

Service Manual

Stereo Synthesizer Tuner

Tuner

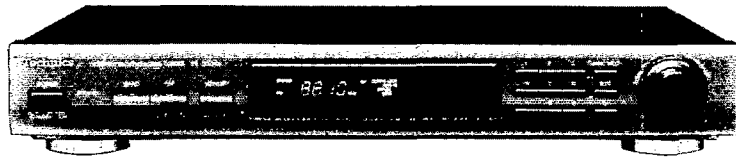
ST-GT350

Colour

(K)... Black Type

Area

Suffix for Model No.	Area	Colour
(E)	Europe.	(K)
(EB)	Great Britain.	
(EF)	France.	
(EG)	Germany.	
(EI)	Italy.	
(EP)	Poland.	
(GC)	Asia, Latin America, Middle Near East and Africa.	
(GN)	Oceania.	



■ SPECIFICATIONS (DIN 45 500)

■ FM TUNER SECTION

Frequency range	87.50–108.00 MHz (0.05 MHz steps)
Sensitivity	1.5 μ V (IHF, usable)
S/N 30 dB	1.3 μ V (75 Ω)
S/N 26 dB	1.2 μ V (75 Ω)
S/N 20 dB	0.9 μ V (75 Ω)
IHF 46 dB stereo quieting sensitivity	28 μ V (75 Ω)
Total harmonic distortion	
MONO	0.2%
STEREO	0.3%
S/N	
MONO	70 dB (75 dB, IHF)
STEREO	65 dB (70 dB, IHF)
Frequency response	20 Hz–15 kHz, +0.5 dB to –1.5 dB
Alternate channel selectivity	
\pm 400 kHz	65 dB
Capture ratio	1.0 dB
Image rejection at 98 MHz	45 dB
IF rejection at 98 MHz	90 dB
Spurious response rejection at 98 MHz	75 dB
AM suppression	55 dB
Stereo separation	
1 kHz	40 dB
Carrier leak	
19 kHz	–30 dB (–35 dB, IHF)
38 kHz	–50 dB (–55 dB, IHF)
Channel balance (250 Hz–6.3 kHz)	\pm 1.5 dB
Limiting point	1.2 μ V
Bandwidth	
IF amplifier	180 kHz
FM demodulator	1000 kHz
Antenna terminal(s)	75 Ω (unbalanced)

■ GENERAL

Output voltage	
for (E) (EB) areas	0.3 V (0.6 V, IHF)
for (EG, EI) areas	0.6 V (1.2 V, IHF)
Power consumption	9 W
Power supply	
for (GC) area	AC 50 Hz/60 Hz, 110 V–127 V/220 V–240 V
for others	AC 50 Hz/60 Hz, 230 V–240 V
Dimensions (W \times H \times D)	430 \times 69.3 \times 301 mm
Weight	2.6 kg

■ AM TUNER SECTION

Frequency range	
for (E, EB, EF, EP) areas	
MW	522 kHz~1611 kHz (9-kHz steps)
	530 kHz~1620 kHz (10-kHz steps)
LW	144 kHz~288 kHz (9-kHz steps)
for (EG, EI, GC, GN) areas	
AM	522 kHz~1611 kHz (9-kHz steps)
	530 kHz~1620 kHz (10-kHz steps)
Sensitivity (S/N 20 dB)	
for (E, EB, EF, EP) areas	
MW (at 999 kHz)	20 μ V, 600 μ V/m
LW (at 216 kHz)	150 μ V
for (EG, EI, GC, GN) areas	
AM (at 999 kHz)	20 μ V, 600 μ V/m
Selectivity (\pm 9 kHz)	
for (E, EB, EF, EP) areas	
MW (at 999 kHz)	40 dB
LW (at 216 kHz)	40 dB
for (EG, EI, GC, GN) areas	
AM (at 999 kHz)	40 dB
Image rejection	
for (E, EB, EF, EP) areas	
MW (at 999 kHz)	40 dB
LW (at 216 kHz)	40 dB
for (EG, EI, GC, GN) areas	
AM (at 999 kHz)	40 dB
IF rejection	
for (E, EB, EF, EP) areas	
MW (at 999 kHz)	50 dB
LW (at 216 kHz)	50 dB
for (EG, EI, GC, GN) areas	
AM (at 999 kHz)	50 dB

Notes:

- Design and specifications are subject to change without notice.
Weight and dimensions are approximate.
- Total harmonic distortion is measured by the digital spectrum analyzer.

Technics

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■ CAUTION FOR AC MAINS LEAD

("EB" area code model only)

For your safety, please read the following text carefully.

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.

A 5-ampere fuse is fitted in this plug.

Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5-ampere and that it is approved by ASTA or BSI to BS1362.

Check for the ASTA mark  or the BSI mark  on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.

If you lose the fuse cover the plug must not be used until a replacement cover is obtained.

A replacement fuse cover can be purchased from your local dealer.

CAUTION!

IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY.

THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

If a new plug is to be fitted please observe the wiring code as shown below.

If in any doubt please consult a qualified electrician.

IMPORTANT

The wires in this mains lead are coloured in accordance with the following code:


Blue: Neutral

Brown: Live

As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

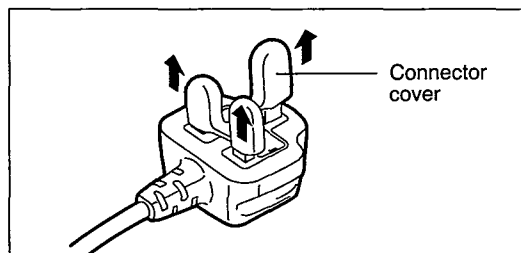
The wire which is coloured BLUE must be connected to the terminal in the plug which is marked with the letter N or coloured BLACK.

The wire which is coloured BROWN must be connected to the terminal in the plug which is marked with the letter L or coloured RED.

Under no circumstances should either of these wires be connected to the earth terminal of the three pin plug, marked with the letter E or the Earth Symbol .

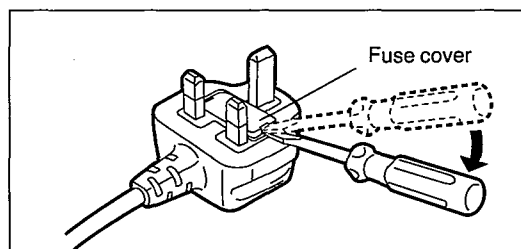
Before use

Remove the connector cover as follows.

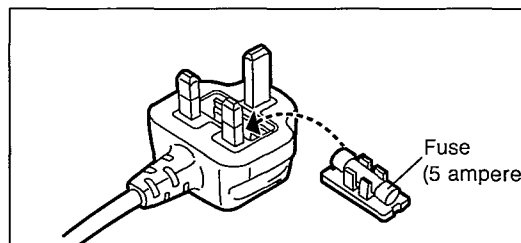


How to replace the fuse

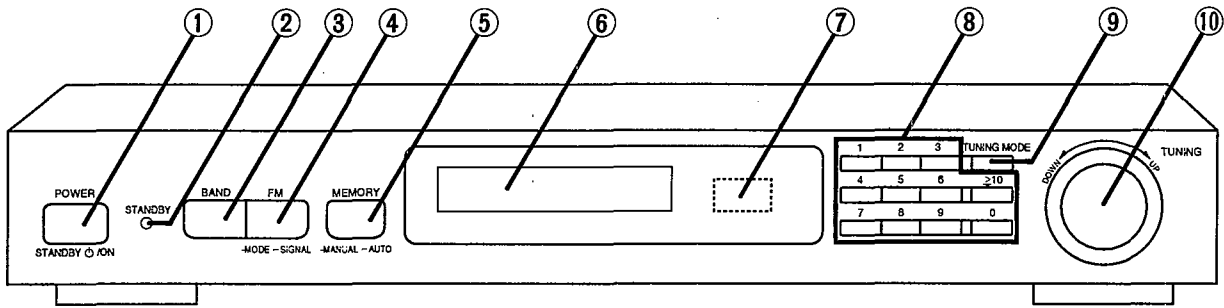
1. Remove the fuse cover with a screwdriver.



