-KS         |
| * IC18    | XW173A00 | IC CS3310-KS         |
| * IC19    | XW173A00 | IC CS3310-KS         |
| * IC20    | XW173A00 | IC CS3310-KS         |
| IC21      | XP895A00 | IC LC78212           |
| IC22      | XF291A00 | IC uPC4570G2         |
| IC23      | XF291A00 | IC uPC4570G2         |
| IC24      | XF291A00 | IC uPC4570G2         |
| IC25      | XF291A00 | IC uPC4570G2         |
| IC26      | XF291A00 | IC uPC4570G2         |
| * IC27    | XW729A00 | IC CPU,EPROM         |
| IC28      | XA507A00 | IC AN78N05           |
| * IC31    | XW863A00 | IC ADM202JRN-REEL7   |
| JK351     | VJ726800 | JACK.MNI             |
| JK352     | VJ726800 | JACK.MNI             |
| JK353     | VJ726800 | JACK.MNI             |
| JK354     | VJ726800 | JACK.MNI             |
| * PJ1     | V4805800 | JACK.PIN 4P          |
| * PJ2     | V4807000 | JACK.PIN 4P(UCA)     |
| * PJ2     | V4807100 | JACK.PIN 6P(RTBG)    |
| * PJ3     | V4807000 | JACK.PIN 4P          |
| * PJ4     | V4807000 | JACK.PIN 4P          |
| * PJ5     | V4806600 | JACK.PIN 2P          |
| * PJ6     | V4806500 | JACK.PIN 2P          |
| Q1        | VD303700 | TR 2SC3326 A,B       |
| Q2        | VD303700 | TR 2SC3326 A,B       |
| Q3        | iA103700 | TR.CHP 2SA1037 Q,R,S |
| Q4        | iA103700 | TR.CHP 2SA1037 Q,R,S |
| Q5        | iA103700 | TR.CHP 2SA1037 Q,R,S |
| Q6        | iA103700 | TR.CHP 2SA1037 Q,R,S |
| Q7        | iA103700 | TR.CHP 2SA1037 Q,R,S |
| Q8        | VV655700 | TR.DGT DTC144EKA     |
| Q9        | iA103700 | TR.CHP 2SA1037 Q,R,S |
| Q10       | iA103700 | TR.CHP 2SA1037 Q,R,S |
| Q11       | iA103700 | TR.CHP 2SA1037 Q,R,S |
| Q12       | iA103700 | TR.CHP 2SA1037 Q,R,S |
| Q13       | iA103700 | TR.CHP 2SA1037 Q,R,S |
| Q14       | iA103700 | TR.CHP 2SA1037 Q,R,S |
| Q15       | iA103700 | TR.CHP 2SA1037 Q,R,S |
| Q16       | iA103700 | TR.CHP 2SA1037 Q,R,S |

\* New Parts

## P.C.B. FUNCTION

| Schm Ref. | PART NO. | Description                        |
|-----------|----------|------------------------------------|
| Q17       | iA103700 | TR.CHP 2SA1037 Q,R,S               |
| Q18       | iA103700 | TR.CHP 2SA1037 Q,R,S               |
| Q19       | VD303700 | TR 2SC3326 A,B                     |
| Q20       | VP872700 | TR 2SC4488 S,T                     |
| Q21       | VP872600 | TR 2SA1708 S,T                     |
| Q22       | VV655700 | TR.DGT DTC144EKA                   |
| Q23       | VV655300 | TR.DGT DTA144EKA                   |
| Q24       | VD303700 | TR 2SC3326 A,B                     |
| Q25       | VD303700 | TR 2SC3326 A,B                     |
| Q26       | VV556400 | TR 2SC2412K Q,R,S                  |
| R5        | Vi199600 | R.MTL.CHP 82K $\Omega$ 1/10W       |
| R7        | VK581200 | R.MTL.CHP 120K $\Omega$ 1/10W      |
| R8        | VK581200 | R.MTL.CHP 120K $\Omega$ 1/10W      |
| R10       | Vi199600 | R.MTL.CHP 82K $\Omega$ 1/10W       |
| R14       | Vi199200 | R.MTL.CHP 56K $\Omega$ 1/10W       |
| R15       | Vi199200 | R.MTL.CHP 56K $\Omega$ 1/10W       |
| R18       | Vi199200 | R.MTL.CHP 56K $\Omega$ 1/10W(RTBG) |
| R19       | Vi199200 | R.MTL.CHP 56K $\Omega$ 1/10W(RTBG) |
| R22       | Vi199200 | R.MTL.CHP 56K $\Omega$ 1/10W       |
| R23       | Vi199200 | R.MTL.CHP 56K $\Omega$ 1/10W       |
| R28       | Vi199200 | R.MTL.CHP 56K $\Omega$ 1/10W       |
| R29       | Vi199200 | R.MTL.CHP 56K $\Omega$ 1/10W       |
| R34       | Vi199200 | R.MTL.CHP 56K $\Omega$ 1/10W       |
| R35       | VK582200 | R.MTL.CHP 330K $\Omega$ 1/10W      |
| R36       | VK582200 | R.MTL.CHP 330K $\Omega$ 1/10W      |
| R37       | Vi199200 | R.MTL.CHP 56K $\Omega$ 1/10W       |
| R40       | Vi199200 | R.MTL.CHP 56K $\Omega$ 1/10W       |
| R41       | VK582200 | R.MTL.CHP 330K $\Omega$ 1/10W      |
| R42       | VK582200 | R.MTL.CHP 330K $\Omega$ 1/10W      |
| R43       | Vi199200 | R.MTL.CHP 56K $\Omega$ 1/10W       |
| R46       | Vi199200 | R.MTL.CHP 56K $\Omega$ 1/10W       |
| R47       | VK582200 | R.MTL.CHP 330K $\Omega$ 1/10W      |
| R48       | Vi199200 | R.MTL.CHP 56K $\Omega$ 1/10W       |
| R49       | VK582200 | R.MTL.CHP 330K $\Omega$ 1/10W      |
| R52       | Vi200000 | R.MTL.CHP 100K $\Omega$ 1/10W      |
| R53       | Vi200000 | R.MTL.CHP 100K $\Omega$ 1/10W      |
| R55       | Vi192500 | R.MTL.CHP 100 $\Omega$ 1/10W       |
| R56       | Vi199600 | R.MTL.CHP 82K $\Omega$ 1/10W       |
| R57       | Vi197000 | R.MTL.CHP 6.8K $\Omega$ 1/10W      |
| R58       | Vi199000 | R.MTL.CHP 47K $\Omega$ 1/10W       |
| R59       | Vi192900 | R.MTL.CHP 150 $\Omega$ 1/10W       |
| R60       | Vi192900 | R.MTL.CHP 150 $\Omega$ 1/10W       |
| R61       | Vi199000 | R.MTL.CHP 47K $\Omega$ 1/10W       |
| R62       | Vi192500 | R.MTL.CHP 100 $\Omega$ 1/10W       |
| R63       | Vi199600 | R.MTL.CHP 82K $\Omega$ 1/10W       |
| R64       | Vi197000 | R.MTL.CHP 6.8K $\Omega$ 1/10W      |
| R65       | VK583400 | R.MTL.CHP 1M $\Omega$ 1/10W        |
| R66       | VK583400 | R.MTL.CHP 1M $\Omega$ 1/10W        |
| R67       | VK583400 | R.MTL.CHP 1M $\Omega$ 1/10W        |
| R68       | VK583400 | R.MTL.CHP 1M $\Omega$ 1/10W        |
| R69       | Vi200000 | R.MTL.CHP 100K $\Omega$ 1/10W      |
| R70       | Vi200000 | R.MTL.CHP 100K $\Omega$ 1/10W      |
| R71       | Vi197400 | R.MTL.CHP 10K $\Omega$ 1/10W       |

\* New Parts

| Schm Ref. | PART NO. | Description                      |
|-----------|----------|----------------------------------|
| R72       | Vi196600 | R.MTL.CHP 4.7K $\Omega$ 1/10W    |
| R73       | Vi200000 | R.MTL.CHP 100K $\Omega$ 1/10W    |
| R74       | Vi196100 | R.MTL.CHP 3.3K $\Omega$ 1/10W    |
| R75       | Vi197200 | R.MTL.CHP 8.2K $\Omega$ 1/10W    |
| R76       | Vi197200 | R.MTL.CHP 8.2K $\Omega$ 1/10W    |
| R77       | Vi196100 | R.MTL.CHP 3.3K $\Omega$ 1/10W    |
| R78       | Vi194900 | R.MTL.CHP 1K $\Omega$ 1/10W      |
| R79       | Vi197000 | R.MTL.CHP 6.8K $\Omega$ 1/10W    |
| R80       | Vi196100 | R.MTL.CHP 3.3K $\Omega$ 1/10W    |
| R81       | Vi198600 | R.MTL.CHP 33K $\Omega$ 1/10W     |
| R82       | Vi198600 | R.MTL.CHP 33K $\Omega$ 1/10W     |
| R83       | Vi196100 | R.MTL.CHP 3.3K $\Omega$ 1/10W    |
| R84       | Vi197000 | R.MTL.CHP 6.8K $\Omega$ 1/10W    |
| R85       | Vi194900 | R.MTL.CHP 1K $\Omega$ 1/10W      |
| R86       | HV455100 | R.CAR.FP 100 $\Omega$ 1/4W       |
| R87       | Vi192500 | R.MTL.CHP 100 $\Omega$ 1/10W     |
| R88       | Vi192500 | R.MTL.CHP 100 $\Omega$ 1/10W     |
| R89       | HV455100 | R.CAR.FP 100 $\Omega$ 1/4W       |
| R90       | VK583400 | R.MTL.CHP 1M $\Omega$ 1/10W      |
| R91       | VK583400 | R.MTL.CHP 1M $\Omega$ 1/10W      |
| R92       | VK583400 | R.MTL.CHP 1M $\Omega$ 1/10W      |
| R93       | VK583400 | R.MTL.CHP 1M $\Omega$ 1/10W      |
| R94       | Vi197400 | R.MTL.CHP 10K $\Omega$ 1/10W     |
| R95       | Vi196600 | R.MTL.CHP 4.7K $\Omega$ 1/10W    |
| R96       | Vi195700 | R.MTL.CHP 2.2K $\Omega$ 1/10W    |
| R97       | Vi195100 | R.MTL.CHP 1.2K $\Omega$ 1/10W    |
| R98       | VK583400 | R.MTL.CHP 1M $\Omega$ 1/10W      |
| R99       | VK583400 | R.MTL.CHP 1M $\Omega$ 1/10W      |
| R100      | Vi195100 | R.MTL.CHP 1.2K $\Omega$ 1/10W    |
| R101      | Vi200000 | R.MTL.CHP 100K $\Omega$ 1/10W    |
| R102      | Vi200000 | R.MTL.CHP 100K $\Omega$ 1/10W    |
| R103      | Vi199000 | R.MTL.CHP 47K $\Omega$ 1/10W     |
| R104      | Vi197400 | R.MTL.CHP 10K $\Omega$ 1/10W     |
| R105      | Vi197400 | R.MTL.CHP 10K $\Omega$ 1/10W     |
| R106      | Vi199000 | R.MTL.CHP 47K $\Omega$ 1/10W     |
| R107      | VK583400 | R.MTL.CHP 1M $\Omega$ 1/10W      |
| R108      | VK583400 | R.MTL.CHP 1M $\Omega$ 1/10W      |
| R109      | VK583400 | R.MTL.CHP 1M $\Omega$ 1/10W      |
| R110      | VK583400 | R.MTL.CHP 1M $\Omega$ 1/10W      |
| R111      | Vi200000 | R.MTL.CHP 100K $\Omega$ 1/10W    |
| R112      | Vi200000 | R.MTL.CHP 100K $\Omega$ 1/10W    |
| R113      | Vi200000 | R.MTL.CHP 100K $\Omega$ 1/10W    |
| R114      | Vi200000 | R.MTL.CHP 100K $\Omega$ 1/10W    |
| R115      | Vi200000 | R.MTL.CHP 100K $\Omega$ 1/10W    |
| R116      | Vi200000 | R.MTL.CHP 100K $\Omega$ 1/10W    |
| R117      | Vi200000 | R.MTL.CHP 100K $\Omega$ 1/10W    |
| R118      | Vi191700 | R.MTL.CHP 47 $\Omega$ 1/10W(UCA) |
| R119      | Vi191700 | R.MTL.CHP 47 $\Omega$ 1/10W(UCA) |
| R120      | Vi191700 | R.MTL.CHP 47 $\Omega$ 1/10W(UCA) |
| R121      | Vi192500 | R.MTL.CHP 100 $\Omega$ 1/10W     |
| R122      | Vi192500 | R.MTL.CHP 100 $\Omega$ 1/10W     |
| R123      | Vi192500 | R.MTL.CHP 100 $\Omega$ 1/10W     |
| R124      | Vi192500 | R.MTL.CHP 100 $\Omega$ 1/10W     |

\* New Parts

P.C.B. FUNCTION

| Schm Ref. | PART NO. | Description              |
|-----------|----------|--------------------------|
| R125      | Vi192500 | R.MTL.CHP 100Ω 1/10W     |
| R126      | HV453220 | R.CAR.FP 2.2Ω 1/4W       |
| R127      | Vi199000 | R.MTL.CHP 47KΩ 1/10W     |
| R128      | Vi200000 | R.MTL.CHP 100KΩ 1/10W    |
| R129      | Vi200000 | R.MTL.CHP 100KΩ 1/10W    |
| R130      | Vi199000 | R.MTL.CHP 47KΩ 1/10W     |
| R131      | Vi200000 | R.MTL.CHP 100KΩ 1/10W    |
| R132      | Vi200000 | R.MTL.CHP 100KΩ 1/10W    |
| R133      | Vi200000 | R.MTL.CHP 100KΩ 1/10W    |
| R134      | Vi200000 | R.MTL.CHP 100KΩ 1/10W    |
| R135      | Vi200000 | R.MTL.CHP 100KΩ 1/10W    |
| R136      | Vi197400 | R.MTL.CHP 10KΩ 1/10W     |
| R137      | Vi200000 | R.MTL.CHP 100KΩ 1/10W    |
| R138      | Vi192500 | R.MTL.CHP 100Ω 1/10W     |
| R139      | Vi200000 | R.MTL.CHP 100KΩ 1/10W    |
| R140      | Vi197400 | R.MTL.CHP 10KΩ 1/10W     |
| R141      | Vi200000 | R.MTL.CHP 100KΩ 1/10W    |
| R142      | Vi192500 | R.MTL.CHP 100Ω 1/10W     |
| R143      | Vi200000 | R.MTL.CHP 100KΩ 1/10W    |
| R144      | Vi191700 | R.MTL.CHP 47Ω 1/10W(UCA) |
| R145      | Vi191700 | R.MTL.CHP 47Ω 1/10W(UCA) |
| R147      | Vi198200 | R.MTL.CHP 22KΩ 1/10W     |
| R148      | Vi191700 | R.MTL.CHP 47Ω 1/10W(UCA) |
| R149      | Vi191700 | R.MTL.CHP 47Ω 1/10W(UCA) |
| R150      | Vi198200 | R.MTL.CHP 22KΩ 1/10W     |
| R152      | Vi192500 | R.MTL.CHP 100Ω 1/10W     |
| R153      | Vi195300 | R.MTL.CHP 1.5KΩ 1/10W    |
| R154      | HV453220 | R.CAR.FP 2.2Ω 1/4W       |
| R155      | HV454100 | R.CAR.FP 10Ω 1/4W        |
| R156      | Vi199000 | R.MTL.CHP 47KΩ 1/10W     |
| R157      | Vi199000 | R.MTL.CHP 47KΩ 1/10W     |
| R158      | Vi199000 | R.MTL.CHP 47KΩ 1/10W     |
| R159      | Vi199000 | R.MTL.CHP 47KΩ 1/10W     |
| R160      | Vi199000 | R.MTL.CHP 47KΩ 1/10W     |
| R161      | Vi197400 | R.MTL.CHP 10KΩ 1/10W     |
| R163      | Vi197400 | R.MTL.CHP 10KΩ 1/10W     |
| R164      | Vi192500 | R.MTL.CHP 100Ω 1/10W     |
| R165      | Vi194100 | R.MTL.CHP 470Ω 1/10W     |
| R166      | Vi200000 | R.MTL.CHP 100KΩ 1/10W    |
| R167      | Vi195300 | R.MTL.CHP 1.5KΩ 1/10W    |
| R169      | Vi197400 | R.MTL.CHP 10KΩ 1/10W     |
| R170      | Vi197400 | R.MTL.CHP 10KΩ 1/10W     |
| R171      | Vi200000 | R.MTL.CHP 100KΩ 1/10W    |
| R172      | Vi197400 | R.MTL.CHP 10KΩ 1/10W     |
| R173      | Vi197800 | R.MTL.CHP 15KΩ 1/10W     |
| R174      | Vi200000 | R.MTL.CHP 100KΩ 1/10W    |
| R175      | Vi196800 | R.MTL.CHP 5.6KΩ 1/10W    |
| R176      | Vi196800 | R.MTL.CHP 5.6KΩ 1/10W    |
| R177      | Vi194900 | R.MTL.CHP 1KΩ 1/10W      |
| R178      | Vi195900 | R.MTL.CHP 2.7KΩ 1/10W    |
| R179      | Vi196600 | R.MTL.CHP 4.7KΩ 1/10W    |
| R180      | Vi192500 | R.MTL.CHP 100Ω 1/10W     |
| R181      | VK583400 | R.MTL.CHP 1MΩ 1/10W      |

\* New Parts

| Schm Ref. | PART NO. | Description                  |
|-----------|----------|------------------------------|
| R182      | Vi196100 | R.MTL.CHP 3.3KΩ 1/10W        |
| R183      | VK583400 | R.MTL.CHP 1MΩ 1/10W          |
| R184      | Vi196100 | R.MTL.CHP 3.3KΩ 1/10W        |
| R185      | Vi192500 | R.MTL.CHP 100Ω 1/10W         |
| R186      | Vi196600 | R.MTL.CHP 4.7KΩ 1/10W        |
| R187      | Vi196600 | R.MTL.CHP 4.7KΩ 1/10W        |
| R188      | Vi196100 | R.MTL.CHP 3.3KΩ 1/10W        |
| R189      | Vi199000 | R.MTL.CHP 47KΩ 1/10W         |
| R190      | Vi199000 | R.MTL.CHP 47KΩ 1/10W         |
| R191      | Vi199000 | R.MTL.CHP 47KΩ 1/10W         |
| R192      | Vi199000 | R.MTL.CHP 47KΩ 1/10W         |
| R193      | Vi199000 | R.MTL.CHP 47KΩ 1/10W         |
| R194      | Vi199000 | R.MTL.CHP 47KΩ 1/10W         |
| R195      | Vi196100 | R.MTL.CHP 3.3KΩ 1/10W        |
| R196      | Vi196600 | R.MTL.CHP 4.7KΩ 1/10W        |
| R197      | Vi196600 | R.MTL.CHP 4.7KΩ 1/10W        |
| R198      | Vi192500 | R.MTL.CHP 100Ω 1/10W         |
| R199      | Vi196100 | R.MTL.CHP 3.3KΩ 1/10W        |
| R200      | Vi196100 | R.MTL.CHP 3.3KΩ 1/10W        |
| R201      | Vi196100 | R.MTL.CHP 3.3KΩ 1/10W        |
| R202      | Vi196100 | R.MTL.CHP 3.3KΩ 1/10W        |
| R203      | Vi192500 | R.MTL.CHP 100Ω 1/10W         |
| R204      | Vi197400 | R.MTL.CHP 10KΩ 1/10W         |
| R205      | Vi197400 | R.MTL.CHP 10KΩ 1/10W         |
| R206      | Vi196700 | R.MTL.CHP 5.1KΩ 1/10W        |
| R207      | Vi200000 | R.MTL.CHP 100KΩ 1/10W        |
| R208      | Vi196100 | R.MTL.CHP 3.3KΩ 1/10W        |
| R209      | Vi197400 | R.MTL.CHP 10KΩ 1/10W         |
| R210      | Vi199000 | R.MTL.CHP 47KΩ 1/10W         |
| R211      | Vi197200 | R.MTL.CHP 8.2KΩ 1/10W        |
| R212      | Vi197200 | R.MTL.CHP 8.2KΩ 1/10W        |
| R213      | Vi199000 | R.MTL.CHP 47KΩ 1/10W         |
| R214      | Vi197400 | R.MTL.CHP 10KΩ 1/10W         |
| R215      | Vi196100 | R.MTL.CHP 3.3KΩ 1/10W        |
| R216      | Vi197400 | R.MTL.CHP 10KΩ 1/10W         |
| R219      | Vi197400 | R.MTL.CHP 10KΩ 1/10W         |
| R220      | Vi192500 | R.MTL.CHP 100Ω 1/10W(A)      |
| R221      | Vi192500 | R.MTL.CHP 100Ω 1/10W(UC)     |
| R222      | Vi192500 | R.MTL.CHP 100Ω 1/10W(UCA)    |
| R224      | Vi199000 | R.MTL.CHP 47KΩ 1/10W(UC)     |
| R225      | Vi195900 | R.MTL.CHP 2.7KΩ 1/10W        |
| R226      | Vi192100 | R.MTL.CHP 68Ω 1/10W          |
| R227      | Vi192500 | R.MTL.CHP 100Ω 1/10W         |
| R228      | Vi197200 | R.MTL.CHP 8.2KΩ 1/10W        |
| R229      | Vi196100 | R.MTL.CHP 3.3KΩ 1/10W        |
| R230      | Vi196100 | R.MTL.CHP 3.3KΩ 1/10W        |
| R231      | Vi197200 | R.MTL.CHP 8.2KΩ 1/10W        |
| R232      | Vi192500 | R.MTL.CHP 100Ω 1/10W         |
| R233      | Vi199000 | R.MTL.CHP 47KΩ 1/10W(RTABG)  |
| R234      | Vi199000 | R.MTL.CHP 47KΩ 1/10W         |
| R235      | Vi199000 | R.MTL.CHP 47KΩ 1/10W         |
| R236      | Vi200000 | R.MTL.CHP 100KΩ 1/100W(RTBG) |
| R237      | Vi200000 | R.MTL.CHP 100KΩ 1/100W(RTBG) |

