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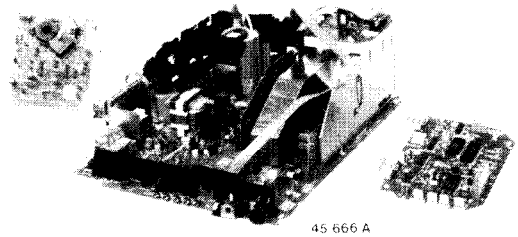
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Service Manual

Contents

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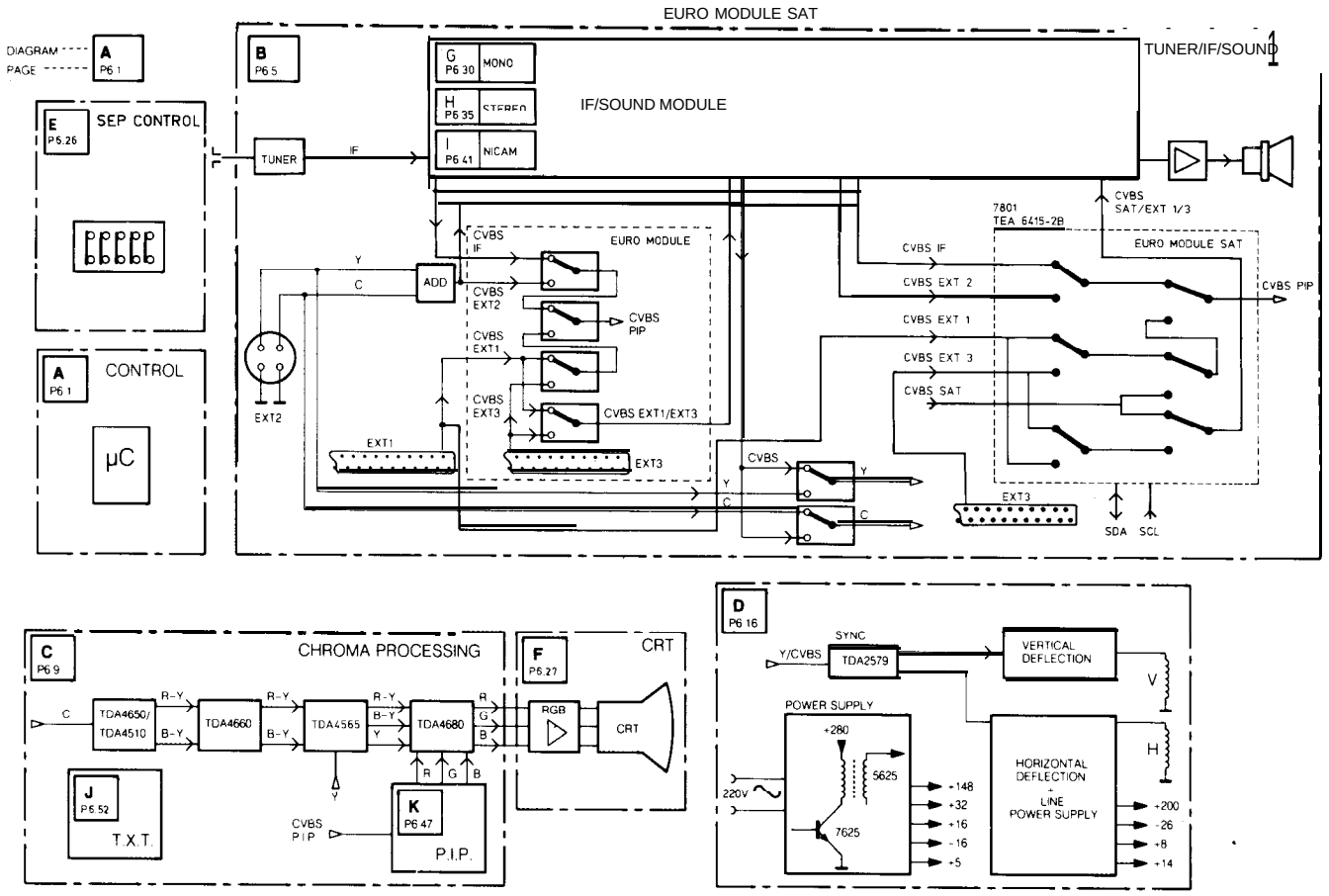
Block diagram