2. Replace the fuse and attach the fuse cover.



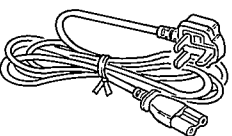
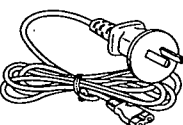
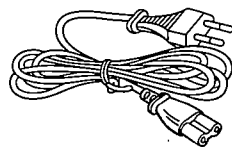
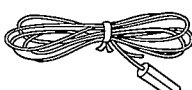
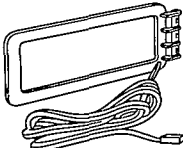
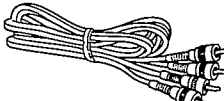

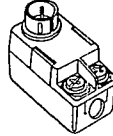

FRONT PANEL CONTROLS



No.	Name
①	Power “STANDBY ON” switch (POWER, STANDBY ON) Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.
②	“STANDBY” indicator (STANDBY) When the unit is connected to the AC mains supply, this indicator lights up in standby mode and goes out when the unit is turned on.
③	Band select button (BAND)
④	FM mode select/FM signal-strength indication button (FM)
⑤	Memory button (MEMORY)

No.	Name
⑥	Display
⑦	Remote control signal sensor When connecting a Technics amplifier with the remote control transmitter to this unit, you can operate this unit using a remote control transmitter of the amplifier. (See the operating instructions of the amplifier.)
⑧	Preset-tuning buttons (1 – 0, ≥10)
⑨	Tuning mode select button (TUNING MODE)
⑩	Tuning control (TUNING)

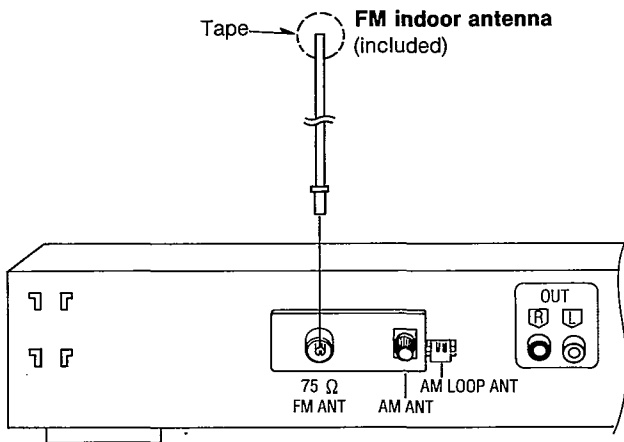
ACCESSORIES

AC power supply cord 1 pc. (For (EB) area) (VJA0733)	(For (GN) area) (RJA0036-K)	(For others) (RJA0019-2K)	FM indoor antenna 1 pc. (RSA0007)
			
AM loop antenna set (RSA0010) AM loop antenna 1 pc. AM antenna holder (RMN0244) 1 pc. Screw (XTN3+10AFZ) 1 pc.	Stereo connection 1 pc. cable (SJP2276)	Attachment plug 1 pc. (SJP9009) (For (EB) area only)	Antenna plug (RFE0014) 1 pc. (For (GC, GN) areas only)
			
	Power plug adaptor 1 pc. (SJP5213-1) (For (GC) area only)		
			

CONNECTIONS

To connect the FM antenna

FM indoor antenna (included)



Attach to a wall (using a tape) facing in the direction of best reception.

For best reception sound quality:

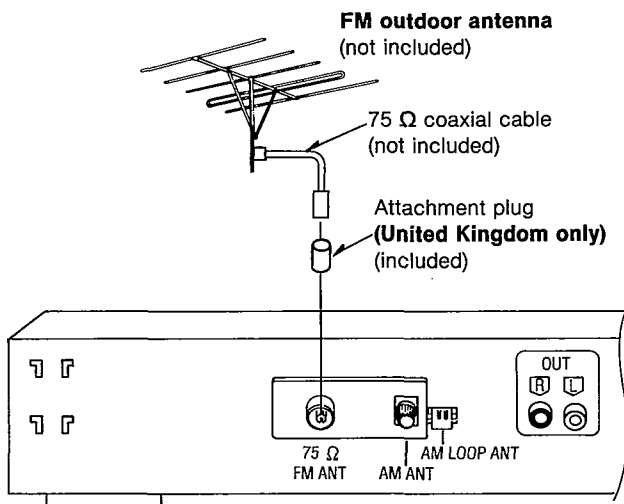
Find the optimum height and direction that gives the maximum signal reception strength.

Note

If the FM indoor antenna does not provide satisfactory reception, an outdoor antenna should be used.

FM outdoor antenna (not included)

The outdoor antenna may be required in a mountainous region, or if this unit is located inside a reinforced-concrete building, etc. Disconnect the FM indoor antenna if an FM outdoor antenna is installed.

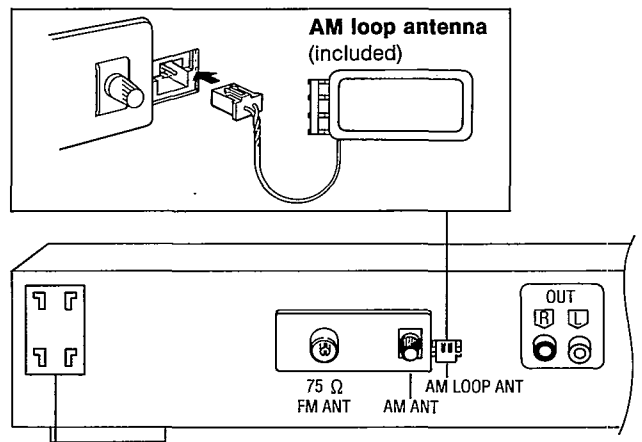


Note

An outdoor antenna should be installed by a competent technician only.

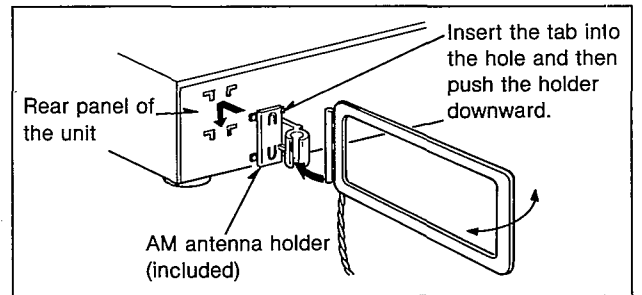
To connect the AM (MW/LW) antenna

AM loop antenna (included)

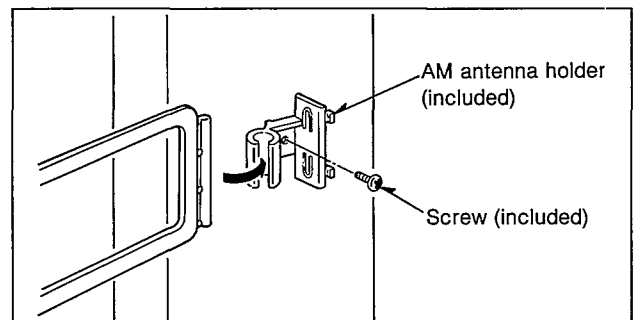


AM loop antenna location

Install the AM antenna holder (included) at the rear panel of this unit and then attach the AM loop antenna to the AM antenna holder (facing in the direction of best reception).



When mounting the antenna to a wall or a rack



Pay attention to the following points when mounting the antenna.

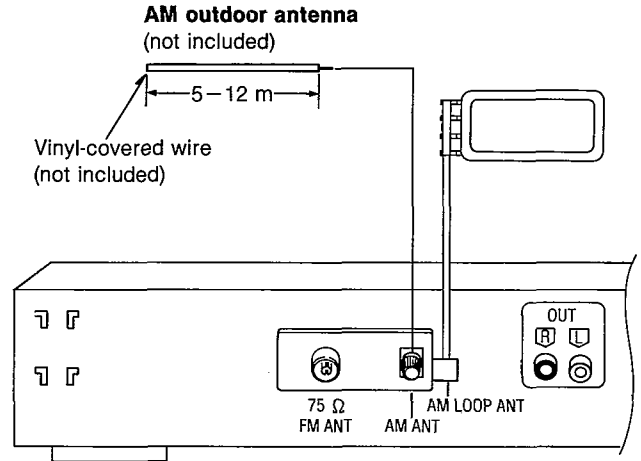
- Do not mount it horizontally (Doing so will impair reception).
- Do not mount it close to power cords, speaker wires or metal surfaces (Doing so will result in noise).
- Do not mount it close to a tape deck. When the tape deck is being used, chirping or beeping sounds may result.

AM outdoor antenna (not included)

An outdoor antenna may be required in a mountainous region, or if this unit is located inside a reinforced-concrete building, etc. Use 5–12 m of vinyl-covered wire horizontally at the window or other convenient location.

Note

- Be sure to connect the AM loop antenna even when an outdoor antenna is used.
- When the unit is not in use, disconnect the outdoor antenna to prevent possible damage that may be caused by lightning. Never use an outdoor antenna during an electrical storm.



Connection to the amplifier and of the power cord

Before connection:
Set the voltage selector to the voltage setting for the area in which the unit will be used.
[Use a minus (-) screwdriver]

Note
Note that this unit will be seriously damaged if this setting is not made correctly.

(For (EB) area only)
BE SURE TO READ THE CAUTION FOR THE AC POWER SUPPLY CORD ON PAGE 2 BEFORE THE FOLLOWING CONNECTION.

Insertion of Connector
Even when the connector is perfectly inserted, depending on the type of inlet used, the front part of the connector may jut out as shown in the drawing. However there is no problem using the unit.

Connector
Approx. 6mm
Appliance inlet

If the power plug will not fit your socket, use the power plug adaptor (included).

Household AC outlet

AC power supply cord (included)

Connect this cord after all other cables and cords are connected.

