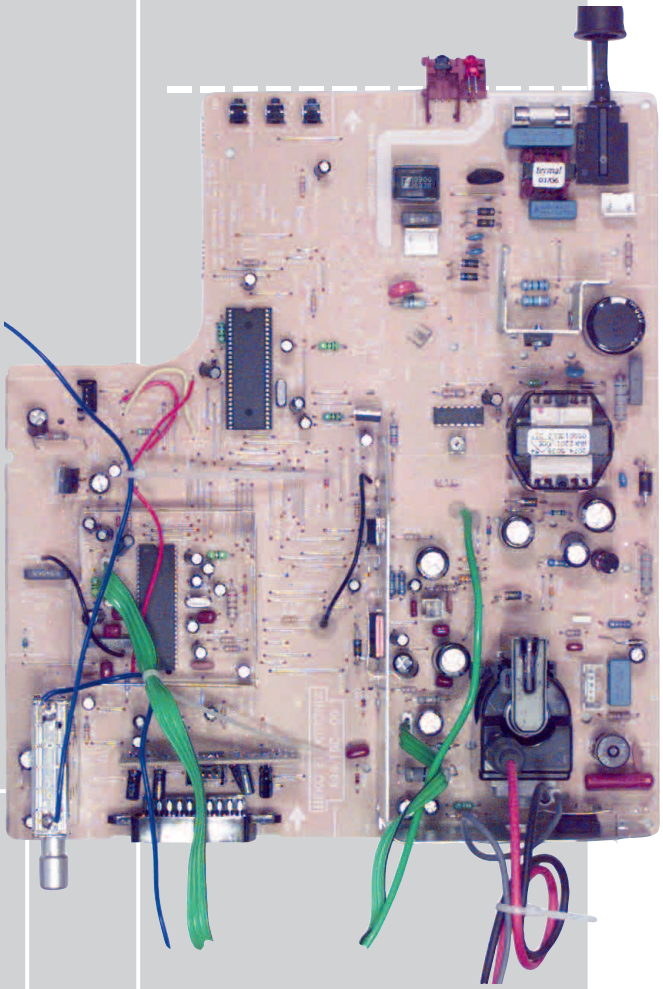
GRUNDIG

TV Service Manual



P 37-1101/5 TXT

GCN9400

T 51-1101/5 TXT

GCN9500

T 55-1101/5 TXT

GCN9600

Additionally required Service Documents for the Complete Service

Service Manual

Safety

Part No. 720108000000

Part Number 720100425000
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Grundig Service

Hotline Deutschland…
…Mo.-Fr. 8.00-18.00 Uhr

Technik:

TV	*0180/52318-41*
TV	*0180/52318-49*
SAT	*0180/52318-48*
VCR/LiveCam	*0180/52318-42*
HiFi/Audio	*0180/52318-43*
Car Audio	*0180/52318-44*
Telekommunikation	*0180/52318-45*
Fax:	*0180/52318-51*
Planatron (8.00-22.00 Uhr)	*0180/52318-99*

Ersatzteil-Verkauf: *Mo.-Fr. 8.00-19.00 Uhr*

Telefon:	*0180/52318-40*
Fax:	*0180/52318-50*

Kundendienst/Werkstätten: Mo.-Fr. 8.00-18.00 Uhr

Telefon:	*0180/52318-52*
Fax:	*0180/52318-46*

gebührenpflichtig

The regulations and safety instructions shall be valid as provided by the "Safety" Service Manual, part number 72010 800 0000, as well as the respective national deviations.

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General Section

Test Equipment

Please note the Grundig Catalog "Test and Measuring Equipment" obtainable from:

Grundig AG
Geschäftsbereich Instruments
Test- und Mess-Systeme
Würzburger Str. 150
D-90766 Fürth
Tel.: 0911 / 703-4540
Fax: 0911 / 703-4130
eMail: instruments@grundig.com
Internet: http://www.grundig-instruments.de

General Notes

Before opening the cabinet disconnect the mains plug!

Wiring
Before disconnecting any leads and especially the earth connecting leads observe the way they are routed to the individual assemblies like the chassis, mains switch panel, keyboard control panel, picture tube panel, deflection unit, loudspeaker and so on.
On completion of the repairs the leads must be laid out as originally fitted at the factory to avoid later failures or disturbances.

Mains Cable
The TV receiver must only be operated with an original mains connecting cable with an interference suppressor choke integrated in the mains plug. This mains cable prevents interference from the mains supply and is part of the product approval. For replacement please order exclusively the mains connecting cable specified in the spare parts list.

TECHNICAL SPECIFICATIONS AND THE FEATURES

Power source:	220-240V AC, 50-60Hz
Power consumption:	40W 14” 50W 20” 50W 21”
Aerial impedance :	75Ohm, Coaxial type
Receiving system*:	PAL BG PAL SECAM BG PAL SECAM BG DK PAL SECAM BG LL’ PAL I
Receiving channels:	VHF BAND I, CH2-4 VHF BAND III, CH5-12 CATV CHANNELS S1-S41 UHF BAND CH21-69
Audio outputs :	2.5W RMS at %10 THD 16 OHM SPEAKER
High Voltage :	23KV ±0.5KV 25.5KV ±0.5KV
Focus voltage :	%25.6±%38 of EHT
Grid 2 voltage :	0-1400V
Heater voltage :	6.3±0.2Vrms
Video/Audio Terminals :	
AV1 IN	Video 1 Vpp, 75Ohm Audio 0.5Vrms, >10Kohm RGB
AV1 OUT	Video 1Vpp,75Ohm Audio 0.5Vrms,>1Kohm
AV2 IN (RCA-OPTIONAL)	Video 1Vpp,75Ohm Audio 0.5Vrms,>10Kohm
Operating temperature :	0-45 Degrees
Safety :	IEC 65/BS P2N
X-Ray radiation :	ACC. IEC 65/BS P2N

• : TV set is produced to receive “one” of these colour and sound systems.

FEATURES

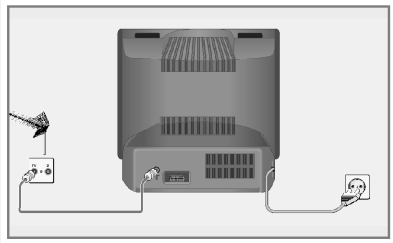
- 100 Program memory
- On-Screen-Display
- Programmable Off Timer
- Auto switch off at no signal condition (5 min.)
- Scart socket (AV in/out, RGB)
- Demo mode
- NTSC playback with tint control (NTSC44.3 via scart)
- Infrared remote control
- CATV channels
- Additional AV input via cinch
- Normalization system to recall the setting in memory after analog settings have been changed
- Teletxt program, national and international text programs
- 16:9 picture format selections
- Menu with **18** languages
- Swapping between two programs with single key stroke (SWAP)

Operating Hints

This chapter contains excerpts from the operating instructions. For further particulars please refer to the appropriate user instructions the part number of which is indicated in the relevant spare parts list.

CONNECTION AND PREPARATION

Connecting the antenna and the mains cable

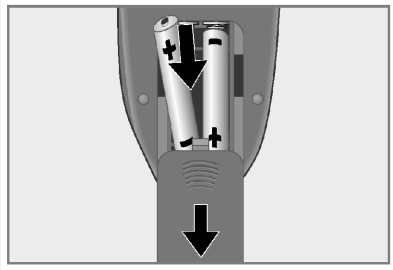


1 Insert the telescopic antenna in the recess in the rear panel (only for P 37-1101/5 TXT).

2 Plug the roof antenna cable or the telescopic antenna into the antenna socket »⅂Г« on the television set.

3 Plug the power cord into the mains socket.

Inserting batteries in the remote control



1 Open the battery compartment by removing the lid.

2 Insert batteries (UM-3 or AA, 2 x 1.5 V).
Observe the polarity (marked on the base of the battery compartment).

Note:
If the television no longer reacts properly to remote control commands, the batteries may be flat. Always remove flat batteries. No liability is accepted for damage resulting from leaking batteries.

Environmental note:
Batteries, including those which are heavy metal-free, may not be disposed of with household waste. Please dispose of used batteries in an environmentally sound manner. Find out about the legal regulations which apply in your area.

OVERVIEW

Operating controls on the television set

⏻	Switches the television to stand-by mode.
◢ P	Switches on the television from stand-by mode; Preset button for volume and channel selection.
▼	Channel select down; Lower volume.
▲	Channel select up; Raise volume.
🎧	Headphone jack, 3.5 mm ø jack plug. – Connecting a headphone set deactivates the loudspeakers.
AUDIO	Audio signal input.
VIDEO	Video signal input.

Note:
When the device is switched on for the first time, "demo mode" is automatically selected. The device shows you all menus and setting options.

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OVERVIEW

The remote control

	Sound on/off (mute).
	Switches off the television (standby).
1...0	Switch the television on from stand-by mode; select channels directly.
AV/TV	Selects the AV preset stations AV1 and AV2.
-/--	Switches from single-digit channel selection to two-digit selection and back.
MENU	Calls up the menus »PICTURE«, »SETUP« and »FEATURES« successively.
TXT	Switches between teletext and TV mode; terminates the menu function.
▲PR▼	Switches the television on from stand-by mode; selects stations step by step; move the cursor in the menus up and down.
OK	Saves various functions.
◄VOL►	Adjust the volume; moves the cursor left/right.
SWAP	Switches to the previously selected television station and back.
16:9	Picture format adjustment
i	Switches on preset station information.
(red)	Scrolls back a page in teletext mode.
(green)	Scrolls to the next page in teletext mode.
(yellow)	In television mode: switch-off timer on/off; in teletext mode: selects desired chapter or page stop.
(blue)	In television mode: switches to the factory settings; in teletext mode: selects desired topic; overrides wait times.
STOP	Stops in teletext pages.
REVEAL	Reveals answer in teletext.
DOUBLE	Enlarges teletext page.
SUB	In television mode: time display on/off; in teletext mode: selects subtitles.
MIX	Mix mode in teletext.
UPDATE	For overriding wait times in teletext mode.

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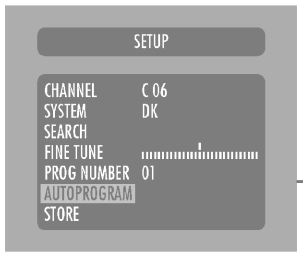
SETTINGS

Assigning channel positions automatically (with the station search)

The television set is equipped with an automatic station search system.

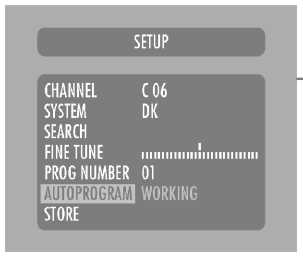
100 preset positions are provided, to which you can assign television stations from the antenna or from the cable connection.



1 Press the »⏻« button on the television set to switch to stand-by mode.

2 Switch on the television set with the »**PR▲**« button.

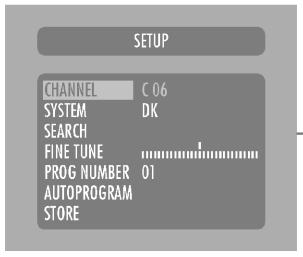
Note:
When you turn the television on for the first time, it automatically selects "demo mode" and shows you all the menus and settings options. Then the »SETUP« menu is displayed, the »AUTOPROGRAM« line is highlighted.



3 Activate automatic station search with »**OK**«.
- The station search begins and »AUTOPROGRAM WORKING« is displayed in the menu; the »SEARCH« indicator flashes.
- The automatic search may last a minute or longer, depending on the number of television stations received.
- After the search is completed, the »SETUP« menu is displayed, the television switches to channel position 1.

Note:
If the television finds a TV station with the BG audio norm (the sound is not clearly audible), the BG audio norm must be entered manually, see the next section, step **3**.

Assigning channel positions manually

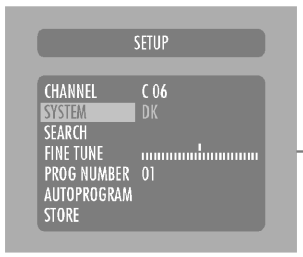


1 Select the »SETUP« menu by pressing »**MENU**« twice.
- The »SETUP« menu is displayed, the »CHANNEL« line is highlighted.

2 Enter the desired channel number with »**◀VOL**« or »**VOL▶**« or »**1...0**«;

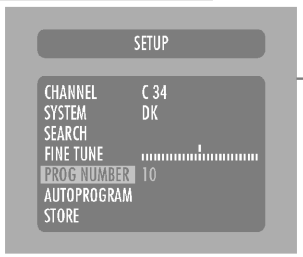
or select the »SEARCH« line with »**PR▼**« and start the station search with »**◀VOL**« or »**VOL▶**«.

Note:
Repeat the search until the desired channel appears on the screen.



3 Select the »SYSTEM« line with »**PR▲**« or »**PR▼**« and select the required audio norm (BG or DK) with »**◀VOL**« or »**VOL▶**«.

4 To fine tune the picture (if it is necessary), select the »FINE TUNE« line using »**PR▲**« or »**PR▼**« and then use »**◀VOL**« or »**VOL▶**« to adjust the fine tuning.



5 Select the »PROG NUMBER« line with »**PR▲**« or »**PR▼**« and select the desired channel position using »**◀VOL**« or »**VOL▶**« or »**1...0**«.

6 Select the »STORE« line using »**PR▲**« or »**PR▼**« and save the settings by pressing »**OK**«.

7 Conclude the setting by pressing »**TXT**«.

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TELEVISION MODE

Switching on/off

1 Switch the television to stand-by mode by pressing »⏻« on the television set.

2 Switch the television out of stand-by mode with »**1...0**« or »**▲PR**« or »**PR▼**«.
– The television switches on to the most recently selected station.

3 Press the »⏻« button to switch the television set to stand-by mode.

4 Switch the television off completely by pressing »⏻« on the television set.
– In this way you save electricity.

Selecting channel positions

1 Select channel positions directly with the »**1...0**« buttons.

2 Press »**▲PR**« or »**PR▼**« to move up and down channel positions one at a time.

3 Select channel positions »AV1« and »AV2« with »**AV/TV**«.

Zap function

This function allows you to switch back and forth between two television stations (zapping).

1 Select a television channel using »**1 ... 0**«.

2 Select another television channel using »**1 ... 0**«.

3 You can now use »**SWAP**« to switch back and forth (zap) between these two television stations.

Adjusting the volume

1 Adjust the volume with »**◄VOL**« or »**VOL►**«.

Note:
The modified value can be saved in the »PICTURE« menu.
To return to the factory setting, press »⏭«.

Muting

1 Switch the sound on/off (mute) with the »🔇« button.

Displaying/concealing the time

1 You can display or conceal the time by pressing the »**SUB**« button (only for stations with teletext).

Displaying the channel position number

1 Display/conceal the channel position number with the »**i**« button.
– The colour system and the status of the switch-off timer is also displayed.

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TELETEXT MODE

TOP text and FLOF text mode

1 Press »**TXT**« to switch to teletext mode.
– At the bottom of the screen, you will see an info line consisting of a red, green, yellow and blue text field. Your remote control possesses buttons with the corresponding colours.

2 Selecting chapters, topics and pages:
To scroll back a page or select a chapter, press the »○« button (red).
To scroll to the next page or select a topic, press the »○« button (green).
To select a chapter, press the »◴« button (yellow).
To select a topic, press the »▸|◂« button (blue).

Note:
Teletext pages can be selected directly with the »**1...0**« buttons or one at a time with »**▲PR**« or »**PR▼**«.

To return to menu page 100, press »**i**«.

3 Switch out of teletext mode by pressing »**TXT**«.

Normal text (basic text) mode

Selecting teletext pages

1 Press »**TXT**« to switch to teletext mode.

2 Press »○« (red) to scroll backwards a page.

3 Press »○« (green) to scroll to the next page.

Note:
Teletext pages can be selected directly with the »**1...0**« buttons or one at a time with »**▲PR**« or »**PR▼**«.

To return to menu page 100, press »**i**«.