\* New Parts

## P.C.B. FUNCTION

| Schm Ref. | PART NO. | Description |       |       |
|-----------|----------|-------------|-------|-------|
| R240      | Vi191700 | R.MTL.CHP   | 47Ω   | 1/10W |
| R241      | Vi191700 | R.MTL.CHP   | 47Ω   | 1/10W |
| R242      | Vi200000 | R.MTL.CHP   | 100KΩ | 1/10W |
| R243      | Vi200000 | R.MTL.CHP   | 100KΩ | 1/10W |
| R244      | Vi200000 | R.MTL.CHP   | 100KΩ | 1/10W |
| R245      | Vi200000 | R.MTL.CHP   | 100KΩ | 1/10W |
| R246      | Vi196100 | R.MTL.CHP   | 3.3KΩ | 1/10W |
| R247      | Vi196100 | R.MTL.CHP   | 3.3KΩ | 1/10W |
| R248      | Vi196100 | R.MTL.CHP   | 3.3KΩ | 1/10W |
| R249      | Vi196100 | R.MTL.CHP   | 3.3KΩ | 1/10W |
| R250      | Vi197400 | R.MTL.CHP   | 10KΩ  | 1/10W |
| R251      | Vi200000 | R.MTL.CHP   | 100KΩ | 1/10W |
| R252      | Vi197400 | R.MTL.CHP   | 10KΩ  | 1/10W |
| R253      | Vi200000 | R.MTL.CHP   | 100KΩ | 1/10W |
| R254      | Vi197400 | R.MTL.CHP   | 10KΩ  | 1/10W |
| R255      | Vi200000 | R.MTL.CHP   | 100KΩ | 1/10W |
| R256      | Vi197400 | R.MTL.CHP   | 10KΩ  | 1/10W |
| R257      | Vi200000 | R.MTL.CHP   | 100KΩ | 1/10W |
| R258      | Vi197400 | R.MTL.CHP   | 10KΩ  | 1/10W |
| R259      | Vi200000 | R.MTL.CHP   | 100KΩ | 1/10W |
| R261      | HV454100 | R.CAR.FP    | 10Ω   | 1/4W  |
| R262      | Vi196100 | R.MTL.CHP   | 3.3KΩ | 1/10W |
| R263      | HV453220 | R.CAR.FP    | 2.2Ω  | 1/4W  |
| R264      | HV453220 | R.CAR.FP    | 2.2Ω  | 1/4W  |
| R265      | Vi199600 | R.MTL.CHP   | 82KΩ  | 1/10W |
| R266      | Vi192500 | R.MTL.CHP   | 100Ω  | 1/10W |
| R267      | Vi199600 | R.MTL.CHP   | 82KΩ  | 1/10W |
| R268      | Vi192500 | R.MTL.CHP   | 100Ω  | 1/10W |
| R269      | Vi199600 | R.MTL.CHP   | 82KΩ  | 1/10W |
| R270      | Vi192500 | R.MTL.CHP   | 100Ω  | 1/10W |
| R271      | Vi199600 | R.MTL.CHP   | 82KΩ  | 1/10W |
| R272      | Vi192500 | R.MTL.CHP   | 100Ω  | 1/10W |
| R273      | Vi199600 | R.MTL.CHP   | 82KΩ  | 1/10W |
| R274      | Vi192500 | R.MTL.CHP   | 100Ω  | 1/10W |
| R277      | Vi192500 | R.MTL.CHP   | 100Ω  | 1/10W |
| R278      | Vi192500 | R.MTL.CHP   | 100Ω  | 1/10W |
| R279      | Vi192500 | R.MTL.CHP   | 100Ω  | 1/10W |
| R280      | Vi192500 | R.MTL.CHP   | 100Ω  | 1/10W |
| R281      | Vi192500 | R.MTL.CHP   | 100Ω  | 1/10W |
| R282      | Vi192500 | R.MTL.CHP   | 100Ω  | 1/10W |
| R283      | Vi200000 | R.MTL.CHP   | 100KΩ | 1/10W |
| R284      | Vi196600 | R.MTL.CHP   | 4.7KΩ | 1/10W |
| R285      | Vi192500 | R.MTL.CHP   | 100Ω  | 1/10W |
| R286      | Vi192500 | R.MTL.CHP   | 100Ω  | 1/10W |
| R287      | Vi192500 | R.MTL.CHP   | 100Ω  | 1/10W |
| R288      | Vi192500 | R.MTL.CHP   | 100Ω  | 1/10W |
| R289      | Vi194100 | R.MTL.CHP   | 470Ω  | 1/10W |
| R290      | Vi194100 | R.MTL.CHP   | 470Ω  | 1/10W |
| R291      | Vi194100 | R.MTL.CHP   | 470Ω  | 1/10W |
| R292      | Vi191700 | R.MTL.CHP   | 47Ω   | 1/10W |
| R296      | Vi191700 | R.MTL.CHP   | 47Ω   | 1/10W |
| R297      | Vi191700 | R.MTL.CHP   | 47Ω   | 1/10W |
| R299      | Vi191700 | R.MTL.CHP   | 47Ω   | 1/10W |

\* New Parts

| Schm Ref. | PART NO. | Description |                  |             |
|-----------|----------|-------------|------------------|-------------|
| R300      | Vi191700 | R.MTL.CHP   | 47Ω              | 1/10W       |
| R301      | VK583400 | R.MTL.CHP   | 1MΩ              | 1/10W       |
| R302      | VK583400 | R.MTL.CHP   | 1MΩ              | 1/10W       |
| R303      | VK583400 | R.MTL.CHP   | 1MΩ              | 1/10W       |
| R304      | VK583400 | R.MTL.CHP   | 1MΩ              | 1/10W       |
| R305      | VK583400 | R.MTL.CHP   | 1MΩ              | 1/10W       |
| R307      | Vi197400 | R.MTL.CHP   | 10KΩ             | 1/10W       |
| R311      | Vi199000 | R.MTL.CHP   | 47KΩ             | 1/10W       |
| R312      | Vi199000 | R.MTL.CHP   | 47KΩ             | 1/10W       |
| R313      | HV453220 | R.CAR.FP    | 2.2Ω             | 1/4W        |
| R314      | Vi197400 | R.MTL.CHP   | 10KΩ             | 1/10W       |
| R315      | Vi200000 | R.MTL.CHP   | 100KΩ            | 1/10W       |
| R316      | Vi200000 | R.MTL.CHP   | 100KΩ            | 1/10W       |
| R318      | Vi195300 | R.MTL.CHP   | 1.5KΩ            | 1/10W       |
| R319      | VK583400 | R.MTL.CHP   | 1MΩ              | 1/10W       |
| R321      | Vi200000 | R.MTL.CHP   | 100KΩ            | 1/10W       |
| R322      | Vi200000 | R.MTL.CHP   | 100KΩ            | 1/10W       |
| R323      | Vi197400 | R.MTL.CHP   | 10KΩ             | 1/10W       |
| R324      | Vi197400 | R.MTL.CHP   | 10KΩ             | 1/10W       |
| R325      | Vi199000 | R.MTL.CHP   | 47KΩ             | 1/10W(ABG)  |
| R326      | Vi199000 | R.MTL.CHP   | 47KΩ             | 1/10W(UCRT) |
| R327      | Vi200000 | R.MTL.CHP   | 100KΩ            | 1/10W       |
| R351      | HL315100 | R.MTL.OXD   | 100Ω             | 1W          |
| R353      | Vi191700 | R.MTL.CHP   | 47Ω              | 1/10W       |
| R356      | Vi197400 | R.MTL.CHP   | 10KΩ             | 1/10W       |
| RY1       | VM640200 | RELAY       | RY12W-OH-K-DC12V |             |
| SW351     | VT903900 | SW.SLIDE    | SSAA22(RT)       |             |
| U351      | VU591000 | L.DTCT      | GP1U271X         |             |
| * XL1     | V4738900 | RSNR.CE     | 12MHz            |             |
|           | V3750100 | PIN         | L=50             |             |
|           | BB071360 | SCR.TERM    | 8.3x13           |             |

\* New Parts

**P.C.B. DSP**

| Schm Ref. | PART NO. | Description                     |
|-----------|----------|---------------------------------|
| *         | V5003000 | P.C.B.                          |
| *         | V5003100 | P.C.B.                          |
| *         | V5003200 | P.C.B.                          |
| *         | CB1      | V4707900 CN.FBRSNSR 1P GP1F37R1 |
| *         | CB2      | V4707900 CN.FBRSNSR 1P GP1F37R1 |
| *         | CB3      | V4707800 CN.FBRLINK 1P GP1F38T2 |
| *         | CB4      | V4707900 CN.FBRSNSR 1P GP1F37R1 |
| *         | CB5      | V4707900 CN.FBRSNSR 1P GP1F37R1 |
| *         | CB6      | V4707900 CN.FBRSNSR 1P GP1F37R1 |
| *         | CB7      | V4707900 CN.FBRSNSR 1P GP1F37R1 |
| *         | CB8      | V4707900 CN.FBRSNSR 1P GP1F37R1 |
|           | CB11     | VP682300 CN.BS.PIN 8P           |
|           | CB12     | VP682300 CN.BS.PIN 8P           |
|           | CB13     | LB919040 CN.BS.PIN 4P           |
|           | CB14     | VQ044700 CN.BS.PIN 16P          |
|           | CB15     | LB919020 CN.BS.PIN 2P           |
|           | CB801    | LA002000 TERM.WRAP 2P(C)        |
|           | CB802    | LA002000 TERM.WRAP 2P(C)        |
|           | CB901    | VB858200 CN.BS.PIN 3P           |
|           | CB902    | VQ044700 CN.BS.PIN 16P          |
|           | CB941    | VQ963700 CN.BS.PIN 16P(UAC)     |
|           | CB942    | VM923600 CN.BS.PIN 13P(UAC)     |
|           | C1       | UB245100 C.CE.M.CHP 0.1uF 25V   |
|           | C2       | UB245100 C.CE.M.CHP 0.1uF 25V   |
|           | C3       | UB245100 C.CE.M.CHP 0.1uF 25V   |
|           | C4       | UB245100 C.CE.M.CHP 0.1uF 25V   |
|           | C5       | UB245100 C.CE.M.CHP 0.1uF 25V   |
|           | C6       | UB245100 C.CE.M.CHP 0.1uF 25V   |
|           | C7       | UB245100 C.CE.M.CHP 0.1uF 25V   |
|           | C8       | UB245100 C.CE.M.CHP 0.1uF 25V   |
|           | C9       | UB051100 C.CE.M.CHP 10pF 50V    |
|           | C10      | UB044220 C.CE.M.CHP 0.022uF 50V |
|           | C11      | UB044220 C.CE.M.CHP 0.022uF 50V |
|           | C12      | UB245100 C.CE.M.CHP 0.1uF 25V   |
| *         | C13      | UU147220 C.EL 22uF 25V          |
|           | C14      | UB051220 C.CE.M.CHP 22pF 50V    |
|           | C15      | UB245100 C.CE.M.CHP 0.1uF 25V   |
| *         | C16      | UU147220 C.EL 22uF 25V          |
|           | C17      | UB051220 C.CE.M.CHP 22pF 50V    |
|           | C18      | UB245100 C.CE.M.CHP 0.1uF 25V   |
| *         | C19      | UU147220 C.EL 22uF 25V          |
|           | C20      | UB051220 C.CE.M.CHP 22pF 50V    |
|           | C21      | UB245100 C.CE.M.CHP 0.1uF 25V   |
|           | C22      | UB044220 C.CE.M.CHP 0.022uF 50V |
|           | C23      | VJ901600 C.CE.M.CHP 75pF 50V    |
|           | C24      | UB012220 C.CE.M.CHP 220pF 50V   |
|           | C25      | UB051100 C.CE.M.CHP 10pF 50V    |
| *         | C26      | UU137470 C.EL 47uF 16V          |
|           | C27      | UB245100 C.CE.M.CHP 0.1uF 25V   |
|           | C28      | UB012220 C.CE.M.CHP 220pF 50V   |
|           | C29      | UB051100 C.CE.M.CHP 10pF 50V    |
|           | C30      | UB012220 C.CE.M.CHP 220pF 50V   |
|           | C31      | UB051100 C.CE.M.CHP 10pF 50V    |

\* New Parts

| Schm Ref. | PART NO. | Description                       |
|-----------|----------|-----------------------------------|
|           | C32      | UB044220 C.CE.M.CHP 0.022uF 50V   |
|           | C33      | UB245100 C.CE.M.CHP 0.1uF 25V     |
|           | C34      | UB051100 C.CE.M.CHP 10pF 50V      |
|           | C35      | UB245100 C.CE.M.CHP 0.1uF 25V     |
|           | C36      | UB013100 C.CE.M.CHP 1000pF 50V    |
| *         | C37      | UU137470 C.EL 47uF 16V            |
| *         | C38      | UU137470 C.EL 47uF 16V            |
| *         | C39      | V3888000 C.MYLAR 150pF 50V        |
| *         | C40      | UU147100 C.EL 10uF 25V            |
|           | C41      | UB245100 C.CE.M.CHP 0.1uF 25V     |
| *         | C42      | UU147100 C.EL 10uF 25V            |
|           | C43      | UB245100 C.CE.M.CHP 0.1uF 25V     |
| *         | C44      | V3888000 C.MYLAR 150pF 50V        |
| *         | C45      | UU137470 C.EL 47uF 16V            |
| *         | C46      | UU137470 C.EL 47uF 16V            |
| *         | C47      | UU137470 C.EL 47uF 16V            |
|           | C48      | UB245100 C.CE.M.CHP 0.1uF 25V     |
| *         | C49      | UU137470 C.EL 47uF 16V            |
|           | C50      | UB245100 C.CE.M.CHP 0.1uF 25V     |
|           | C51      | UB013100 C.CE.M.CHP 1000pF 50V    |
|           | C52      | UB013100 C.CE.M.CHP 1000pF 50V    |
|           | C53      | UB013100 C.CE.M.CHP 1000pF 50V    |
|           | C54      | UB245100 C.CE.M.CHP 0.1uF 25V     |
|           | C55      | UB051100 C.CE.M.CHP 10pF 50V      |
|           | C56      | UB245100 C.CE.M.CHP 0.1uF 25V     |
| *         | C57      | VJ900600 C.CE.M.CHP 30pF 50V      |
|           | C58      | UB013100 C.CE.M.CHP 1000pF 50V    |
| *         | C59      | VJ900600 C.CE.M.CHP 30pF 50V      |
|           | C60      | UB044220 C.CE.M.CHP 0.022uF 50V   |
| *         | C61      | V3888000 C.MYLAR 150pF 50V        |
|           | C62      | UA654220 C.MYLAR 0.022uF 50V      |
| *         | C63      | UU147100 C.EL 10uF 25V            |
|           | C64      | UB245100 C.CE.M.CHP 0.1uF 25V     |
|           | C65      | UB245100 C.CE.M.CHP 0.1uF 25V     |
| *         | C66      | UU147100 C.EL 10uF 25V            |
|           | C67      | UA654220 C.MYLAR 0.022uF 50V      |
| *         | C68      | V3888000 C.MYLAR 150pF 50V        |
|           | C69      | UB051100 C.CE.M.CHP 10pF 50V      |
|           | C70      | UB044100 C.CE.M.CHP 0.01uF 50V    |
|           | C71      | UB245100 C.CE.M.CHP 0.1uF 25V     |
| *         | C72      | UU147100 C.EL 10uF 25V            |
|           | C73      | UB245100 C.CE.M.CHP 0.1uF 25V     |
|           | C74      | UA653470 C.MYLAR 4700pF 50V       |
|           | C75      | UB245100 C.CE.M.CHP 0.1uF 25V     |
| *         | C76      | UU147100 C.EL 10uF 25V            |
|           | C77      | UB245220 C.CE.M.CHP 0.22uF 25V    |
|           | C78      | UB245220 C.CE.M.CHP 0.22uF 25V    |
| *         | C79      | UU147100 C.EL 10uF 25V            |
|           | C80      | UB245100 C.CE.M.CHP 0.1uF 25V     |
|           | C81      | VR169200 C.MYLAR.ML ECQ-V1H474JL3 |
|           | C82      | VR169200 C.MYLAR.ML ECQ-V1H474JL3 |
|           | C83      | UB245100 C.CE.M.CHP 0.1uF 25V     |
|           | C84      | UB245100 C.CE.M.CHP 0.1uF 25V     |