Stereo connection cable

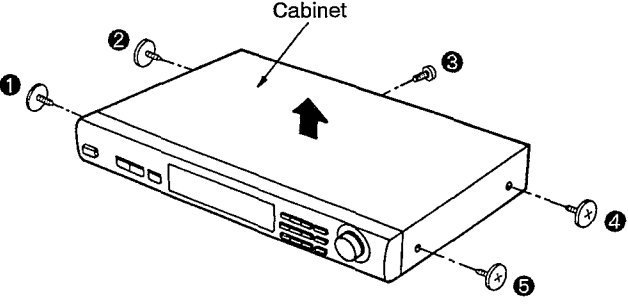
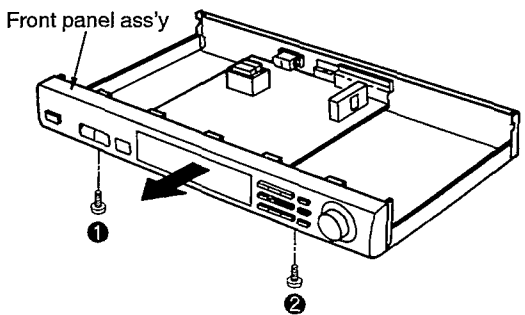
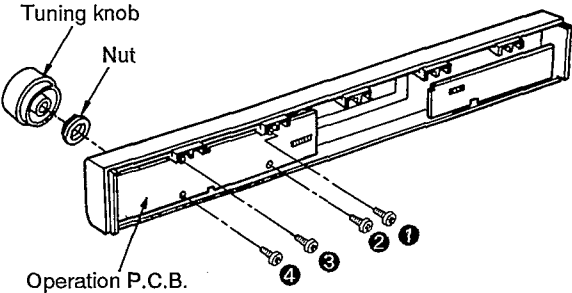
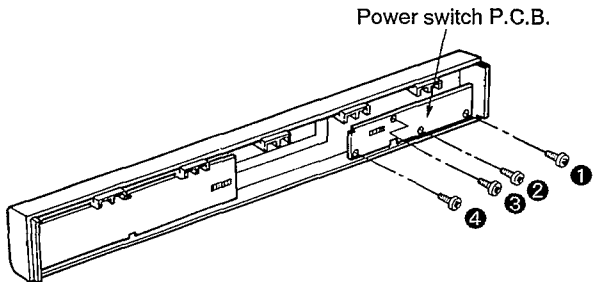
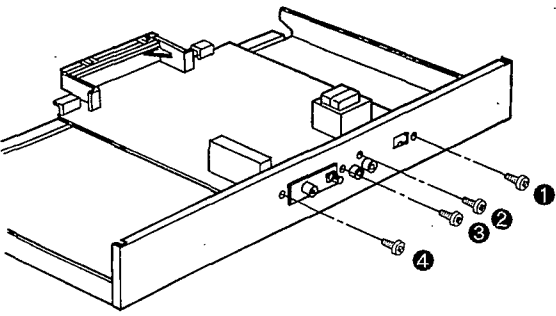
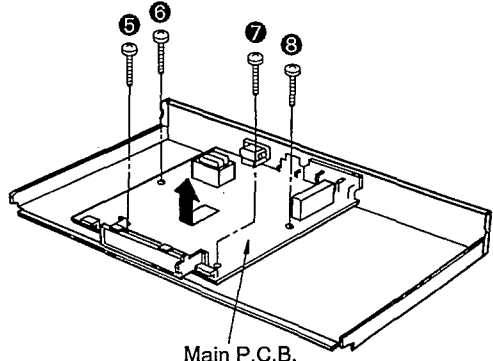
White (L)

Red (R)

DISASSEMBLY INSTRUCTIONS

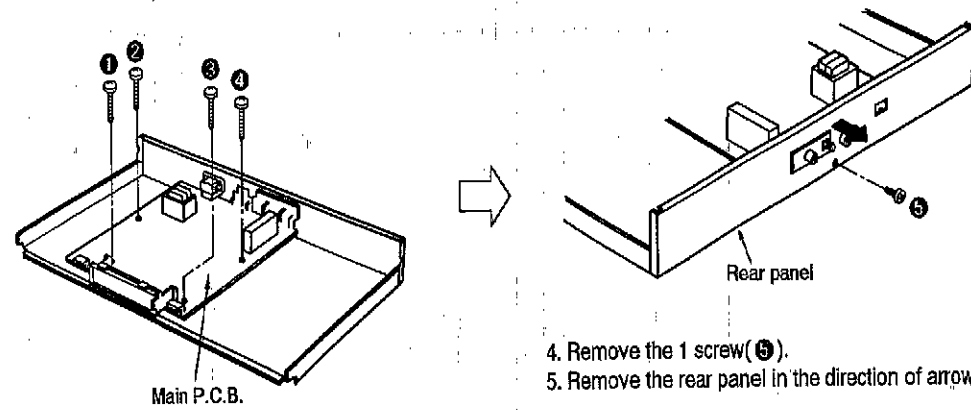
"ATTENTION SERVICER"

Some chassis components may have sharp edges. Be careful when disassembling and servicing.

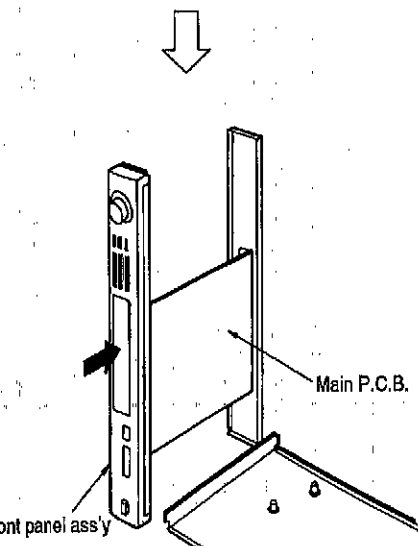
Ref.No. 1	Removal of the cabinet	Ref.No. 2	Removal of the front panel ass'y
Procedure 1		Procedure 1→2	
 <p>1. Remove the 5 screws(①~⑤). 2. Remove the cabinet in the direction of arrow.</p>		 <p>1. Remove the 2 screws(①, ②). 2. Remove the front panel ass'y in the direction of arrow.</p>	
Ref.No. 3	Removal of the operation P.C.B.	Ref.No. 4	Removal of the power switch P.C.B.
Procedure 1→2→3		Procedure 1→2→4	
 <p>1. Pull out the tuning knob. 2. Remove the nut. 3. Remove the 4 screws(①~④).</p>		 <p>• Remove the 4 screws(①~④).</p>	
Ref.No. 5	Removal of the main P.C.B.		
Procedure 1→2→5			
 <p>1. Remove the 4 screws(①~④).</p>		 <p>2. Remove the 4 screws(⑤~⑧). 3. Remove the main P.C.B. in the direction of arrow.</p>	

HOW TO CHECK THE MAIN P.C.B.

1. Remove the cabinet. (See Ref. No.1 of the disassembly instructions.)
2. Remove the front panel ass'y. (See Ref. No.2 of the disassembly instructions.)