Technical specification

Mains voltag	:220 **240** V (± 10%)
Mains frequency	:50 Hz (± 10%)
Aerial input impedance	:75Ω - coax
Minimum aerial voltage	:40µV
Maximum aerial voltage	:32mV
Pull-in range colour synchronization	: ±300Hz
Pull-in range horizontal synchronization	: ±300Hz

Local operation functions:

P +; P -; ◿ +; ◿ -; install

Programmes: O-59
VCR operation on programmes: O-59

Indications:

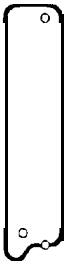
- On Screen Display (OSD)
- LED:
  - standby (red)
  - operation (green)

  RC5 reception (flashing yellow)
  - internal fault in µP (flashing)

Connection facilities

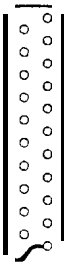
1. Specification of the terminal sockets

EXT1



1 - Audio ⊖ R (0,5V_{RMS} ≤ 1 kΩ)
2 Audio ⊕ R (0,2 - 2V_{RMS}; 0,5 V_{nom}; ≥ 10kΩ)
3 - Audio ⊖ L (0,5V_{RMS} ≤ 1 kΩ)
4 - Audio ⊥
5 - Blue ⊥
6 - Audio ⊕ L (0,2 2V_{RMS}; 0,5 V_{nom}; ≥ 10kΩ)
7 - Blue ⊕ (0,7V_{pp}/75Ω)
8 - R C 5 ⊖ (500-800mV_{pp}) + CVBS-Status 1 ⊕ (0-2V: int.; 9,5-12V: ext.)
9 - Green ⊥
10 - -
11 - Green ⊕ (0,7V_{pp}; 75Ω)
12 - -
13 - Red ⊥
14 - -
15 - Red ⊕ (0,7V_{pp}; 75Ω)
16 - RGB-Status (0-0,4V: int. I-3V ext. 75Ω)
17 - CVBS ⊖ ⊥
18 - CVBS ⊕ ⊥
19 - CVBS ⊖ (1V_{pp}/75Ω)
20 - CVBS ⊕ (1V_{pp}/75Ω)
21 - Earth screen

EXT3



1 Audio ⊖ R (0,5V_{RMS}; ≤ 1kΩ)
2 - Audio ⊕ R (0,2 - 2V_{RMS}; 0,5 V_{nom}; ≥ 10kΩ)
3 - Audio ⊖ L (0,5V_{RMS}; ≤ 1 kΩ)
4 - Audio ⊥
5 -
6 - Audio ⊕ L (0,2 - 2V_{RMS}; 0,5 V , , ; ≥ 10kΩ)
7 --
8 - CVBS status 3 ⊖ (O-2V: int.; 9,5-1 2V: ext.)
9 --
I O - -
11 - -
12 - -
13 - -
14 - -
15 - -
16 - -
17 - CVBS ⊖ ⊥
18 - CVBS ⊕ ⊥
19 - CVBS ⊖ (1 V_{pp}/75Ω)
20 - CVBS ⊕ (1V_{pp}/75Ω)
21 Earth screen

EXT2

1 - I
2 - 1
3 - Y ⊕ (1V_{pp}; 75Ω)
4 - c ⊕ (1V_{pp}; 75Ω)

2x ⊙ CINCH Audio ⊕ L + R (0,2-2V_{RMS}; 0,5 v $_{nom}$ ≥ 10kΩ)

Audio out

2x ⊙ CINCH Audio ⊖ L+ R (0,5V_{RMS}; ≤ 1 kΩ)

Front

⊙ 3.5mm ≥ 8Ω

2. Connecting equipment

Depending on the type of TV set, a variety of equipment can be connected. The exact number of pieces of equipment depends on the number of connectors on the back of the TV set (EXT1, 2 or 3). The wiring diagram in Fig. 2.1 shows which kinds of equipment can be connected. The wiring diagram shows the TV set with the maximum number of connectors possible for the GR2.2 chassis.

An RGB source (e.g. laserdisc player) can only be connected to EXT1 In order to switch the TV set to RGB operation, this RGB source must generate both a CVBS status signal at pin 8 and an RGB status signal at pin 16 of the euroconnector. It is not possible to switch the equipment to EXT1 in RGB operation using the remote control.