Overriding wait time

The wait time for calling up a teletext page can be overridden:

1 Enter the teletext page number using the »**1...0**« buttons.

2 Switch to the currently set television station with »**UPDATE**«.
– At the top of the screen you will see »P xxx«.
– When a page number appears in place of »P xxx«, the teletext page has been found.

3 Switch to the teletext page with »**UPDATE**«.

Enlarging teletext page

1 You can enlarge a teletext page by repeatedly pressing »**DOUBLE**«.

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TELETEXT MODE

Calling up a sub-page

1 Call up a sub-page with »**SUB**«.

2 Enter the four-digit number for the desired sub-page with the »**1...0**« buttons.
– After a short time the selected sub-page appears.

Page stop for multiple pages

A multiple page may contain several sub-pages, which are automatically scrolled by the transmitting station.

1 To stop at a sub-page, press the »**STOP**« button.

2 Undo the function by pressing »**STOP**«.

Reveal answer

Certain teletext pages can contain "concealed answers" or information which can be called up.

1 Display information with »**REVEAL**«.

2 Conceal information with »**REVEAL**«.

Mix mode

1 To view a teletext page and a television station simultaneously, press the »**MIX**« button.

2 If you only want to see the teletext page, press the »**MIX**« button again.

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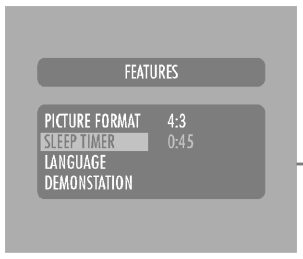
CONVENIENCE FUNCTIONS

Entering the switch-off time

You can enter a switch-off time. After the set time has elapsed, the television switches to stand-by mode.

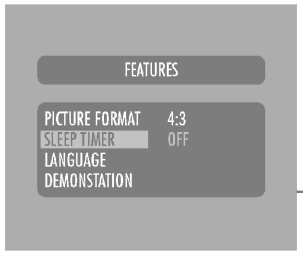


1 Select the »FEATURES« menu by pressing »**MENU**« three times.
– The »FEATURES« menu appears.

2 Select the »SLEEP TIMER« line by pressing »**PR▼**« or »**▲PR**«.

3 Enter the required time (in 15 minute intervals from 15 to 120 minutes) by pressing »**◄VOL**« or »**VOL►**«.

4 Save and conclude the setting by pressing »**MENU**«.



Note:
When the switch-off timer is activated, the 30 seconds before switch-off time are displayed on the screen.
Then the television switches to stand-by mode.

The time remaining before deactivation can be called up with the »**i**« button.

To deactivate the switch-off timer, repeat steps **1** and **2** and in step **3** select »OFF« by pressing »**◄VOL**« or »**VOL►**«.

Selecting the language of the screen menu

This function allows you to select the "language" of the menu on the television screen.

1 Select the »FEATURES« menu by pressing »**MENU**« three times.
– The »FEATURES« menu appears.

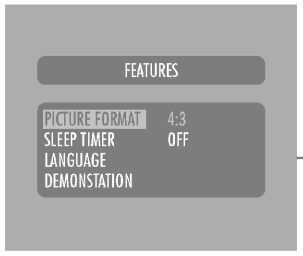
2 Select the »LANGUAGE« line with »**PR▼**« or »**▲PR**« and call up the »LANGUAGE« menu by pressing »**OK**«.

3 Select your language of choice using »**◄VOL**«, »**VOL►**« or »**PR▼**«, »**▲PR**«.

4 Press »**OK**« to confirm the setting.

5 Press »**MENU**« to conclude the setting.

Setting the picture format



1 Select the »FEATURES« menu by pressing »**MENU**« three times.
– The »FEATURES« menu appears.

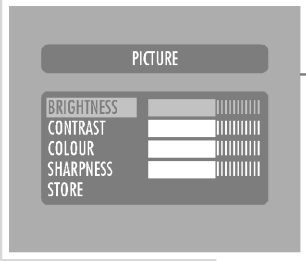
2 Select the »PICTURE FORMAT« line with »**PR▼**« or »**▲PR**«.

3 Select the desired picture format (4:3 or 16:9) with »**◄VOL**« or »**VOL►**«.

4 Save and conclude the setting by pressing »**MENU**«.

CONVENIENCE FUNCTIONS

Setting brightness, colour, contrast and focus



1 Select the »PICTURE« menu by pressing »**MENU**« once.

2 Select the »BRIGHTNESS«, »CONTRAST«, »COLOUR« or »SHARPNESS« line with »**PR▲**« or »**PR▼**«.

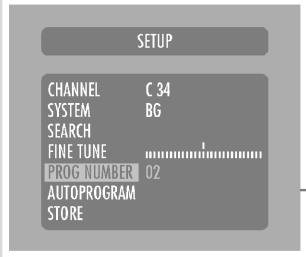
3 Set the value by pressing »**◀VOL**« or »**VOL▶**«.

4 Select the »STORE« line using »**PR▲**« or »**PR▼**« and press »**OK**« to save.
– The message »STORED« appears briefly in the »PICTURE« menu.

Note:
The volume setting, described in the chapter "Adjusting the volume" on page 7, is now saved.

Sorting television stations

If any channels were saved more than once during the process of setting television channels with the automatic station search, or if you want to re-assign particular stations to another preset position, you can perform this setting in the »SETUP« menu.



1 Select the TV channel to be re-assigned to another preset position by pressing »**PR▲**«, »**PR▼**« or »**1...0**«.

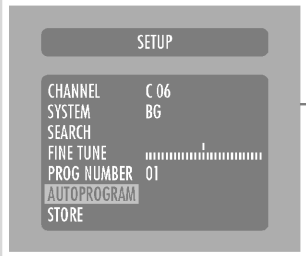
2 Select the »SETUP« menu by pressing »**MENU**« twice.
– The »SETUP« menu appears with the »CHANNEL« line highlighted.

3 Select the »PROG NUMBER« line with »**PR▲**« or »**PR▼**« and select the desired channel position using »**◀VOL**« or »**VOL▶**« or »**1...0**«.

4 Select the »STORE« line with »**PR▲**« or »**PR▼**« and save the settings by pressing »**OK**«.

5 Press »**TXT**« to conclude the setting.

Re-starting the station search



1 Select the »SETUP« menu by pressing »**MENU**« twice.
– The »SETUP« menu appears with the »CHANNEL« line highlighted.

2 Select the »AUTOPROGRAM« line with »**PR▲**« or »**PR▼**« and start the automatic station search by pressing »**OK**«.
– The station search begins and »AUTOPROGRAM WORKING« is displayed in the menu; the »SEARCH« indicator flashes.

Activating demo mode

1 Select the »FEATURES« menu by pressing »**MENU**« three times.
– The »FEATURES« menu appears with the »PICTURE FORMAT« line highlighted.

2 Select the »DEMONSTRATION« line using »**PR▲**« or »**PR▼**« and activate demo mode by pressing »**OK**«.

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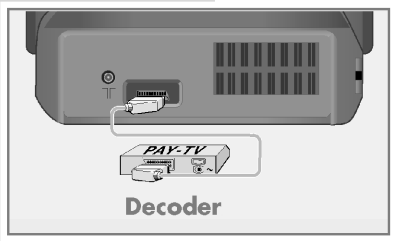
USING EXTERNAL DEVICES

Decoder or satellite receiver

In order for the television to receive encoded programs from a privately operated station, a decoder is needed.

Connecting a decoder or satellite receiver

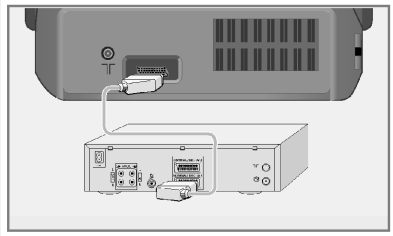


1 Connect the EURO-AV socket on the television set with the corresponding socket on the decoder using a EURO/AV-cable.

Note:
A satellite receiver can also be connected to this socket.
If you want to use both a satellite receiver and a decoder, the decoder must be connected to the satellite receiver.

Video recorder or SET-TOP box

Connecting a video recorder or SET-TOP box



1 Connect the EURO-AV socket on the television set with the corresponding socket on the video recorder or SET-TOP box using a EURO/AV (Scart) cable.

Using a video recorder or SET-TOP box

1 Switch on the video recorder or SET-TOP box and select the desired function.

2 Select channel position »AV1« with the »**AV/TV**« button.
– The video and audio information from the video recorder or the SET-TOP box can now be seen and heard on the television set.

Camcorder

Connecting a camcorder

1 Connect the »**AUDIO**« and »**VIDEO**« sockets on the front of the device (T55 and T51) or on the right side of the device (P37) and the equivalent sockets on the camcorder by means of a standard cable (cinch cable).

Using a camcorder

1 Switch on the camcorder and select the function you wish to use.

2 Select channel position »AV2« with the »**AV/TV**« button.
– The video and audio information from the camcorder can now be seen and heard on the television set.

INFORMATION

Technical data

Mains voltage:	220 – 240V, 50/60 Hz
Power consumption:	P 37-1101/5 TXT: during operation 40 W, in stand-by 4 W T 51-1101/5 TXT: during operation 50 W, in stand-by 4 W T 55-1101/5 TXT: during operation 50 W, in stand-by 4 W
Sound output:	5 Watts music (2.5 Watts sine)
Reception ranges:	C01 ... C99, special channels S01 ... S41, frequency band 1 ... 4
Channel positions:	100 and 2 AV

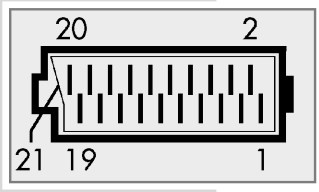
Service information for dealers:

The television set may only be operated with the mains cable set supplied. It prevents problems from the mains supply and is part of the device certification. Please order only replacement mains cable sets with the designation »item number 75955-045.0200« from customer service locations.

The product complies with the following EU directives:
73/23/EEC directive for electrical equipment to be used within defined voltage ranges.
89/336/EEC directive on electromagnetic compatibility.

The television set complies with the following standards: EN 60065, EN 55013, EN 55020

Contact assignments of the EURO-AV socket



Pin		Signal	Pin		Signal
1	=	Audio output right	12	=	–
2	=	Audio input right	13	=	Red ground
1	=	Audio output left	14	=	Ground
4	=	Audio ground	15	=	RGB red input, (S-Video = Chroma)
5	=	Blue ground	16	=	RGB switch voltage
6	=	Audio input left	17	=	Video ground
7	=	RGB blue input	18	=	RGB switch voltage ground
8	=	Switch voltage	19	=	Video output
9	=	Green ground	20	=	Video input, (S-Video = luminance)
10	=	–	21	=	Shielding/ground
11	=	RGB green input			

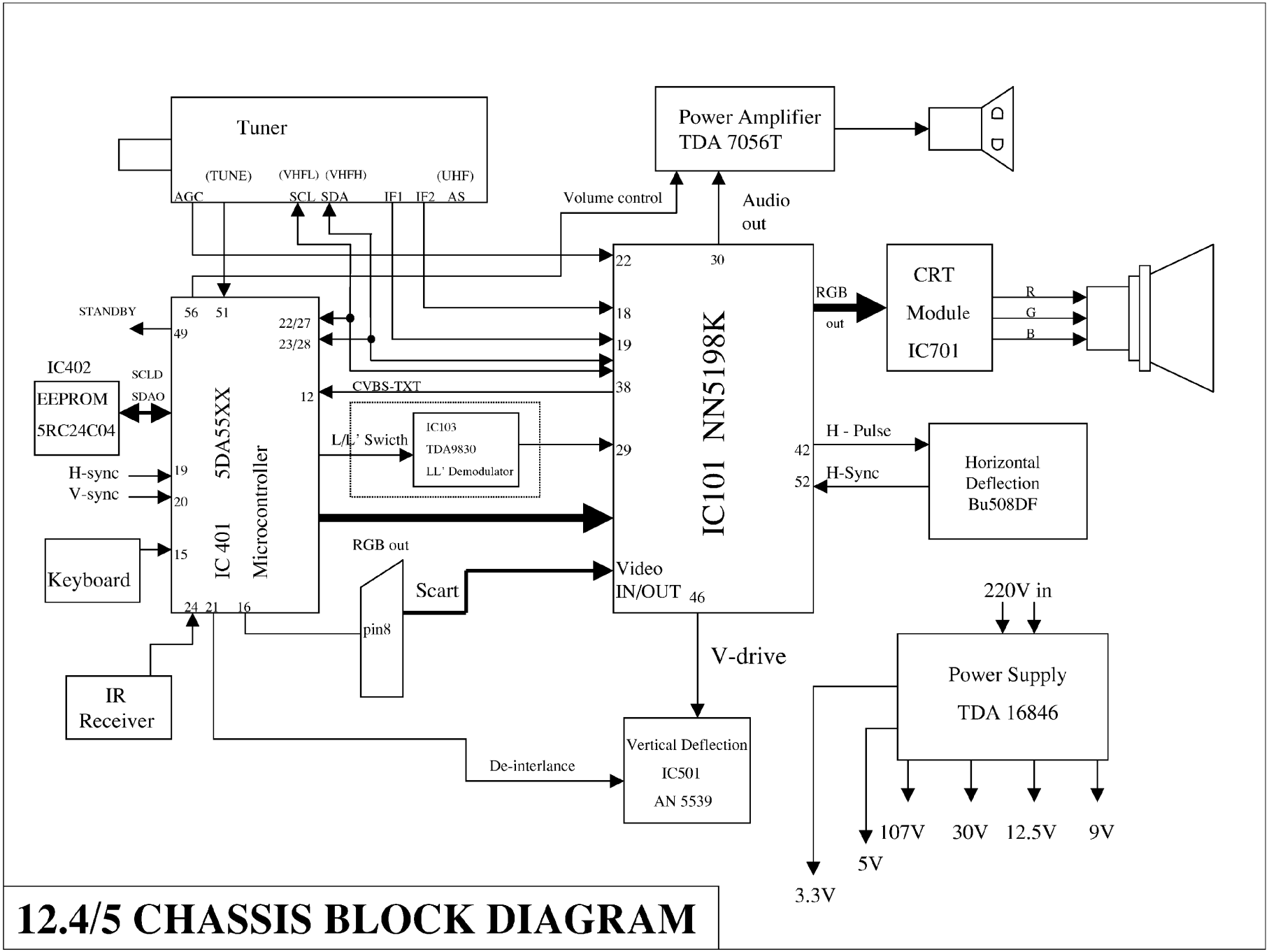
ENGLISH
13

INFORMATION

Rectifying minor problems

If the remedies given below do not work, please consult an authorised GRUNDIG dealer. Please bear in mind that malfunctions can also be caused by external devices such as video recorders or satellite receivers.
If the picture is poor, it may help to reset the television to the factory picture settings by pressing »▶|◀«.

Fault	Possible cause	Remedy
Screen lit (snow), but no transmission visible	Antenna cable	Is antenna cable connected?
	No station is set	Start station search
Poor picture contrast	Picture settings incorrectly set	Adjust brightness, contrast or colour setting
	Problem at station	Test with another channel
Interference to picture and/or sound	Interference by other devices	Move the devices
Ghosting, reflection	Channel setting	Automatic or manual channel setting/fine tuning
	Antenna	Have antenna cable or system checked
No sound	Audio norm setting	Set correct audio norm
No colour	Colour intensity at minimum	Turn colour up
	TV norm setting (if setting option available)	Select correct colour norm
	Problem at station	Test with another channel
Inappropriate colour, colour spots	Strong magnetic field due for example to loudspeakers	Move the loudspeakers away from the television. If colour spots remain, switch off the television set at the mains and switch on again after 10 minutes.
Picture but no sound	Volume set to minimum	Turn up/switch on loudspeaker
	Problem at station	Test with another channel
Teletext missing or faulty	Television station (has no teletext) or aerial system	Test another channel for fine tuning and ghosting
	Station signal too weak	Check aerial system
Remote control does not work	No optical connection	Point the remote control at the television set
	Remote control batteries	Check the batteries, change if necessary
	Operating condition undefined	Switch off the television with the main power button for ca. 2 min.