\* New Parts

## P.C.B. DSP

| Schm Ref. | PART NO. | Description           |
|-----------|----------|-----------------------|
| C85       | VJ900700 | C.CE.M.CHP 33pF 50V   |
| C86       | VJ900700 | C.CE.M.CHP 33pF 50V   |
| C87       | UB245100 | C.CE.M.CHP 0.1uF 25V  |
| * C88     | UU128100 | C.EL 100uF 10V        |
| * C89     | UU128100 | C.EL 100uF 10V        |
| C90       | UB245100 | C.CE.M.CHP 0.1uF 25V  |
| C91       | UB245100 | C.CE.M.CHP 0.1uF 25V  |
| * C92     | UU147100 | C.EL 10uF 25V         |
| C93       | UB245100 | C.CE.M.CHP 0.1uF 25V  |
| * C94     | UU128100 | C.EL 100uF 10V        |
| C95       | UB245100 | C.CE.M.CHP 0.1uF 25V  |
| * C96     | UU147100 | C.EL 10uF 25V         |
| C97       | UB245100 | C.CE.M.CHP 0.1uF 25V  |
| * C98     | UU128100 | C.EL 100uF 10V        |
| C99       | UB245100 | C.CE.M.CHP 0.1uF 25V  |
| C100      | UB245100 | C.CE.M.CHP 0.1uF 25V  |
| C101      | UB245100 | C.CE.M.CHP 0.1uF 25V  |
| C102      | UB245100 | C.CE.M.CHP 0.1uF 25V  |
| * C103    | UU128100 | C.EL 100uF 10V        |
| C104      | UB245100 | C.CE.M.CHP 0.1uF 25V  |
| C105      | UB245100 | C.CE.M.CHP 0.1uF 25V  |
| C107      | UN837470 | C.EL 47uF 16V         |
| * C108    | UU128100 | C.EL 100uF 10V        |
| C109      | UB245100 | C.CE.M.CHP 0.1uF 25V  |
| C110      | UB245100 | C.CE.M.CHP 0.1uF 25V  |
| C111      | UB245100 | C.CE.M.CHP 0.1uF 25V  |
| C112      | UB245100 | C.CE.M.CHP 0.1uF 25V  |
| C113      | VJ900100 | C.CE.M.CHP 18pF 50V   |
| C114      | VJ898700 | C.CE.M.CHP 2pF 50V    |
| * C118    | UU128100 | C.EL 100uF 10V        |
| C119      | UB044100 | C.CE.M.CHP 0.01uF 50V |
| C120      | UB044100 | C.CE.M.CHP 0.01uF 50V |
| C121      | UB245100 | C.CE.M.CHP 0.1uF 25V  |
| * C122    | UU128100 | C.EL 100uF 10V        |
| C126      | UB245100 | C.CE.M.CHP 0.1uF 25V  |
| C127      | UB245100 | C.CE.M.CHP 0.1uF 25V  |
| * C128    | UU128100 | C.EL 100uF 10V        |
| C129      | UB245100 | C.CE.M.CHP 0.1uF 25V  |
| C139      | UB245100 | C.CE.M.CHP 0.1uF 25V  |
| C140      | UB012470 | C.CE.M.CHP 470pF 50V  |
| C141      | UB245100 | C.CE.M.CHP 0.1uF 25V  |
| C146      | UB245100 | C.CE.M.CHP 0.1uF 25V  |
| C149      | UB245100 | C.CE.M.CHP 0.1uF 25V  |
| * C150    | UU118330 | C.EL 330uF 6.3V       |
| C151      | UB245100 | C.CE.M.CHP 0.1uF 25V  |
| C152      | UB245100 | C.CE.M.CHP 0.1uF 25V  |
| C153      | UB245100 | C.CE.M.CHP 0.1uF 25V  |
| C157      | UB245100 | C.CE.M.CHP 0.1uF 25V  |
| C158      | UB245100 | C.CE.M.CHP 0.1uF 25V  |
| * C159    | UU128100 | C.EL 100uF 10V        |
| C160      | UB245100 | C.CE.M.CHP 0.1uF 25V  |
| C161      | UB245100 | C.CE.M.CHP 0.1uF 25V  |
| C162      | UB245100 | C.CE.M.CHP 0.1uF 25V  |

\* New Parts

| Schm Ref. | PART NO. | Description          |
|-----------|----------|----------------------|
| * C163    | UU137470 | C.EL 47uF 16V        |
| * C164    | UU137470 | C.EL 47uF 16V        |
| C165      | VQ645600 | C.MYLAR 100pF 50V    |
| * C166    | Vi716600 | C.MYLAR 8200pF 50V   |
| C167      | UB012470 | C.CE.M.CHP 470pF 50V |
| C168      | UB245100 | C.CE.M.CHP 0.1uF 25V |
| * C169    | UU137470 | C.EL 47uF 16V        |
| C170      | UB245100 | C.CE.M.CHP 0.1uF 25V |
| C171      | UB245100 | C.CE.M.CHP 0.1uF 25V |
| C172      | UB245100 | C.CE.M.CHP 0.1uF 25V |
| * C173    | UU128100 | C.EL 100uF 10V       |
| * C174    | UU137220 | C.EL 22uF 16V        |
| * C175    | UU128100 | C.EL 100uF 10V       |
| * C176    | UU147100 | C.EL 10uF 25V        |
| C177      | Vi716100 | C.MYLAR 3300pF 50V   |
| C178      | Vi715100 | C.MYLAR 470pF 50V    |
| * C179    | UU137470 | C.EL 47uF 16V        |
| * C180    | UU137470 | C.EL 47uF 16V        |
| * C181    | UU118330 | C.EL 330uF 6.3V      |
| * C182    | UU147100 | C.EL 10uF 25V        |
| C183      | UB245100 | C.CE.M.CHP 0.1uF 25V |
| * C184    | UU137470 | C.EL 47uF 16V        |
| C185      | UB245100 | C.CE.M.CHP 0.1uF 25V |
| C186      | UB245100 | C.CE.M.CHP 0.1uF 25V |
| C187      | UB245100 | C.CE.M.CHP 0.1uF 25V |
| * C188    | UU137470 | C.EL 47uF 16V        |
| * C189    | UU128100 | C.EL 100uF 10V       |
| * C190    | UU137220 | C.EL 22uF 16V        |
| * C191    | UU128100 | C.EL 100uF 10V       |
| C192      | VQ645600 | C.MYLAR 100pF 50V    |
| * C193    | UU147100 | C.EL 10uF 25V        |
| C194      | Vi716100 | C.MYLAR 3300pF 50V   |
| C195      | Vi715100 | C.MYLAR 470pF 50V    |
| * C196    | Vi716600 | C.MYLAR 8200pF 50V   |
| * C197    | UU128100 | C.EL 100uF 10V       |
| C198      | UB245100 | C.CE.M.CHP 0.1uF 25V |
| C199      | UB245100 | C.CE.M.CHP 0.1uF 25V |
| C200      | UB245100 | C.CE.M.CHP 0.1uF 25V |
| C201      | UB245100 | C.CE.M.CHP 0.1uF 25V |
| C202      | UB245100 | C.CE.M.CHP 0.1uF 25V |
| C203      | UB245100 | C.CE.M.CHP 0.1uF 25V |
| C204      | UB245100 | C.CE.M.CHP 0.1uF 25V |
| * C205    | UU128100 | C.EL 100uF 10V       |
| C206      | UB245100 | C.CE.M.CHP 0.1uF 25V |
| C207      | UB245100 | C.CE.M.CHP 0.1uF 25V |
| * C208    | UU137470 | C.EL 47uF 16V        |
| * C209    | UU137470 | C.EL 47uF 16V        |
| C210      | UB245100 | C.CE.M.CHP 0.1uF 25V |
| * C211    | UU137470 | C.EL 47uF 16V        |
| C212      | VQ645600 | C.MYLAR 100pF 50V    |
| * C213    | UU147100 | C.EL 10uF 25V        |
| * C214    | Vi716500 | C.MYLAR 6800pF 50V   |
| C215      | Vi715500 | C.MYLAR 1000pF 50V   |

\* New Parts



P.C.B. DSP

| Schm Ref. | PART NO. | Description |         |      |
|-----------|----------|-------------|---------|------|
| * C216    | Vi717000 | C.MYLAR     | 0.018uF | 50V  |
| * C217    | UU118330 | C.EL        | 330uF   | 6.3V |
| C218      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| C219      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| C220      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| * C221    | UU137470 | C.EL        | 47uF    | 16V  |
| * C222    | UU137470 | C.EL        | 47uF    | 16V  |
| C223      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| C224      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| C225      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| * C226    | UU128100 | C.EL        | 100uF   | 10V  |
| * C227    | UU137220 | C.EL        | 22uF    | 16V  |
| * C228    | UU137470 | C.EL        | 47uF    | 16V  |
| * C229    | UU128100 | C.EL        | 100uF   | 10V  |
| * C230    | UU128100 | C.EL        | 100uF   | 10V  |
| C231      | VQ645600 | C.MYLAR     | 100pF   | 50V  |
| * C232    | Vi716500 | C.MYLAR     | 6800pF  | 50V  |
| C233      | Vi715500 | C.MYLAR     | 1000pF  | 50V  |
| * C234    | UU137470 | C.EL        | 47uF    | 16V  |
| * C235    | UU137470 | C.EL        | 47uF    | 16V  |
| * C236    | UU128100 | C.EL        | 100uF   | 10V  |
| C237      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| C238      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| * C239    | UU147100 | C.EL        | 10uF    | 25V  |
| C240      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| * C241    | UU137470 | C.EL        | 47uF    | 16V  |
| C242      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| C243      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| * C244    | UU128100 | C.EL        | 100uF   | 10V  |
| * C245    | UU137220 | C.EL        | 22uF    | 16V  |
| * C246    | UU147100 | C.EL        | 10uF    | 25V  |
| * C247    | Vi717000 | C.MYLAR     | 0.018uF | 50V  |
| C248      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| C249      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| C250      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| * C251    | UU137470 | C.EL        | 47uF    | 16V  |
| C252      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| C253      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| * C254    | UU137470 | C.EL        | 47uF    | 16V  |
| * C255    | UU128100 | C.EL        | 100uF   | 10V  |
| * C256    | UU137220 | C.EL        | 22uF    | 16V  |
| C257      | VQ645600 | C.MYLAR     | 100pF   | 50V  |
| * C258    | UU147100 | C.EL        | 10uF    | 25V  |
| * C259    | Vi716500 | C.MYLAR     | 6800pF  | 50V  |
| C260      | Vi715500 | C.MYLAR     | 1000pF  | 50V  |
| * C261    | Vi717000 | C.MYLAR     | 0.018uF | 50V  |
| * C262    | UU137470 | C.EL        | 47uF    | 16V  |
| * C263    | UU137470 | C.EL        | 47uF    | 16V  |
| * C264    | UU137470 | C.EL        | 47uF    | 16V  |
| C265      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| C266      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| C267      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| C268      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |

\* New Parts

| Schm Ref. | PART NO. | Description |         |      |
|-----------|----------|-------------|---------|------|
| * C269    | UU137470 | C.EL        | 47uF    | 16V  |
| * C270    | UU128100 | C.EL        | 100uF   | 10V  |
| * C271    | UU128100 | C.EL        | 100uF   | 10V  |
| * C272    | UU128100 | C.EL        | 100uF   | 10V  |
| C273      | VQ645600 | C.MYLAR     | 100pF   | 50V  |
| * C274    | UU147100 | C.EL        | 10uF    | 25V  |
| * C275    | Vi716500 | C.MYLAR     | 6800pF  | 50V  |
| C276      | Vi715500 | C.MYLAR     | 1000pF  | 50V  |
| * C277    | Vi717000 | C.MYLAR     | 0.018uF | 50V  |
| * C278    | UU137470 | C.EL        | 47uF    | 16V  |
| C279      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| * C280    | UU128100 | C.EL        | 100uF   | 10V  |
| C281      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| C282      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| C283      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| * C284    | UU118330 | C.EL        | 330uF   | 6.3V |
| C285      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| * C286    | UU147100 | C.EL        | 10uF    | 25V  |
| C287      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| * C288    | UU137470 | C.EL        | 47uF    | 16V  |
| * C289    | UU137470 | C.EL        | 47uF    | 16V  |
| * C290    | UU137220 | C.EL        | 22uF    | 16V  |
| * C291    | UU137470 | C.EL        | 47uF    | 16V  |
| C292      | VQ645600 | C.MYLAR     | 100pF   | 50V  |
| * C293    | Vi717000 | C.MYLAR     | 0.018uF | 50V  |
| * C294    | UU128100 | C.EL        | 100uF   | 10V  |
| C295      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| * C296    | UU118330 | C.EL        | 330uF   | 6.3V |
| C297      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| C298      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| C299      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| C300      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| C302      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| C303      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| C304      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| * C305    | UU137470 | C.EL        | 47uF    | 16V  |
| * C306    | UU137470 | C.EL        | 47uF    | 16V  |
| C307      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| C308      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| C309      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| C310      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| * C311    | UU128100 | C.EL        | 100uF   | 10V  |
| * C312    | UU137220 | C.EL        | 22uF    | 16V  |
| * C313    | UU128100 | C.EL        | 100uF   | 10V  |
| * C314    | UU128100 | C.EL        | 100uF   | 10V  |
| * C315    | UU147100 | C.EL        | 10uF    | 25V  |
| * C316    | Vi716500 | C.MYLAR     | 6800pF  | 50V  |
| C317      | Vi715500 | C.MYLAR     | 1000pF  | 50V  |
| * C318    | UU137470 | C.EL        | 47uF    | 16V  |
| * C319    | UU137470 | C.EL        | 47uF    | 16V  |
| C320      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| * C321    | UU147100 | C.EL        | 10uF    | 25V  |
| C322      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |

\* New Parts

## P.C.B. DSP

| Schm Ref. | PART NO. | Description |         |      |
|-----------|----------|-------------|---------|------|
| * C323    | UU137470 | C.EL        | 47uF    | 16V  |
| C324      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| C325      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| * C326    | UU137470 | C.EL        | 47uF    | 16V  |
| * C327    | UU128100 | C.EL        | 100uF   | 10V  |
| * C328    | UU137220 | C.EL        | 22uF    | 16V  |
| C329      | VQ645600 | C.MYLAR     | 100pF   | 50V  |
| * C330    | UU147100 | C.EL        | 10uF    | 25V  |
| * C331    | Vi716500 | C.MYLAR     | 6800pF  | 50V  |
| C332      | Vi715500 | C.MYLAR     | 1000pF  | 50V  |
| * C333    | Vi717000 | C.MYLAR     | 0.018uF | 50V  |
| C334      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| C335      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| * C336    | UU137470 | C.EL        | 47uF    | 16V  |
| C337      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| C338      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| * C339    | UU137470 | C.EL        | 47uF    | 16V  |
| * C340    | UU128100 | C.EL        | 100uF   | 10V  |
| C341      | VQ645600 | C.MYLAR     | 100pF   | 50V  |
| * C342    | UU147100 | C.EL        | 10uF    | 25V  |
| * C343    | Vi716500 | C.MYLAR     | 6800pF  | 50V  |
| C344      | Vi715500 | C.MYLAR     | 1000pF  | 50V  |
| * C345    | Vi717000 | C.MYLAR     | 0.018uF | 50V  |
| C346      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| C347      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| * C348    | UU137470 | C.EL        | 47uF    | 16V  |
| * C349    | UU137470 | C.EL        | 47uF    | 16V  |
| C350      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| C351      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| * C352    | UU137220 | C.EL        | 22uF    | 16V  |
| * C353    | UU137470 | C.EL        | 47uF    | 16V  |
| * C354    | UU128100 | C.EL        | 100uF   | 10V  |
| * C355    | UU128100 | C.EL        | 100uF   | 10V  |
| C356      | VQ645600 | C.MYLAR     | 100pF   | 50V  |
| * C357    | Vi716500 | C.MYLAR     | 6800pF  | 50V  |
| C358      | Vi715500 | C.MYLAR     | 1000pF  | 50V  |
| * C359    | UU137470 | C.EL        | 47uF    | 16V  |
| * C360    | UU137470 | C.EL        | 47uF    | 16V  |
| C361      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| * C362    | UU128100 | C.EL        | 100uF   | 10V  |
| C363      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| C364      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| C365      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| * C366    | UU118330 | C.EL        | 330uF   | 6.3V |
| C367      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| * C368    | UU147100 | C.EL        | 10uF    | 25V  |
| C369      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| * C370    | UU137470 | C.EL        | 47uF    | 16V  |
| C371      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| C372      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V  |
| * C373    | UU128100 | C.EL        | 100uF   | 10V  |
| * C374    | UU137220 | C.EL        | 22uF    | 16V  |
| * C375    | UU147100 | C.EL        | 10uF    | 25V  |

\* New Parts

| Schm Ref. | PART NO. | Description |         |     |
|-----------|----------|-------------|---------|-----|
| * C376    | Vi717000 | C.MYLAR     | 0.018uF | 50V |
| C381      | UB051470 | C.CE.M.CHP  | 47pF    | 50V |
| C382      | UB051470 | C.CE.M.CHP  | 47pF    | 50V |
| C383      | UB051470 | C.CE.M.CHP  | 47pF    | 50V |
| C384      | UB051470 | C.CE.M.CHP  | 47pF    | 50V |
| C385      | UB051470 | C.CE.M.CHP  | 47pF    | 50V |
| C386      | UB051470 | C.CE.M.CHP  | 47pF    | 50V |
| C387      | UB051470 | C.CE.M.CHP  | 47pF    | 50V |
| C388      | UB051470 | C.CE.M.CHP  | 47pF    | 50V |
| C389      | UB051470 | C.CE.M.CHP  | 47pF    | 50V |
| C390      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V |
| C391      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V |
| C392      | UB051470 | C.CE.M.CHP  | 47pF    | 50V |
| C393      | UB051470 | C.CE.M.CHP  | 47pF    | 50V |
| C394      | UB051470 | C.CE.M.CHP  | 47pF    | 50V |
| C395      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V |
| C396      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V |
| C397      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V |
| C398      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V |
| C399      | UB051470 | C.CE.M.CHP  | 47pF    | 50V |
| C400      | UB051470 | C.CE.M.CHP  | 47pF    | 50V |
| C401      | UB051470 | C.CE.M.CHP  | 47pF    | 50V |
| C402      | UB051470 | C.CE.M.CHP  | 47pF    | 50V |
| C403      | UB051470 | C.CE.M.CHP  | 47pF    | 50V |
| C404      | UB051470 | C.CE.M.CHP  | 47pF    | 50V |
| C405      | UB051470 | C.CE.M.CHP  | 47pF    | 50V |
| C406      | UB051470 | C.CE.M.CHP  | 47pF    | 50V |
| C407      | UB051470 | C.CE.M.CHP  | 47pF    | 50V |
| C408      | UB051470 | C.CE.M.CHP  | 47pF    | 50V |
| C409      | UB051470 | C.CE.M.CHP  | 47pF    | 50V |
| C410      | UB051470 | C.CE.M.CHP  | 47pF    | 50V |
| C411      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V |
| C412      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V |
| * C413    | UU147100 | C.EL        | 10uF    | 25V |
| C414      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V |
| C415      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V |
| * C416    | UU128100 | C.EL        | 100uF   | 10V |
| C417      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V |
| * C418    | UU128100 | C.EL        | 100uF   | 10V |
| C419      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V |
| * C420    | UU128100 | C.EL        | 100uF   | 10V |
| C421      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V |
| C422      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V |
| * C423    | UU128100 | C.EL        | 100uF   | 10V |
| * C424    | UU128100 | C.EL        | 100uF   | 10V |
| C425      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V |
| * C426    | UU128100 | C.EL        | 100uF   | 10V |
| C427      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V |
| * C428    | UU128100 | C.EL        | 100uF   | 10V |
| C429      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V |
| C430      | UB245100 | C.CE.M.CHP  | 0.1uF   | 25V |
| * C431    | UU128100 | C.EL        | 100uF   | 10V |
| * C432    | UU128100 | C.EL        | 100uF   | 10V |