3. Remove the 4 screws (1-4).

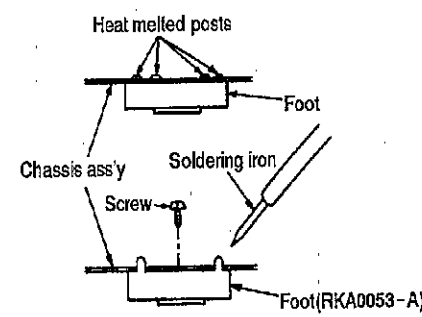


4. Remove the 1 screw (5).
5. Remove the rear panel in the direction of arrow.

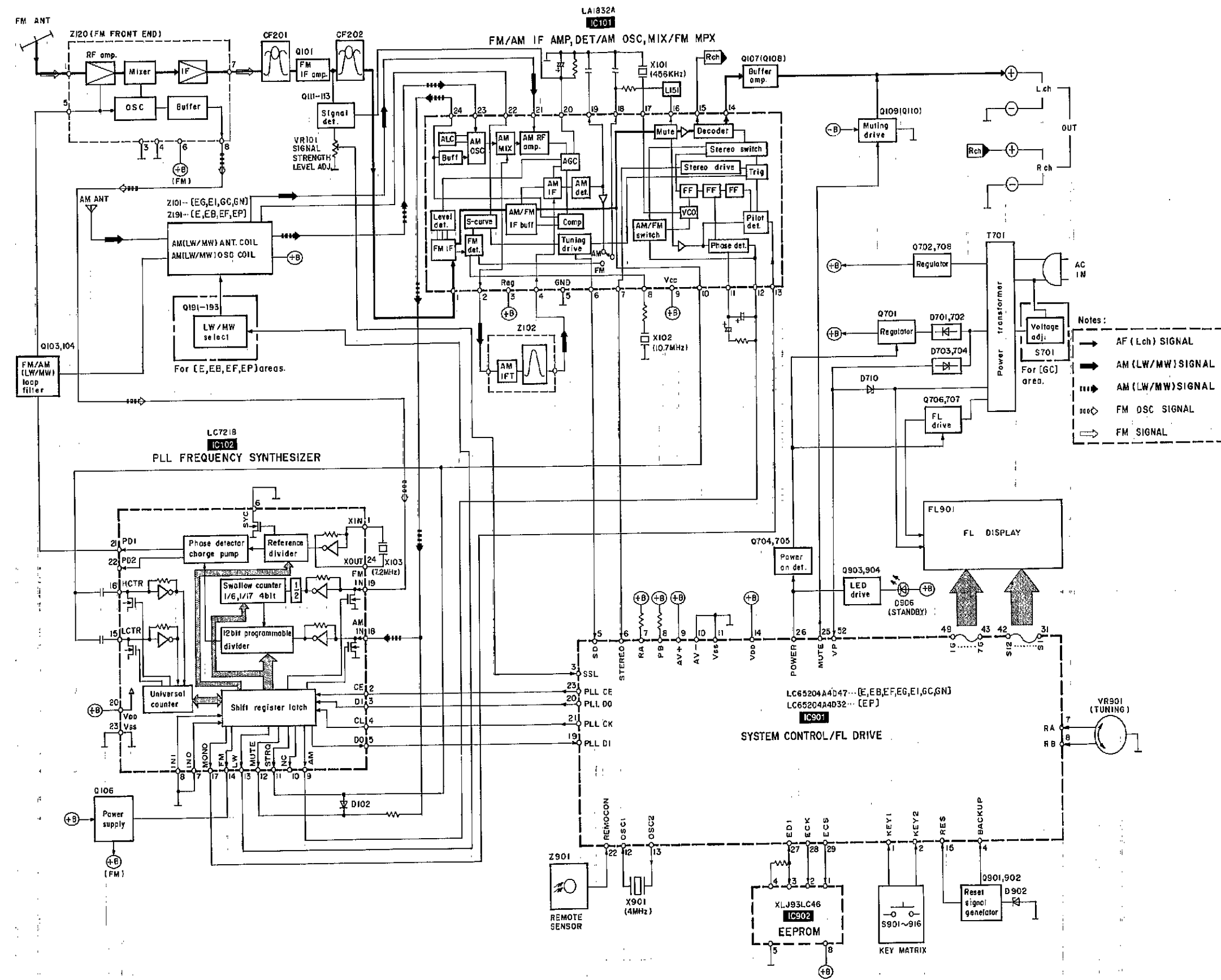
6. Reinstall the front panel ass'y to the main P.C.B.
7. When checking the soldered surface of the main P.C.B. and replacing the parts, do as shown right.

REPLACEMENT OF THE FOOT

1. Remove the 4 heat melted posts on the chassis ass'y with a pair of rippers or similar tool.
2. To replace the foot(RKA0053-A) on the chassis ass'y melt the 4 posts with a soldering iron or install it with a screw(XTB3+6J).



BLOCK DIAGRAM

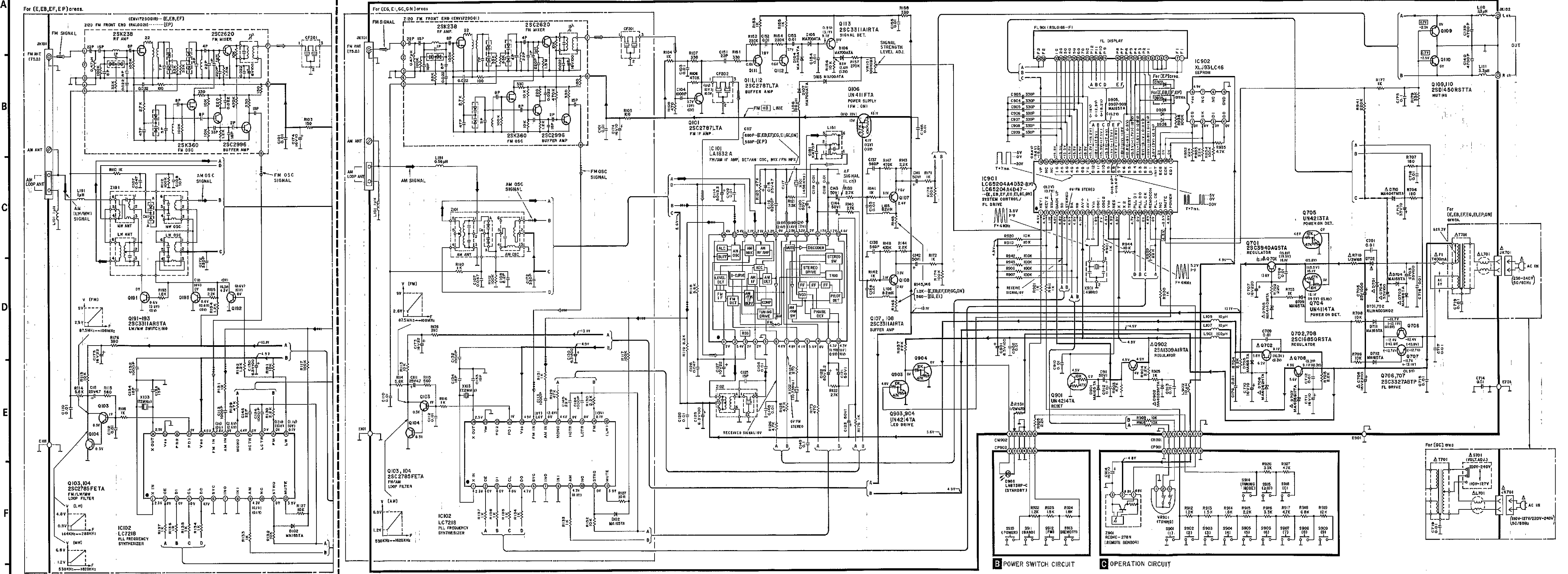


TERMINAL FUNCTION OF IC

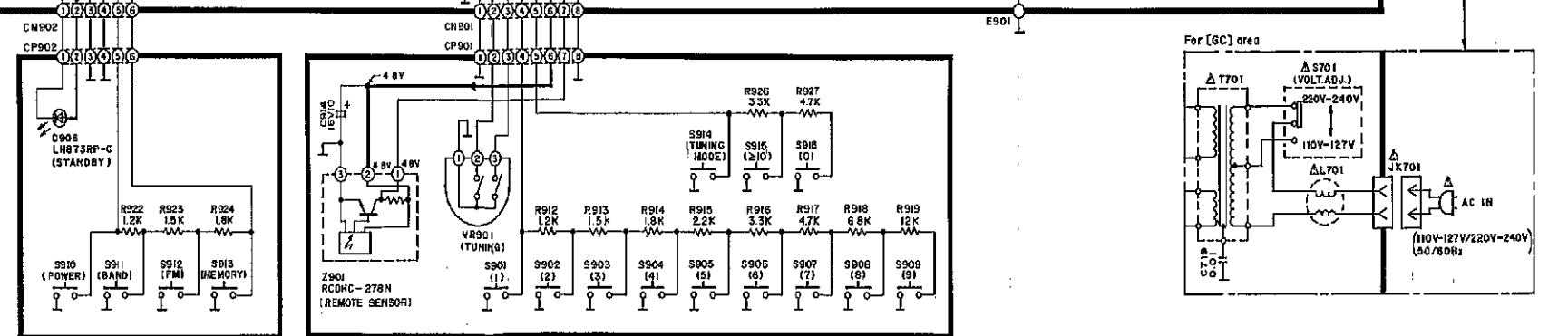
• IC901 (LC65204A4D32: for (EP) area/LC65204A4D47: for others): System Control/FL Drive

Pin No.	Mark	I/O Division	Function	Pin No.	Mark	I/O Division	Function
1	KEY 1	I	Key matrix detect terminal	19	PLLDI	I	Serial data input for PLL tuner
2	KEY 2	I	Key matrix detect terminal	20	PLLDO	O	Serial data output for PLL tuner
3	SSL	I	Not used, connected to resistor	21	PLLCK	O	Serial clock output for PLL tuner
4	BACKUP	I	Power Backup detect terminal	22	REMOCON	I	Remote control terminal
5	SD	I	Received signal detect terminal	23	PLLCE	O	Serial chip enable output for PLL tuner
6	STEREO	I	Stereo signal detect terminal	24	NC	—	No connection
7	RA	I	Not used, connected to resistor	25	MUTE	O	Muting control signal output terminal
8	RB	I	Not used, connected to resistor	26	POWER	O	Power on signal output
9	AV+	I	Not used, connected to power supply	27	EDI	I/O	Serial data for EEPROM
10	AV-	—	Not used, connected to GND	28	ECK	O	Serial clock output for EEPROM
11	VSS	—	GND terminal	29	ECS	O	Chip select output for EEPROM
12	OSC1	I	Quartz oscillation terminal (f=4 MHz)	30	INIT	I	Not used, connected to resistor
13	OSC2	O	Quartz oscillation terminal (f=4 MHz)	31	S1	O	Segment signal of FL display
14	VDD	I	Power supply terminal	42	S12	O	
15	RES	I	Reset signal detect terminal	43	7G	O	Digit signal of FL display
16	X1	I	Quartz oscillation terminal (f=32.7 MHz) Not used, connected to power supply	49	1G	O	
17	X2	O	Quartz oscillation terminal (f=32.7 MHz) Not used, open	50	NC	—	No connection
18	TEST	—	Test terminal	51	NC	—	No connection
				52	VP	I	Negative voltage terminal

A MAIN CIRCUIT (FM FRONT END/PLL/FM-AM IF AMP-DET-MPX/CONTROL/POWER SUPPLY/MUTING)



B POWER SWITCH CIRCUIT



SCHEMATIC DIAGRAM (Parts list on pages 21~24.)