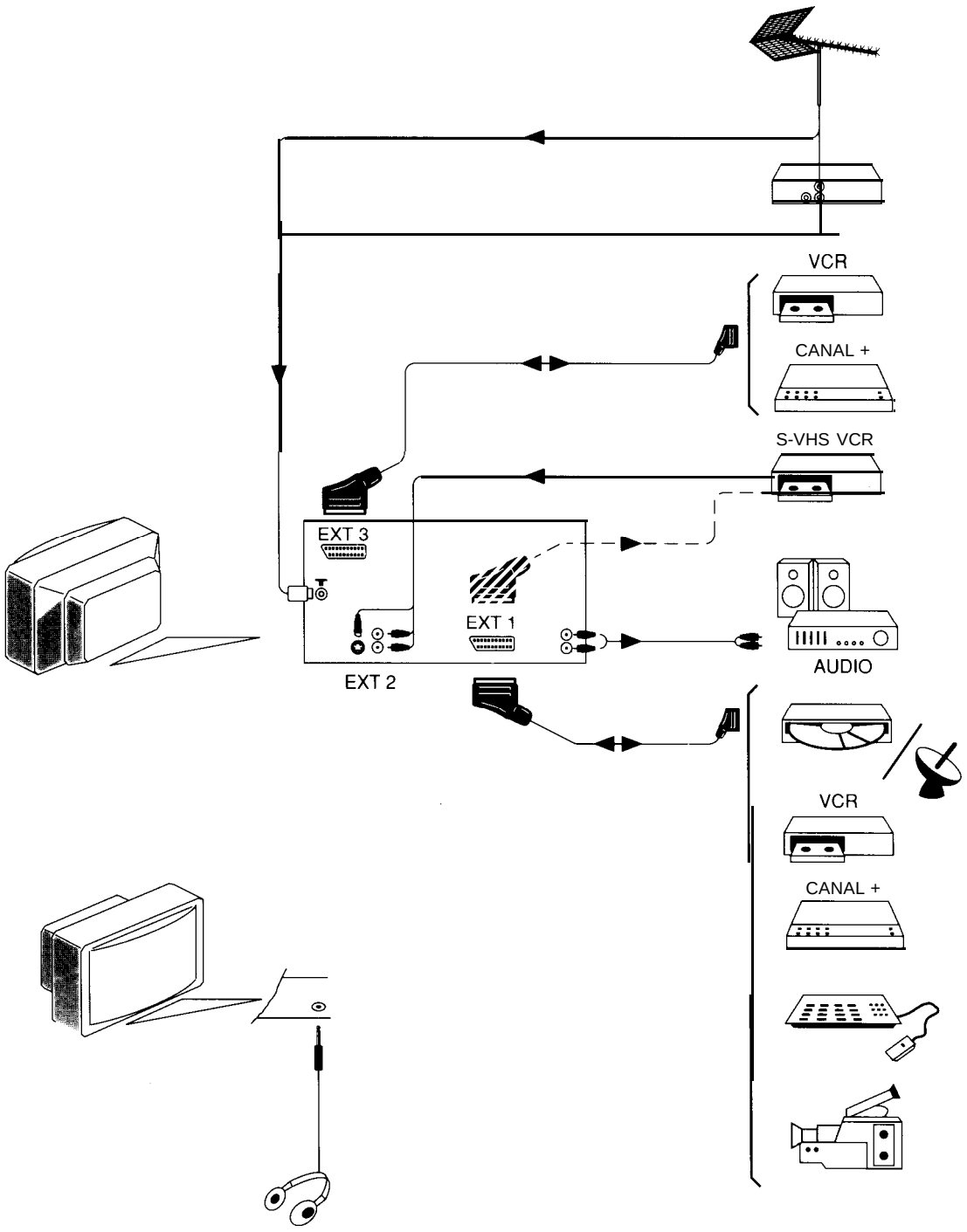


Fig. 2.1

Warnings

1. Safety regulations require that the unit should be returned in its original condition and that components identical to the original components are used. The safety components are indicated by the symbol ⚠.
2. In order to prevent damage to ICs and transistors, all high-voltage fiashovers must be avoided. In order to prevent damage to the picture tube, it should be discharged using the method shown in Fig.3.1. Use a high-voltage probe and a multimeter (position DC-V). Discharge until the meter reading is OV (after approx. 30s).
3. **ESD**