\* New Parts

## P.C.B. DSP

| Schm Ref. | PART NO. | Description |               |      |
|-----------|----------|-------------|---------------|------|
| * C433    | UB245100 | C.CE.M.CHP  | 0.1uF         | 25V  |
| C434      | UU128100 | C.EL        | 100uF         | 10V  |
| C901      | VH053100 | C.CE.TUBLR  | 0.1uF         | 50V  |
| C902      | VH053100 | C.CE.TUBLR  | 0.1uF         | 50V  |
| C903      | VH053100 | C.CE.TUBLR  | 0.1uF         | 50V  |
| C904      | VH053100 | C.CE.TUBLR  | 0.1uF         | 50V  |
| C905      | VH053100 | C.CE.TUBLR  | 0.1uF         | 50V  |
| C906      | VH053100 | C.CE.TUBLR  | 0.1uF         | 50V  |
| C907      | UB245100 | C.CE.M.CHP  | 0.1uF         | 25V  |
| * C908    | UU137100 | C.EL        | 10uF          | 16V  |
| C909      | UB245100 | C.CE.M.CHP  | 0.1uF         | 25V  |
| C910      | VH053100 | C.CE.TUBLR  | 0.1uF         | 50V  |
| C911      | UB245100 | C.CE.M.CHP  | 0.1uF         | 25V  |
| * C912    | UU167100 | C.EL        | 10uF          | 50V  |
| * C913    | UU118330 | C.EL        | 330uF         | 6.3V |
| C914      | UB245100 | C.CE.M.CHP  | 0.1uF         | 25V  |
| C915      | VJ901900 | C.CE.M.CHP  | 100pF         | 50V  |
| C916      | UB245100 | C.CE.M.CHP  | 0.1uF         | 25V  |
| C917      | VH053100 | C.CE.TUBLR  | 0.1uF         | 50V  |
| C918      | VH053100 | C.CE.TUBLR  | 0.1uF         | 50V  |
| C921      | VH053100 | C.CE.TUBLR  | 0.1uF         | 50V  |
| C922      | VH053100 | C.CE.TUBLR  | 0.1uF         | 50V  |
| C923      | VH053100 | C.CE.TUBLR  | 0.1uF         | 50V  |
| C924      | VH053100 | C.CE.TUBLR  | 0.1uF         | 50V  |
| C925      | VH053100 | C.CE.TUBLR  | 0.1uF         | 50V  |
| C926      | VH053100 | C.CE.TUBLR  | 0.1uF         | 50V  |
| C927      | VH053100 | C.CE.TUBLR  | 0.1uF         | 50V  |
| D1        | VT332900 | DIODE       | 1SS355        |      |
| D2        | VT332900 | DIODE       | 1SS355        |      |
| D3        | VT332900 | DIODE       | 1SS355        |      |
| D4        | VT332900 | DIODE       | 1SS355        |      |
| D5        | VT332900 | DIODE       | 1SS355        |      |
| D6        | VT332900 | DIODE       | 1SS355        |      |
| D7        | VT332900 | DIODE       | 1SS355        |      |
| D8        | VT332900 | DIODE       | 1SS355        |      |
| D9        | VT332900 | DIODE       | 1SS355        |      |
| D10       | VT332900 | DIODE       | 1SS355        |      |
| D11       | VV220700 | DIODE.SHOT  | RB501V-40     |      |
| D12       | VV220700 | DIODE.SHOT  | RB501V-40     |      |
| D13       | VV220700 | DIODE.SHOT  | RB501V-40     |      |
| D14       | VV220700 | DIODE.SHOT  | RB501V-40     |      |
| D15       | VV220700 | DIODE.SHOT  | RB501V-40     |      |
| D16       | VV220700 | DIODE.SHOT  | RB501V-40     |      |
| D17       | VV220700 | DIODE.SHOT  | RB501V-40     |      |
| D18       | VV220700 | DIODE.SHOT  | RB501V-40     |      |
| D19       | VT332900 | DIODE       | 1SS355        |      |
| D20       | VT707700 | C.TRIM      | KV1851-TL     |      |
| D901      | VG438300 | DIODE.ZENR  | MTZJ6.8B 6.8V |      |
| * D902    | V2598200 | LED         | SIR-505ST     |      |
| G1        | VR463400 | TERM.GND    | D3.5 TP00385  |      |
| G2        | VR463400 | TERM.GND    | D3.5 TP00385  |      |
| G3        | VR463400 | TERM.GND    | D3.5 TP00385  |      |
| * IC1     | XW504A00 | IC          | CPU,EPROM     |      |

\* New Parts

| Schm Ref. | PART NO. | Description |                    |  |
|-----------|----------|-------------|--------------------|--|
| * IC2     | XW526A00 | IC          | YSD917             |  |
| * IC3     | XW272A00 | IC          | AK5383-VS          |  |
| IC4       | XP250A00 | IC          | HD74HC00FPTR NAND  |  |
| IC5       | XU728A00 | IC          | YSS908-F           |  |
| IC6       | XV304B00 | IC          | YSS918D-F          |  |
| * IC7     | XV988A00 | IC          | YSS910-S           |  |
| * IC8     | XV988A00 | IC          | YSS910-S           |  |
| * IC9     | XV058A00 | IC          | DF1704E            |  |
| * IC10    | XV057A00 | IC          | PCM1704U           |  |
| * IC11    | XV057A00 | IC          | PCM1704U           |  |
| * IC12    | XV058A00 | IC          | DF1704E            |  |
| * IC13    | XV057A00 | IC          | PCM1704U           |  |
| * IC14    | XV057A00 | IC          | PCM1704U           |  |
| * IC15    | XV058A00 | IC          | DF1704E            |  |
| * IC16    | XV057A00 | IC          | PCM1704U           |  |
| * IC17    | XV057A00 | IC          | PCM1704U           |  |
| * IC18    | XV058A00 | IC          | DF1704E            |  |
| * IC19    | XV057A00 | IC          | PCM1704U           |  |
| * IC20    | XV057A00 | IC          | PCM1704U           |  |
| * IC21    | XV058A00 | IC          | DF1704E            |  |
| * IC22    | XV057A00 | IC          | PCM1704U           |  |
| * IC23    | XV057A00 | IC          | PCM1704U           |  |
| IC24      | XT958A00 | IC          | PM4007A            |  |
| IC25      | XV411A00 | IC          | W24258S-70LE-EL10  |  |
| IC33      | XV077A00 | IC          | MSM514260C-60JS    |  |
| IC34      | XV077A00 | IC          | MSM514260C-60JS    |  |
| IC35      | XV077A00 | IC          | MSM514260C-60JS    |  |
| IC36      | XP250A00 | IC          | HD74HC00FPTR NAND  |  |
| IC37      | XP250A00 | IC          | HD74HC00FPTR NAND  |  |
| IC38      | XF291A00 | IC          | uPC4570G2          |  |
| * IC39    | XD598A00 | IC          | TC74HCU04AFEL INV  |  |
| * IC40    | XD598A00 | IC          | TC74HCU04AFEL INV  |  |
| IC41      | XS776A00 | IC          | TC74HC126AF BUS BU |  |
| IC42      | XQ248A00 | IC          | TC74HC125AF BUS BU |  |
| IC43      | XV493A00 | IC          | HD74HC151FPEL      |  |
| IC44      | XV493A00 | IC          | HD74HC151FPEL      |  |
| IC45      | XR038A00 | IC          | NJM2904M OP AMP    |  |
| IC46      | XE518A00 | IC          | uPC4574G2          |  |
| IC47      | XF291A00 | IC          | uPC4570G2          |  |
| IC48      | XF291A00 | IC          | uPC4570G2          |  |
| IC49      | XF291A00 | IC          | uPC4570G2          |  |
| IC50      | XF291A00 | IC          | uPC4570G2          |  |
| IC51      | XF291A00 | IC          | uPC4570G2          |  |
| IC52      | XF291A00 | IC          | uPC4570G2          |  |
| IC53      | XF291A00 | IC          | uPC4570G2          |  |
| IC54      | XF291A00 | IC          | uPC4570G2          |  |
| IC55      | XF291A00 | IC          | uPC4570G2          |  |
| IC56      | XF291A00 | IC          | uPC4570G2          |  |
| IC57      | XP250A00 | IC          | HD74HC00FPTR NAND  |  |
| * IC901   | XY115A00 | IC          | M66004MAFP-200C    |  |
| * IC902   | XY115A00 | IC          | M66004MAFP-200C    |  |
| L1        | V2726500 | COIL        | 68uH               |  |
| L2        | V2726500 | COIL        | 68uH               |  |

\* New Parts

## P.C.B. DSP

| Schm Ref. | PART NO. | Description |                |
|-----------|----------|-------------|----------------|
| L3        | V2726500 | COIL        | 68uH           |
| L4        | V2726500 | COIL        | 68uH           |
| L5        | V2726500 | COIL        | 68uH           |
| L6        | V2726500 | COIL        | 68uH           |
| L7        | V2726500 | COIL        | 68uH           |
| L8        | V2726500 | COIL        | 68uH           |
| L9        | VT623200 | FLTR.LC     | SBP-4930       |
| PJ1       | VZ726300 | JACK.PIN    | 2P             |
| PJ2       | VZ726400 | JACK.PIN    | 2P             |
| Q1        | iA103700 | TR.CHP      | 2SA1037 Q,R,S  |
| Q2        | VV556400 | TR          | 2SC2412K Q,R,S |
| Q3        | VV556400 | TR          | 2SC2412K Q,R,S |
| Q4        | VV556400 | TR          | 2SC2412K Q,R,S |
| Q5        | VV556400 | TR          | 2SC2412K Q,R,S |
| Q6        | iA103700 | TR.CHP      | 2SA1037 Q,R,S  |
| Q7        | iA103700 | TR.CHP      | 2SA1037 Q,R,S  |
| Q8        | VV556400 | TR          | 2SC2412K Q,R,S |
| Q901      | iC241200 | TR.CHP      | 2SC2412K Q,R,S |
| Q902      | iC241200 | TR.CHP      | 2SC2412K Q,R,S |
| Q903      | iC241200 | TR.CHP      | 2SC2412K Q,R,S |
| Q904      | iC241200 | TR.CHP      | 2SC2412K Q,R,S |
| Q905      | iC241200 | TR.CHP      | 2SC2412K Q,R,S |
| Q906      | iC241200 | TR.CHP      | 2SC2412K Q,R,S |
| Q907      | iC241200 | TR.CHP      | 2SC2412K Q,R,S |
| Q908      | iC241200 | TR.CHP      | 2SC2412K Q,R,S |
| Q909      | iC241200 | TR.CHP      | 2SC2412K Q,R,S |
| Q910      | iC241200 | TR.CHP      | 2SC2412K Q,R,S |
| R12       | Vi196500 | R.MTL.CHP   | 4.3KΩ 1/10W    |
| R13       | Vi196500 | R.MTL.CHP   | 4.3KΩ 1/10W    |
| R39       | Vi196600 | R.MTL.CHP   | 4.7KΩ 1/10W    |
| R41       | Vi196600 | R.MTL.CHP   | 4.7KΩ 1/10W    |
| R42       | Vi196600 | R.MTL.CHP   | 4.7KΩ 1/10W    |
| R43       | Vi196600 | R.MTL.CHP   | 4.7KΩ 1/10W    |
| R44       | Vi196600 | R.MTL.CHP   | 4.7KΩ 1/10W    |
| R46       | Vi196600 | R.MTL.CHP   | 4.7KΩ 1/10W    |
| R60       | HV453100 | R.CAR.FP    | 1Ω 1/4W        |
| R66       | HV454220 | R.CAR.FP    | 22Ω 1/4W       |
| R67       | Vi196600 | R.MTL.CHP   | 4.7KΩ 1/10W    |
| R68       | Vi191800 | R.MTL.CHP   | 51Ω 1/10W      |
| R69       | Vi191800 | R.MTL.CHP   | 51Ω 1/10W      |
| R70       | Vi191800 | R.MTL.CHP   | 51Ω 1/10W      |
| R71       | Vi191800 | R.MTL.CHP   | 51Ω 1/10W      |
| R72       | Vi196600 | R.MTL.CHP   | 4.7KΩ 1/10W    |
| R73       | HV454220 | R.CAR.FP    | 22Ω 1/4W       |
| R82       | HV453220 | R.CAR.FP    | 2.2Ω 1/4W      |
| R84       | HV453100 | R.CAR.FP    | 1Ω 1/4W        |
| R85       | Vi197400 | R.MTL.CHP   | 10KΩ 1/10W     |
| R86       | Vi197400 | R.MTL.CHP   | 10KΩ 1/10W     |
| R91       | HV453100 | R.CAR.FP    | 1Ω 1/4W        |
| R92       | HV453100 | R.CAR.FP    | 1Ω 1/4W        |
| R95       | HV454330 | R.CAR.FP    | 33Ω 1/4W       |
| R118      | HV453100 | R.CAR.FP    | 1Ω 1/4W        |
| R119      | HV453100 | R.CAR.FP    | 1Ω 1/4W        |

\* New Parts

| Schm Ref. | PART NO. | Description |             |
|-----------|----------|-------------|-------------|
| R138      | Vi195900 | R.MTL.CHP   | 2.7KΩ 1/10W |
| R139      | HV454220 | R.CAR.FP    | 22Ω 1/4W    |
| R141      | Vi200000 | R.MTL.CHP   | 100KΩ 1/10W |
| R142      | Vi194900 | R.MTL.CHP   | 1KΩ 1/10W   |
| R143      | Vi194900 | R.MTL.CHP   | 1KΩ 1/10W   |
| R144      | Vi194900 | R.MTL.CHP   | 1KΩ 1/10W   |
| R145      | Vi192500 | R.MTL.CHP   | 100Ω 1/10W  |
| R148      | Vi195900 | R.MTL.CHP   | 2.7KΩ 1/10W |
| R149      | Vi200000 | R.MTL.CHP   | 100KΩ 1/10W |
| R150      | Vi194900 | R.MTL.CHP   | 1KΩ 1/10W   |
| R151      | Vi194900 | R.MTL.CHP   | 1KΩ 1/10W   |
| R152      | Vi194900 | R.MTL.CHP   | 1KΩ 1/10W   |
| R153      | HV454220 | R.CAR.FP    | 22Ω 1/4W    |
| R154      | Vi192500 | R.MTL.CHP   | 100Ω 1/10W  |
| R155      | HV454150 | R.CAR.FP    | 15Ω 1/4W    |
| R156      | Vi196500 | R.MTL.CHP   | 4.3KΩ 1/10W |
| R157      | Vi200000 | R.MTL.CHP   | 100KΩ 1/10W |
| R158      | Vi194900 | R.MTL.CHP   | 1KΩ 1/10W   |
| R159      | Vi194900 | R.MTL.CHP   | 1KΩ 1/10W   |
| R160      | Vi194900 | R.MTL.CHP   | 1KΩ 1/10W   |
| R161      | HV454220 | R.CAR.FP    | 22Ω 1/4W    |
| R162      | Vi192500 | R.MTL.CHP   | 100Ω 1/10W  |
| R163      | Vi196400 | R.MTL.CHP   | 3.9KΩ 1/10W |
| R164      | Vi200000 | R.MTL.CHP   | 100KΩ 1/10W |
| R165      | HV454220 | R.CAR.FP    | 22Ω 1/4W    |
| R167      | HV454150 | R.CAR.FP    | 15Ω 1/4W    |
| R168      | Vi194900 | R.MTL.CHP   | 1KΩ 1/10W   |
| R169      | Vi194900 | R.MTL.CHP   | 1KΩ 1/10W   |
| R170      | Vi194900 | R.MTL.CHP   | 1KΩ 1/10W   |
| R171      | Vi192500 | R.MTL.CHP   | 100Ω 1/10W  |
| R172      | Vi196500 | R.MTL.CHP   | 4.3KΩ 1/10W |
| R173      | Vi200000 | R.MTL.CHP   | 100KΩ 1/10W |
| R174      | Vi194900 | R.MTL.CHP   | 1KΩ 1/10W   |
| R175      | Vi194900 | R.MTL.CHP   | 1KΩ 1/10W   |
| R176      | Vi194900 | R.MTL.CHP   | 1KΩ 1/10W   |
| R177      | HV454220 | R.CAR.FP    | 22Ω 1/4W    |
| R178      | Vi192500 | R.MTL.CHP   | 100Ω 1/10W  |
| R179      | Vi196500 | R.MTL.CHP   | 4.3KΩ 1/10W |
| R180      | Vi200000 | R.MTL.CHP   | 100KΩ 1/10W |
| R181      | Vi194900 | R.MTL.CHP   | 1KΩ 1/10W   |
| R182      | Vi194900 | R.MTL.CHP   | 1KΩ 1/10W   |
| R183      | Vi194900 | R.MTL.CHP   | 1KΩ 1/10W   |
| R184      | HV454220 | R.CAR.FP    | 22Ω 1/4W    |
| R185      | Vi192500 | R.MTL.CHP   | 100Ω 1/10W  |
| R186      | HV454150 | R.CAR.FP    | 15Ω 1/4W    |
| R187      | Vi196500 | R.MTL.CHP   | 4.3KΩ 1/10W |
| R188      | HV454220 | R.CAR.FP    | 22Ω 1/4W    |
| R189      | Vi200000 | R.MTL.CHP   | 100KΩ 1/10W |
| R190      | Vi194900 | R.MTL.CHP   | 1KΩ 1/10W   |
| R191      | Vi194900 | R.MTL.CHP   | 1KΩ 1/10W   |
| R192      | Vi194900 | R.MTL.CHP   | 1KΩ 1/10W   |
| R193      | Vi192500 | R.MTL.CHP   | 100Ω 1/10W  |
| R194      | HV454150 | R.CAR.FP    | 15Ω 1/4W    |

\* New Parts

\* New Parts

\* New Parts

## P.C.B. TUNER (Lead Type)

| Schm Ref. | PART NO. | Description |
|-----------|----------|-------------|
|           | V2518600 | P.C.B.      |
|           | V2518800 | P.C.B.      |
| CB4       | VQ961900 | CN          |
| C1        | VG288900 | C.EL        |
| C3        | VG275800 | C.CE.TUBLR  |
| C4        | VJ837200 | C.EL        |
| C5        | VF467300 | C.CE.TUBLR  |
| C6        | VJ837200 | C.EL        |
| C7        | VJ839100 | C.EL        |
| C8        | VF467300 | C.CE.TUBLR  |
| C9        | VF467300 | C.CE.TUBLR  |
| C10       | VF467300 | C.CE.TUBLR  |
| C11       | VF467000 | C.CE.TUBLR  |
| C12       | VJ836900 | C.EL        |
| C13       | VJ836900 | C.EL        |
| C14       | FG212100 | C.CE        |
| C15       | VF467000 | C.CE.TUBLR  |
| C16       | VF466700 | C.CE.TUBLR  |
| C17       | VJ837200 | C.EL        |
| C19       | VA760600 | C.CE        |
| C20       | VG288900 | C.EL        |
| C21       | VJ599000 | C.CE.TUBLR  |
| C22       | VG290700 | C.EL        |
| C23       | VF467300 | C.CE.TUBLR  |
| C24       | UM416470 | C.EL        |
| C25       | UM216330 | C.EL        |
| C26       | VJ836900 | C.EL        |
| C27       | VF467300 | C.CE.TUBLR  |
| C28       | VA760600 | C.CE        |
| C29       | VJ839100 | C.EL        |
| C30       | VJ839100 | C.EL        |
| C31       | VG288900 | C.EL        |
| C32       | VJ839000 | C.EL        |
| C33       | VJ839100 | C.EL        |
| C34       | UA654470 | C.MYLAR     |
| C35       | VG290700 | C.EL        |
| C36       | UA652270 | C.MYLAR     |
| C36       | UA653100 | C.MYLAR     |
| C37       | UA652270 | C.MYLAR     |
| C37       | UA653100 | C.MYLAR     |
| C38       | VF466900 | C.CE.TUBLR  |
| C39       | VG290900 | C.EL        |
| C40       | VG290700 | C.EL        |
| C41       | UA653390 | C.MYLAR     |
| C42       | UM407220 | C.EL        |
| C43       | UA653390 | C.MYLAR     |
| C44       | VG290700 | C.EL        |
| C45       | VJ837200 | C.EL        |
| C46       | VJ837200 | C.EL        |
| C49       | UA652120 | C.MYLAR     |
| C49       | UA653220 | C.MYLAR     |
| C50       | VJ599000 | C.CE.TUBLR  |
| D1        | VD631600 | DIODE       |

\* New Parts

| Schm Ref. | PART NO. | Description |
|-----------|----------|-------------|
| D2        | VD631600 | DIODE       |
| D3        | VG437700 | DIODE.ZENR  |
| Fi1       | GG000560 | FLTR.CE     |
| Fi2       | GG000560 | FLTR.CE     |
| * Fi2     | V4545200 | FLTR.CE     |
| Fi3       | VC219000 | FLTR.CE     |
| IC1       | XB760A00 | IC          |
| IC2       | XQ944A00 | IC          |
| IC3       | iG158100 | IC          |
| L1        | Vi546100 | COIL        |
| L2        | Vi546100 | COIL        |
| L3        | Vi546100 | COIL        |
| L4        | Vi546100 | COIL        |
| PK1       | V2716700 | TUNER.PK    |
| PK1       | V2909100 | TUNER.PK    |
| PK2       | VU333700 | COIL.RF.AM  |
| Q1        | iC053540 | TR          |
| Q2        | iC053540 | TR          |
| Q3        | VD678500 | TR.DGT      |
| Q4        | iC174020 | TR          |
| Q5        | VG722000 | TR.DGT      |
| Q6        | iC1815C0 | TR          |
| Q7        | VD678500 | TR.DGT      |
| R56       | HV454470 | R.CAR.FP    |
| * T1      | V3725400 | COIL.DT     |
| T2        | VR895700 | COIL.IF     |
| T3        | VT486800 | COIL        |
| T4        | VQ138200 | FLTR.LC     |
| T5        | VQ138200 | FLTR.LC     |
| TE1       | VU477800 | TERM.ANT    |
| TP1       | VT969000 | PIN.TEST    |
| TP2       | VT969000 | PIN.TEST    |
| VR1       | VJ694000 | VR.TRIM     |
| VR2       | VJ694000 | VR.TRIM     |
| XL1       | VY734600 | RSNR.CRYS   |
| XL2       | GG000750 | RSNR.CE     |
|           | BB071360 | SCR.TERM    |
|           | VR282500 | PLATE       |