(This schematic diagram may be modified at any time with the development of new technology.)

Notes:

- S701 : Voltage adj. switch.
(110V-127V ↔ 220V-240V)
- S901~909 : Preset-tuning (1-0, ≥ 10) switches.
915, 916 [S901: 1, S902: 2, S903: 3, S904: 4,
S905: 5, S906: 6, S907: 7, S908: 8,
S909: 9, S915: ≥ 10, S916: 0]
- S910 : Power "STANDBY φ /ON" (POWER, STANDBY φ /ON) switch.
- S911 : Band select (BAND) switch.
- S912 : FM mode select/FM signal-strength indication (FM) switch.
- S913 : Memory (MEMORY) switch.
- S914 : Tuning mode select (TUNING MODE) switch.
- Signal line
 ▤ : AF signal (Lch)
 ▤ : AM OSC signal
 ▤ : AM signal
 ▤ : Positive voltage lines
 ▤ : Negative voltage lines
 □ : FM OSC signal
 ▤ : FM signal

Important safety notice

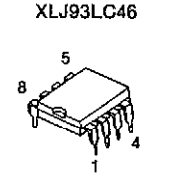
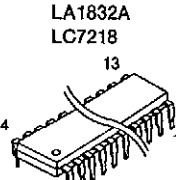
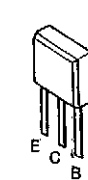
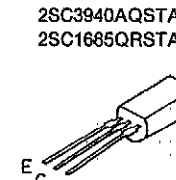
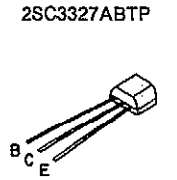
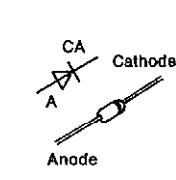
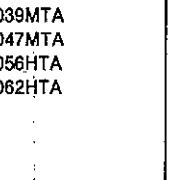
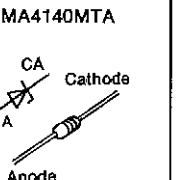
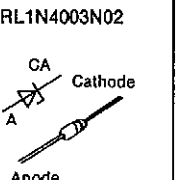
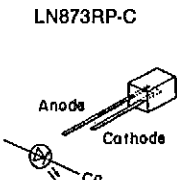
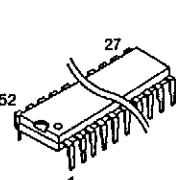
Components identified by Δ mark have special characteristics important for safety. Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used as occasion calls. When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

- All voltage values shown in circuitry are DC voltage in FM signal (Stereo mono) reception mode.
- * Figures in () Stand for DC-voltage in AM (MW) signal reception mode.
- * Figures in < > Stand for DC-voltage in LW signal reception mode.
- * Figures in □ stand for DC-voltage in muting mode.

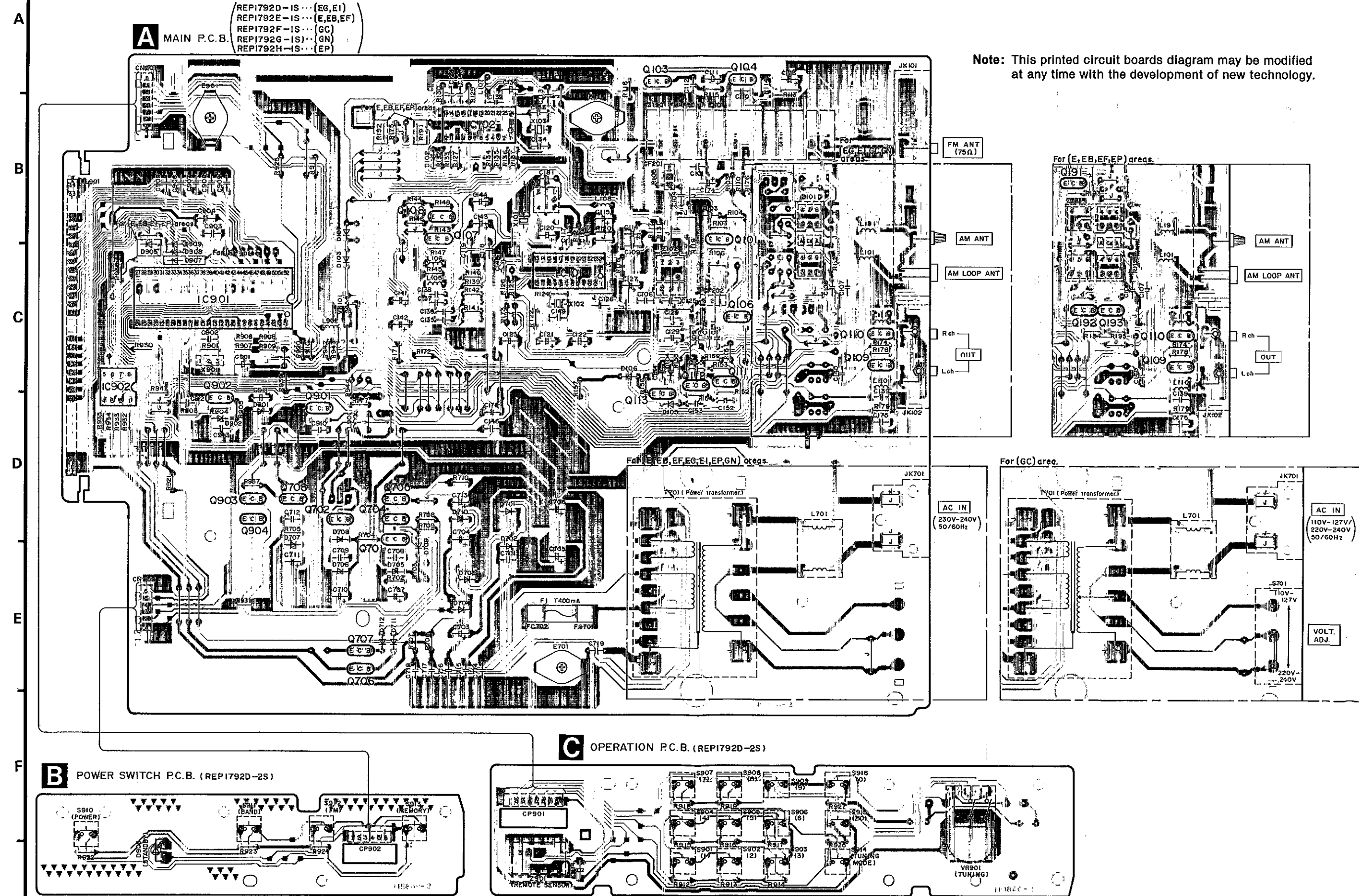
Caution!

- IC and LSI are sensitive to static electricity. Secondary trouble can be prevented by taking care during repair.
- Cover the parts boxes made of plastics with aluminum foil.
- Ground the soldering iron.
- Put a conductive mat on the work table.
- Do not touch the legs of IC or LSI with the fingers directly.