12.4/5 CHASSIS BLOCK DIAGRAM

BASIC SPECIFICATION AND DESCIPTION OF TDA16846 (IC601)

Description

TheTDA16846 is optimized to control free running or fixed frequency flyback converters with or with-out Power Factor Correction (Current Pump). To provide low power consumption at light loads, this device reduces the switching frequency continuously with load, towards an adjustable minimum (e.g. 20kHz in standby mode). Additionally, the start up current is very low. To avoid switching stresses of the power devices, the power transistor is always switched on at minimum voltage. A special circuit is implemented to avoid jitter. The device has several protection functions: VCC over- and undervoltage, mains undervoltage, current limiting and 2 free usable fault comparators. Regulation can be done by using the internal error amplifier or an opto coupler feedback (additional input). The out-put driver is ideally suited for driving a power MOSFET, but it can also be used for a bipolar transistor.
Fixed frequency and synchronized operation are also possible.

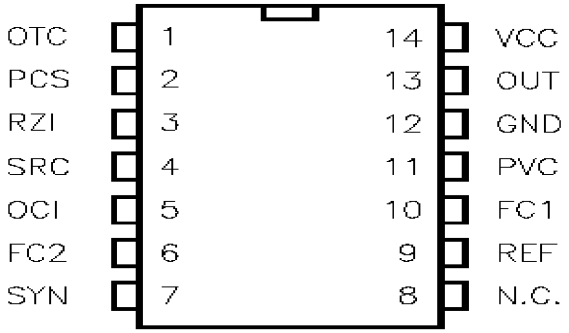
Pin Description

Pin	Symbol	Function
1	OTC	Off Time Circuit
2	PCS	Primary Current Simulation
3	RZI	Regulation and Zero Crossing Input
4	SRC	Soft-Start and Regulation Capacitor
5	OCI	Opto Coupler Input
6	FC2	Fault Comparator 2
7	SYN	Synchronization Input
8		N. C.
9	REF	Reference Voltage and Current
10	FC1	Fault Comparator 1
11	PVC	Primary Voltage Check
12	GND	Ground
13	OUT	Output
14	VCC	Supply Voltage

Short Description of the Pin Functions

Pin 1: A parallel RC- circuit between this pin and ground determines the ringing suppression time and the standby- frequency.
Pin 2: A capacitor between this pin and ground and a resistor between this pin and the anode of the primary elcap quantifies the max. possible output power of the SMPS.
Pin 3: This is the input of the error amplifier and the zero crossing input. The output of a voltage divider between the control winding and ground is connected to this input. If the pulses at pin 3 exceed a 5V threshold, the control voltage at pin 4 is lowered.
Pin 4: This is the pin for the control voltage. A capacitor has to be connected between this pin and ground. The value of this capacitor determines the duration of the softstart and the speed of the control.
Pin 5: If an opto coupler for the control is used, it´s output has to be connected between this pin and ground. The voltage divider at pin 3 has then to be changed, so that the pulses at pin 3 are below 5V.
Pin 6: Fault comparator 2: If a voltage > 1.2 V is applied to this pin, the SMPS stops.
Pin 7: If fixed frequency mode is wanted, a parallel RC circuit has to be connected between this pin and ground. The RC- value determines the frequency. If synchronized mode is wanted, sync pulses have to be fed into this pin.
Pin 8: Not connected.

Pin 9: Output for reference voltage (5 V). With a resistor between this pin and ground the fault comparator 2 (pin 6) is enabled.
Pin 10: Fault comparator 1: If a voltage > 1 V is applied to this pin, the SMPS stops.
Pin 11: This is the input of the primary voltage check. The voltage at the anode of the primary elcap has to be fed to this pin via a voltage divider. If the voltage of this pin falls below 1V, the SMPS is switched off. A second function of this pin is the primary voltage dependent fold back point correction (only active in free running mode).
Pin 12: Common ground.
Pin 13: Output signal. This pin has to be connected across a serial resistor with the gate of the power transistor.
Pin 14: Connection for supply voltage and startup capacitor. After startup the supply voltage is produced by the control winding of the transformer and rectified by an external diode.



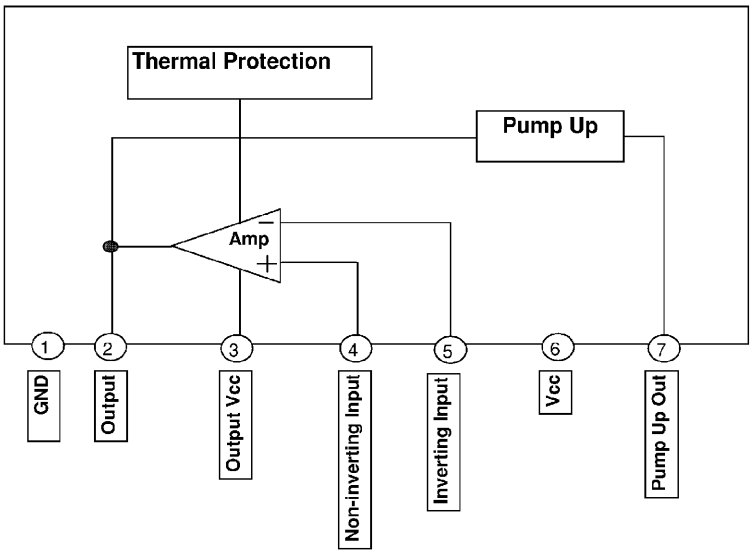
Absolute maximum ratings

Parameter	Symbol	Min	Max	Unit	Remark
Supply Voltage at Pin 14	V_{CC}	-0.3	17	V	
Voltage at Pin 1, 4, 5, 6, 7, 9, 10		-0.3	6	V	
Voltage at Pin 2, 8, 11		-0.3	17	V	
Voltage at Pin 3 Current into Pin 3	RZI	 -10	6	V mA	 V3 < -0.3V
Current into Pin 9	REF	-1		mA	
Current into Pin 13	OUT	 -100	100	mA mA	V13 > V_{CC} V13 < 0 V
ESD Protection				kV	MIL STD 883C method 3015.6, 100pF,1500Ω
Operating Ambient Temperature	T_A	0	70	°C	
Storage Temperature	T_{stg}	-65	125	°C	
Operating Junction Temperature	T_J		125	°C	
Thermal Resistance Junction-Ambient	R_{thJA}			K/W	P-DIP-14-3
Soldering Temperature			260	°C	
Soldering Time			10	s	

All voltages listed are referenced to ground (0V, V_{SS}) except where noted.

IC101 NN5198K/50991K VIDEO CONTROLLER IC					
PİN NO.	Pin Description	PIN VOLTAGES (VDC)	Pin NO.	Pin Description	PİN VOLTAGES (VDC)
1	TEST	-	27	QIF DETECT OUTPUT	3.60
2	SCL	2.39	28	SIF INPUT	3.40
3	CHROMA APC FILTER	5.60	29	EXTERNAL AUDIO INPUT	3.90
4	ABCL	3.28	30	AUDIO OUTPUT	4.21
5	Ys INPUT	0.38	31	BLACK LEVEL DETECT FILTER	4.41
6	EXTERNAL R INPUT	4.85	32	DE - EMPHASIS FILTER/AUDIO MONITOR OUTPUT	4.32
7	EXTERNAL G INPUT	4.85	33	VCC1 (CHROMA)	9
8	EXTERNAL B INPUT	5.10	34	VIF DETECT OUTPUT	5.30
9	VCC1 (VCJ)	9.20	35	VCC3 (DAC)	4.65
10	R OUTPUT	3.05	36	VIDEO OUTPUT	5.24
11	G OUTPUT	3.05	37	TEST 2	0
12	B OUTPUT	2.95	38	Y INPUT/VERTICAL SYNC, INPUT	4.18
13	GND (VCJ)	0.12	39	HORIZONTAL SYNC, INPUT	4.10
14	CHROMA VCX 01 (4,43MHz)	0.24	40	CHROMA VCX 02 (3.58 MHz)	2.68
15	SECAM PLL REF, FILTER	0.05	41	VCC2 (HORIZONTAL VCC)	6.15
16	VCC1 (VIF/SIF)	9.00	42	HORIZONTAL PULSE OUTPUT	1.25
17	SECAM BELL REF, FILTER	0.13	43	HORIZONTAL AFC1 FILTER	3.32
18	VIF INPUT (1)	2.80	44	AUDIO DE - COUPLING FILTER	3.09
19	VIF INPUT (2)	2.80	45	VERTICAL SAW TOOTH	1.17
20	GND (VIF/SIF)	-	46	VERTICAL OUTPUT	3.20
21	QIF INPUT	2.66	47	VERTICAL AGC FILTER	3.10
22	RF AGC OUTPUT	4.84	48	VDD1 (CMOS)	4.97
23	AFT OUTPUT	4.05	49	SCP/CW OUTPUT/X - RAY	0.68
24	EXTERNAL VIDEO/CHROMA INP	3.14	50	VSS (CMOS)	0
25	IF AGC FILTER	6.71	51	SDA	1.85
26	VIF APC FILTER	3.40	52	FBP INPUT	0.38

IC501 AN5539LF



Pin Descriptions

Pin No.	Pin Name
1	GND
2	Vertical Output
3	Vertical Output Power Supply
4	Non-inverting Input
5	Inverting Input
6	Power Supply
7	Pump-up Output

	IC401 SDA5552/SDA5521 MICROCONTROLLER IC		
PİN NO.	Pin Description	Pin NO.	Pin Description
1	I/O PIN -open collector	27	SDA1-OUT
2	TV INT- Multimedia mode	28	SDA1-IN
3	ON-LINE-Multimedia mode	29	GND
4	LL' SWITCH	30	VDD-3.3V SUPPLY
5	BAND SELECT (no function for 12.5 models)	31	NO CONNECTION
6	BAND SELECT (no function for 12.5 models)	32	NO CONNECTION
7	LL' AV Selection	33	RESET PIN
8	SERVICE PIN (no fuction for normal operation)	34	NO CONNECTION
9	VDD_2.5 supply pin	35	XTAL1- INPUT OF THE INVERTING OSCILLATOR AMPLIFIER
10	GND	36	XTAL2- INPUT OF THE INVERTING OSCILLATOR AMPLIFIER
11	VDD_3.3 supply pin	37	VDD_2.5 supply pin
12	CVBS-TXT input	38	R OUTPUT FOR OSD AND TXT
13	VDDA_2.5 supply pin	39	G OUTPUT FOR OSD AND TXT
14	GND	40	B OUTPUT FOR OSD AND TXT
15	LOCAL KEYBOARD İNPUT	41	FBL OUT
16	STATUS PIN	42	VDDA_2.5 supply pin
17	AFT	43	GND
18	POWER CTRL	44	VDD_3.3 supply pin
19	HORIZONTAL SYNC INPUT	45	AV SELECTION
20	VERTICAL SYNC INPUT	46	RGB SELECTION
21	ODD/EVEN OUTPUT	47	NO CONNECTION
22	SCL1-OUT	48	GND
23	SCL1-IN	49	STAND BY (ON-OFF) PIN
24	INFRARED RECEIVER INPUT	50	NO CONNECTION
25	SCL0-SDA0 INPUT	51	TUNING VOLTAGE (NO CONNECTION FOR 12.5 MODELS)
26	SCL0-SDA0 INPUT	52	VOLUME CONTROL PIN

IC103 TDA9830 TV SOUND AM DEMODULATOR AND AUDIO SWITCH

FEATURES

- Adjustment free wideband synchronous AM demodulator
- Audio source-mute switch (low noise)
- Audio level according EN50049
- 5 to 8 V power supply or 12 V alternative
- Low power consumption.

GENERAL DESCRIPTION

The TDA9830, a monolithic integrated circuit, is designed for AM-sound demodulation used in L- and L'-standard.
The IC provides an audio source selector and also mute switch.

PINNING

SYMBOL	PIN	DESCRIPTION
IFIN	1	sound IF differential input signal
n.c.	2	not connected
C_{AGC}	3	AGC capacitor
C_{REF}	4	REF voltage filtering capacitor
n.c.	5	not connected
AMOUT	6	AM demodulator output
AMIN	7	input signal (from AM) to audio switch
AFOUT	8	output signal from audio switch
EXTIN	9	input signal (from external) to audio switch
SWITCH	10	switch input select control
V_{p2}	11	Supply voltage +12 V (alternative)
MUTE	12	mute control
GND	13	ground (0 V)
V_{p1}	14	supply voltage +5 to +8 V
n.c.	15	not connected
IFIN	16	sound IF differential input signal

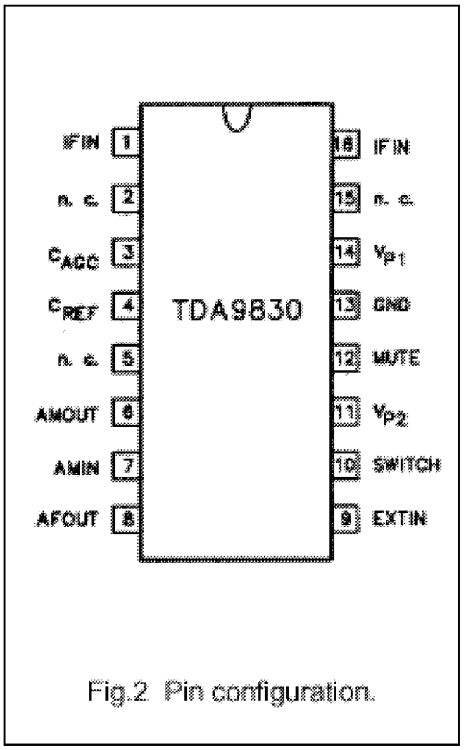


Fig.2 Pin configuration.

Adjustment

ELECTRICAL ADJUSTMENTS

ENTERING THE SERVICE MODE: Press the "MENU" button to switch to the "PICTURE" menu, then enter the digits "8 5 0 0" in this menu (this entry is not visible). Exit the Service Mode with the "0" button. When exiting the Service Mode, the software version is briefly indicated and changes will be stored automatically.

1-POWER SUPPLY VOLTAGE

Connect a digital voltmeter to the cathode of D610 diode at the AV1 mode of the TV and set the screen voltge to the minumum. Adjust the main supply voltage +B with P601 potentiometer to the following voltage value.

14 inch	A33LPE02X01	106V DC
20 inch	A4ECR143X51	118V DC
21 inch	A51EER 133X41	118V DC

Adjust the screen potentiometer to the level where a picture is just visible.

2- INTERMEDIATE FREQUENCY ADJUSTMENTS

Before starting this adjustment follow this procedure:
Enter service mode, chanğe “VIDEO” header to “NEW”. Then exit from service mode.
ATTENTION!!! : Above procedure must be done after replacing the Video IC (IC101) or EEPROM IC. IF adjustment must be repeated after “VIDEO” header displays “NEW”.

For BG, DK, I standard: Adjust the frequency of pattern generator to the 38.9Mhz and switch it to colour bar pattern. Connect the RF output of pattern generator to the pin 1 of F101. Enter service mode. Adjust the “AFT38” item of service menu to read the voltage value 1.45VDC +-100mV DC at the pin#23 of IC101. Exit from service mode.

For SECAM LL’ Standart : Adjust the frequency of pattern generator to the 33.9 MHz and switch it to colour bar pattern. Connect the RF output of pattern generator to the pin 1 of F101. Enter service mode. Adjust the “AFT33”item of service menu to read the voltage value 1.45VDC ± 100mV DC at the pin#23 of IC101. Exit from service mode.

3-AGC ADJUSTMENTS

Apply a signal at the channel 32 with 60±1dBuV level to the antenna input (switch sound carrier Off and switch “Video Ext” On).
Connect an oscilloscope to the pin#11 (IF2) of Tuner and ground.
Enter service mode and go “AGC” header.
Adjust the amplitude to the value given below (which is monitored on oscilloscope) using the Volume+/Volume- key of remote control.