\* New Parts

**P.C.B. TUNER (Lead Type & SMD)**

| Schm Ref. | PART NO. | Description               |
|-----------|----------|---------------------------|
| * C1      | V2519300 | P.C.B.CHP TUNER/TU-01(UC) |
| * C3      | V2519500 | P.C.B.CHP TUNER/TU-01(A)  |
| C3        | VG287600 | C.EL 100uF 25V            |
| C4        | UB050800 | C.CE.M.CHP 8pF 50V        |
| C5        | UR837470 | C.EL 47uF 16V             |
| C6        | UB044100 | C.CE.M.CHP 0.01uF 50V     |
| C7        | UR837470 | C.EL 47uF 16V             |
| C8        | UM416100 | C.EL 1uF 50V              |
| C9        | UB044100 | C.CE.M.CHP 0.01uF 50V     |
| C10       | UB044100 | C.CE.M.CHP 0.01uF 50V     |
| C11       | UB013100 | C.CE.M.CHP 1000pF 50V     |
| C12       | UM397100 | C.EL 10uF 16V             |
| C13       | UM397100 | C.EL 10uF 16V             |
| C14       | FG652100 | C.CE 100pF 50V            |
| C15       | UB013100 | C.CE.M.CHP 1000pF 50V     |
| C16       | UB051470 | C.CE.M.CHP 47pF 50V       |
| C17       | UR837470 | C.EL 47uF 16V             |
| C19       | V4006100 | C.CE 10pF 50V             |
| C20       | VG287600 | C.EL 100uF 25V            |
| C21       | UB044470 | C.CE.M.CHP 0.047uF 50V    |
| C22       | VG290700 | C.EL 3.3uF 50V            |
| C23       | UB044100 | C.CE.M.CHP 0.01uF 50V     |
| C24       | UM406470 | C.EL 4.7uF 50V            |
| C25       | UM416330 | C.EL 3.3uF 50V            |
| C26       | UM397100 | C.EL 10uF 16V             |
| C27       | UB044100 | C.CE.M.CHP 0.01uF 50V     |
| C28       | VA760600 | C.CE 10pF 50V             |
| C29       | UM416100 | C.EL 1uF 50V              |
| C30       | UM416100 | C.EL 1uF 50V              |
| C31       | VG287600 | C.EL 100uF 25V            |
| C32       | UM415470 | C.EL 0.47uF 50V           |
| C33       | UM416100 | C.EL 1uF 50V              |
| C34       | UA954470 | C.MYLAR 0.047uF 50V       |
| C35       | VG290700 | C.EL 3.3uF 50V            |
| C36       | UA952270 | C.MYLAR 270pF 50V(A)      |
| C36       | UA953100 | C.MYLAR 1000pF 50V(UC)    |
| C37       | UA952270 | C.MYLAR 270pF 50V(A)      |
| C37       | UA953100 | C.MYLAR 1000pF 50V(U)     |
| C38       | UB012470 | C.CE.M.CHP 470pF 50V      |
| C39       | VG287200 | C.EL 10uF 50V             |
| C40       | VG290700 | C.EL 3.3uF 50V            |
| C41       | UA953390 | C.MYLAR 3900pF 50V        |
| C42       | UM397220 | C.EL 22uF 25V             |
| C43       | UA953390 | C.MYLAR 3900pF 50V        |
| C44       | VG290700 | C.EL 3.3uF 50V            |
| C45       | UR837470 | C.EL 47uF 16V             |
| C46       | UR837470 | C.EL 47uF 16V             |
| C47       | UB012330 | C.CE.M.CHP 330pF 50V      |
| C48       | UB012560 | C.CE.M.CHP 560pF 50V      |
| C49       | UA952120 | C.MYLAR 120pF 50V(A)      |
| C49       | UA953220 | C.MYLAR 2200pF 50V(UC)    |
| C50       | UB044470 | C.CE.M.CHP 0.047uF 50V    |

\* New Parts

| Schm Ref. | PART NO. | Description                   |
|-----------|----------|-------------------------------|
| C51       | UR837470 | C.EL 47uF 16V                 |
| C52       | UR837470 | C.EL 47uF 16V                 |
| C53       | UR837470 | C.EL 47uF 16V                 |
| C54       | VA761100 | C.CE 27pF 50V                 |
| C55       | VA761100 | C.CE 27pF 50V                 |
| C56       | UB044470 | C.CE.M.CHP 0.047uF 50V        |
| C57       | UB012330 | C.CE.M.CHP 330pF 50V          |
| CB4       | VQ961900 | CN 16P                        |
| D1        | VT332900 | DIODE 1SS355                  |
| D2        | VT332900 | DIODE 1SS355                  |
| D3        | VU172000 | DIODE.ZENR UDZS5.6BTE-17 5.6V |
| Fi1       | GG000560 | FLTR.CE SFE10.7MS3GHY-A       |
| Fi2       | GG000560 | FLTR.CE SFE10.7MS3GHY-A       |
| Fi3       | VC219000 | FLTR.CE SFZ450JL3             |
| IC1       | XB760A00 | IC LA1266                     |
| IC2       | XQ944A00 | IC LC72131                    |
| IC3       | iG158100 | IC LA3401                     |
| L1        | VU889500 | COIL 220uH                    |
| L2        | VU889500 | COIL 220uH                    |
| L3        | VU889500 | COIL 220uH                    |
| L4        | VU889500 | COIL 220uH                    |
| L5        | VU889500 | COIL 220uH                    |
| PK1       | V2716700 | TUNER.PK ENV-172A4G1(A)       |
| PK1       | V2909100 | TUNER.PK ENV-172C8G1R(UC)     |
| PK2       | VU333700 | COIL.RF.AM 940536051A         |
| Q1        | iC053540 | TR 2SC535 A,B,C               |
| Q2        | iC053540 | TR 2SC535 A,B,C               |
| Q3        | VD678500 | TR.DGT DTA114ES               |
| Q4        | iC174020 | TR 2SC1740S R,S               |
| Q5        | VG722000 | TR.DGT DTC144ES               |
| Q6        | iC181510 | TR 2SC1815 Y                  |
| Q7        | VD678500 | TR.DGT DTA114ES               |
| R56       | HV754470 | R.CAR.FP 47Ω 1/4W             |
| * T1      | V3725400 | COIL.DT 10.7MHZ 104A          |
| T2        | VR895700 | COIL.IF 450KHz                |
| T3        | VT486800 | COIL XYA2(A)                  |
| T4        | VQ138200 | FLTR.LC 19KHz                 |
| T5        | VQ138200 | FLTR.LC 19KHz                 |
| TE1       | VU477800 | TERM.ANT AJ-2038-040          |
| TP1       | VT969000 | PIN.TEST IRS-2049             |
| TP2       | VT969000 | PIN.TEST IRS-2049             |
| VR1       | VJ694000 | VR.TRIM B47KΩ                 |
| VR2       | VJ694000 | VR.TRIM B47KΩ                 |
| XL1       | VY734600 | RSNR.CRYS 7.2MHz              |
| XL2       | GG000750 | RSNR.CE 18.95KHz              |
| XL3       | V3930900 | RSNR.CRYS 4.332MHz            |
|           | BB071360 | SCR.TERM 8.3x13               |
|           | VR282500 | PLATE ANT.                    |

\* New Parts

## CHIP RESISTOR

| Schm<br>Ref. | PART NO. | Description |       |            |
|--------------|----------|-------------|-------|------------|
|              | RD250000 | R.CAR.CHP   | 0Ω    | 1/10W      |
|              | RD253100 | R.CAR.CHP   | 1Ω    | 1/10W      |
|              | RD253220 | R.CAR.CHP   | 2.2Ω  | 1/10W      |
|              | RD253470 | R.CAR.CHP   | 4.7Ω  | 1/10W      |
|              | RD254100 | R.CAR.CHP   | 10Ω   | 1/10W      |
|              | RD254330 | R.CAR.CHP   | 33Ω   | 1/10W      |
|              | RD254470 | R.CAR.CHP   | 47Ω   | 1/10W      |
|              | RD254680 | R.CAR.CHP   | 68Ω   | 1/10W      |
|              | RD254750 | R.CAR.CHP   | 75Ω   | 1/10W      |
|              | RD254820 | R.CAR.CHP   | 82Ω   | 1/10W      |
|              | RD255100 | R.CAR.CHP   | 100Ω  | 1/10W      |
|              | RD255120 | R.CAR.CHP   | 120Ω  | 1/10W      |
|              | RD255150 | R.CAR.CHP   | 150Ω  | 1/10W      |
|              | RD255220 | R.CAR.CHP   | 220Ω  | 1/10W      |
|              | RD255330 | R.CAR.CHP   | 330Ω  | 1/10W      |
|              | RD255470 | R.CAR.CHP   | 470Ω  | 1/10W(C)   |
|              | RD255560 | R.CAR.CHP   | 560Ω  | 1/10W      |
|              | RD255680 | R.CAR.CHP   | 680Ω  | 1/10W      |
|              | RD255820 | R.CAR.CHP   | 820Ω  | 1/10W      |
|              | RD256100 | R.CAR.CHP   | 1KΩ   | 1/10W      |
|              | RD256120 | R.CAR.CHP   | 1.2KΩ | 1/10W      |
|              | RD256180 | R.CAR.CHP   | 1.8KΩ | 1/10W(UCA) |
|              | RD256200 | R.CAR.CHP   | 2KΩ   | 1/10W      |
|              | RD256220 | R.CAR.CHP   | 2.2KΩ | 1/10W      |
|              | RD256270 | R.CAR.CHP   | 2.7KΩ | 1/10W(UCA) |
|              | RD256330 | R.CAR.CHP   | 3.3KΩ | 1/10W      |
|              | RD256430 | R.CAR.CHP   | 4.3KΩ | 1/10W      |
|              | RD256470 | R.CAR.CHP   | 4.7KΩ | 1/10W      |
|              | RD256510 | R.CAR.CHP   | 5.1KΩ | 1/10W      |
|              | RD256680 | R.CAR.CHP   | 6.8KΩ | 1/10W      |
|              | RD256750 | R.CAR.CHP   | 7.5KΩ | 1/10W      |
|              | RD256820 | R.CAR.CHP   | 8.2KΩ | 1/10W      |
|              | RD257100 | R.CAR.CHP   | 10KΩ  | 1/10W      |
|              | RD257120 | R.CAR.CHP   | 12KΩ  | 1/10W      |
|              | RD257150 | R.CAR.CHP   | 15KΩ  | 1/10W      |
|              | RD257180 | R.CAR.CHP   | 18KΩ  | 1/10W      |
|              | RD257220 | R.CAR.CHP   | 22KΩ  | 1/10W      |
|              | RD257270 | R.CAR.CHP   | 27KΩ  | 1/10W      |
|              | RD257330 | R.CAR.CHP   | 33KΩ  | 1/10W      |
|              | RD257470 | R.CAR.CHP   | 47KΩ  | 1/10W      |
|              | RD257680 | R.CAR.CHP   | 68KΩ  | 1/10W      |
|              | RD257820 | R.CAR.CHP   | 82KΩ  | 1/10W      |
|              | RD258100 | R.CAR.CHP   | 100KΩ | 1/10W      |
|              | RD258220 | R.CAR.CHP   | 220KΩ | 1/10W      |
|              | RD258470 | R.CAR.CHP   | 470KΩ | 1/10W      |
|              | RD258680 | R.CAR.CHP   | 680KΩ | 1/10W      |
|              | RD259100 | R.CAR.CHP   | 1MΩ   | 1/10W      |
|              | RD259220 | R.CAR.CHP   | 2.2MΩ | 1/10W      |

\* New Parts

[illegible]

\* New Parts



A

B

C

D

E

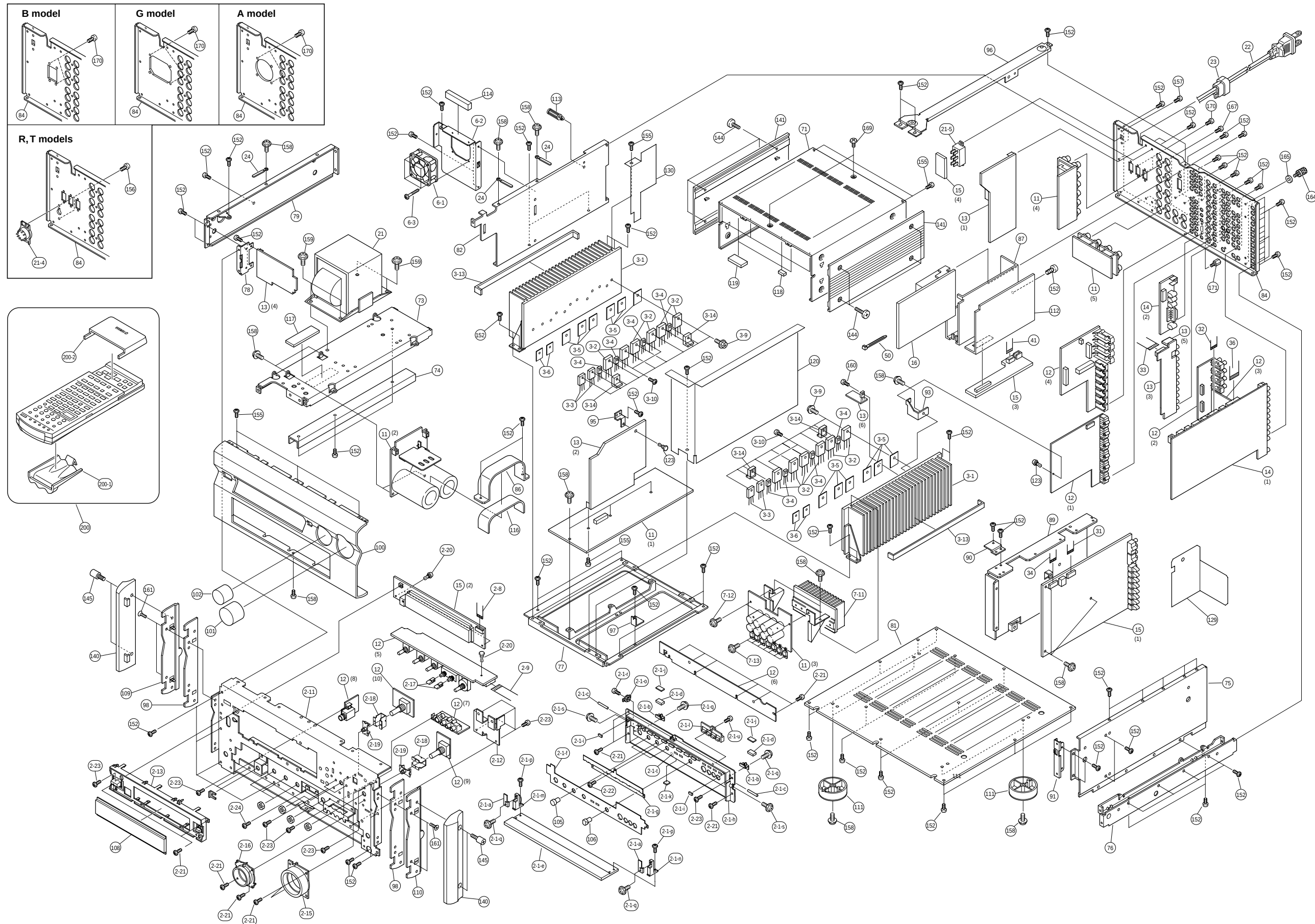
F

G

H

DSP-AX1/RX-V1

## ■ EXPLODED VIEW



MECHANICAL PARTS

| Ref. No. | PART NO. | Description                  | Remarks          | Markets     |
|----------|----------|------------------------------|------------------|-------------|
| 2-1-a    | VZ619800 | SUPPORT                      | HINGE            |             |
| 2-1-b    | VZ830500 | SUPPORT                      | MG               |             |
| 2-1-c    | VZ621800 | SHAFT                        | AA               |             |
| 2-1-d    | VZ621900 | MAGNET                       |                  |             |
| * 2-1-e  | V4321400 | PANEL, LID                   | BL               |             |
| * 2-1-e  | V4321600 | PANEL, LID                   | GD               |             |
| * 2-1-f  | V4324400 | PLATE, L                     | RX-V1 BL         | (UCA)       |
| * 2-1-f  | V4324700 | PLATE, L                     | RX-V1 GD         | (UCA)       |
| * 2-1-f  | V4481600 | PLATE, L                     | DSP-AX1 BL       | (RBGT)      |
| * 2-1-f  | V4481800 | PLATE, L                     | DSP-AX1 GD       | (RBGT)      |
| * 2-1-g  | V4324800 | PLATE, SP                    | RX-V1 BL         | (UCA)       |
| * 2-1-g  | V4325000 | PLATE, SP                    | RX-V1 GD         | (UCA)       |
| * 2-1-g  | V4516800 | PLATE, SP                    | DSP-AX1 BL       | (RBGT)      |
| * 2-1-g  | V4517000 | PLATE, SP                    | DSP-AX1 GD       | (RBGT)      |
| * 2-1-h  | V4328200 | CASE, SUB PANEL              | BL               |             |
| * 2-1-h  | V4328400 | CASE, SUB PANEL              | GD               |             |
| 2-1-i    | V2048500 | CUSHION, LID                 | GD               |             |
| 2-1-i    | VT062900 | CUSHION                      | BL               |             |
| 2-1-j    | VZ875000 | SPACER                       | MG               |             |
| 2-1-k    | VH625500 | DAMPER                       |                  |             |
| * 2-1-l  | V4481100 | BUTTON, TU                   | RX-V1 BL         | (UCA)       |
| * 2-1-l  | V4481300 | BUTTON, TU                   | RX-V1 GD         | (UCA)       |
| * 2-1-m  | V4329400 | HINGE, R                     | BL               |             |
| * 2-1-m  | V4329600 | HINGE, R                     | GD               |             |
| 2-1-n    | V0047400 | HINDGE                       | GD               |             |
| 2-1-n    | VZ629400 | HINDGE                       | BL               |             |
| * 2-1-o  | V5095100 | DAMPER, GEAR                 | 058E-L           |             |
| 2-1-p    | ED330066 | BIND HEAD SCREW              | 3x6 FCRM3-BL     |             |
| 2-1-q    | EK930010 | PW HEAD B-TITE SCREW         | 3x8-8 FCRM3-BL   |             |
| 2-1-r    | VG893800 | BIND HEAD P-TITE SCREW       | 2x6 ZMC2-BL      |             |
| 2-1-s    | VE529700 | PW HEAD B-TITE SCREW         | 3x6-8 FCRM3-BL   |             |
| 2-1-t    | V3217600 | PLATE, GROUND                |                  |             |
| 2-1-u    | EP600190 | BIND HEAD B-TITE SCREW       | 3x8 ZMC2-BL      | RX-V1 (UCA) |
| 2- 8     | MF116250 | FLEXIBLE FLAT CABLE          | 16P 250mm        |             |
| 2- 9     | MF117200 | FLEXIBLE FLAT CABLE          | 17P 200mm        |             |
| * 2-11   | V4318400 | SUB CHASSIS                  |                  |             |
| * 2-12   | V4481900 | SUPPORT, PJ                  | PJ               |             |
| * 2-13   | V4328700 | BUTTON CASE                  | UPPER            |             |
| * 2-13   | V4328900 | BUTTON CASE                  | UPPER            |             |
| * 2-15   | V4323100 | ESCUTCHEON, VOL              | BL               |             |
| * 2-15   | V4323300 | ESCUTCHEON, VOL              | GD               |             |
| 2-16     | VZ625900 | ESCUTCHEON, SEL              | BL               |             |
| 2-16     | VZ756800 | ESCUTCHEON, SEL              | GD               |             |
| 2-17     | V2467300 | BUTTON                       | 3/8              |             |
| 2-17     | V2467500 | BUTTON                       | 3/8              |             |
| * 2-18   | V5181000 | SUPPORT                      | ENC              |             |
| * 2-19   | V5181200 | SUPPORT                      |                  |             |
| 2-20     | CB605620 | PLASTIC RIVET                | No.1781          |             |
| 2-21     | EP600190 | BIND HEAD B-TITE SCREW       | 3x8 ZMC2-BL      |             |
| 2-22     | VR145000 | BIND HEAD BONDING TAP. SCREW | 3x12 MFZN2-BL    |             |
| 2-23     | VN413300 | BIND HEAD BONDING B-T. SCREW | 3x8 MFZN2-BL     |             |
| 2-24     | ED330066 | BIND HEAD SCREW              | 3x6 FCRM3-BL     |             |
| * 3- 1   | V4325100 | HEAT SINK ASS'Y, L           | 52BS300-L130ASSY |             |