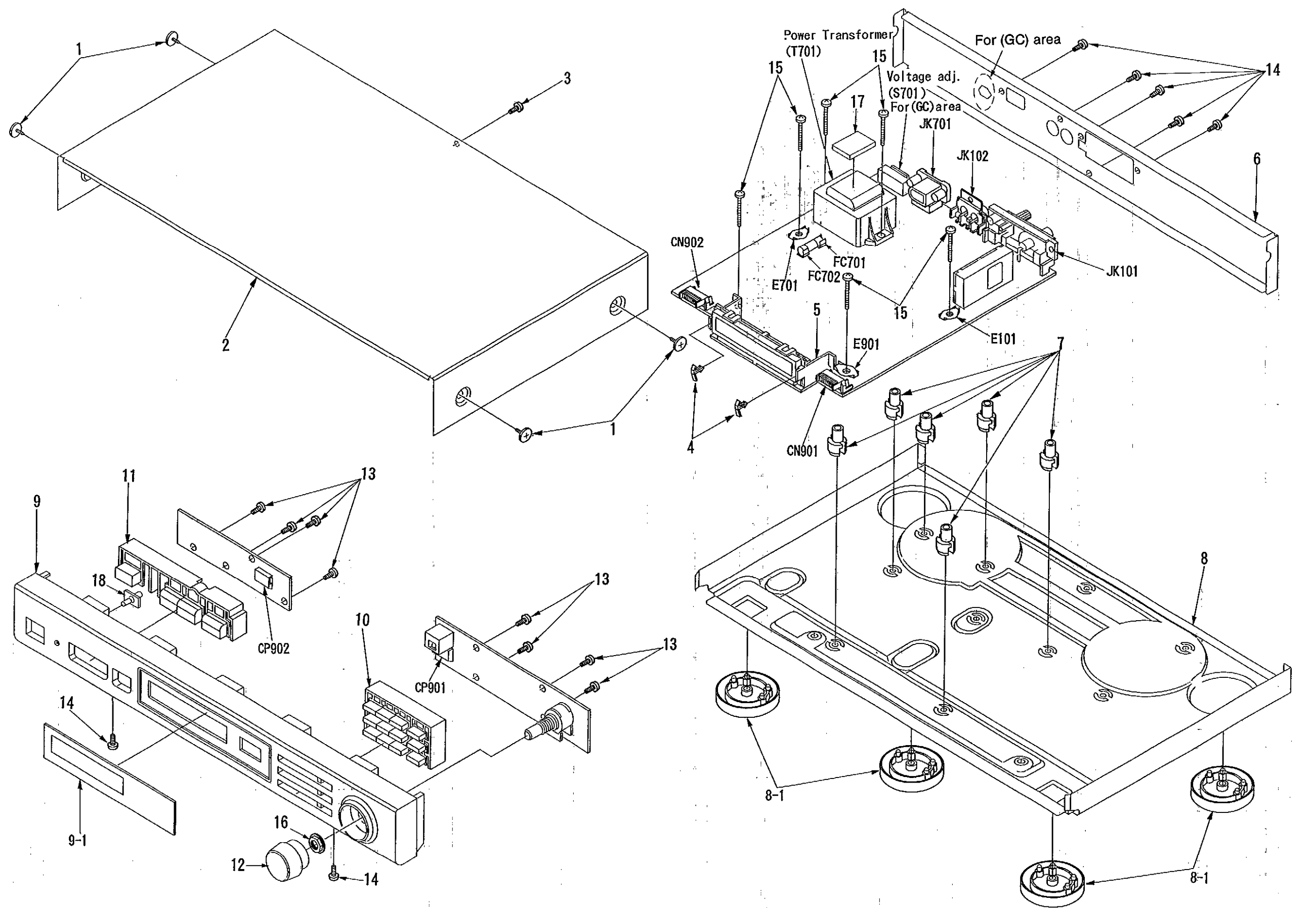
Terminal guide of IC's, transistors and diodes

XLJ93LC46 	LA1832A LC7218 	 2SA1309AIRTA 2SC2785FETA 2SC2787LTA 2SC3311AIRTA 2SC3311ARSTA 2SD1450RSTTA (for (E, EB, EF, EP) areas)	UN411FTA UN4213TA UN4214TA UN4114TA	2SC3940AQSTA 2SC1685QRSTA 
2SC3327ABTP 	MA4039MTA MA4047MTA MA4056HTA MA4062HTA 	MA4140MTA 	RL1N4003N02 	MA165TA MA700ATA 
LN873RP-C 	LC65204A4D32 (for (EP) area) LC65204A4D47 (for others) 			

PRINTED CIRCUIT BOARDS AND WIRING CONNECTION DIAGRAM



CABINET PARTS LOCATION



REPLACEMENT PARTS LIST

Notes: *Important safety notice:
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 Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.
 When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.
 *The parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area.)
 Parts without these indications can be used for all areas.
 *E indicates in Remarks column parts are supplied by PFS. (Panasonic France S.A. Longwy division.)

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
				Q113	2SC3311AIRTA	TRANSISTOR	
				Q191-193	2SC3311ARSTA	TRANSISTOR	(E, EB, EF, EP)
				Q701	2SC3940AQSTA	TRANSISTOR	Δ
1	RHD30035-K	SCREW		Q702	2SC1685QRSTA	TRANSISTOR	Δ
2	RKMD032-K	CABINET		Q704	UN4114TA	TRANSISTOR	
3	XTB3+8JFZ	SCREW		Q705	UN4213	TRANSISTOR	
4	RMND195	FL. PIECE		Q706, 707	2SC3327-A	TRANSISTOR	
5	RMND251	FL. HOLDER		Q708	2SC1685QRSTA	TRANSISTOR	Δ
6	RGRD181A-B	REAR PANEL	(E, EP)	Q901	UN4214TA	TRANSISTOR	
6	RGRD181A-D	REAR PANEL	(EB)	Q902	2SA1309AIRTA	TRANSISTOR	Δ
6	RFKHTGT350EF	REAR PANEL ASS'Y	E (EF)	Q903, 904	UN4214TA	TRANSISTOR	
6	RGRD181A-C	REAR PANEL	(EG)				
6	RGRD181A-F	REAR PANEL	E (EI)				
6	RGRD181B-B	REAR PANEL	(GC)				
6	RGRD181A-D	REAR PANEL	(GN)	D102	MA165	DIODE	
7	RKQD089	P. C. B. SUPPORT		D103-107	MA700	DIODE	
8	RFKJLPG460-K	CHASSIS ASS'Y		D701, 702	RL1N4003N02	DIODE	Δ
8-1	RKAD053-A	FOOT		D703, 704	MA165	DIODE	Δ
9	RFKGTGT350E	FRONT PANEL ASS'Y		D705	MA4140M	DIODE	Δ
9-1	RKMD329-K	TRANSPARENT PLATE		D706	MA4062-H	DIODE	Δ
10	RFKNTK55PPAK	PRESET BUTTON ASS'Y		D707	MA4056HTA	DIODE	Δ
11	RFKNTK55PPBK	POWER/MODE BUTTON ASS'Y		D708, 709	MA165	DIODE	
12	RGM0200-K	TUNING KNOB		D710	MA4047HTA	DIODE	Δ
13	RHD26017	SCREW		D711, 712	MA165	DIODE	
14	XTB3+8JFZ1	SCREW		D901	MA165	DIODE	
15	XTB3+20JFZ	SCREW		D902	MA4039MTA	DIODE	Δ
16	RHN90001	NUT		D905	MA165	DIODE	(E, EB, EF, EP)
17	FMG0145	TRANSFORMER RUBBER		D906	LN873RP-C	L. E. D.	
18	RGL0227-Q	PANEL LIGHT		D907	MA165	DIODE	(EP)
				D908, 909	MA165	DIODE	
				INTEGRATED CIRCUIT (S)			
				VARIABLE RESISTOR (S)			
IC101	LA1832A	FM/AM IF AMP/AM OSC		VR101	EVDXAAD0815	SIGNAL STRENGTH LEVEL ADJ.	
IC102	LC7218	PLL. FREQ. SYNTHESIZER		VR901	RRVEC16B12-A	TUNING VOLUME ADJ.	
IC901	LC652044AD47	SYSTEM CONT./FL. DRIVE	(E, EB, EF, EG, EI, GC, GN)				
IC901	LC652044AD32	SYSTEM CONT./FL. DRIVE	(EP)				
IC902	XLJ93LC46	EEPROM					
				COIL (S)			
				TRANSISTOR (S)			
Q101	2SC2787L	TRANSISTOR		L101	ELESN1ROMA	COIL	
Q103, 104	2SC2785FE	TRANSISTOR		L105, 106	RLQZB822KT-D	COIL	
Q106	UN411FTA	TRANSISTOR		L107	RLQA100JT-Y	COIL	
Q107, 108	2SC3311AIRTA	TRANSISTOR		L108	ELEXT101KA9	COIL	
Q109, 110	2SD1450RTA	TRANSISTOR		L109	RLQA100JT-Y	COIL	
Q111, 112	2SC2787L	TRANSISTOR		L110, 111	ELEXT3R3KA9	COIL	
				L151	SLM1B10M-1M	COIL	
				L191	ELESN1ROMA	COIL	(E, EB, EF, EP)