12.5 chassis for BG,DK,I	**Standards:**	630mVpp±20mVpp
12.5 chassis for LL’	**Standards:**	450mVpp±20mVpp
12.4 chassis for BG,DK,	**Standards:**	630mVpp±20mVpp
12.4 chassis for LL’	**Standards:**	450mVpp±20mVpp
12.4 chassis for I’	**Standards:**	500mVpp±20mVpp

4- SERVICE MODE SETUP

ITEM	SELECTION
TUNER	SHARP&ALPS PHILLIPS P.SONIC TEMIC FULL BAND UHF ONLY
FULL BAND and UHF ONLY	items are valid only for 12.4 (voltage synthezirs) chassis.
AV2	NO: Single scart YES: Single scart+front AV
CLR.S	PAL PAL/NTSC : SECAM is iden tified automatically.
SND.S	BG I BG+DK BG+LL'
TEXT	DEFAULT : Teletext FASTEXT : Fastext

5- GEOMETRY ADJUSTMENTS

Enter service mode. Select Green Button in Service Menu. "H.POS" is for horizontal position, "V.HEI" is for vertical size, "LNRTY" is for vertical linearity, "S.COR" is for S-correction adjustment.

6- SCREEN ADJUSTMENT

Enter service mode. Select Yellow Button in Service Menu. Select "SCRN" item. Press Vol + or - button. You will see white horizontal line at center of the screen. Adjust the screen potentiometer to the just visiable level of horizontal line. Return to PICTURE MODE by pressing VOL+

7- WHITE BALANCE ADJUSTMENT

Enter the service mode. Select Yellow Button in Service Menu. Select and adjust "G.CUT" to the 128. Adjust "R.CUt" and "B.CUT" for cut off adjustment. Select and adjust "R.DRV" and "B.DRV" for white balace. Exit from service mode.

8- PRESET VALUES OF SERVICE MENU ITEMS

Below given values are average values and can vary according to the CRT type and chassis type.

	RED Menu Button			GREEN Menu Button						YELLOW Menu Button							BLUE Menu Button	
SIZE	AGC	ST.BY	VIDEO	H.POS	V.POS	V.HEI	LNRT V	S.COR	Y.DLY	G.CUT	R.CUT	B.CUT	R.DRV	B.DRV	SCRN	SECBL	AFT38	AFT33
14"	19	NO	OLD	14	4	64	46	0	1	128	127	124	59	53	0	48	40	61
20"	19	NO	OLD	13	4	80	47	0	1	128	128	119	58	59	0	48	40	61
21"	19	NO	OLD	14	4	81	47	0	1	128	128	121	55	56	0	48	40	61

CONVERGENCE ADJUSTMENTS

Note: Before attempting any convergence adjustments, the receiver should be operated for at least fifteen minutes.

• Centre Convergence Adjustment

1. Receive crosshatch pattern with a colour bar signal generator.
2. Adjust the BRIGHTNESS and CONTRAST Controls for well defined pattern.
3. Adjust two tabs of the 4-Pole Magnets to change the angle between them (See figure 16) and superimpose red and blue vertical lines in the centrel area of the picture screen. (See figure).
4. Turn the both tabs at the same time keeping the constant angle to superimpose red and blue horizontal lines at the centre of the screen. (See figure)
5. Adjust two tabs of 6-Pole Magnets to superimpose red/blue line and green one. Adjusting the angle affects the vertical lines and rotating both magnets affects the horizontal lines.
6. Repeat adjustments 3,4,5 to ensure best convergence, the adjustment must be undertaken with great care because of the interaction between 4 and 6 pole magnets.

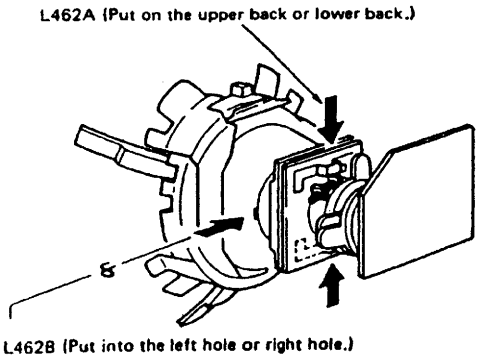
• Circumference Convergence Adjustment

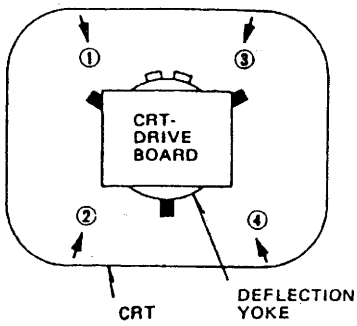
1. Loosen the clamping screw of deflection yoke to allow the yoke to tilt.
2. Put a wedge as shown in figure 15 temporarily. (Do not remove cover paper on adhesive part of the wedge.)
3. Tilt front of the deflection yoke up or down to obtain better convergence in circumference. (See figure) Push the mounted wedge into the space between picture tube and the yoke to fix the yoke temporarily.
4. Put other wedge into bottom space and remove the cover paper to stick.
5. Tilt front of the yoke right or left to obtain better convergence in circumference. (See figure)
6. Keep the yoke position and put another wedge in either upper space. Remove cover paper and stick the wedge on picture tube to fix the yoke.
7. Detach the temporarily mounted wedge and put it in another upper space. Stick it on picture tube to fix the yoke.
8. After fixing three wedges, recheck overall convergence. Tighten the screw firmly to fix the yoke and check the yoke is firm.
9. Stick 3 adhesive tapes on wedges.

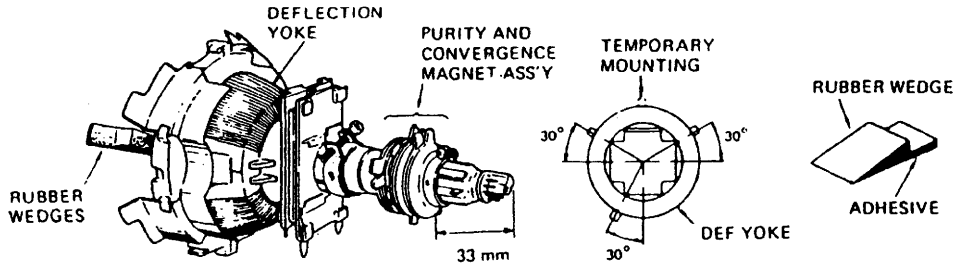
CONVERGENCE COMPENSATOR

Compensators L462A and L462B are used to correct misconvergence (Red-Green) at the top center or bottom center on screen, when the misconvergence is still evident even though the yoke adjustment is tried. Compensator L462C is also used to correct misconvergence (Vertical shift of Red or Blue) at four corners on screen.

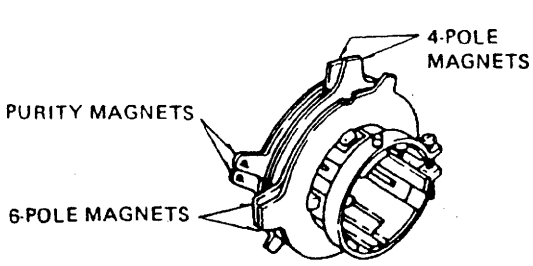
1. To correct horizontal misconvergence (Red-Green), put compensator L462A on the yoke back (see figure right) to find a position for minimizing misconvergence. Mark the position and remove protective paper on the rear of L462A to stick it in place. Apply adhesives on buth yoke and L462A.
2. To correct vertical misconvergence (Red-Green), put the tips of compensator L462B into either of the holes on the yoke core and apply adhesives.
3. To correct up or down shift of Red at top right or bottom right corner, put compensator L462C at point 1 ve 2 or the pisture tube (see figure right.) to find a position for minimizing misconvergence. Mark the position and remove protective paper on the rear of L462C to stick it in place.



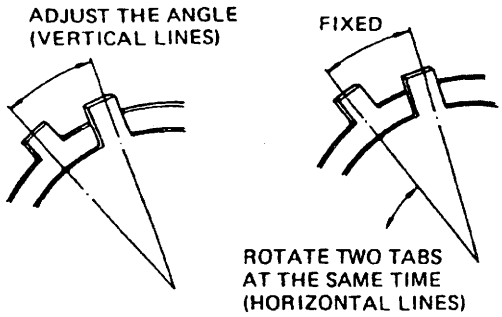




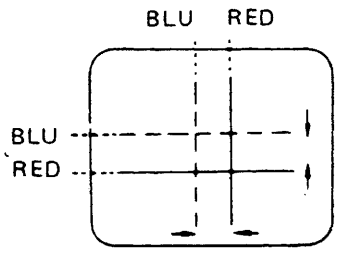
RUBBER WEDGES LOCATION



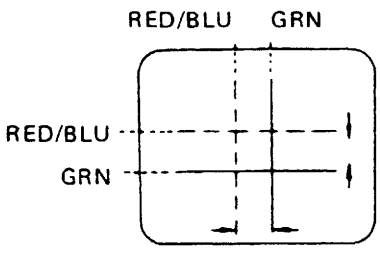
CONVERGENCE MAGNET ASSEMBLY



ADJUSTMENT OF MAGNETS

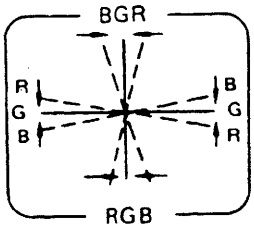


4-POLE MAGNETS MOVEMENT

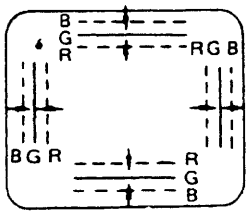


6-POLE MAGNETS MOVEMENT

Centre Convergence by Convergence Magnets



INCLINE THE YOKE UP (OR DOWN)



INCLINE THE YOKE RIGHT (OR LEFT)

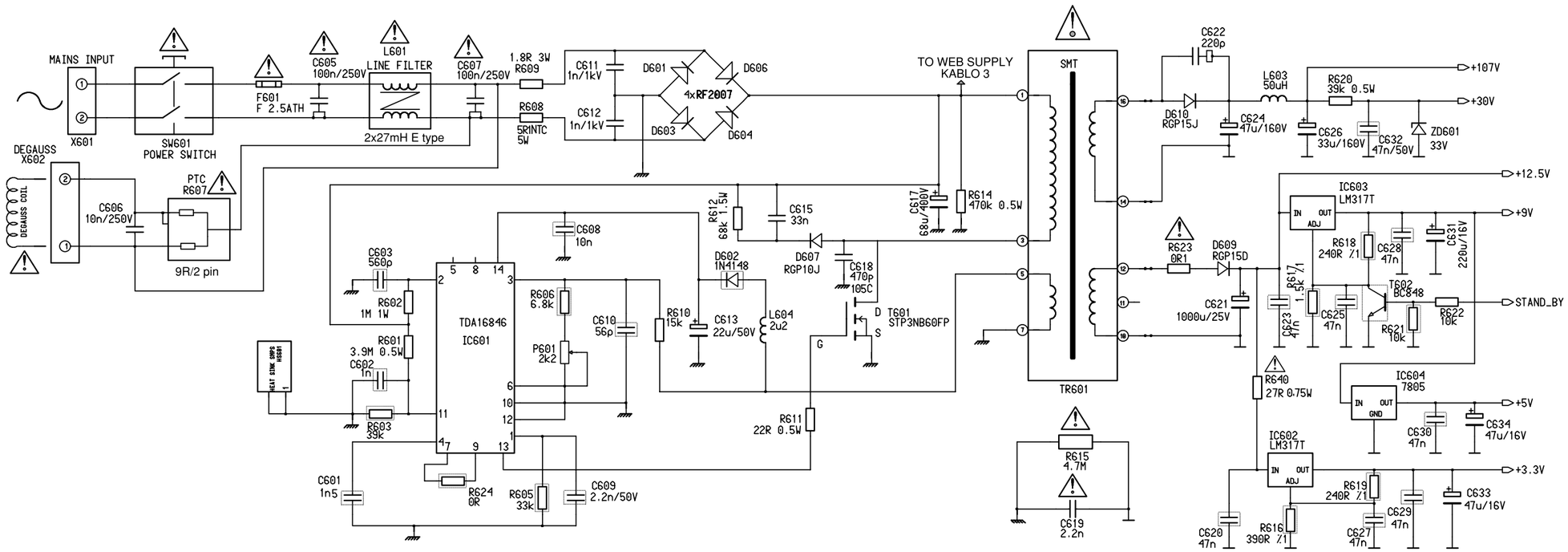
Circumference Convergence by DEF Yoke

Dot Movement Pattern

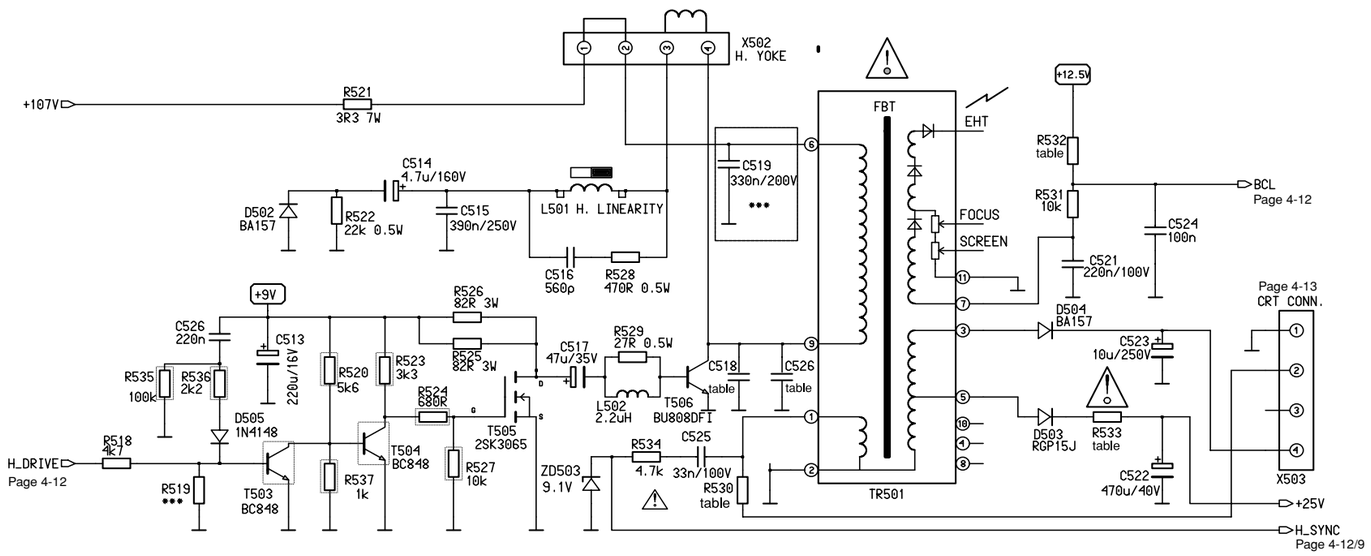
P 37-1101/5 TXT, T 51-1101/5 TXT, T 55-1101/5 TXT Layout of the PCBs and Circuit Diagrams