\* New Parts

| Ref. No. | PART NO. | Description            | Remarks            | Markets      |
|----------|----------|------------------------|--------------------|--------------|
| * 3- 1   | V4766700 | HEAT SINK ASS'Y, R     | 52BS300-L130ASSY   |              |
| △# 3- 2  | V4863600 | PAIR TRANSISTOR        | 2SA1943/C5200 O,R  | Q517,521,525 |
| △# 3- 2  | V4863600 | PAIR TRANSISTOR        | 2SA1943/C5200 O,R  | ,563,566,570 |
| # 3- 3A  | iX615750 | TRANSISTOR             | 2SA1694 O,P,Y      | Q575A,Q580A  |
| # 3- 3C  | iX615760 | TRANSISTOR             | 2SC4467 O,P,Y      | Q575C,Q580C  |
| # 3- 4   | VC398100 | TRANSISTOR             | 2SC1846 S          | Q508,511,514 |
| # 3- 4   | VC398100 | TRANSISTOR             | 2SC1846 S          | ,552,555,558 |
| △# 3- 4  | VC398100 | TRANSISTOR             | 2SC1846 S          | ,560,561     |
| 3- 5     | VK196000 | SHEET                  | 22x29              |              |
| 3- 6     | VK195900 | SHEET                  | 19x24              |              |
| 3- 9     | VK173200 | SCREW, TRANSISTOR      | 3x15 SP FCM3       |              |
| 3-10     | VK697600 | BIND HEAD B-TITE SCREW | 3x10 SP ZMC2-Y     |              |
| 3-13     | VU195800 | DAMPER, FIN            |                    |              |
| * 3-14   | V5120300 | SUPPORT, PCB           | PCB                |              |
| * 6- 1   | V3316600 | DC BRUSHLESS FAN       | 2410ML-05W-B40-T14 |              |
| 6- 2     | VZ619400 | SUPPORT                | FAN                |              |
| 6- 3     | VV220300 | BIND HEAD B-TITE SCREW | 3x30 MFZN2-BL      |              |
| * 7-11   | V4326200 | HEAT SINK, L           |                    |              |
| 7-12     | EK930010 | PW HEAD B-TITE SCREW   | 3x8-8 FCRM3-BL     |              |
| 7-13     | VK697600 | BIND HEAD B-TITE SCREW | 3x10 SP ZMC2-Y     |              |
| * 11     | V5001000 | P.C.B. ASS'Y           | MAIN               | (U)          |
| * 11     | V5001100 | P.C.B. ASS'Y           | MAIN               | (C)          |
| * 11     | V5001200 | P.C.B. ASS'Y           | MAIN               | (RT)         |
| * 11     | V5001300 | P.C.B. ASS'Y           | MAIN               | (A)          |
| * 11     | V5001400 | P.C.B. ASS'Y           | MAIN               | (BG)         |
| * 12     | V5001600 | P.C.B. ASS'Y           | VIDEO              | (UC)         |
| * 12     | V5001700 | P.C.B. ASS'Y           | VIDEO              | (RT)         |
| * 12     | V5001800 | P.C.B. ASS'Y           | VIDEO              | (A)          |
| * 12     | V5001900 | P.C.B. ASS'Y           | VIDEO              | (BG)         |
| * 13     | V5002100 | P.C.B. ASS'Y           | SUB TRANS.         | (U)          |
| * 13     | V5002200 | P.C.B. ASS'Y           | SUB TRANS.         | (C)          |
| * 13     | V5002300 | P.C.B. ASS'Y           | SUB TRANS.         | (RT)         |
| * 13     | V5002400 | P.C.B. ASS'Y           | SUB TRANS.         | (A)          |
| * 13     | V5003500 | P.C.B. ASS'Y           | SUB TRANS.         | (B)          |
| * 13     | V5003600 | P.C.B. ASS'Y           | SUB TRANS.         | (G)          |
| * 14     | V5002600 | P.C.B. ASS'Y           | FUNCTION           | (UC)         |
| * 14     | V5002700 | P.C.B. ASS'Y           | FUNCTION           | (RT)         |
| * 14     | V5002800 | P.C.B. ASS'Y           | FUNCTION           | (A)          |
| * 14     | V5002900 | P.C.B. ASS'Y           | FUNCTION           | (BG)         |
| * 15     | V5003000 | P.C.B. ASS'Y           | DSP                | (RBGT)       |
| * 15     | V5003100 | P.C.B. ASS'Y           | DSP                | (UA)         |
| * 15     | V5003200 | P.C.B. ASS'Y           | DSP                | (C)          |
| 16       | V2518600 | P.C.B. ASS'Y           | TUNER/TU-01        | RX-V1 (UC)   |
| 16       | V2518800 | P.C.B. ASS'Y           | TUNER/TU-01        | RX-V1 (A)    |
| 16       | V2519300 | P.C.B. ASS'Y           | TUNER/TU-01,CHIP   | RX-V1 (UC)   |
| 16       | V2519500 | P.C.B. ASS'Y           | TUNER/TU-01,CHIP   | RX-V1 (A)    |
| △* 21    | XW967A00 | POWER TRANSFORMER      |                    | (U)          |
| △* 21    | XW968A00 | POWER TRANSFORMER      |                    | (C)          |
| △* 21    | XW969A00 | POWER TRANSFORMER      |                    | (RT)         |
| △* 21    | XW970A00 | POWER TRANSFORMER      |                    | (A)          |
| △* 21    | XW971A00 | POWER TRANSFORMER      |                    | (BG)         |
| △ 21- 4  | Vi449800 | VOLTAGE SELECTOR       | ESE-37284-F        | (RT)         |
| △ 21- 5  | VZ855600 | SLIDE SWITCH           | SDKGA4             | (URABGT)     |

\* New Parts

|     | Ref.<br>No. | PART NO. | Description           | Remarks   | Markets           |
|-----|-------------|----------|-----------------------|-----------|-------------------|
| ⚠ * | 22          | V5069600 | POWER CORD ASS'Y      |           | (UC)              |
| ⚠   | 22          | VP418300 | POWER CORD ASS'Y      |           | (A)               |
| ⚠   | 22          | VS759300 | POWER CORD ASS'Y      |           | (G)               |
| ⚠   | 22          | VU411300 | POWER CORD ASS'Y      |           | (B)               |
| ⚠   | 22          | VZ542500 | POWER CORD ASS'Y      |           | (RT)              |
|     | 23          | VN158600 | CORD STOPPER          | No.2104   | (RABGT)           |
|     | 23          | VQ583400 | CORD STOPPER          | No.2272   | (UC)              |
|     | 24          | CB502030 | BINDING TIE           | S-75B     |                   |
|     | 31          | MF108080 | FLEXIBLE FLAT CABLE   | 8P 80mm   |                   |
|     | 32          | MF111400 | FLEXIBLE FLAT CABLE   | 11P 400mm |                   |
|     | 33          | MF116060 | FLEXIBLE FLAT CABLE   | 16P 60mm  |                   |
|     | 34          | MF116250 | FLEXIBLE FLAT CABLE   | 16P 250mm |                   |
|     | 36          | MF127350 | FLEXIBLE FLAT CABLE   | 27P 350mm |                   |
| *   | 41          | V4868500 | CONNECTOR, FLAT CABLE | 13P 450mm | RX-V1 (UCA)       |
|     | 50          | CB069250 | BINDING TIE           | BK-1      |                   |
| *   | 71          | V4318100 | TOP COVER             |           | BL                |
| *   | 71          | V4318300 | TOP COVER             |           | GD                |
|     | 73          | VZ618000 | FRAME                 | L         |                   |
|     | 74          | VU120700 | FRAME, L/SF           |           |                   |
| *   | 75          | V4318600 | FRAME                 | R/UPPER   |                   |
| *   | 76          | V4318500 | FRAME                 | R/LOWER   |                   |
| *   | 77          | V4600900 | FRAME, CENTER         |           |                   |
| *   | 78          | V4320400 | SUPPORT, A            | SUB       |                   |
| *   | 79          | V4318800 | FRAME                 | SL        |                   |
| *   | 81          | V4803700 | BOTTOM COVER          |           |                   |
| *   | 82          | V4318900 | FRAME                 | CF        |                   |
| *   | 84          | V4319100 | REAR PANEL            |           | (U)               |
| *   | 84          | V4319200 | REAR PANEL            |           | (C)               |
| *   | 84          | V4319400 | REAR PANEL            |           | (A)               |
| *   | 84          | V4563300 | REAR PANEL            |           | (RT)              |
| *   | 84          | V4563500 | REAR PANEL            |           | (G)               |
| *   | 84          | V4563600 | REAR PANEL            |           | (B)               |
|     | 86          | VZ764400 | SUPPORT               | CMCN      |                   |
| *   | 87          | V4847300 | SHIELD CASE           |           | RX-V1 (UCA)       |
| *   | 89          | V4318700 | SHIELD CASE           |           |                   |
| *   | 90          | V4320200 | SUPPORT               | I/PCB     |                   |
|     | 91          | VT999700 | SUPPORT               | R/FR      |                   |
| *   | 93          | V4320300 | SUPPORT               | S/PCB     |                   |
| *   | 95          | V4847400 | SUPPORT               | C/PCB     |                   |
| *   | 96          | V4319700 | FRAME                 | C/UP      |                   |
| *   | 97          | V4949800 | SUPPORT               | F/PCB     |                   |
| *   | 98          | V4320100 | SUPPORT, SIDE         | AA        |                   |
| *   | 100         | V4321000 | FRONT PANEL           |           | RX-V1 BL (UCA)    |
| *   | 100         | V4321200 | FRONT PANEL           |           | RX-V1 GD (UCA)    |
| *   | 100         | V4515100 | FRONT PANEL           |           | DSP-AX1 BL (RBGT) |
| *   | 100         | V4515300 | FRONT PANEL           |           | DSP-AX1 GD (RBGT) |
| *   | 101         | V4322200 | KNOB, D45             |           | BL                |
| *   | 101         | V4322500 | KNOB, D45             |           | GD                |
| *   | 102         | V5541400 | KNOB                  |           | GD                |
| *   | 102         | V5541300 | KNOB                  |           | BL                |
|     | 105         | VS757200 | KNOB                  | D12P      | BL                |
|     | 105         | VZ891300 | KNOB                  | D12P      | GD                |
|     | 106         | VT275100 | KNOB                  | D12R      | BL                |

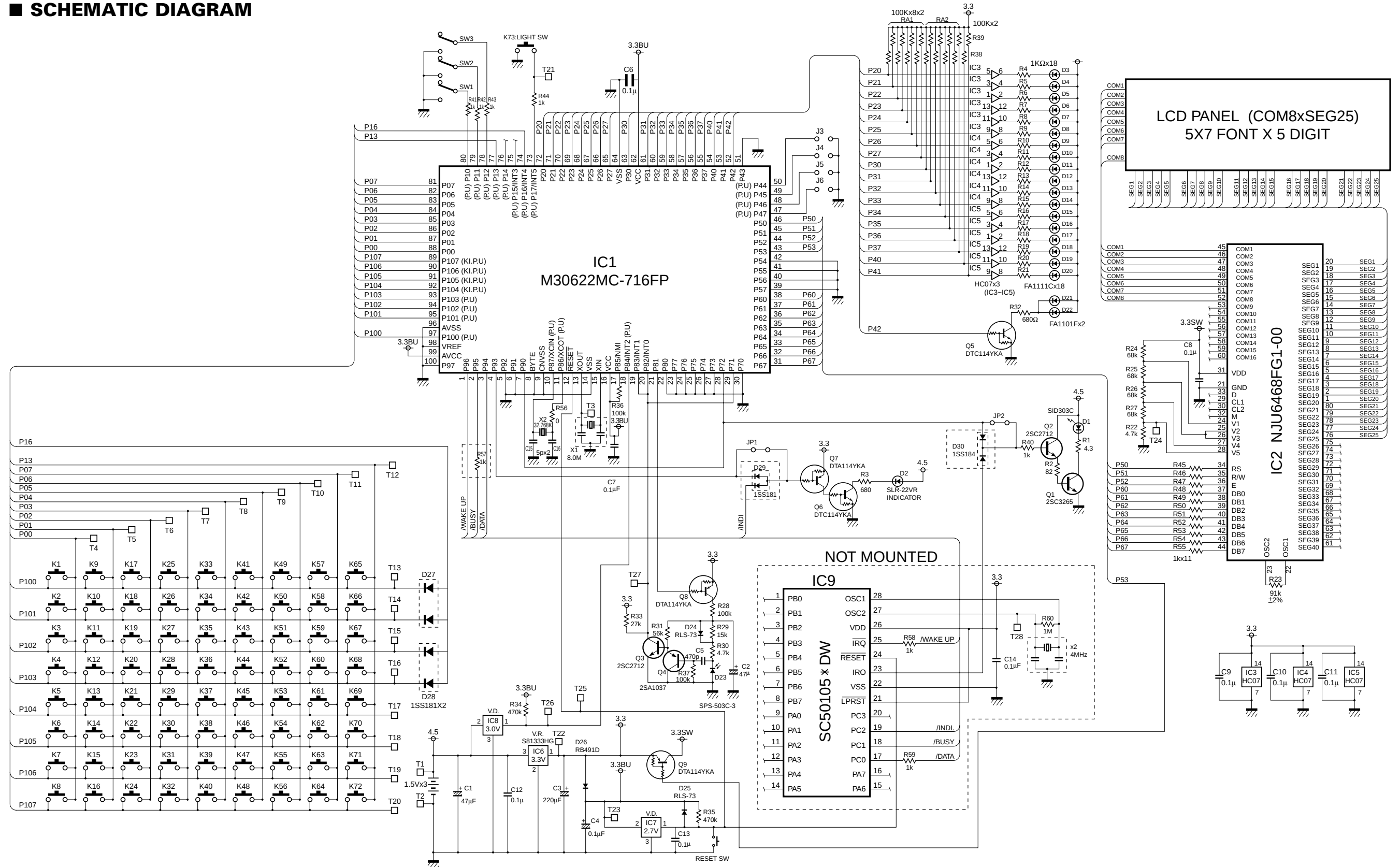
\* New Parts

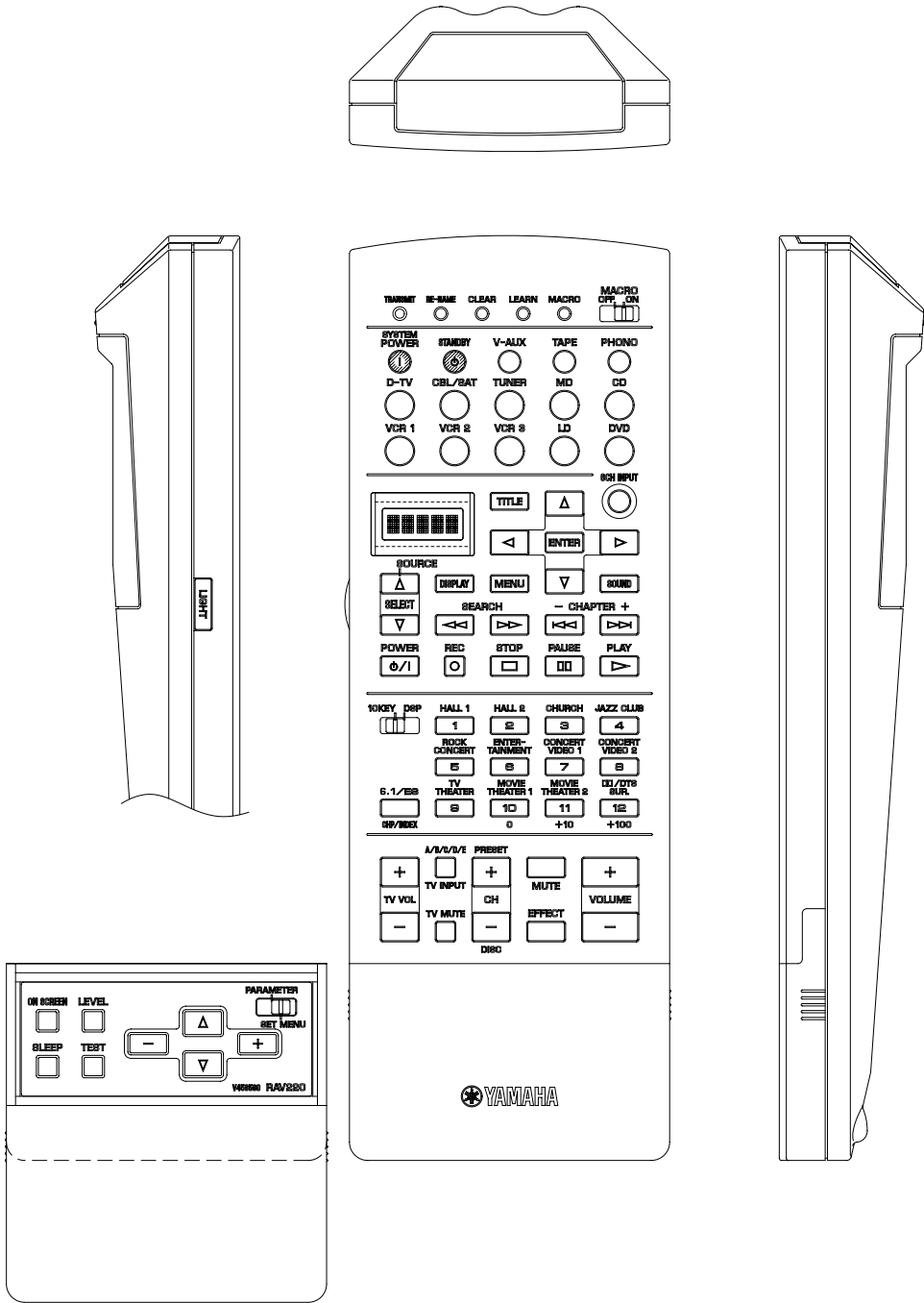
|   | Ref.<br>No. | PART NO. | Description                  | Remarks            | Markets     |
|---|-------------|----------|------------------------------|--------------------|-------------|
|   | 106         | VZ891400 | KNOB                         | D12R               |             |
| * | 108         | V4329700 | WINDOW PANEL, LID            |                    | GD          |
| * | 109         | V4329300 | PLATE SIDE/H190              | CB                 |             |
| * | 110         | V4565700 | PLATE                        | CB                 |             |
|   | 111         | V0042500 | LEG                          | D60xH21            | GD          |
|   | 111         | VS025000 | LEG                          | D60xH21            | BL          |
| * | 112         | V5126500 | SHIELD PLATE                 | TU                 | RX-V1 (UCA) |
| * | 113         | V5118300 | SPACER                       |                    |             |
|   | 114         | VZ822300 | CUSHION, FAN                 |                    |             |
|   | 116         | VZ764800 | DAMPER                       | BLACK              |             |
|   | 117         | VK492200 | DAMPER                       | A                  |             |
|   | 118         | VE222600 | CUSHION                      |                    |             |
|   | 119         | VK706800 | DAMPER                       | TOP                |             |
| * | 120         | V4867300 | PLATE/FUNC                   |                    |             |
|   | 123         | CB605620 | PLASTIC RIVET                | No.1781            |             |
| * | 129         | V5177100 | PLATE/DSP                    |                    |             |
| * | 130         | V5177200 | PLATE/HEAT                   |                    |             |
| * | 140         | V4321800 | PANEL, SIDE                  |                    | BL          |
| * | 140         | V4322000 | PANEL, SIDE                  |                    | GD          |
| * | 141         | V4563800 | SIDE PANEL                   |                    | BL          |
| * | 141         | V4564000 | SIDE PANEL                   |                    | GD          |
| * | 144         | V4656000 | FLAT FILLISTER HEAD SCREW    | 4x12-10 MFZN2-BL   | BL          |
| * | 144         | V4656200 | FLAT FILLISTER HEAD SCREW    | 4x12-10 MFNI33     | GD          |
| * | 145         | V4656300 | SPECIAL SCREW                | 4-7 MFZN2-BL       | BL          |
| * | 145         | V4656500 | SPECIAL SCREW                | 4-7 MFNI33         | GD          |
|   | 152         | VN413300 | BIND HEAD BONDING B-T. SCREW | 3x8 MFZN2-BL       |             |
|   | 155         | EP600190 | BIND HEAD B-TITE SCREW       | 3x8 ZMC2-BL        |             |
|   | 156         | ED330066 | BIND HEAD SCREW              | 3x6 FCRM3-BL       | (R)         |
|   | 157         | EP600530 | BIND HEAD S-TITE SCREW       | 3x8 ZMC2-BL        | (C)         |
|   | 158         | EK930010 | PW HEAD B-TITE SCREW         | 3x8-8 FCRM3-BL     |             |
|   | 159         | VK625000 | CUP S-TITE SCREW             | 5x10-12 ZMC2-Y     |             |
|   | 160         | VK697600 | BIND HEAD B-TITE SCREW       | 3x10 SP ZMC2-Y     |             |
|   | 161         | EP600790 | FLAT HEAD B-TITE SCREW       | 3x8 MFZN2-BL       |             |
|   | 164         | AA627310 | GROUND TERMINAL              |                    |             |
|   | 165         | EV265560 | PLAIN WASHER                 | 3.6x10x0.8 FNM3-3G |             |
|   | 167         | VY731200 | BONDING HEAD TAPPING SCREW   | 3x10 MFNI33        |             |
|   | 169         | EX601850 | SPECIAL SCREW S-TITE         | 4x8-10 FCRM3-BL    | BL          |
|   | 169         | VZ893000 | DECORATED SCREW S-TIGHT      | 4x8-10 MFNI-33     | GD          |
|   | 170         | EP600220 | BIND HEAD B-TITE SCREW       | 3x10 ZMC2-Y        |             |
| * | 171         | V3768900 | SCREW, LOCK                  | 17L-003C41         |             |
| * |             |          | ACCESSORIES                  |                    |             |
| * | 200         | V4565600 | REMOTE CONTROL TRANSMITTER   | RAV220             |             |
|   | 200-1       | AAX12830 | LID                          | 103RRC-170-01R SMK |             |
|   | 200-2       |          | SLIDE COVER                  | 103RRC-171-01R SMK |             |
|   |             | VG850700 | ANTENNA, FM                  | 1.4m               | RX-V1 (UCA) |
|   |             | VQ307400 | AM LOOP ANTENNA              | 81-653-645-110     | RX-V1 (UCA) |
|   |             | VT948000 | ANTENNA ADAPTER              |                    | (UC)        |
|   |             |          | BATTERY(ALKALINE DRY)        | 1.5V LR6(3S)AG     |             |