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
L191	ELESNR56MA	COIL	(EG, EI, GC, GN)	S908	EVQ21405R	PRESET-TUNING (8)	
L701	RLQZ600M-W	COIL	△	S909	EVQ21405R	PRESET-TUNING (9)	
L901	ELEXT101KA9	COIL		S910	EVQ21405R	POWER	
L902	RLQA100JT-Y	COIL		S911	EVQ21405R	BAND	
		TRANSFORMER (S)		S912	EVQ21405R	FM	
				S913	EVQ21405R	MEMORY	
T701	RTPIK4E027	POWER TRANSFORMER	△	S914	EVQ21405R	TUNING MODE	
		COMPONENT COMBINATION (S)		S915	EVQ21405R	PRESET (≥ 10)	
				S916	EVQ21405R	PRESET (0)	
						CONNECTOR(S) AND SOCKET(S)	
Z101	RLA2Z002M-T	COMPONENT COMBINATION	(EG, EI, GC, GN)	GN901	RJU003K008M1	SOCKET (8P)	
Z102	RLI2Z006M-T	COMPONENT COMBINATION		GN902	RJU003K006M1	SOCKET (6P)	
Z191	RLA6Z005M-T	COMPONENT COMBINATION	(E, EB, EF, EP)	CP901	RJT003K008-1	CONNECTOR (8P)	
Z901	RCDHC-278N	REMOTE SENSOR		CP902	RJT003K006-1	CONNECTOR (6P)	
		FILTER(S)				JACK(S)	
CF201	RLFFETNGD01L	FILTER		JK101	RJH4202M	ANT TERMINAL	
CF202	RLFFETMGD01L	FILTER		JK102	RJH3201N	LINE OUT	
		OSCILLATOR(S)		JK701	SJS9236	AC INLET	(E, EB, EG, EF, EI, EP, GC) △
X101	RSXZ456KM07	OSCILLATOR (456KHz)		JK701	SJSD16	AC INLET	(GN) △
X102	RLFDGTD01I	OSCILLATOR (10.7MHz)				GND PLATE(S)	
X103	RSXC7M20S04T	OSCILLATOR (7.2MHz)		E101	SNE1004-2	GND PLATE	
X901	EFOEC4004T4	OSCILLATOR (4MHz)		E701	SNE1004-2	GND PLATE	
		DISPLAY TUBE (S)		E901	SNE1004-2	GND PLATE	
FL901	RSL0166-F	DISPLAY TUBE				FUSE HOLDER(S)	
		FM FRONT END PACK ASS'Y(S)		FC701, 702	EYF52BC	FUSE HOLDER	
Z120	ENV17290G1R	FM FRONT END	(E, EB, EF)				
Z120	ENV17290G1	FM FRONT END	(EG, EI, GC, GN)				
Z120	RAL0021	FM FRONT END	(EP)				
		FUSE (S)					
F1	XBA2C04TBO	FUSE, 250V T400mA	△				
		SWITCH(ES)					
S701	ESD26700A	VOLTAGE ADJ.	(GC) △				
S901	EVQ21405R	PRESET-TUNING (1)					
S902	EVQ21405R	PRESET-TUNING (2)					
S903	EVQ21405R	PRESET-TUNING (3)					
S904	EVQ21405R	PRESET-TUNING (4)					
S905	EVQ21405R	PRESET-TUNING (5)					
S906	EVQ21405R	PRESET-TUNING (6)					
S907	EVQ21405R	PRESET-TUNING (7)					

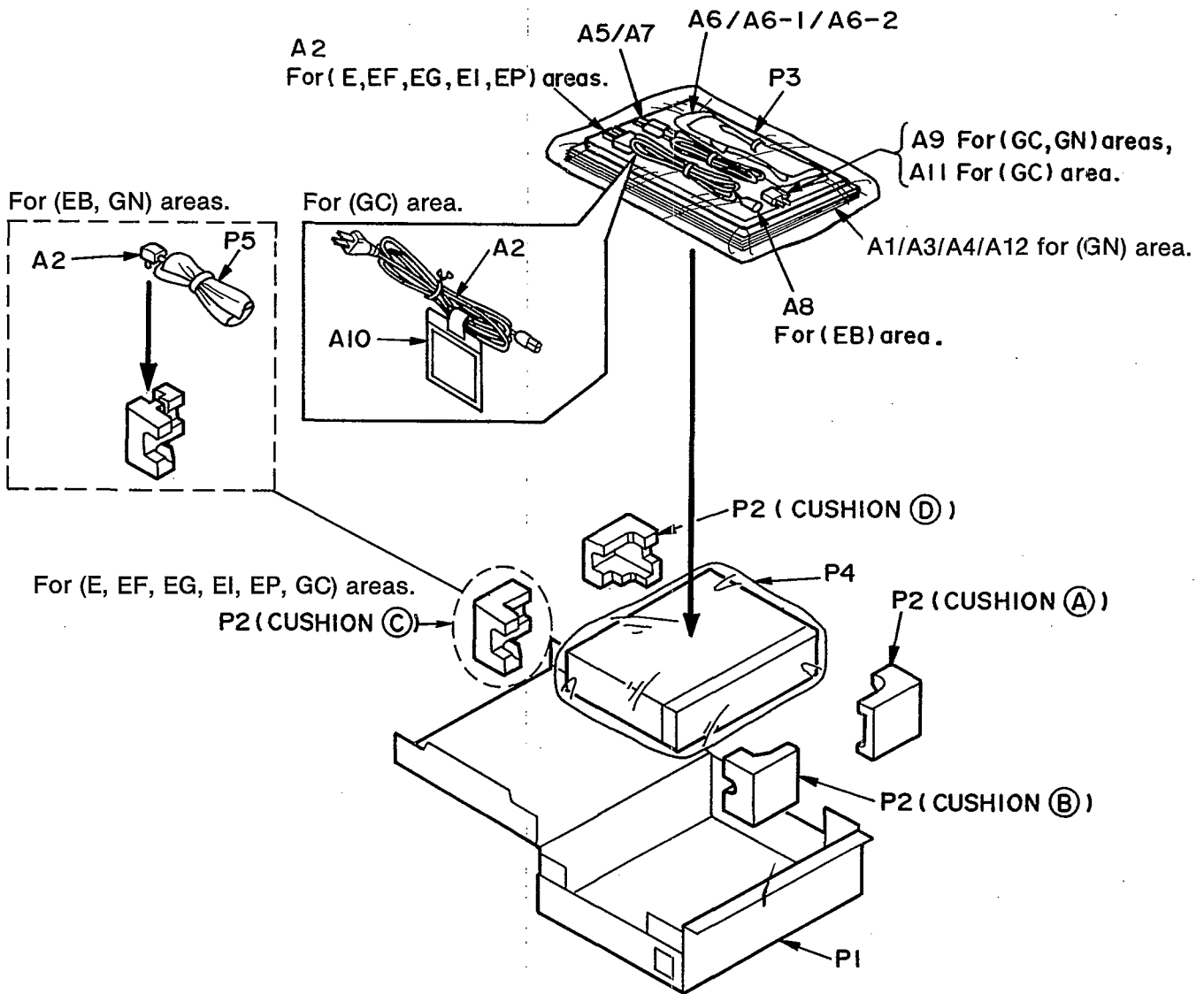
RESISTORS AND CAPACITORS

Notes : * Capacity values are in microfarads (uF) unless specified otherwise, P=Pico-farads (pF) F=Farads (F)
* Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM), 1M=1,000k (OHM)