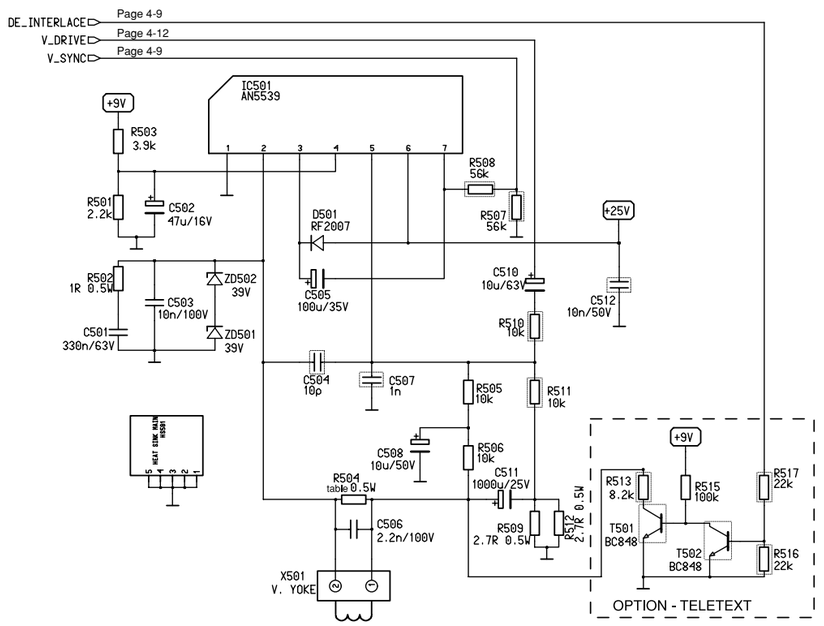
Layout of the PCBs and Circuit Diagrams

Mains Section



Deflection

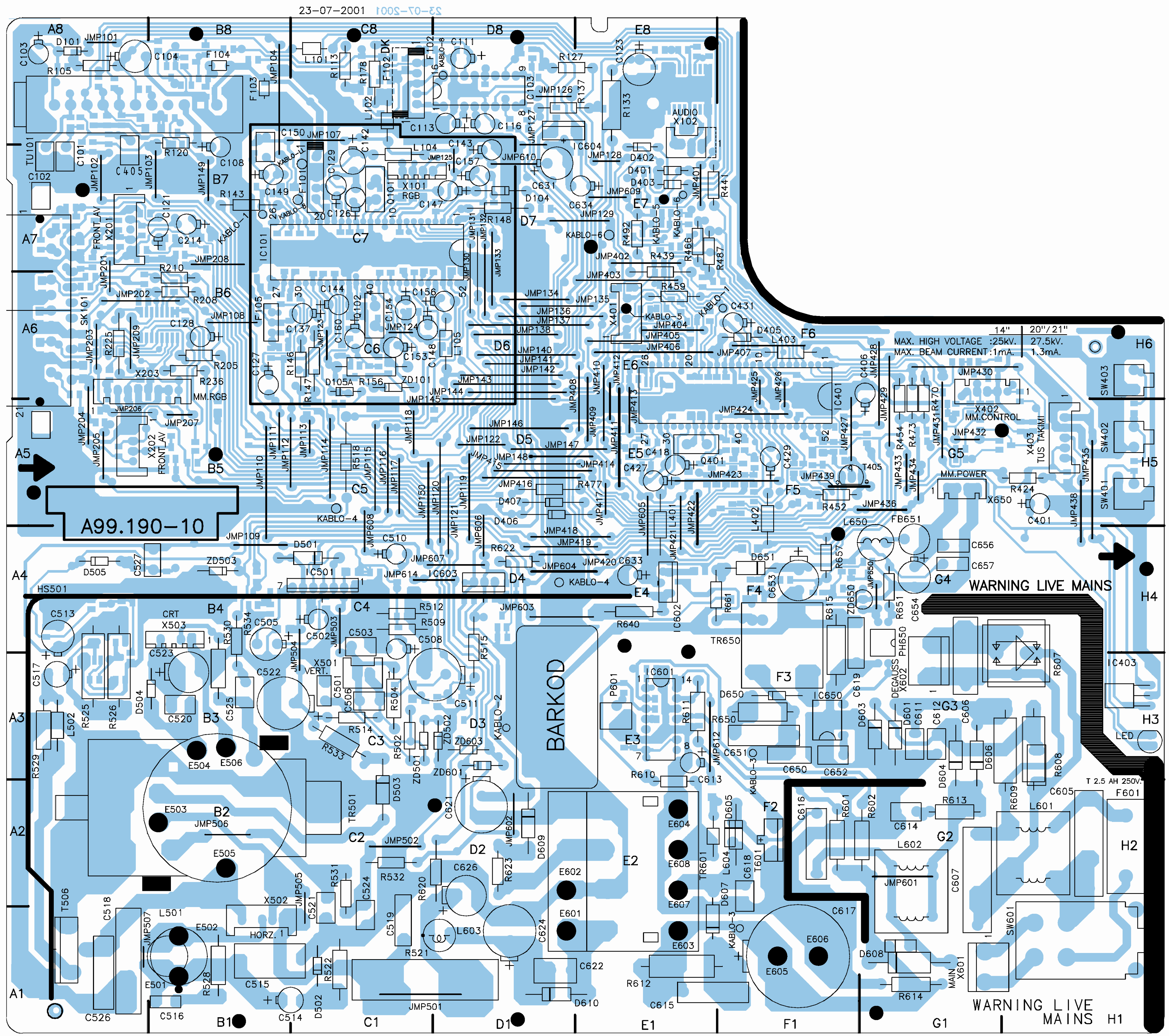




Layout of the PCBs and Circuit Diagrams
P 37-1101/5 TXT, T 51-1101/5 TXT, T 55-1101/5 TXT

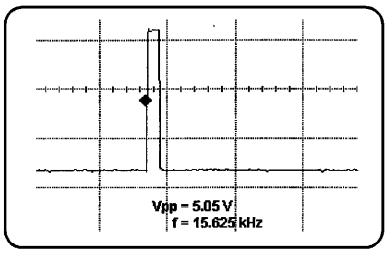
Chassis Board

Component Side, Top View



WAVE FORMS

1. IC 101 (NN 5198K)



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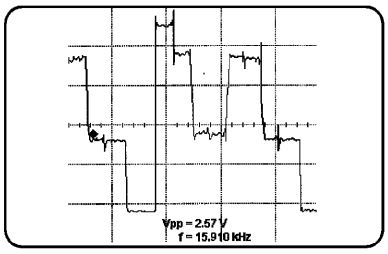
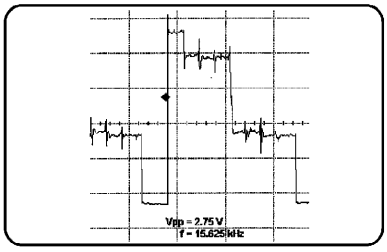


Pin no: 10



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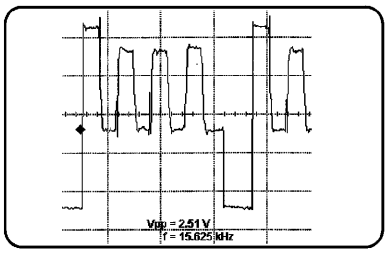

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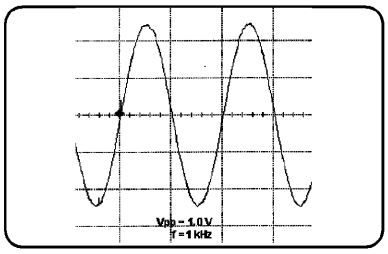

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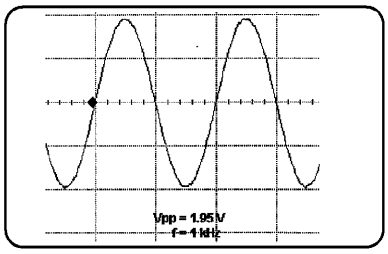

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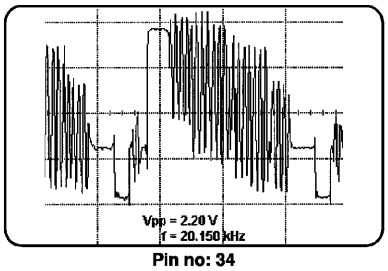

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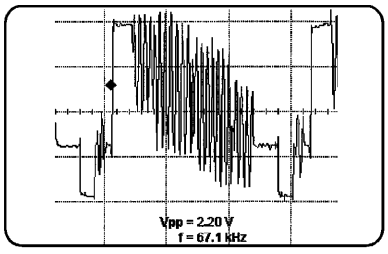

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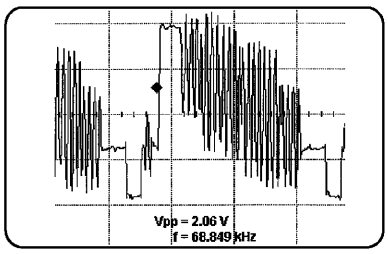

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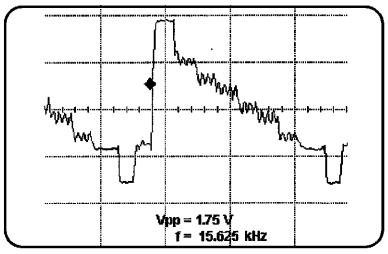

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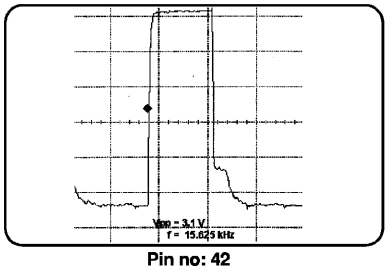

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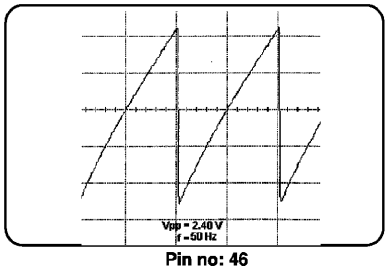
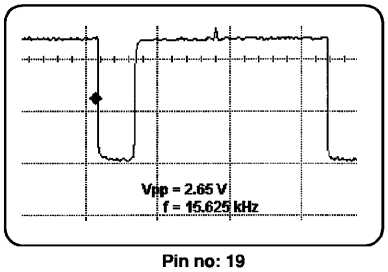


Pin no: 46

2. IC 401 (SDA 555XL)



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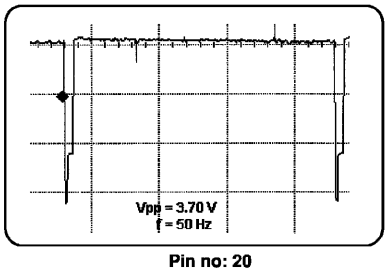

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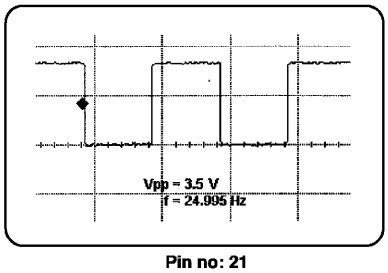

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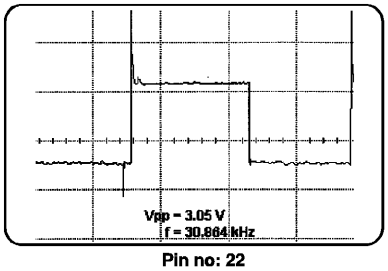

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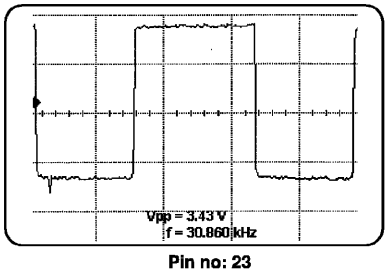

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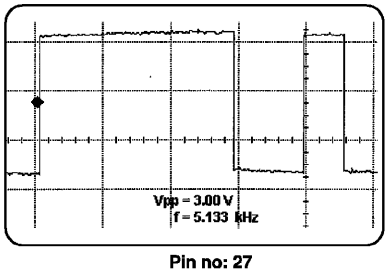

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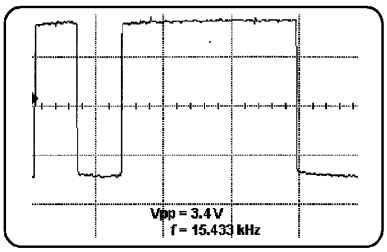

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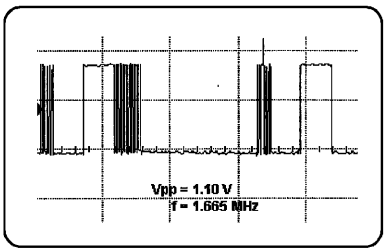

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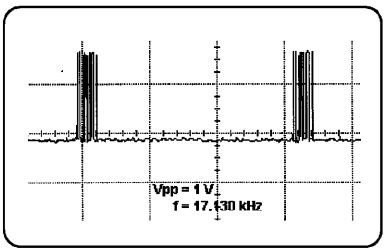

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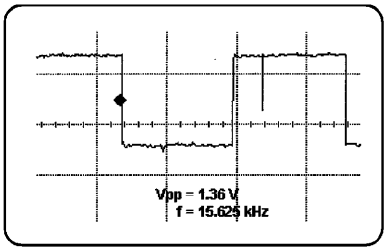

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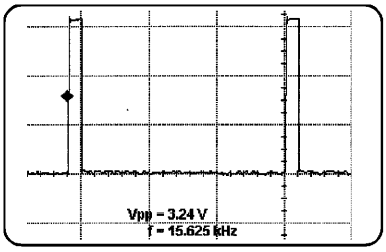
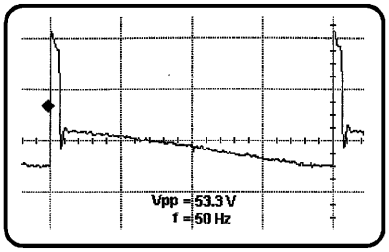
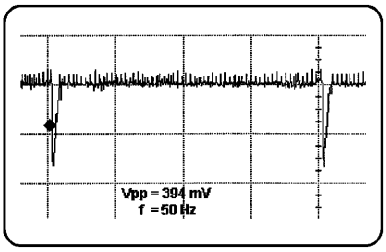


Pin no: 41

3. IC 501 (AN 5539)



Pin no: 2



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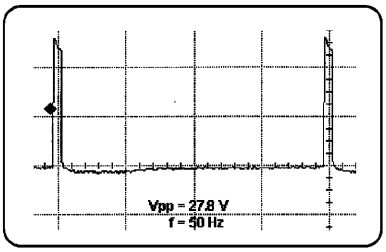
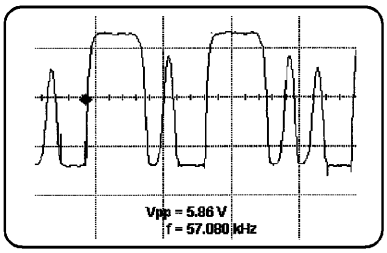


Pin no: 7

4. IC 601 (TDA 16846)



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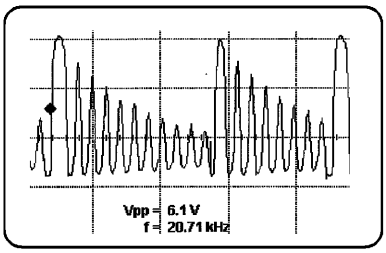
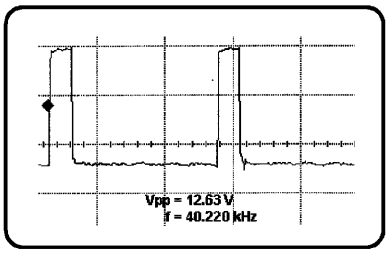


Pin no: 3 (TV Stand-By)



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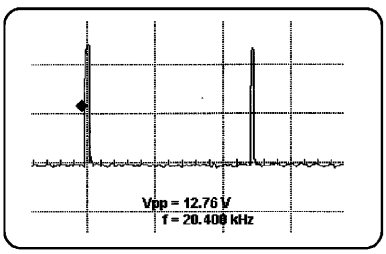
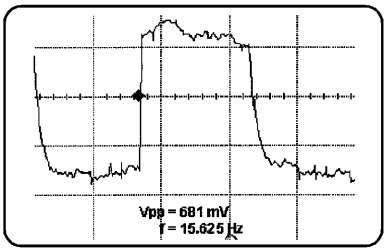


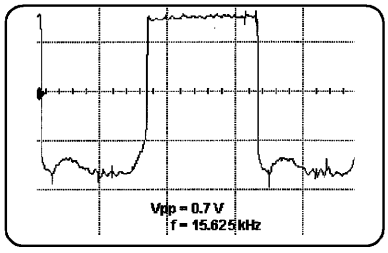
Pin no: 13 (TV Stand-By)