   All ICs and many other semiconductors are sensitive to electrostatic discharges (ESD). Careless handling during repair can drastically shorten their life. Make sure that during repair you are connected by a pulse band with resistance to the same potential as the earth of the unit. Keep components and tools also at this same potential.
4. When repairing a unit, always connect it to the mains voltage via an isolating transformer.
5. Be careful when taking measurements in the high-voltage section and on the picture tube.
6. Never replace modules or other components while the unit is switched on.
7. It is recommended that safety goggles are worn when replacing the picture tube.
8. When making settings, use plastic rather than metal tools.
   This will prevent any short circuits and the danger of a circuit becoming unstable.
9. After repair the wiring should be fastened once more in the cable clamps for this purpose.
10. In order to prevent measuring errors, the heat sinks should not be used as reference points for measurements.
    The heat sink for the sound output amplifier (next to the channel selector) is connected to the -16 or -12 volts.
11. Together with the deflection unit and any multipole unit, the flat square picture tubes used form an integrated unit. The deflection and the multipole units are set optimally at the factory. Adjustment of this unit during repair is therefore not recommended.
12. The high-voltage cable in 21" units is glued in the line output transformer. This can therefore not be replaced.

Notes

1. The cold chassis direct voltages and oscillograms should be measured with regard to the tuner earth (A). Voltages on the line mains side of the SOPS transformer 5625 should be measured with respect to (⏚).
2. The direct voltages and oscillograms given in the diagrams should be measured in the service default mode (see section 9). A colour bar signal, modulated on a picture carrier wave of 475.25 MHz, should be used as the video signal. A 1 kHz signal should be used for the sound (for all systems).
3. Where necessary, the oscillo rams and direct voltages are measured with (4 ⌐) and without aerial signal(x). Voltages in the power supply section are measured both for normal operation (◐) and in standby (⏻). These values are indicated by means of the appropriate symbols.
4. The picture tube PCB has printed spark gaps. Each spark gap is connected between an electrode of the picture tube and the Aquadag coating.
5. The semiconductors indicated in the circuit diagram and in the parts lists are completely interchangeable per position with the semiconductors in the unit, irrespective of the type indication on these semiconductors.
6. The connectors used for the modules (board to board) are gold-plated and should only be replaced by the same type.
7. In the case of fault finding and/or repair to the teletext module, the accessibility of the circuit and the components can be increased by using extension cards.
   The order numbers of these extension cards are:
   - 6 times: 4822 395 30259
   - 8 times: 4822 2 14 3 1402
8. Both multisystem and single system units are mentioned in this documentation.
   The term multisystem unit is used to refer to a unit that is suitable for the reception of PAL BGI and SECAM BGLL' systems.
   A multi-system set for Eastern-Europa is suitable for the reception of the PAL/SECAM BGDK systems. The term single system unit is used to refer to all other units (such as PAL BG, PAL/SECAM BG and PAL I units).
9. Blackline units can be recognized by the thick, protected high-voltage cable. Non-blackline units have a thin, unprotected high-voltage cable.

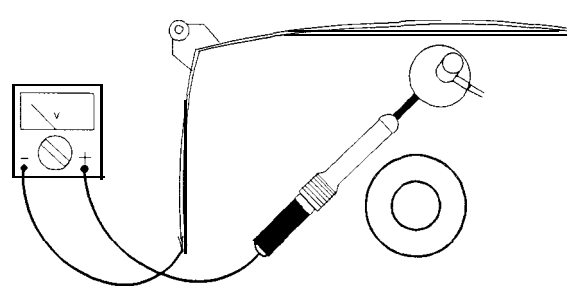


Fig. 3.1

Mechanical instructions

1. Removing the back plate

It is only possible to remove the back plate after removing the screws on the top, side, possibly on the underneath **and possibly under the EXT 3 connection** (see Fig. 4.1). In the case of subwoofer units, the subwoofer speaker on the carrier panel should also be unplugged.

2. Service position 1

Service position for module service and to measure test points
Unlock the chassis after the cables of the degaussing coil and any PIP module have been disconnected, and pull it backwards until all test points are accessible (see Fig. 4.2).
In order to make the tuner and the IF/sound module accessible, the bracket above these modules can be removed (see Fig. 4.3). With the exception of one fault message, the unit continues to function normally when the PIP module is not connected.

3. Service position 2

Service position for repair
Place the chassis on the heat sink on the tuner side after service position 1 is reached (see Fig. 4.4).
Warning: make sure that the heat sink of the sound output amplifier does not form a short circuit with the raster/line heat sink if the bracket of the euromodule has been removed!