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
		RESISTORS	R178	ERDS2TJ104	1/4W 100K	R941	ERDS2TJ224T	1/4W 220K
			R179	ERDS2TJ333	1/4W 33K	R942, 943	ERDS2TJ104	1/4W 100K
			R191	ERDS2TJ103	1/4W 10K (E, EB, EF, EP)	R944	ERDS2TJ103	1/4W 10K
R103	ERDS2TJ101	1/4W 100						CAPACITORS
R104	ERDS2TJ102	1/4W 1K	R192	ERDS2TJ122	1/4W 1.2K (E, EB, EF, EP)			
R105	ERDS2TJ471	1/4W 470	R193	ERDS2TJ182	1/4W 1.8K (E, EB, EF, EP)	C101	ECBTC1C103NS5	16V 0.01U
R106	ERDS2TJ474	1/4W 470K	R194	ERDS2TJ122	1/4W 1.2K (E, EB, EF, EP)	C103	ECBTC1C103NS5	16V 0.01U
R107	ERDS2TJ331	1/4W 330	R195	ERDS2TJ222	1/4W 2.2K (E, EB, EF, EP)	C104	ECBT1H102KB5	50V 1000P
R110	ERDS2TJ102	1/4W 1K	R702	ERDS2TJ221	1/4W 220	C106	ECBTC1C103NS5	16V 0.01U
R112	ERDS2TJ104	1/4W 100K	R703	ERDS2TJ102	1/4W 1K	C107	ECFR1E473KR	25V 0.047U
R113	ERDS2TJ103	1/4W 10K	R704, 705	ERDS2TJ222	1/4W 2.2K	C108	ECBT1H100JC5	50V 10P (E, EB, EF, EP)
R114	ERDS2TJ562	1/4W 5.6K	R706, 707	ERDS2TJ181T	1/4W 180	C108	ECBT1H8R2KC5	50V 8.2P (EG, EI, GC, GN)
R115	ERDS2TJ561	1/4W 560	R708, 709	ERDS2TJ103	1/4W 10K	C109, 110	ECBTC1C103NS5	16V 0.01U
R116	ERDS2TJ102	1/4W 1K	R710	ERDS1FVJ680T	1/2W 68 Δ	C111	ECEA1EKA4R7B	25V 4.7U
R117	ERDS2TJ104	1/4W 100K	R901	ERDS2TJ102	1/4W 1K	C112	ECBTC1C103NS5	16V 0.01U
R118	ERDS2TJ562	1/4W 5.6K	R903	ERDS2TJ472	1/4W 4.7K	C113	ECBT1H102KB5	50V 1000P
R119	ERDS2TJ822	1/4W 8.2K	R904	ERDS2TJ222	1/4W 2.2K	C114	ECEA1HKA3R3B	50V 3.3U
R120	ERDS2TJ473	1/4W 47K	R905	ERDS2TJ102	1/4W 1K	C115	ECEA1EKA4R7B	25V 4.7U
R121	ERDS2TJ332	1/4W 3.3K	R906, 907	ERDS2TJ104	1/4W 100K	C116	ECBTC1C822MS5	16V 8200P
R122	ERDS2TJ272T	1/4W 2.7K	R908-910	ERDS2TJ103	1/4W 10K	C117	ECQP2A681JZT	200V 680P (E, EB, EF, EG, EI, GC, GN)
R124	ERDS2TJ271	1/4W 270	R911	ERDS2TJ102	1/4W 1K	C117	ECQP2A561JZT	200V 560P (EP)
R125, 126	ERDS2TJ472	1/4W 4.7K	R912	ERDS2TJ102	1/4W 1K	C118, 119	ECQB1H103JF3	50V 0.01U
R127	ERDS2TJ103	1/4W 10K	R913	ERDS2TJ122	1/4W 1.2K	C120, 121	ECEA1HKA010B	50V 1U
R129	ERDS2TJ473	1/4W 47K	R914	ERDS2TJ182	1/4W 1.8K	C122	ECEA1HKA2R2B	50V 2.2U
R130	ERDS2TJ222	1/4W 2.2K	R915	ERDS2TJ222	1/4W 2.2K	C123	ECEA1HKA010B	50V 1U
R131	ERDS2TJ102	1/4W 1K	R916	ERDS2TJ332	1/4W 3.3K	C124	ECBT1H102KB5	50V 1000P
R132	ERDS2TJ103	1/4W 10K	R917	ERDS2TJ472	1/4W 4.7K	C125	ECBT1H150JC5	50V 15P
R133-137	ERDS2TJ102	1/4W 1K	R918	ERDS2TJ682T	1/4W 6.8K	C126	ECFR1E473KR	25V 0.047U
R139, 140	ERDS2TJ272T	1/4W 2.7K	R919	ERDS2TJ123	1/4W 12K	C127	ECEA1AKA220B	10V 22U
R141, 142	ERDS2TJ102	1/4W 1K	R920	ERDS2TJ103	1/4W 10K	C128	ECBTC1C103NS5	16V 0.01U
R143, 144	ERDS2TJ222	1/4W 2.2K	R921	ERDS2TJ102	1/4W 1K	C129, 130	ECEA0JKA101B	6.3V 100U
R145, 146	ERDS2TJ122	1/4W 1.2K (E, EB, EF, EP, GC, GN)	R922	ERDS2TJ122	1/4W 1.2K	C132	ECBT1H102KB5	50V 1000P
R145, 146	ERDS2TJ561T	1/4W 560 (EG, EI)	R923	ERDS2TJ152	1/4W 1.5K	C133	ECBT1H150JC5	50V 15P
R147, 148	ERDS2TJ474	1/4W 470K	R924	ERDS2TJ182	1/4W 1.8K	C134	ECBT1H180JC5	50V 18P
R151	ERDS2TJ331	1/4W 330	R925	ERDS2TJ222	1/4W 2.2K	C135, 136	ECBTC1C103KS5	16V 0.01U
R152	ERDS2TJ224T	1/4W 220K	R926	ERDS2TJ332	1/4W 3.3K	C137, 138	ECBT1H561KB5	50V 560P
R153	ERDS2TJ102	1/4W 1K	R927	ERDS2TJ472	1/4W 4.7K	C139, 140	ECQB1H472JF3	50V 4700P
R154	ERDS2TJ224T	1/4W 220K	R930	ERDS2TJ102	1/4W 1K	C141-144	ECEA1HKA010B	50V 1U
R155	ERDS2TJ102	1/4W 1K	R931	ERDS1FVJ471T	1/2W 470 Δ	C145	ECBT1H220J5	50V 22P
R156	ERDS2TJ103	1/4W 10K	R932, 933	ERDS2TJ223	1/4W 22K	C146	ECKR1H103ZF5	50V 0.01U
R157	ERDS2TJ274	1/4W 270K	R934	ERDS2TJ104	1/4W 100K	C148	ECBTC1C103NS5	16V 0.01U
R158	ERDS2TJ331	1/4W 330	R935	ERDS2TJ472	1/4W 4.7K	C149	ECFR1E104ZF5	25V 0.1U
R171, 172	ERDS2TJ102	1/4W 1K	R936	ERDS2TJ104	1/4W 100K	C151	ECBT1H220J5	50V 22P
R173	ERDS2TJ471	1/4W 470	R937	ERDS2TJ223	1/4W 22K	C152-155	ECBTC1C103KS5	16V 0.01U
R174	ERDS2TJ104	1/4W 100K	R939	ERDS2TJ223	1/4W 22K			
R175	ERDS2TJ102	1/4W 1K						
R176	ERDS2TJ391	1/4W 390						
R177	ERDS2TJ102	1/4W 1K						

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
C172	ECBT1H331KB5	50V 330P	C705	ECA1EM102B	25V 1000U	C901	ECEA0JKA101B	6.3V 100U
C173	ECEA1CKA220B	16V 22U	C706	ECA1CM222B	16V 2200U Δ	C902	ECKR1H103ZF5	50V 0.01U
C174	ECEA1CKA100B	16V 10U	C707	ECA1CM221B	16V 220U	C903-909	ECKR1H331KB5	50V 330P
C175	ECFR1E104ZF5	25V 0.1U	C708, 709	ECKR1H103ZF5	50V 0.01U	C910	ECKR1H103ZF5	50V 0.01U
C176	ECKR1H103ZF5	50V 0.01U	C710, 711	ECEA1CKA100B	16V 10U	C911	ECEA1HKA010B	50V 1U
C181	ECBT1H471KB5	50V 470P	C712	ECKR1H103ZF5	50V 0.01U	C912, 913	ECKR1H103ZF5	50V 0.01U
C701	ECKR1H103ZF5	50V 0.01U	C713	ECEA1VKA100B	35V 10U	C914	ECEA1CKA100B	16V 10U
C703	ECA1VM101B	35V 100U	C714-718	ECKR1H103ZF5	50V 0.01U			
C704	ECA1VM101B	35V 100U Δ	C719	ECBT1C103NS5	16V 0.01U			

PACKAGING



CUSHION ① ② ③ ④ : RPN0811 For (E, EG, GC, EP) areas.
 : RPN0769-1 For (EB, GN) areas, RPN0325 For (EF, EI) areas.

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REPLACEMENT PARTS LIST

Notes: *Important safety notice:

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 When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

*The parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area.)

Parts without these indications can be used for all areas.

*The "SF" mark denotes the standard part.

*☐ Indicates in Remarks columns parts are supplied by PFS. (Panasonic France S.A. Longwy division.)

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
		PACKING MATERIAL		A1	RQT2349-V	INSTRUCTION MANUAL	☐ (E1)
				A1	RQF2221	INSTRUCTION MANUAL ASS'Y	(EP)
				A1	RFKSTGT350GC	INSTRUCTION MANUAL ASS'Y	(GC)
P1	RPG1982	PACKING CASE	(E, EG, GC, EP)	A1	RQT2350-L	INSTRUCTION MANUAL	(GN)
P1	RPG1983	PACKING CASE	(EB)	A2	RJA0019-2K	AC POWER SUPPLY CORD	(E, EF, EG, EI, GC, EP)
P1	RPG1985	PACKING CASE	☐ (EF)				Δ (SF)
P1	RPG1986	PACKING CASE	☐ (E1)	A2	VJA0733	AC POWER SUPPLY CORD	(EB) Δ (SF)
P1	RPG1984	PACKING CASE	(GN)	A2	RJA0036-K	AC POWER SUPPLY CORD	(GN) Δ (SF)
P2	RPNO811	CUSHION	(E, EG, GC, EP)	A3	RQA0013	WARRANTY CARD	(E, EB, EF, EG, EI)
P2	RPNO767-1	CUSHION	(EB, GN)	A3	RQX7433ZA	WARRANTY CARD	(GN)
P2	RPNO325	CUSHION	(EF, E1)	A4	RQCB0169	SERVICENTER LIST	(E, EB, EF, EG, EI, GC, GN)
P3	RPQ0164	PAD		A5	RSA0007	FM INDOOR ANT	
P4	XZB52X60A01Z	PROTECTION BAG (UNIT)		A6	RSA0010	AM LOOP ANTENNA SET	
P5	RPH0032	PROTECTION SHEET	(EB, GN)	A6-1	RMNO244	AM ANTENNA HOLDER	
		ACCESSORIES		A6-2	XTN3*10AFZ	SCREW	
				A7	SJP2276	STEREO CONNECTION CABLE	
A1	RFKSTGT350E	INSTRUCTION MANUAL ASS'Y	(E)	A8	SJP9009	ATTACHMENT PLUG	(EB)
A1	RQT2345-B	INSTRUCTION MANUAL	(EB)	A9	RFE0014	ANTENNA PLUG	(GC, GN)
A1	RFKSTGT350EF	INSTRUCTION MANUAL ASS'Y	(EF)	A10	RQLA0134	VOLTAGE CAUTION LABEL	(GC)
A1	RQT2348-D	INSTRUCTION MANUAL	(EG)	A11	SJP5213-1	POWER PLUG ADAPTOR	(GC) Δ
				A12	SQX40022	AM STEREO CAUTION LABEL	(GN)