5. T 503 (BC 848 NPN)



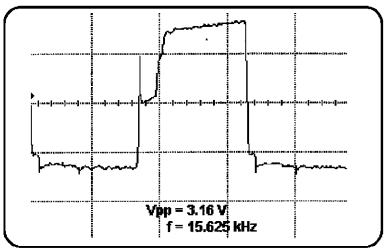
Base

6. T 504 (BC 848 NPN)



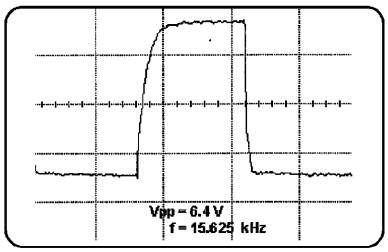
Base

7. T 505 (2 SK3065)



Drain

T 505 (2 SK3065)

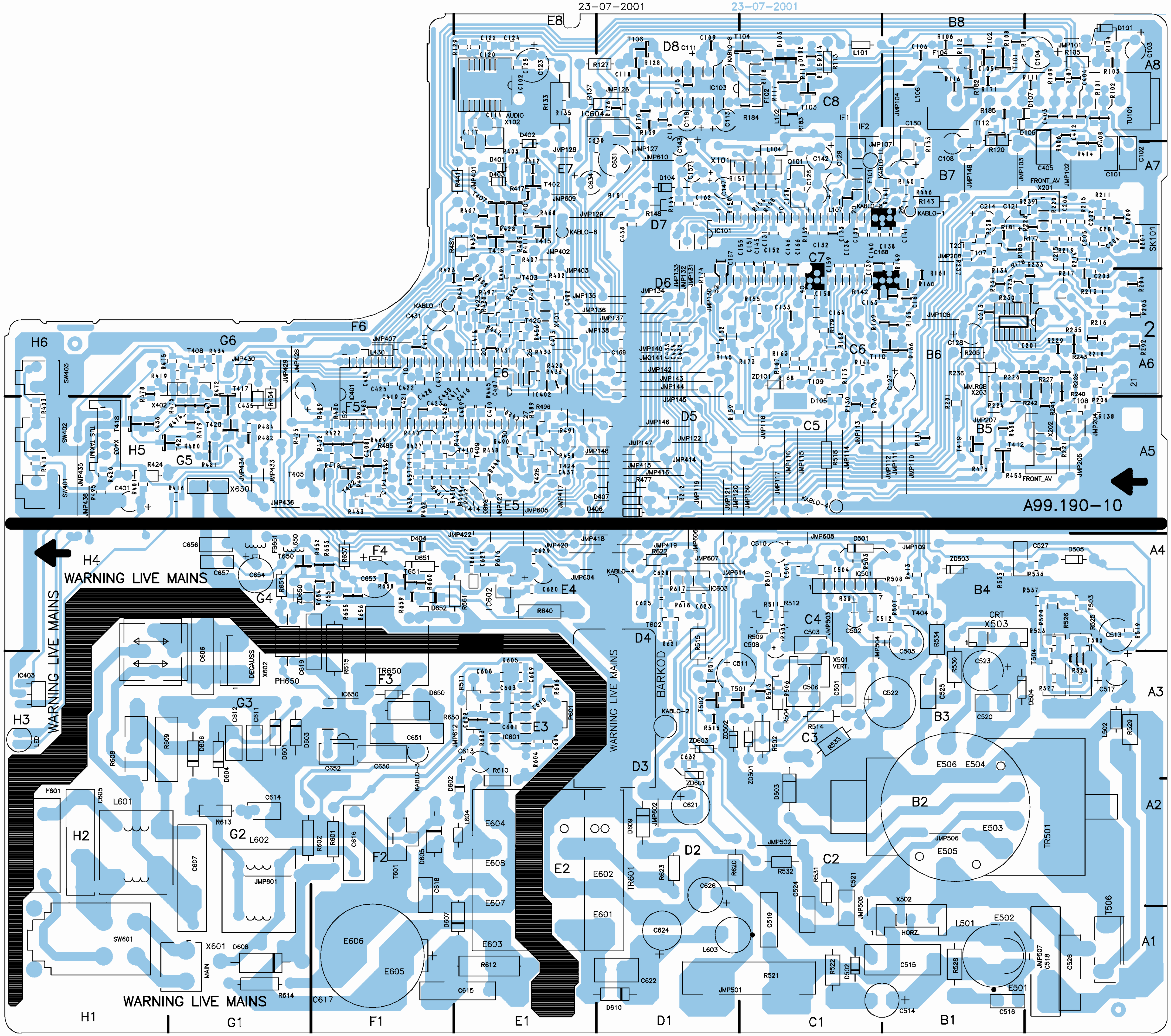


Gate

P 37-1101/5 TXT, T 51-1101/5 TXT, T 55-1101/5 TXT Layout of the PCBs and Circuit Diagrams

Chassis Board

Solder Side, Bottom View



Layout of the PCBs and Circuit Diagrams P 37-1101/5 TXT, T 51-1101/5 TXT, T 55-1101/5 TXT

Circuit Diagram

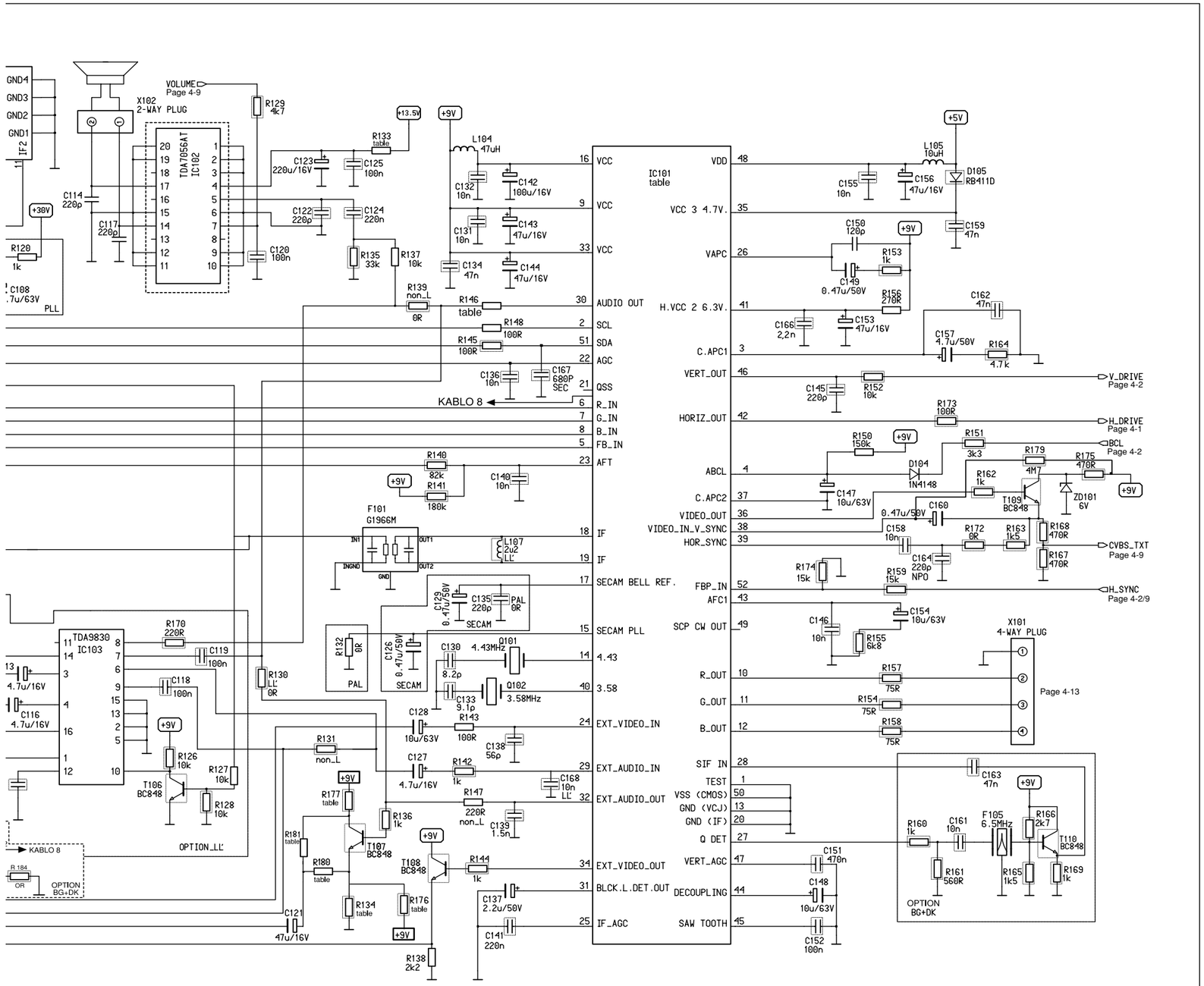
A99.820-03

	IC401
TX	SDA5552
NTX	SDA5521

	C518	C526	R133	R504	R532	R53
14″	6,8n	-	4,7R	470R	18k	4,7F
20″	9,1n	-	2,2R	470R	12k	shor
21″	7,5n	330p	2,2R	220R	12k	shor

	C403	C412	KABLO 5	KABLO 6	R107	F
VS	47n	47n	–	–	0R	
FS	47p	47p			220R	2

P 37-1101/5 TXT, T 51-1101/5 TXT, T 55-1101/5 TXT Layout of the PCBs and Circuit Diagrams



R532	R533	R530
18k	4,7R	0,68R 0,5W
12k	short	0,47R 0,5W
12k	short	0,68R 0,5W

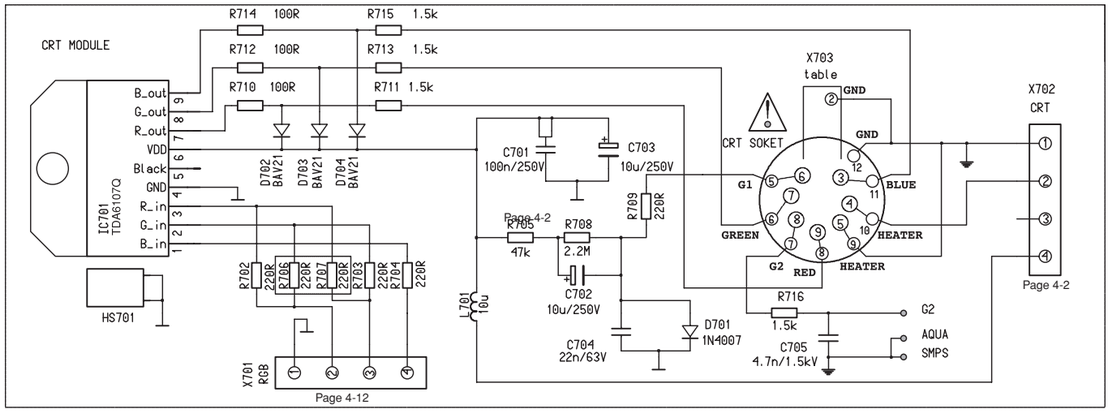
R107	R109
0R	0R
220R	220R

Components designated by the safety symbol should only be replaced by original parts produced and proofed by the manufacturer.
Sicherheitsbauteile im Sinn der Sicherheitsbestimmung. Diese Teile dürfen nur durch Originalteile ersetzt werden.
Contrassegno di sicurezza. I componenti devono, corrispondere a ricambi originali e devono essere montati a regola d'arte.

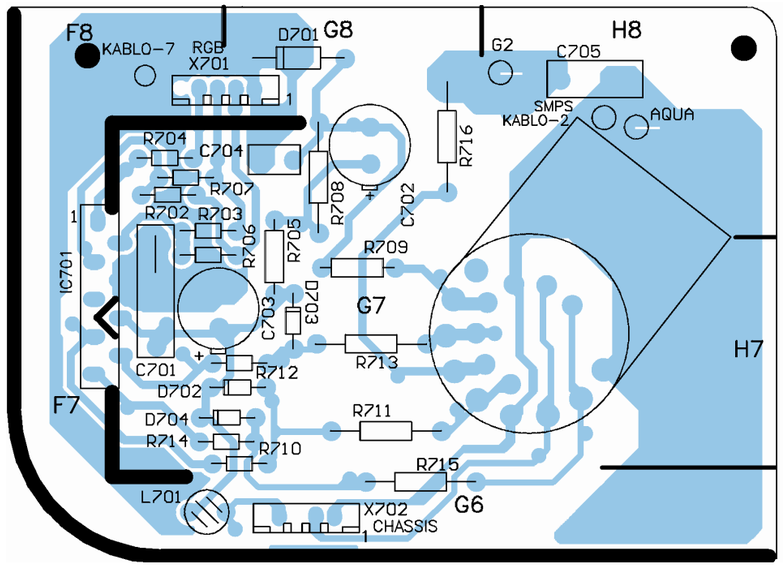
	IC101´	F101	R134	R146	R176	R177	R207	R209	R180	R181	C103	C106	F104	D102	R116	R182
SEC LL´	NN5198K	K3958M	270R	1k	680R	390R	220R	220R	-	0R	47u	4,7n	40,4 MHz	BA682	150R	-
BG	NN5099K	G1985M	560R	100R	-	0R	330R	330R	0R	-	10u	-	-	-	-	-
I	NN5099K	J1952M	560R	100R	-	0R	330R	330R	0R	-	10u	-	-	-	-	-
DK	NN5198K	K2955	560R	100R	-	0R	330R	330R	0R	-	10u	22n	40,4 MHz	0R	150R	68p

Subject to change without notice

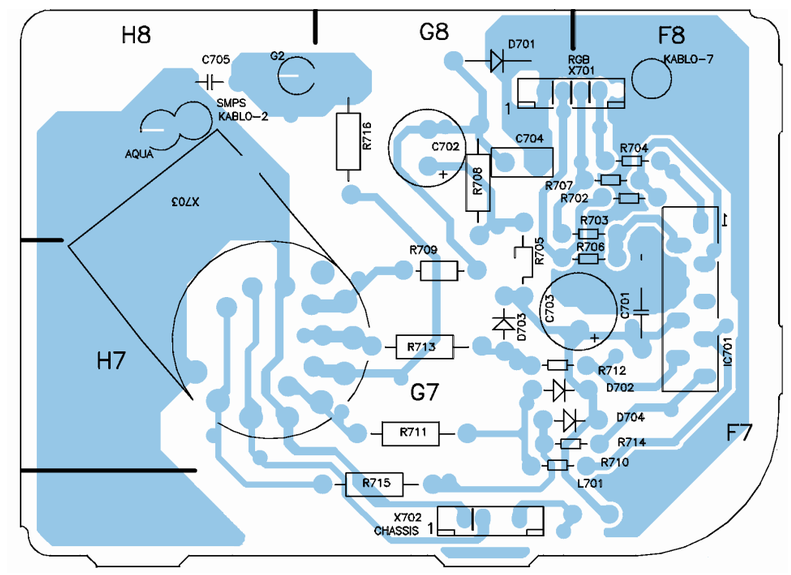
CRT Panel



Component Side, Top View



Solder Side, Bottom View



GRUNDIG

Ersatzteilliste
Spare Parts List

TV

9 / 2001

P 37-1101/5 TEXT

MATERIAL-NR. / PART NO.: 772501508900 BESTELL-NR. / ORDER NO.: GCN9400 CORONA SILBER/CORONA SILVER

POS. NR. POS. NO.	ABB. FIG.	MATERIAL-NR. PART NUMBER	ANZ. QTY.	BEZEICHNUNG (D)	DESCRIPTION (GB)
		772501508900		P 37-1101/5 TEXT CORONA SILBER KEIN E-TEIL	P 37-1101/5 TEXT CORONA SILVER NO SPARE PART
0200.000	1	759550456300		GEH-VORDERTEIL SILBER 14"	CABINET FRONT SILVER 14"
0201.000		759550454400		LAUTSPRECHER 16OHM3W	SPEAKER 16OHM3W
0250.000		759550456700		ABDECKUNG BEDRUCKT	COVER PRINTED
0255.000		759550456900		ABDECKUNG SEITE	COVER SIDE
0300.000		759550455800		GEH-RUECKTEIL SILBER 14"	CABINET REAR PART SILVER 14"
0330.000		759550456600		ANTENNE TELESKOP	ANRENNA TELESCOPE
0700.000	⚠	759550454900		SPULE ENTMAGNETISIERUNG 14"	COIL DEGAUSSING 14"
1100.000	⚠	759550454600		BILDR.PH A34EAC01X06DY-BR	PICT.TUBE PH A34EAC01X06DY-BR
1311.000	1	759550457000		KNOPF PROGRAMM/LAUTSTAERKE	KNOB PROGRAM/VOLUME
1370.000	1	759550456800		KNOPF NETZ	KNOB POWER
2100.000	⚠	759550450200		NETZKABEL M.DR.2,3M	POWER CABLE W.DR.2,3M
2400.000		759550450100		FERNBEDIENUNG	REMOTE CONTROL
		720107620000		BEDIENUNGSANLEITUNG SI,RO,COR,BUL	OPERATING INSTRUCTIONS SI,RO,COR,BUL
		720107621000		BEDIENUNGSANLEITUNG GB,PL,CZ,SK,H	OPERATING INSTRUCTIONS GB,PL,CZ,SK,H
		720100425000		SERVICE MANUAL GB	SERVICE MANUAL GB