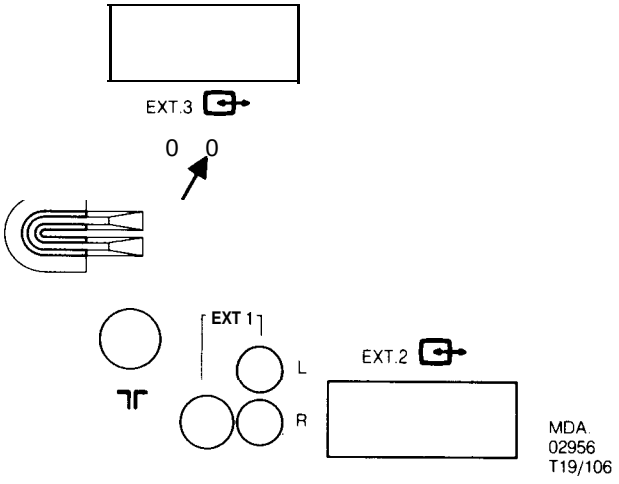


Fig. 4.1

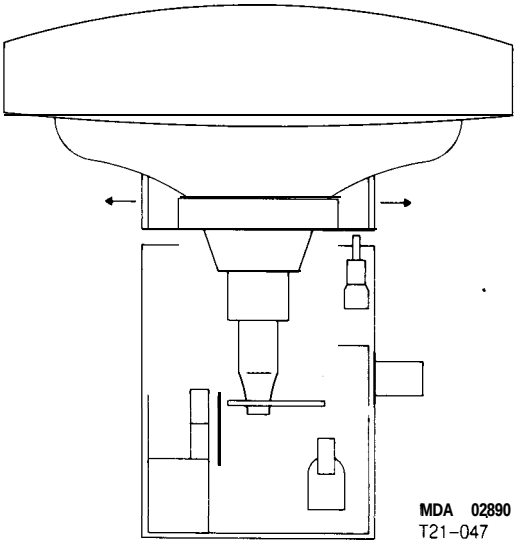


Fig. 4.2

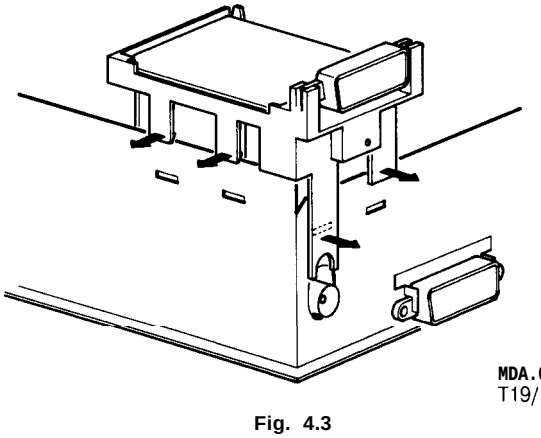


Fig. 4.3

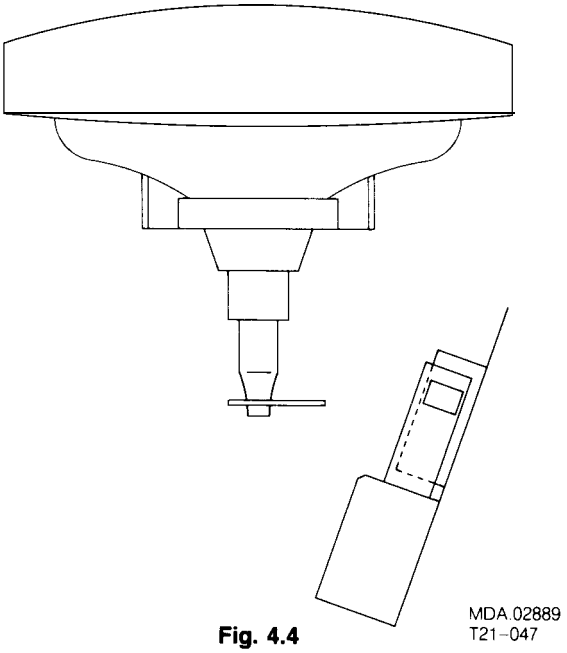


Fig. 4.4

Electrical adjustments

Setting conditions

All electrical settings should be made under the following conditions:

- supply voltage: 220 - 240 V ± 10%; 50 Hz ± 5%
- warming-up time ≈ 10 minutes
- * the voltages and oscillograms have been measured with regard to tuner earth.
- measuring probe: Ri > 10 MΩ; Ci < 2.5 pF.