\* New Parts

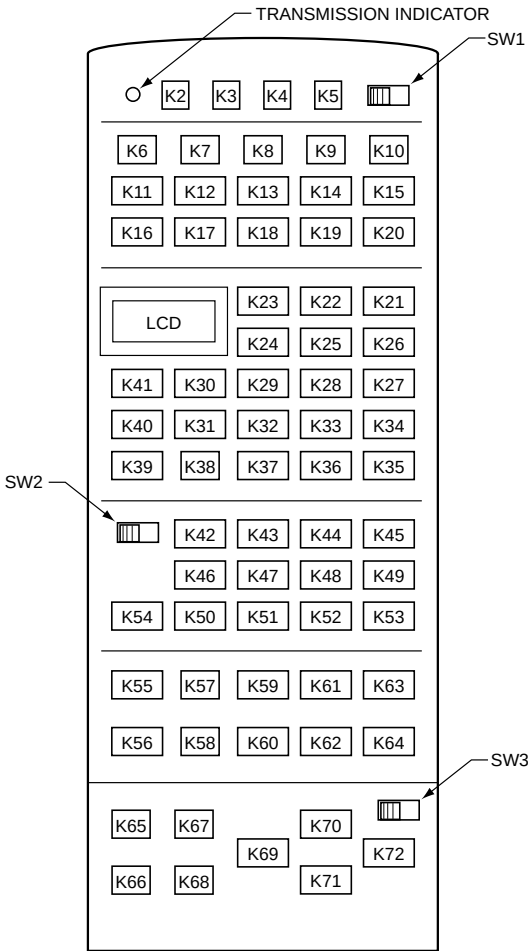
# REMOTE CONTROL TRANSMITTER

## ■ SCHEMATIC DIAGRAM





Key arrangement



Initial code of Yamaha/ヤマハ初期コード・・・1/2

| Key No. | Key Name    | YPC    | DSP<br>* 1 | Zone2<br>* 2 |                                                                                                             |             |             |             |                |              |
|---------|-------------|--------|------------|--------------|-------------------------------------------------------------------------------------------------------------|-------------|-------------|-------------|----------------|--------------|
| 1       | ----        | —      | —          | —            | * 1: Those code are transmitted when "DSP" is set-up as AMP library.<br>AMPライブラリをDSPに設定することで送信される。          |             |             |             |                |              |
| 2       | RE-NAME     | —      | —          | —            |                                                                                                             |             |             |             |                |              |
| 3       | CLEAR       | —      | —          | —            |                                                                                                             |             |             |             |                |              |
| 4       | LEARN       | —      | —          | —            |                                                                                                             |             |             |             |                |              |
| 5       | MACRO       | —      | —          | —            |                                                                                                             |             |             |             |                |              |
| 6       | POWER on    | *7A-1D | 7D-90      | *7A-1D       | * 2: Those code are transmitted when "Zone2" is chosen with Select key.<br>SelectキーによってZone2を選択することで送信される。  |             |             |             |                |              |
| 7       | STANDBY     | 7A-1E  | 7D-91      | 7A-1E        |                                                                                                             |             |             |             |                |              |
| 8       | V-AUX       | 7A-55  | 7D-8A      | 7A-D8        |                                                                                                             |             |             |             |                |              |
| 9       | TAPE        | 7A-18  | 7D-8B      | 7A-D3        |                                                                                                             |             |             |             |                |              |
| 10      | PHONO       | 7A-14  | 7D-88      | 7A-D0        |                                                                                                             |             |             |             |                |              |
| 11      | D-TV        | 7A-54  | 7D-84      | 7A-D9        | *: Transmitting Code of K6, "7A-1D"<br>K6送信コード、"7A-1D"について<br>Full word transmitted twice.<br>ワード部が2回送信される。 |             |             |             |                |              |
| 12      | CBSAT       | 7A-C0  | 7D-96      | 7A-CC        |                                                                                                             |             |             |             |                |              |
| 13      | TUNER       | 7A-16  | 7D-89      | 7A-D2        |                                                                                                             |             |             |             |                |              |
| 14      | MD          | 7A-C9  | 7D-86      | 7A-CF        |                                                                                                             |             |             |             |                |              |
| 15      | CD          | 7A-15  | 7D-87      | 7A-D1        |                                                                                                             |             |             |             |                |              |
| 16      | VCR1        | 7A-0F  | 7D-81      | 7A-D6        | Device not mentioned on this table has no initial code.<br>本表に記載なきデバイスの初期コードはなし。                            |             |             |             |                |              |
| 17      | VCR2        | 7A-13  | 7D-82      | 7A-D7        |                                                                                                             |             |             |             |                |              |
| 18      | VCR3        | 7A-C8  | 7D-85      | 7A-CE        |                                                                                                             |             |             |             |                |              |
| 19      | LD          | 7A-17  | 7D-83      | 7A-D5        |                                                                                                             |             |             |             |                |              |
| 20      | DVD         | 7A-C1  | 7D-97      | 7A-CD        |                                                                                                             |             |             |             |                |              |
| 21      | EXT. DEC.   | 7A-87  | 7D-8C      | 7A-87        |                                                                                                             |             |             |             |                |              |
|         | Device      |        |            |              | DVD<br>(K20)                                                                                                | LD<br>(K19) | CD<br>(K15) | MD<br>(K14) | TUNER<br>(K13) | TAPE<br>(K9) |
| 22      | Up          | →      | →          | →            | 7C-B4                                                                                                       | —           | —           | —           | —              | —            |
| 23      | TITLE       | →      | →          | →            | 7C-B1                                                                                                       | —           | —           | —           | —              | —            |
| 24      | Left        | →      | →          | →            | 7C-B5                                                                                                       | —           | —           | —           | —              | —            |
| 25      | Enter       | →      | →          | →            | 7C-B8                                                                                                       | —           | —           | —           | —              | —            |
| 26      | Right       | →      | →          | →            | 7C-B6                                                                                                       | —           | —           | —           | —              | —            |
| 27      | SOUND       | →      | →          | →            | 7C-AD                                                                                                       | 7C-12       | —           | —           | —              | 7A-06        |
| 28      | Down        | →      | →          | →            | 7C-B3                                                                                                       | —           | —           | —           | —              | —            |
| 29      | MENU        | →      | →          | →            | 7C-B2                                                                                                       | —           | —           | —           | —              | —            |
| 30      | DISPLAY     | →      | →          | →            | 7C-A6                                                                                                       | 7C-13       | 79-0A       | 79-A5       | —              | —            |
| 31      | REW(SEARCH) | →      | →          | →            | 7C-86                                                                                                       | 7C-06       | 7A-0D       | 79-AC       | —              | 7A-01        |
| 32      | FF(SEARCH)  | →      | →          | →            | 7C-87                                                                                                       | 7C-07       | 7A-0C       | 79-AD       | —              | 7A-02        |
| 33      | CHP/SKIP-   | →      | →          | →            | 7C-B9                                                                                                       | 7C-02       | 7A-0B       | 79-AB       | —              | 7A-07        |
| 34      | CHP/SKIP+   | →      | →          | →            | 7C-BA                                                                                                       | 7C-03       | 7A-0A       | 79-AE       | —              | 7A-40        |
| 35      | PLAY        | →      | →          | →            | 7C-82                                                                                                       | 7C-05       | 7A-08       | 79-A8       | —              | 7A-00        |
| 36      | PAUSE       | →      | →          | →            | 7C-83                                                                                                       | 7C-5A       | 7A-09       | 79-A9       | —              | —            |
| 37      | STOP        | →      | →          | →            | 7C-85                                                                                                       | 7C-5B       | 7A-09       | 79-AA       | —              | 7A-03        |
| 38      | REC         | →      | →          | →            | 7C-B7                                                                                                       | —           | —           | 79-AF       | —              | 7A-04        |
| 39      | POWER       | →      | →          | →            | —                                                                                                           | —           | —           | —           | —              | —            |
| 40      | SELECT down | —      | —          | —            | —                                                                                                           | —           | —           | —           | —              | —            |
| 41      | SELECT up   | —      | —          | —            | —                                                                                                           | —           | —           | —           | —              | —            |

\*1: Those code are transmitted when "DSP" is set-up as AMP library.  
AMPライブラリをDSPに設定することで送信される。

\*2: Those code are transmitted when "Zone2" is chosen with Select key.  
SelectキーによってZone2を選択することで送信される。

\*: Transmitting Code of K6, '7A-1D'  
K6送信コード、'7A-1D'について  
Full word transmitted twice.  
ワード部が2回送信される。

Device not mentioned on this table has no initial code.  
本表に記載なきデバイスの初期コードはなし。

Initial code of Yamaha/ヤマハ初期コード・・・2/2

| Key No. | Key Name    | YPC       | DSP * 1  | Zoon2 * 2 | DVD      | LD        | CD       | MD    | TUNER | TAPE |
|---------|-------------|-----------|----------|-----------|----------|-----------|----------|-------|-------|------|
|         | SW2         |           | DSP      |           |          |           |          |       |       |      |
| 42      | PRG1        | 7A-88     | 7D-D0    | 7A-88     | 7C-94    | 7C-17     | 79-11    | 79-85 | 7A-E5 | —    |
| 43      | PRG2        | 7A-89     | 7D-D1    | 7A-89     | 7C-95    | 7C-18     | 79-12    | 79-86 | 7A-E6 | —    |
| 44      | PRG3        | 7A-8A     | 7D-D2    | 7A-8A     | 7C-96    | 7C-19     | 79-13    | 79-87 | 7A-E7 | —    |
| 45      | PRG4        | 7A-8B     | 7D-D3    | 7A-8B     | 7C-97    | 7C-1A     | 79-14    | 79-88 | 7A-E8 | —    |
| 46      | PRG5        | 7A-8C     | 7D-D4    | 7A-8C     | 7C-98    | 7C-1B     | 79-15    | 79-89 | 7A-E9 | —    |
| 47      | PRG6        | 7A-8D     | 7D-D5    | 7A-8D     | 7C-99    | 7C-1C     | 79-16    | 79-8A | 7A-EA | —    |
| 48      | PRG7        | 7A-8E     | 7D-D6    | 7A-8E     | 7C-9A    | 7C-1D     | 79-17    | 79-8B | 7A-EB | —    |
| 49      | PRG8        | 7A-8F     | 7D-D7    | 7A-8F     | 7C-9B    | 7C-1E     | 79-18    | 79-8C | 7A-EC | —    |
| 50      | PRG9        | 7A-90     | 7D-D8    | 7A-90     | 7C-9C    | 7C-1F     | 79-19    | 79-8D | 7A-E1 | —    |
| 51      | PRG10       | 7A-91     | 7D-D9    | 7A-91     | 7C-93    | 7C-16     | 79-10    | 79-8E | 7A-E2 | —    |
| 52      | PRG11       | 7A-92     | 7D-DA    | 7A-92     | 7C-9D    | 7C-5D     | 79-1A    | 79-8F | 7A-E3 | —    |
| 53      | PRG12       | 7A-93     | 7D-DB    | 7A-93     | 7C-9F    | 7C-5E     | 79-0D    | —     | 7A-E4 | —    |
| 54      | Extra       | 7A-97     | 7D-DF    | 7A-97     | 7C-9E    | 7C-15     | 79-0B    | —     | 7A-E0 | —    |
| 55      | TV VOL up   | →         | →        | →         | —        | —         | —        | —     | —     | —    |
| 56      | TV VOL down | →         | →        | →         | —        | —         | —        | —     | —     | —    |
| 57      | TV INPUT    | →         | →        | →         | —        | —         | —        | —     | 7A-12 | —    |
| 58      | TV MUTE     | →         | →        | →         | —        | —         | —        | —     | —     | —    |
| 59      | CH up       | →         | →        | →         | 7C-8B    | —         | 7A-4F    | —     | 7A-10 | —    |
| 60      | CH down     | →         | →        | →         | 7C-8A    | —         | 7A-50    | —     | 7A-11 | —    |
| 61      | MUTE        | 7A-1C     | 7D-94    | 7A-DC     |          |           |          |       |       |      |
| 62      | EFFECT      | 7A-56     | 7D-C1    | 7A-56     |          |           |          |       |       |      |
| 63      | VOL up      | 7A-1A     | 7D-8D    | 7A-DA     |          |           |          |       |       |      |
| 64      | VOL down    | 7A-1B     | 7D-8E    | 7A-DB     |          |           |          |       |       |      |
|         | SW3         | Parameter | Set Menu | Parameter | Set Menu | Parameter | Set Menu |       |       |      |
| 65      | ON SCREEN   | 7A-C2     | 7D-C2    | 7A-C2     |          |           |          |       |       |      |
| 66      | SLEEP       | 7A-57     | 7D-93    | 7A-57     |          |           |          |       |       |      |
| 67      | LEVEL       | 7A-86     | 7D-95    | 7A-86     |          |           |          |       |       |      |
| 68      | TEST        | 7A-85     | 7D-CA    | 7A-85     |          |           |          |       |       |      |
| 69      | LEFT        | 7A-C7     | 7A-9F    | 7D-C7     | 7D-9F    | 7A-C7     | 7A-9F    |       |       |      |
| 70      | UP          | 7A-C5     | 7A-9D    | 7D-C5     | 7D-9D    | 7A-C5     | 7A-9D    |       |       |      |
| 71      | DOWN        | 7A-C4     | 7A-9C    | 7D-C4     | 7D-9C    | 7A-C4     | 7A-9C    |       |       |      |
| 72      | RIGHT       | 7A-C6     | 7A-9E    | 7D-C6     | 7D-9E    | 7A-C6     | 7A-9E    |       |       |      |

Key type table/キー種別表

| No. | Key Name    | Learn<br>*1 | Macro<br>*2 | Device<br>*3 | Illumi<br>*4 |
|-----|-------------|-------------|-------------|--------------|--------------|
| 1   | ----        | —           | —           | —            | —            |
| 2   | RE-NAME     | —           | —           | —            | —            |
| 3   | CLEAR       | —           | —           | —            | —            |
| 4   | LEARN       | —           | —           | —            | —            |
| 5   | MACRO       | —           | —           | —            | —            |
| 6   | POWER on    | ○           | ○           | —            | —            |
| 7   | STANDBY     | ○           | ○           | —            | —            |
| 8   | V-AUX       | ○           | ○           | ○            | —            |
| 9   | TAPE        | ○           | ○           | ○            | —            |
| 10  | PHONO       | ○           | ○           | ○            | —            |
| 11  | D-TV        | ○           | ○           | ○            | —            |
| 12  | CBSAT       | ○           | ○           | ○            | —            |
| 13  | TUNER       | ○           | ○           | ○            | —            |
| 14  | MD          | ○           | ○           | ○            | —            |
| 15  | CD          | ○           | ○           | ○            | —            |
| 16  | VCR1        | ○           | ○           | ○            | —            |
| 17  | VCR2        | ○           | ○           | ○            | —            |
| 18  | VCR3        | ○           | ○           | ○            | —            |
| 19  | LD          | ○           | ○           | ○            | —            |
| 20  | DVD         | ○           | ○           | ○            | —            |
| 21  | EXT. DEC.   | ○           | —           | —            | —            |
| 22  | Up          | ○           | —           | —            | D3           |
| 23  | TITLE       | ○           | —           | —            | D4           |
| 24  | Left        | ○           | —           | —            | D5           |
| 25  | Enter       | ○           | —           | —            | D6           |
| 26  | Right       | ○           | —           | —            | D7           |
| 27  | SOUND       | ○           | —           | —            | D8           |
| 28  | Down        | ○           | —           | —            | D9           |
| 29  | MENU        | ○           | —           | —            | D10          |
| 30  | DISPLAY     | ○           | —           | —            | D11          |
| 31  | REW(SEARCH) | ○           | —           | —            | D12          |
| 32  | FF(SEARCH)  | ○           | —           | —            | D13          |
| 33  | CHP/SKIP-   | ○           | —           | —            | D14          |
| 34  | CHP/SKIP+   | ○           | —           | —            | D15          |
| 35  | PLAY        | ○           | —           | —            | D16          |
| 36  | PAUSE       | ○           | —           | —            | D17          |
| 37  | STOP        | ○           | —           | —            | D18          |
| 38  | REC         | ○           | —           | —            | D19          |
| 39  | POWER       | ○           | —           | —            | D20          |
| 40  | SELECT down | —           | —           | ○            | —            |
| 41  | SELECT up   | —           | —           | ○            | —            |
| 42  | PRG1        | ○           | —           | —            | —            |
| 43  | PRG2        | ○           | —           | —            | —            |
| 44  | PRG3        | ○           | —           | —            | —            |
| 45  | PRG4        | ○           | —           | —            | —            |
| 46  | PRG5        | ○           | —           | —            | —            |
| 47  | PRG6        | ○           | —           | —            | —            |
| 48  | PRG7        | ○           | —           | —            | —            |
| 49  | PRG8        | ○           | —           | —            | —            |
| 50  | PRG9        | ○           | —           | —            | —            |
| 51  | PRG10       | ○           | —           | —            | —            |
| 52  | PRG11       | ○           | —           | —            | —            |
| 53  | PRG12       | ○           | —           | —            | —            |
| 54  | Extra       | ○           | —           | —            | —            |
| 55  | TV VOL up   | ○           | —           | —            | —            |
| 56  | TV VOL down | ○           | —           | —            | —            |
| 57  | TV INPUT    | ○           | —           | —            | —            |
| 58  | TV MUTE     | ○           | —           | —            | —            |
| 59  | CH up       | ○           | —           | —            | —            |
| 60  | CH down     | ○           | —           | —            | —            |
| 61  | MUTE        | ○           | —           | —            | —            |
| 62  | EFFECT      | ○           | —           | —            | —            |
| 63  | VOL up      | ○           | —           | —            | —            |
| 64  | VOL down    | ○           | —           | —            | —            |
| 65  | ON SCREEN   | ○           | —           | —            | —            |
| 66  | SLEEP       | ○           | —           | —            | —            |
| 67  | LEVEL       | ○           | —           | —            | —            |
| 68  | TEST        | ○           | —           | —            | —            |
| 69  | LEFT        | ○           | —           | —            | —            |
| 70  | UP          | ○           | —           | —            | —            |
| 71  | DOWN        | ○           | —           | —            | —            |
| 72  | RIGHT       | ○           | —           | —            | —            |