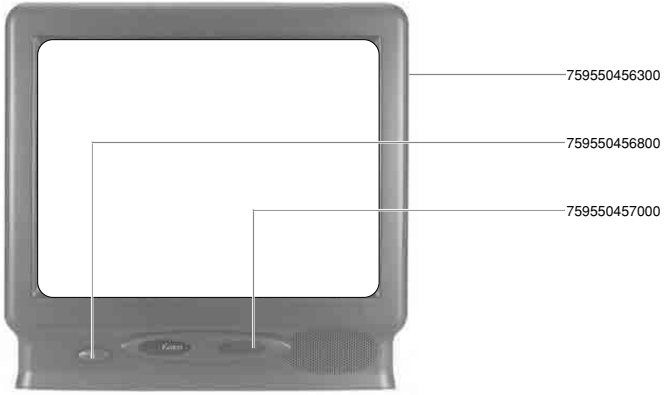
POS. NR. POS. NO.		MATERIAL-NR. PART NUMBER	BEZEICHNUNG DESCRIPTION
C 00511		845299864700	ELKO 1000UF 20% 25V RM5 C
C 00522		845324218700	ELKO 1000UF 35V 105C RM5
C 00605	⚠	851179381800	FOKO MKP336.2 0,1UF 20% 275V
C 00607	⚠	851179381800	FOKO MKP336.2 0,1UF 20% 275V
C 00611		759902001800	KONDENS. 1NF 1KV
C 00612		759902001800	KONDENS. 1NF 1KV
C 00615		853151068700	MKT 15 0,033UF 20% 630V
C 00618		759880523200	CER 470PF 2KV
C 00619	⚠	759880450800	KONDENS. 2.2NF 20% 250V
C 00621		845299864700	ELKO 1000UF 20% 25V RM5 C
C 00622		759880644200	KONDENS. 220PF 10% 2KV
C 00705		865009051900	KERKO HV A 2200PF 20% 2KV
D 00104		830921504500	DIODE 1N4148 AV619 -GA
D 00105		759550453300	SMD DIODE RB411D T146
D 00404		830953414900	MELF-DIODE LL 4148 TFK/IT
D 00405		830921504500	DIODE 1N4148 AV619 -GA
D 00406		830921504500	DIODE 1N4148 AV619 -GA
D 00501		725511823600	DIODE RF2007
D 00502		830920100500	DIODE BA157 AV619 -AMMO
D 00503		759880511100	DIODE RGP15J
D 00504		830920100500	DIODE BA157 AV619 -AMMO
D 00505		830921504500	DIODE 1N4148 AV619 -GA
D 00601		725511823600	DIODE RF2007
D 00602		830953414900	MELF-DIODE LL 4148 TFK/IT
D 00603		725511823600	DIODE RF2007
D 00604		725511823600	DIODE RF2007
D 00606		725511823600	DIODE RF2007
D 00607		830956550700	DIODE RGP10J/1N4937 MOT/G
D 00609		759550453500	DIODE RGB15D

POS. NR. POS. NO.		MATERIAL-NR. PART NUMBER	BEZEICHNUNG DESCRIPTION
D 00610		759550455400	DIODE RGP30MS
D 00701		830921503300	DIODE 1N4007 ITT/SES/TFK
D 00702		830920002100	DIODE BAV21 ITT/ TFK AV61
D 00703		830920002100	DIODE BAV21 ITT/ TFK AV61
D 00704		830920002100	DIODE BAV21 ITT/ TFK AV61
F 00101		759550450500	FILTER OWA J1985M
F 00601	⚠	831562150300	SI 5X20 T2,5A H 250V
IC 00010		830577345300	SMD IC 74HCT4053 AV215-G1
IC 00101		759550454300	IC NN5198K
IC 00101		759550455500	IC NN5099K
IC 00102		759550454100	SMD IC TDA7056AT
IC 00401		759550455700	IC SDA5552 (IRA SOFTWARE
IC 00402		759550455600	CIC BR24C04 (SOP8)
IC 00403		830546183600	IC TSOP1836 VISHAY
IC 00501		759550454500	IC AN5539LF
IC 00601		830533464600	IC TDA16846 SIE
IC 00602		759880752800	IC LM317T
IC 00603		759880752800	IC LM317T
IC 00604		759550454000	IC TDB7805CT
IC 00701		759550454200	IC TDA6170Q
L 00001		759550452000	SPULE 50MHZ 600RPH-WB
L 00002		759550452000	SPULE 50MHZ 600RPH-WB
L 00003		759862006100	DR 0309 10UH 4-253T-15020
L 00010		759550451700	SMD SPULE 18UH K/12
L 00101		759813083500	DR 0207 10UH 5% AX
L 00104		814052632600	DR AX 0411-GA 47UH 5%
L 00105		814052632600	DR AX 0411-GA 47UH 5%

ÄNDERUNGEN VORBEHALTEN / SUBJECT TO ALTERATION

POS. NR. POS. NO.		MATERIAL-NR. PART NUMBER	BEZEICHNUNG DESCRIPTION
L 00106		759550451600	SMD SPULE 1UH
L 00401		814052641200	DR AX 0411 10UH 10% <<<
L 00402		814052641200	DR AX 0411 10UH 10% <<<
L 00403		814052641200	DR AX 0411 10UH 10% <<<
L 00501		759550455100	SPULE H-LIN 55UH
L 00502		759550451900	SPULE 2,2UH LAL04
L 00601	⚠	759550451200	FILTER LINE 27MH
L 00603		759550451800	SPULE 50UH
L 00604		759520307800	DR 0309 100UH 5% AX LALO3
L 00701		759550451500	SPULE 10UH R0814
LED		759540365800	LED 5MM K-504 HL ROT
P 00601		759550453100	REGLER 2,2KOHM
Q 00101		759813163300	QUARZ 4,433619 MHZ HC 18
Q 00102		759813163400	QUARZ 3,579545 MHZ HC 18
Q 00401		838224609600	QUARZ 6,0 MHZ Q 270/2A
R 00133		759550455300	WIDERST 4,7OHM1W
R 00521		759550452900	WIDERST 3,3OHM2W
R 00526		759550452100	WIDERST 82OHM3W
R 00530		759550455200	WIDERST 1,8OHM1W
R 00533		759550455300	WIDERST 4,7OHM1W
R 00601		759550452500	WIDERST 3,9MOHM1W
R 00602		759550452400	WIDERST 1MOHM1W
R 00607	⚠	759550457500	PTC 9OHM 2PIN
R 00608	⚠	759550453200	NTC WIDERST 5,1OHM
R 00612		759550452300	WIDERST 68KOHM1,5W
R 00615	⚠	759550452600	WIDERST 4,7MOHM1/2W
R 00623	⚠	759550452700	WIDERST 0,1OHM0,4W
R 00640	⚠	759550453000	WIDERST 22OHM1/2W
SK 00101		759550450400	EURO-AV BUCHSENL.21POL/SW

POS. NR. POS. NO.		MATERIAL-NR. PART NUMBER	BEZEICHNUNG DESCRIPTION
SW 00401		759550451400	TASTSCHALTER
SW 00402		759550451400	TASTSCHALTER
SW 00403		759550451400	TASTSCHALTER
SW 00901	⚠	759550450300	NETZSCHALTER
T 00011		830100484800	SMD TRANS BC848B/ BC847B
T 00201		830100484800	SMD TRANS BC848B/ BC847B
T 00408		830100385800	SMD TRANS BC858B/ BC857B
T 00409		830100385800	SMD TRANS BC858B/ BC857B
T 00410		830100385800	SMD TRANS BC858B/ BC857B
T 00411		830100385800	SMD TRANS BC858B/ BC857B
T 00414		830100385800	SMD TRANS BC858B/ BC857B
T 00503		830100484800	SMD TRANS BC848B/ BC847B
T 00504		830100484800	SMD TRANS BC848B/ BC847B
T 00505		759550453800	SMD TRANS 2SK3065
T 00506		759550453900	TRANS BU808DFI
T 00601		759550453700	TRANS STP3NB60FP
T 00602		830100484800	SMD TRANS BC848B/ BC847B
TR 00501	⚠	759550450800	TRAFO DIODEN-SPLIT FBT14"
TR 00601	⚠	759550450600	TRAFO SPERRWANDLER 14"
TU 00101		759550451300	TUNER UV1316/ALG-3
X 00703	⚠	759550451000	BILDROHRFASSUNG
ZD 00101		759550449100	Z-DIODE UZ6,2BSB
ZD 00501		759550453600	Z- DIODE MTZJ39B
ZD 00502		759550453600	Z- DIODE MTZJ39B
ZD 00503		759866515100	DIODE MTZ 9,1 B-T 77 HDM0
ZD 00601		759550453400	Z- DIODE UZT33V



Es gelten die Vorschriften und Sicherheitshinweise gemäß dem Service Manual "Sicherheit", Mat.-Nummer 720108000000, sowie zusätzlich die eventuell abweichenden, landesspezifischen Vorschriften!

⚠ (!)

The regulations and safety instructions shall be valid as provided by the "Safety" Service Manual, part number 720108000000, as well as the respective national deviations.

ÄNDERUNGEN VORBEHALTEN / SUBJECT TO ALTERATION

GRUNDIG

Ersatzteilliste
Spare Parts List

TV

9 / 2001

T 51-1101/5 TEXT

MATERIAL-NR. / PART NO.: 772501518900 BESTELL-NR. / ORDER NO.: GCN9500 CORONA SILBER/CORONA SILVER

POS. NR. POS. NO.	ABB. FIG.	MATERIAL-NR. PART NUMBER	ANZ. QTY.	BEZEICHNUNG (D)	DESCRIPTION (GB)
		772501518900		T 51-1101/5 TEXT CORONA SILBER KEIN E-TEIL	T 51-1101/5 TEXT CORONA SILVER NO SAPRE PART
0200.000	1	759550456100		GEH-VORDERTEIL SILBER 20"	CABINET FRONT SILVER 20"
0201.000		759550454400		LAUTSPRECHER 16OHM3W	SPEAKER 16OHM3W
0250.000		759550457100		ABDECKUNG	COVER
0300.000		759550455900		GEH-RUECKTEIL SILBER 20"	CABINET REAR PART SILVER 20"
0700.000	⚠	759550455000		SPULE ENTMAGNETISIERUNG 20"	COIL DEGAUSSING 20"
1100.000	⚠	759550454700		BILDR.SEB A48ECR43X51	PICT.TUBE SEB A48ECR43X51
1311.000	1	759550457200		KNOPF PROGRAMM/LAUTSTAERKE	KNOB PROGRAM/VOLUME
1370.000	1	759550456400		TASTE NETZ	KEY POWER
2100.000	⚠	759550450200		NETZKABEL M.DR.2,3M	POWER CABLE W.DR2,3M
2400.000		759550450100		FERNBEDIENUNG	REMOTE CONTROL
		720107620000		BEDIENUNGSANLEITUNG SI,RO,COR,BUL	OPERATING INSTRUCTIONS SI,RO,COR,BUL
		720107621000		BEDIENUNGSANLEITUNG GB,PL,CZ,SK,H	OPERATING INSTRUCTIONS GB,PL,CZ,SK,H
		720100425000		SERVICE MANUAL GB	SERVICE MANUAL GB

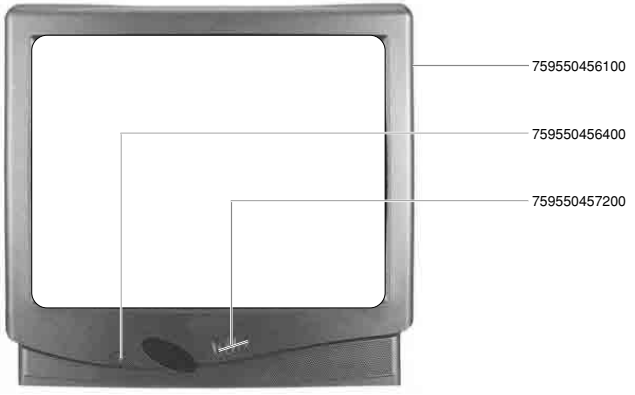
POS. NR. POS. NO.		MATERIAL-NR. PART NUMBER	BEZEICHNUNG DESCRIPTION
C 00511		845299864700	ELKO 1000UF 20% 25V RM5 C
C 00522		845324218700	ELKO 1000UF 35V 105C RM5
C 00605	⚠	851179381800	FOKO MKP336.2 0,1UF 20% 275V
C 00607	⚠	851179381800	FOKO MKP336.2 0,1UF 20% 275V
C 00611		759902001800	KONDENS. 1NF 1KV
C 00612		759902001800	KONDENS. 1NF 1KV
C 00615		853151068700	MKT 15 0,033UF 20% 630V
C 00618		759880523200	CER 470PF 2KV
C 00619	⚠	759880450800	KONDENS. 2.2NF 20% 250V
C 00621		845299864700	ELKO 1000UF 20% 25V RM5 C
C 00622		759880644200	KONDENS. 220PF 10% 2KV
C 00705		865009051900	KERKO HV A 2200PF 20% 2KV
D 00104		830921504500	DIODE 1N4148 AV619 -GA
D 00105		759550453300	SMD DIODE RB411D T146
D 00404		830953414900	MELF-DIODE LL 4148 TFK/IT
D 00405		830921504500	DIODE 1N4148 AV619 -GA
D 00406		830921504500	DIODE 1N4148 AV619 -GA
D 00501		725511823600	DIODE RF2007
D 00502		830920100500	DIODE BA157 AV619 -AMMO
D 00503		759880511100	DIODE RGP15J
D 00504		830920100500	DIODE BA157 AV619 -AMMO
D 00505		830921504500	DIODE 1N4148 AV619 -GA
D 00601		725511823600	DIODE RF2007
D 00602		830953414900	MELF-DIODE LL 4148 TFK/IT
D 00603		725511823600	DIODE RF2007
D 00604		725511823600	DIODE RF2007
D 00606		725511823600	DIODE RF2007
D 00607		830956550700	DIODE RGP10J/1N4937 MOT/G
D 00609		759550453500	DIODE RGB15D

POS. NR. POS. NO.		MATERIAL-NR. PART NUMBER	BEZEICHNUNG DESCRIPTION
D 00610		759550455400	DIODE RGP30MS
D 00701		830921503300	DIODE 1N4007 ITT/SES/TFK
D 00702		830920002100	DIODE BAV21 ITT/ TFK AV61
D 00703		830920002100	DIODE BAV21 ITT/ TFK AV61
D 00704		830920002100	DIODE BAV21 ITT/ TFK AV61
F 00101		759550450500	FILTER OWA J1985M
F 00601	⚠	831562150300	SI 5X20 T2,5A H 250V
IC 00010		830577345300	SMD IC 74HCT4053 AV215-G1
IC 00101		759550454300	IC NN5198K
IC 00101		759550455500	IC NN5099K
IC 00102		759550454100	SMD IC TDA7056AT
IC 00401		759550455700	IC SDA5552 (IRA SOFTWARE
IC 00402		759550455600	CIC BR24C04(SOP8)
IC 00403		830546183600	IC TSOP1836 VISHAY
IC 00501		759550454500	IC AN5539LF
IC 00601		830533464600	IC TDA16846 SIE
IC 00602		759880752800	IC LM317T
IC 00603		759880752800	IC LM317T
IC 00604		759550454000	IC TDB7805CT
IC 00701		759550454200	IC TDA6170Q
L 00001		759550452000	SPULE 50MHZ 600RPH-WB
L 00002		759550452000	SPULE 50MHZ 600RPH-WB
L 00003		759862006100	DR 0309 10UH 4-253T-15020
L 00010		759550451700	SMD SPULE 18UH K/12
L 00101		759813083500	DR 0207 10UH 5% AX
L 00104		814052632600	DR AX 0411-GA 47UH 5%
L 00105		814052632600	DR AX 0411-GA 47UH 5%

ÄNDERUNGEN VORBEHALTEN / SUBJECT TO ALTERATION

POS. NR. POS. NO.		MATERIAL-NR. PART NUMBER	BEZEICHNUNG DESCRIPTION
L 00106		759550451600	SMD SPULE 1UH
L 00401		814052641200	DR AX 0411 10UH 10% <<<
L 00402		814052641200	DR AX 0411 10UH 10% <<<
L 00403		814052641200	DR AX 0411 10UH 10% <<<
L 00501		759550451100	SPULE H-LIN 70UH
L 00501		759550451100	SPULE H-LIN 70UH
L 00502		759550451900	SPULE 2,2UH LAL04
L 00601	⚠	759550451200	FILTER LINE 27MH
L 00603		759550451800	SPULE 50UH
L 00604		759520307800	DR 0309 100UH 5% AX LALO3
L 00701		759550451500	SPULE 10UH R0814
LED		759540365800	LED 5MM K-504 HL ROT
P 00601		759550453100	REGLER 2,2KOHM
Q 00101		759813163300	QUARZ 4,433619 MHZ HC 18
Q 00102		759813163400	QUARZ 3,579545 MHZ HC 18
Q 00401		838224609600	QUARZ 6,0 MHZ Q 270/2A
R 00133		759550452800	WIDERST 2,2OHM1W
R 00521		759550452900	WIDERST 3,3OHM2W
R 00526		759550452100	WIDERST 82OHM3W
R 00530		759875238900	WIDERSTAND 0,47 5% 1W
R 00601		759550452500	WIDERST 3,9MOHM1W
R 00602		759550452400	WIDERST 1MOHM1W
R 00607	⚠	759550457500	PTC 9OHM 2PIN
R 00608	⚠	759550453200	NTC WIDERST 5,1OHM
R 00612		759550452300	WIDERST 68KOHM1,5W
R 00615	⚠	759550452600	WIDERST 4,7MOHM1/2W
R 00623	⚠	759550452700	WIDERST 0,1OHM0,4W
R 00640	⚠	759550453000	WIDERST 22OHM1/2W
SK 00101		759550450400	EURO-AV BUCHSENL.21POL/SW

POS. NR. POS. NO.		MATERIAL-NR. PART NUMBER	BEZEICHNUNG DESCRIPTION
SW 00401		759550451400	TASTSCHALTER
SW 00402		759550451400	TASTSCHALTER
SW 00403		759550451400	TASTSCHALTER
SW 00901	⚠	759550450300	NETZSCHALTER
T 00011		830100484800	SMD TRANS BC848B/ BC847B
T 00201		830100484800	SMD TRANS BC848B/ BC847B
T 00408		830100385800	SMD TRANS BC858B/ BC857B
T 00409		830100385800	SMD TRANS BC858B/ BC857B
T 00410		830100385800	SMD TRANS BC858B/ BC857B
T 00411		830100385800	SMD TRANS BC858B/ BC857B
T 00414		830100385800	SMD TRANS BC858B/ BC857B
T 00503		830100484800	SMD TRANS BC848B/ BC847B
T 00504		830100484800	SMD TRANS BC848B/ BC847B
T 00505		759550453800	SMD TRANS 2SK3065
T 00506		759550453900	TRANS BU808DFI
T 00601		759550453700	TRANS STP3NB60FP
T 00602		830100484800	SMD TRANS BC848B/ BC847B
TR 00501	⚠	759550450900	TRAFO DIODEN-SPLIT FBT20/21"
TR 00601	⚠	759550450700	TRAFO SPERRWANDLER 20/21"
TU 00101		759550451300	TUNER UV1316/ALG-3
X 00703	⚠	759550451000	BILDROHRFASSUNG
ZD 00101		759550449100	Z-DIODE UZ6,2BSB
ZD 00501		759550453600	Z- DIODE MTZJ39B
ZD 00502		759550453600	Z- DIODE MTZJ39B
ZD 00503		759866515100	DIODE MTZ 9,1 B-T 77 HDM0
ZD 00601		759550453400	Z- DIODE UZT33V



Es gelten die Vorschriften und Sicherheitshinweise gemäß dem Service Manual "Sicherheit", Mat.-Nummer 720108000000, sowie zusätzlich die eventuell abweichenden, landesspezifischen Vorschriften!

⚠ (!)

The regulations and safety instructions shall be valid as provided by the "Safety" Service Manual, part number 720108000000, as well as the respective national deviations.

ÄNDERUNGEN VORBEHALTEN / SUBJECT TO ALTERATION

GRUNDIG

Ersatzteilliste
Spare Parts List

TV

9 / 2001

T 55-1101/5 TEXT

MATERIAL-NR. / PART NO.: 772501528900 BESTELL-NR. / ORDER NO.: GCN9600 CORONA SILBER/CORONA SILVER

POS. NR. POS. NO.	ABB. FIG.	MATERIAL-NR. PART NUMBER	ANZ. QTY.	BEZEICHNUNG (D)	DESCRIPTION (GB)
		772501528900		T 55-1101/5 TEXT CORONA SILBER KEIN E-TEIL	T 55-1101/5 TEXT CORONA SILVER NO SPARE PART
0200.000	1	759550456200		GEH-VORDERTEIL SILBER 21"	CABINET FRONT SILVER 21"
0201.000		759550454400		LAUTSPRECHER 16OHM3W	SPEAKER 16OHM3W
0300.000		759550456000		GEH-RUECKTEIL SILBER 21"	CABINET REAR PART SILVER 21"
0700.000	⚠	759550456500		SPULE ENTMAGNETISIERUN 21"	COIL DEGAUSSING 21"
1100.000	⚠	759550454800		BILDR.VC A51EFS83X191	PICT.TUBE VC A51EFS83X191
1311.000	1	759550457400		KNOPF PROGRAMM/LAUTSTAERKE	KNOB PROGRAM/VOLUME
1370.000	1	759550457300		KNOPF NETZ	KNOB POWER
2100.000	⚠	759550450200		NETZKABEL M.DR.2,3M	POWER CABLE W.DR.2,3M
2400.000		759550450100		FERNBEDIENUNG	REMOTE CONTROL
		720107620000		BEDIENUNGSANLEITUNG SI,RO,COR,BUL	OPERATING INSTRUCTIONS SI,RO,COR,BUL
		720107621000		BEDIENUNGSANLEITUNG GB,PL,CZ,SK,H	OPERATING INSTRUCTIONS GB,PL,CZ,SK,H
		720100425000		SERVICE MANUAL GB	SERVICE MANUAL GB

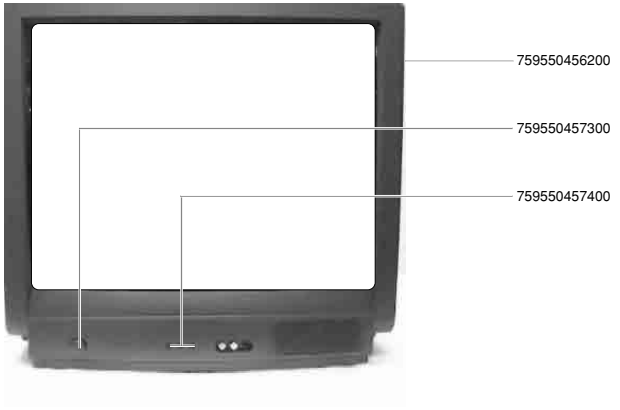
POS. NR. POS. NO.		MATERIAL-NR. PART NUMBER	BEZEICHNUNG DESCRIPTION
C 00511		845299864700	ELKO 1000UF 20% 25V RM5 C
C 00522		845324218700	ELKO 1000UF 35V 105C RM5
C 00605	⚠	851179381800	FOKO MKP336.2 0,1UF 20% 275V
C 00607	⚠	851179381800	FOKO MKP336.2 0,1UF 20% 275V
C 00611		759902001800	KONDENS. 1NF 1KV
C 00612		759902001800	KONDENS. 1NF 1KV
C 00615		853151068700	MKT 15 0,033UF 20% 630V
C 00618		759880523200	CER 470PF 2KV
C 00619	⚠	759880450800	KONDENS. 2.2NF 20% 250V
C 00621		845299864700	ELKO 1000UF 20% 25V RM5 C
C 00622		759880644200	KONDENS. 220PF 10% 2KV
C 00705		865009051900	KERKO HV A 2200PF 20% 2KV
D 00104		830921504500	DIODE 1N4148 AV619 -GA
D 00105		759550453300	SMD DIODE RB411D T146
D 00404		830953414900	MELF-DIODE LL 4148 TFK/IT
D 00405		830921504500	DIODE 1N4148 AV619 -GA
D 00406		830921504500	DIODE 1N4148 AV619 -GA
D 00501		725511823600	DIODE RF2007
D 00502		830920100500	DIODE BA157 AV619 -AMMO
D 00503		759880511100	DIODE RGP15J
D 00504		830920100500	DIODE BA157 AV619 -AMMO
D 00505		830921504500	DIODE 1N4148 AV619 -GA
D 00601		725511823600	DIODE RF2007
D 00602		830953414900	MELF-DIODE LL 4148 TFK/IT
D 00603		725511823600	DIODE RF2007
D 00604		725511823600	DIODE RF2007
D 00606		725511823600	DIODE RF2007
D 00607		830956550700	DIODE RGP10J/1N4937 MOT/G
D 00609		759550453500	DIODE RGB15D

POS. NR. POS. NO.		MATERIAL-NR. PART NUMBER	BEZEICHNUNG DESCRIPTION
D 00610		759550455400	DIODE RGP30MS
D 00701		830921503300	DIODE 1N4007 ITT/SES/TFK
D 00702		830920002100	DIODE BAV21 ITT/ TFK AV61
D 00703		830920002100	DIODE BAV21 ITT/ TFK AV61
D 00704		830920002100	DIODE BAV21 ITT/ TFK AV61
F 00101		759550450500	FILTER OWA J1985M
F 00601	⚠	831562150300	SI 5X20 T2,5A H 250V
IC 00010		830577345300	SMD IC 74HCT4053 AV215-G1
IC 00101		759550454300	IC NN5198K
IC 00101		759550455500	IC NN5099K
IC 00102		759550454100	SMD IC TDA7056AT
IC 00401		759550455700	IC SDA5552 (IRA SOFTWARE
IC 00402		759550455600	CIC BR24C04 (SOP8)
IC 00403		830546183600	IC TSOP1836 VISHAY
IC 00501		759550454500	IC AN5539LF
IC 00601		830533464600	IC TDA16846 SIE
IC 00602		759880752800	IC LM317T
IC 00603		759880752800	IC LM317T
IC 00604		759550454000	IC TDB7805CT
IC 00701		759550454200	IC TDA6170Q
L 00001		759550452000	SPULE 50MHZ 600RPH-WB
L 00002		759550452000	SPULE 50MHZ 600RPH-WB
L 00003		759862006100	DR 0309 10UH 4-253T-15020
L 00010		759550451700	SMD SPULE 18UH K/12
L 00101		759813083500	DR 0207 10UH 5% AX
L 00104		814052632600	DR AX 0411-GA 47UH 5%
L 00105		814052632600	DR AX 0411-GA 47UH 5%

ÄNDERUNGEN VORBEHALTEN / SUBJECT TO ALTERATION

POS. NR. POS. NO.		MATERIAL-NR. PART NUMBER	BEZEICHNUNG DESCRIPTION
L 00106		759550451600	SMD SPULE 1UH
L 00401		814052641200	DR AX 0411 10UH 10% <<<
L 00402		814052641200	DR AX 0411 10UH 10% <<<
L 00403		814052641200	DR AX 0411 10UH 10% <<<
L 00501		759550451100	SPULE H-LIN 70UH
L 00502		759550451900	SPULE 2,2UH LAL04
L 00601	⚠	759550451200	FILTER LINE 27MH
L 00603		759550451800	SPULE 50UH
L 00604		759520307800	DR 0309 100UH 5% AX LALO3
L 00701		759550451500	SPULE 10UH R0814
LED		759540365800	LED 5MM K-504 HL ROT
P 00601		759550453100	REGLER 2,2KOHM
Q 00101		759813163300	QUARZ 4,433619 MHZ HC 18
Q 00102		759813163400	QUARZ 3,579545 MHZ HC 18
Q 00401		838224609600	QUARZ 6,0 MHZ Q 270/2A
R 00133		759550452800	WIDERST 2,2OHM1W
R 00521		759550452900	WIDERST 3,3OHM2W
R 00526		759550452100	WIDERST 82OHM3W
R 00530		759550326400	WIDERST 0,22OHM1W
R 00601		759550452500	WIDERST 3,9MOHM1W
R 00602		759550452400	WIDERST 1MOHM1W
R 00607	⚠	759550457500	PTC 9OHM 2PIN
R 00608	⚠	759550453200	NTC WIDERST 5,1OHM
R 00612		759550452300	WIDERST 68KOHM1,5W
R 00615	⚠	759550452600	WIDERST 4,7MOHM1/2W
R 00623	⚠	759550452700	WIDERST 0,1OHM0,4W
R 00640	⚠	759550453000	WIDERST 22OHM1/2W
SK 00101		759550450400	EURO-AV BUCHSENL.21POL/SW

POS. NR. POS. NO.		MATERIAL-NR. PART NUMBER	BEZEICHNUNG DESCRIPTION
SW 00401		759550451400	TASTSCHALTER
SW 00402		759550451400	TASTSCHALTER
SW 00403		759550451400	TASTSCHALTER
SW 00901	⚠	759550450300	NETZSCHALTER
T 00011		830100484800	SMD TRANS BC848B/ BC847B
T 00201		830100484800	SMD TRANS BC848B/ BC847B
T 00408		830100385800	SMD TRANS BC858B/ BC857B
T 00409		830100385800	SMD TRANS BC858B/ BC857B
T 00410		830100385800	SMD TRANS BC858B/ BC857B
T 00411		830100385800	SMD TRANS BC858B/ BC857B
T 00414		830100385800	SMD TRANS BC858B/ BC857B
T 00503		830100484800	SMD TRANS BC848B/ BC847B
T 00504		830100484800	SMD TRANS BC848B/ BC847B
T 00505		759550453800	SMD TRANS 2SK3065
T 00506		759550453900	TRANS BU808DFI
T 00601		759550453700	TRANS STP3NB60FP
T 00602		830100484800	SMD TRANS BC848B/ BC847B
TR 00501	⚠	759550450900	TRAFO DIODEN-SPLIT FBT20/21"
TR 00601	⚠	759550450700	TRAFO SPERRWANDLER 20/21"
TU 00101		759550451300	TUNER UV1316/ALG-3
X 00703	⚠	759550451000	BILDROHRFASSUNG
ZD 00101		759550449100	Z-DIODE UZ6,2BSB
ZD 00501		759550453600	Z- DIODE MTZJ39B
ZD 00502		759550453600	Z- DIODE MTZJ39B
ZD 00503		759866515100	DIODE MTZ 9,1 B-T 77 HDM0
ZD 00601		759550453400	Z- DIODE UZT33V



Es gelten die Vorschriften und Sicherheitshinweise gemäß dem Service Manual "Sicherheit", Mat.-Nummer 720108000000, sowie zusätzlich die eventuell abweichenden, landesspezifischen Vorschriften!

⚠ (!)

The regulations and safety instructions shall be valid as provided by the "Safety" Service Manual, part number 720108000000, as well as the respective national deviations.

ÄNDERUNGEN VORBEHALTEN / SUBJECT TO ALTERATION