\*1; The key which has ○ is learning key.  
○のキーが学習可能キー

\*2; The key which has ○ is Macro transmitting key.  
○のキーがマクロ送信登録可能キー

\*3; The key which has ○ is for Device select.  
○のキーはデバイス選択キー

\*4; The key which has D\* \* is Illuminated key.  
D\* \*表記のあるキーが照光キー  
(D\* \*: LED Assign/LED アサインを示す)

Key Function of K22 - K60/K22～K60のキーファンクション

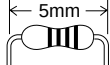
|    | Device      | DVD                | LD           | VCR3         | VCR2         | VCR1         | CD           | MD           | TUNER            | CBSAT              | D-TV         | PHONO        | TAPE         | V-AUX        | OPTN         |
|----|-------------|--------------------|--------------|--------------|--------------|--------------|--------------|--------------|------------------|--------------------|--------------|--------------|--------------|--------------|--------------|
| 22 | Up          | Menu up            | —            | —            | —            | —            | —            | —            | —                | Menu up            | —            | —            | —            | —            | —            |
| 23 | TITLE       | Title              | —            | —            | —            | —            | —            | —            | —                | —                  | —            | —            | —            | —            | —            |
| 24 | Left        | Menu left          | —            | —            | —            | —            | —            | —            | —                | Menu left          | —            | —            | —            | —            | —            |
| 25 | Enter       | Menu enter         | —            | —            | —            | —            | —            | —            | —                | Menu select        | —            | —            | —            | —            | —            |
| 26 | Right       | Menu right         | —            | —            | —            | —            | —            | —            | —                | Menu right         | —            | —            | —            | —            | —            |
| 27 | SOUND       | Audio              | Audio        | —            | —            | —            | —            | —            | —                | —                  | —            | —            | A/B          | —            | —            |
| 28 | Down        | Menu down          | —            | —            | —            | —            | —            | —            | —                | Menu down          | —            | —            | —            | —            | —            |
| 29 | MENU        | MENU               | —            | —            | —            | —            | —            | —            | —                | MENU               | —            | —            | —            | —            | —            |
| 30 | DISPLAY     | Display            | Display      | —            | —            | —            | Display      | Display      | —                | Display            | Display      | —            | —            | —            | —            |
| 31 | REW(SEARCH) | Rew                | Rew          | Rew          | Rew          | Rew          | Rew          | Rew          | —                | (VCR1 Rew)         | (VCR1 Rew)   | —            | Rew          | —            | —            |
| 32 | FF(SEARCH)  | FF                 | FF           | FF           | FF           | FF           | FF           | FF           | —                | (VCR1 FF)          | (VCR1 FF)    | —            | FF           | —            | —            |
| 33 | CHP/SKIP-   | Skip-              | Chap/Skip-   | —            | —            | —            | Skip-        | Skip-        | —                | —                  | —            | —            | DIR A        | —            | —            |
| 34 | CHP/SKIP+   | Skip+              | Chap/Skip+   | —            | —            | —            | Skip+        | Skip+        | —                | —                  | —            | —            | DIR B        | —            | —            |
| 35 | PLAY        | Play               | Play         | Play         | Play         | Play         | Play         | Play         | —                | (VCR1 Play)        | (VCR1 Play)  | —            | Play         | —            | —            |
| 36 | PAUSE       | Pause              | Pause        | Pause        | Pause        | Pause        | Pause        | Pause        | —                | (VCR1 Pause)       | (VCR1 Pause) | —            | Pause        | —            | —            |
| 37 | STOP        | Stop               | Stop         | Stop         | Stop         | Stop         | Stop         | Stop         | —                | (VCR1 Stop)        | (VCR1 Stop)  | —            | Stop         | —            | —            |
| 38 | REC         | Return             | —            | REC          | REC          | REC          | —            | REC          | —                | (VCR1 REC)         | (VCR1 REC)   | —            | REC          | —            | —            |
| 39 | POWER       | Power              | Power        | Power        | Power        | Power        | Power        | Power        | Power            | Power              | Power        | —            | Power        | —            | —            |
| 40 | SELECT down | Device select down |              |              |              |              |              |              |                  | Device select down |              |              |              |              |              |
| 41 | SELECT up   | Device select up   |              |              |              |              |              |              |                  | Device select up   |              |              |              |              |              |
| 42 | PRG1        | 1                  | 1            | 1            | 1            | 1            | 1            | 1            | P1               | 1                  | 1            | —            | —            | —            | —            |
| 43 | PRG2        | 2                  | 2            | 2            | 2            | 2            | 2            | 2            | P2               | 2                  | 2            | —            | —            | —            | —            |
| 44 | PRG3        | 3                  | 3            | 3            | 3            | 3            | 3            | 3            | P3               | 3                  | 3            | —            | —            | —            | —            |
| 45 | PRG4        | 4                  | 4            | 4            | 4            | 4            | 4            | 4            | P4               | 4                  | 4            | —            | —            | —            | —            |
| 46 | PRG5        | 5                  | 5            | 5            | 5            | 5            | 5            | 5            | P5               | 5                  | 5            | —            | —            | —            | —            |
| 47 | PRG6        | 6                  | 6            | 6            | 6            | 6            | 6            | 6            | P6               | 6                  | 6            | —            | —            | —            | —            |
| 48 | PRG7        | 7                  | 7            | 7            | 7            | 7            | 7            | 7            | P7               | 7                  | 7            | —            | —            | —            | —            |
| 49 | PRG8        | 8                  | 8            | 8            | 8            | 8            | 8            | 8            | P8               | 8                  | 8            | —            | —            | —            | —            |
| 50 | PRG9        | 9                  | 9            | 9            | 9            | 9            | 9            | 9            | B                | 9                  | 9            | —            | —            | —            | —            |
| 51 | PRG10       | 0                  | 0            | 0/10         | 0/10         | 0/10         | 0            | 0            | C                | 0                  | 0/10         | —            | —            | —            | —            |
| 52 | PRG11       | +10                | +10          | —            | —            | —            | +10          | +10          | D                | Recall             | —            | —            | —            | —            | —            |
| 53 | PRG12       | Clear              | Clear        | —            | —            | —            | +100DISC     | Clear        | E                | —                  | —            | —            | —            | —            | —            |
| 54 | Extra       | Title/index        | CHP/Time     | TV/VIDEO     | TV/VIDEO     | TV/VIDEO     | enter        | —            | A                | enter              | enter        | —            | —            | —            | —            |
| 55 | TV VOL up   | (TVVOL up)         | (TVVOL up)   | (TVVOL up)   | (TVVOL up)   | (TVVOL up)   | (TVVOL up)   | (TVVOL up)   | —                | (TVVOL up)         | TVVOL up     | (TVVOL up)   | (TVVOL up)   | (TVVOL up)   | (TVVOL up)   |
| 56 | TV VOL down | (TVVOL down)       | (TVVOL down) | (TVVOL down) | (TVVOL down) | (TVVOL down) | (TVVOL down) | (TVVOL down) | —                | (TVVOL down)       | TVVOL down   | (TVVOL down) | (TVVOL down) | (TVVOL down) | (TVVOL down) |
| 57 | TV INPUT    | (TV Input)         | (TV Input)   | (TV Input)   | (TV Input)   | (TV Input)   | (TV Input)   | (TV Input)   | A/B/C/D/E, FM/AM | (TV Input)         | TV Input     | (TV Input)   | (TV Input)   | (TV Input)   | (TV Input)   |
| 58 | TV MUTE     | (TV Mute)          | (TV Mute)    | (TV Mute)    | CH up        | (TV Mute)    | (TV Mute)    | (TV Mute)    | —                | (TV Mute)          | TV Mute      | (TV Mute)    | (TV Mute)    | (TV Mute)    | (TV Mute)    |
| 59 | CH up       | DISC+              | DISC+        | CH up        | CH down      | CH up        | DISC+        | —            | PRESET+          | CH up              | CH up        | —            | —            | —            | —            |
| 60 | CH down     | DISC-              | DISC-        | CH down      | —            | CH down      | DISC-        | —            | PRESET-          | CH down            | CH down      | —            | —            | —            | —            |

Initial Macro setup/初期登録マクロ

| Key | Key Name | 1  | 2      | 3          | 4～10 |
|-----|----------|----|--------|------------|------|
| 6   | POWER on | K6 | K39 TV | —          | —    |
| 7   | STANDBY  | K7 | —      | —          | —    |
| 8   | V-AUX    | K6 | K8     | —          | —    |
| 9   | PHONO    | K6 | K9     | —          | —    |
| 10  | TAPE     | K6 | K10    | K35 : TAPE | —    |
| 11  | TV       | K6 | K11    | —          | —    |
| 12  | DBS      | K6 | K12    | —          | —    |
| 13  | TUNER    | K6 | K13    | —          | —    |
| 14  | CD       | K6 | K14    | K35 : CD   | —    |
| 15  | MD       | K6 | K15    | K35 : MD   | —    |
| 16  | VCR1     | K6 | K16    | K35 : VCR1 | —    |
| 17  | VCR2     | K6 | K17    | K35 : VCR2 | —    |
| 18  | VCR3     | K6 | K18    | K35 : VCR3 | —    |
| 19  | LD       | K6 | K19    | K35 : LD   | —    |
| 20  | DVD      | K6 | K20    | K35 : DVD  | —    |



Parts List for Carbon Resistors

| Value  | 1/4W Type Part No. | 1/6W Type Part No. | Value  | 1/4W Type Part No.                                                                                                                                                                                                                                                                                                                                                        | 1/6W Type Part No. |
|--------|--------------------|--------------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| 1.0 Ω  | HJ35 3100          | HF85 3100          | 10 kΩ  | HF45 7100                                                                                                                                                                                                                                                                                                                                                                 | HF45 7100          |
| 1.8 Ω  | HJ35 3180          | ※                  | 11 kΩ  | HF45 7110                                                                                                                                                                                                                                                                                                                                                                 | HF45 7110          |
| 2.2 Ω  | HJ35 3220          | HF85 3220          | 12 kΩ  | HJ35 7120                                                                                                                                                                                                                                                                                                                                                                 | HF85 7120          |
| 3.3 Ω  | HJ35 3330          | HF85 3330          | 13 kΩ  | HF45 7130                                                                                                                                                                                                                                                                                                                                                                 | HF45 7130          |
| 4.7 Ω  | HJ35 3470          | HF85 3470          | 15 kΩ  | HF45 7150                                                                                                                                                                                                                                                                                                                                                                 | HF45 7150          |
| 5.6 Ω  | HJ35 3560          | HF85 3560          | 18 kΩ  | HF45 7180                                                                                                                                                                                                                                                                                                                                                                 | HF45 7180          |
| 10 Ω   | HF45 4100          | HF45 4100          | 22 kΩ  | HF45 7220                                                                                                                                                                                                                                                                                                                                                                 | HF45 7220          |
| 15 Ω   | HJ35 4150          | HF85 4150          | 24 kΩ  | HF45 7240                                                                                                                                                                                                                                                                                                                                                                 | HF45 7240          |
| 22 Ω   | HF45 4220          | HF45 4220          | 27 kΩ  | HJ35 7270                                                                                                                                                                                                                                                                                                                                                                 | HF85 7270          |
| 27 Ω   | HJ35 4270          | HF85 4270          | 30 kΩ  | HF45 7300                                                                                                                                                                                                                                                                                                                                                                 | HF45 7300          |
| 33 Ω   | HF45 4330          | HF45 4330          | 33 kΩ  | HF45 7330                                                                                                                                                                                                                                                                                                                                                                 | HF45 7330          |
| 39 Ω   | HJ35 4470          | HF85 4390          | 36 kΩ  | HF45 7360                                                                                                                                                                                                                                                                                                                                                                 | HF45 7360          |
| 47 Ω   | HF45 4470          | HF45 4470          | 39 kΩ  | HF45 7390                                                                                                                                                                                                                                                                                                                                                                 | HF45 7390          |
| 56 Ω   | HF45 4560          | HF45 4560          | 47 kΩ  | HF45 7470                                                                                                                                                                                                                                                                                                                                                                 | HF45 7470          |
| 68 Ω   | HF45 4680          | HF45 4680          | 51 kΩ  | HF45 7510                                                                                                                                                                                                                                                                                                                                                                 | HF45 7510          |
| 75 Ω   | HF45 4750          | HF45 4750          | 56 kΩ  | HF45 7560                                                                                                                                                                                                                                                                                                                                                                 | HF45 7560          |
| 82 Ω   | HF45 4820          | HF45 4820          | 62 kΩ  | HF45 7620                                                                                                                                                                                                                                                                                                                                                                 | HF45 7620          |
| 91 Ω   | HF45 4910          | HF45 4910          | 68 kΩ  | HF45 7680                                                                                                                                                                                                                                                                                                                                                                 | HF45 7680          |
| 100 Ω  | HF45 5100          | HF45 5100          | 82 kΩ  | HF45 7820                                                                                                                                                                                                                                                                                                                                                                 | HF45 7820          |
| 110 Ω  | HJ35 5110          | HF85 5110          | 91 kΩ  | HF45 7910                                                                                                                                                                                                                                                                                                                                                                 | HF45 7910          |
| 120 Ω  | HF45 5120          | HF45 5120          | 100 kΩ | HF45 8100                                                                                                                                                                                                                                                                                                                                                                 | HF45 8100          |
| 150 Ω  | HF45 5150          | HF45 5150          | 110 kΩ | HF45 8110                                                                                                                                                                                                                                                                                                                                                                 | HF45 8110          |
| 160 Ω  | HJ35 5160          | ※                  | 120 kΩ | HF45 8120                                                                                                                                                                                                                                                                                                                                                                 | HF45 8120          |
| 180 Ω  | HF45 5180          | HF45 5180          | 150 kΩ | HF45 8150                                                                                                                                                                                                                                                                                                                                                                 | HF45 8150          |
| 200 Ω  | HF45 5200          | HF45 5200          | 180 kΩ | HF45 8180                                                                                                                                                                                                                                                                                                                                                                 | HF45 8180          |
| 220 Ω  | HF45 5220          | HF45 5220          | 220 kΩ | HJ35 8220                                                                                                                                                                                                                                                                                                                                                                 | HF85 8220          |
| 270 Ω  | HF45 5270          | HF45 5270          | 270 kΩ | HF45 8270                                                                                                                                                                                                                                                                                                                                                                 | HF45 8270          |
| 330 Ω  | HF45 5330          | HF45 5330          | 300 kΩ | HF45 8300                                                                                                                                                                                                                                                                                                                                                                 | HF45 8300          |
| 390 Ω  | HF45 5390          | HF45 5390          | 330 kΩ | HF45 8330                                                                                                                                                                                                                                                                                                                                                                 | HF45 8330          |
| 430 Ω  | HF45 5430          | HF45 5430          | 390 kΩ | HJ35 8390                                                                                                                                                                                                                                                                                                                                                                 | HF85 8390          |
| 470 Ω  | HF45 5470          | HF45 5470          | 470 kΩ | HF45 8470                                                                                                                                                                                                                                                                                                                                                                 | HF45 8470          |
| 510 Ω  | HF45 5510          | HF45 5510          | 560 kΩ | HJ35 8560                                                                                                                                                                                                                                                                                                                                                                 | HF85 8560          |
| 560 Ω  | HF45 5560          | HF45 5560          | 680 kΩ | HJ35 8680                                                                                                                                                                                                                                                                                                                                                                 | HF85 8680          |
| 680 Ω  | HF45 5680          | HF45 5680          | 820 kΩ | HJ35 8820                                                                                                                                                                                                                                                                                                                                                                 | HF85 8820          |
| 820 Ω  | HF45 5820          | HF45 5820          | 1.0 MΩ | HF45 9100                                                                                                                                                                                                                                                                                                                                                                 | HF45 9100          |
| 910 Ω  | HF45 5910          | HF45 5910          | 1.2 MΩ | HJ35 9120                                                                                                                                                                                                                                                                                                                                                                 | ※                  |
| 1.0 kΩ | HF45 6100          | HF45 6100          | 1.5 MΩ | HJ35 9150                                                                                                                                                                                                                                                                                                                                                                 | HF85 9150          |
| 1.2 kΩ | HF45 6120          | HF45 6120          | 1.8 MΩ | HJ35 9180                                                                                                                                                                                                                                                                                                                                                                 | HF85 9180          |
| 1.5 kΩ | HF45 6150          | HF45 6150          | 2.2 MΩ | HJ35 9220                                                                                                                                                                                                                                                                                                                                                                 | HF85 9220          |
| 1.8 kΩ | HF45 6180          | HF45 6180          | 3.3 MΩ | HJ35 9330                                                                                                                                                                                                                                                                                                                                                                 | HF85 9330          |
| 2.0 kΩ | HJ35 6200          | HF85 6200          | 3.9 MΩ | HJ35 9390                                                                                                                                                                                                                                                                                                                                                                 | ※                  |
| 2.2 kΩ | HF45 6220          | HF45 6220          | 4.7 MΩ | HJ35 9470                                                                                                                                                                                                                                                                                                                                                                 | HF85 9470          |
| 2.4 kΩ | HJ35 6240          | HF85 6240          |        |                                                                                                                                                                                                                                                                                                                                                                           |                    |
| 2.7 kΩ | HF45 6270          | HF45 6270          |        |                                                                                                                                                                                                                                                                                                                                                                           |                    |
| 3.0 kΩ | HF45 6300          | HF45 6300          |        | <div><div><div>1/4W Type</div><div>HJ35 ○○○○</div><div>← 10mm →</div><div></div></div><div><div>1/6W Type</div><div>HF45 ○○○○</div><div>HF85 ○○○○</div><div>← 5mm →</div><div></div></div></div> |                    |
| 3.3 kΩ | HF45 6330          | HF45 6330          |        |                                                                                                                                                                                                                                                                                                                                                                           |                    |
| 3.6 kΩ | HJ35 6360          | HF85 6360          |        |                                                                                                                                                                                                                                                                                                                                                                           |                    |
| 3.9 kΩ | HF45 6390          | HF45 6390          |        |                                                                                                                                                                                                                                                                                                                                                                           |                    |
| 4.7 kΩ | HF45 6470          | HF45 6470          |        |                                                                                                                                                                                                                                                                                                                                                                           |                    |
| 5.1 kΩ | HF45 6510          | HF45 6510          |        |                                                                                                                                                                                                                                                                                                                                                                           |                    |
| 5.6 kΩ | HF45 6560          | HF45 6560          |        |                                                                                                                                                                                                                                                                                                                                                                           |                    |
| 6.8 kΩ | HF45 6680          | HF45 6680          |        |                                                                                                                                                                                                                                                                                                                                                                           |                    |
| 8.2 kΩ | HF45 6820          | HF45 6820          |        |                                                                                                                                                                                                                                                                                                                                                                           |                    |
| 9.1 kΩ | HF45 6910          | HF45 6910          |        |                                                                                                                                                                                                                                                                                                                                                                           |                    |

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