1. Settings on the carrier board

1.1 + 148V/ + 95V supply voltage

Connect a voltmeter over C2631. Using R3635, set the supply voltage to + 148V ± 0.5V for 25" and 28" units or to 95V ± 0.5V for 21" units.

1.2 Focusing

This is set using the focusing potentiometer (on the top of the line output transformer).

1.3 Vg2 setting

Connect a pattern generator and supply a blanking frame signal (black picture). Switch the unit to the service default mode (see section 9).
Connect an oscilloscope to the emitters of transistors 7304 and 7364 on the picture tube module. Set the oscilloscope to frame frequency. Measure the DC voltage level of the measuring pulses (see Fig. 7.2). Using the Vg2 potentiometer on the line output transformer, set the measuring pulse with the lowest DC voltage level to:

* + 145V ± 5V for 25" and 28" blackline units (protected high-voltage cable)
* + 130V ± 5V for 28" non-blackline units
* + 118V ± 5V for 25" non-blackline units
* + 120V ± 5V for 21" units.

1.4 Horizontal synchronization

Connect pin 5-IC7470 to pin 9-IC7470.
Supply an aerial signal and tune the set.
Adjust potentiometer 3457 until the picture is straight. Remove the interconnection.

1.5 Horizontal centring

Set using potentiometer 3461.

1.6 Vertical centring

Set using potentiometer 35 16.

1.7 Picture height

Set using potentiometer 3504.

1.8 Chroma bandpass filter

a. Setting for PAL/SECAM sets (TDA4650)

Connect a signal generator (e.g. PM 5326) to pin 20 of the euroconnector (EXT1) and set its frequency to 4.286 MHz/0.2 Vpp. Switch the unit to EXT1 Connect pin 27-IC7306 to pin 13-IC7306 (+ 12V). Connect an oscilloscope to pin 15-IC7306.
Set 5301 to maximum amplitude.
Remove the interconnection.

b. Setting for PAL sets (TDA4510)

Connect a signal generator (e.g. PM 5326) to pin 20 of the euroconnector (EXT1) and set its frequency to 4.43 MHz. Connect the unit to EXT1. Connect an oscilloscope to pin 9-IC7305 (TDA4650).Set 5301 to maximum amplitude.

1.9 Chroma auxiliary oscillator

Connect a pattern generator and supply a PAL colour bar pattern. Connect pin 11-IC7305 (TDA4510) or pin 17-IC7306 (TDA4650) to earth. Set 2313 so that the colour on the screen has practically stopped. Remove the interconnection.

1.10 SECAM demodulators for PAL/SECAM sets (TDA4650)

Connect a pattern generator and supply a SECAM black pattern. Connect an oscilloscope to pin 1-IC7306 (TDA4650). Set 5304 to minimum amplitude.Connect the oscilloscope to pin 3-IC7306 (TDA4650). Set 3312 to minimum amplitude.

1.11 White balance

Connect a pattern generator and select a white picture. Switch on the service menu (see section 9) and select "WHITE BALANCE".
Set the value of "Green" to 51, and the Value of "Blue" to 46. In most cases-no futher adjustments are required.

1.12 Peak white limit

Switch on the service menu (see section 9) and select " WHITE BALANCE".
Set "WHITE LIMIT" to the value:

- 43 for blackline units
- 53 for non-blackline units
- 53 for 21 " units.

1.13 Cut-off points of the picture tube

Connect a pattern generator and select a black picture. Switch on the service menu (see section 9) and select "CUT OFF".
Set the value of "Red" to 56, and fore "Green" to 16, and for "Blue" to 15. In most cases no futher adjustments are required.

1.14 Options

Switch on the service menu and select "OPTION 1" or "OPTION 2".
Switch the options "ON" and "OFF" according to whether the following options are present:

- "PIP" on a PIP set
- "2ND SCART" on a set with two euroconnectors
- "TELETEXT" on a teletext set
- "SVHS" for the Y/C connector in mono sets
- **"MULTI SYSTEM"** for multisystem sets
- "HYPERBAND" for a tuner which can be tuned to the frequency band of 300 MHz to 450 MHz
- "UHF ONLY" for a tuner which can only be tuned to the UHF band
- "NICAM TWIN" for stereo sets which can also receive NICAM sound.
- "SIXTEEN/NINE" for switching between normal screen size and wide screen size.

MAIN PANEL

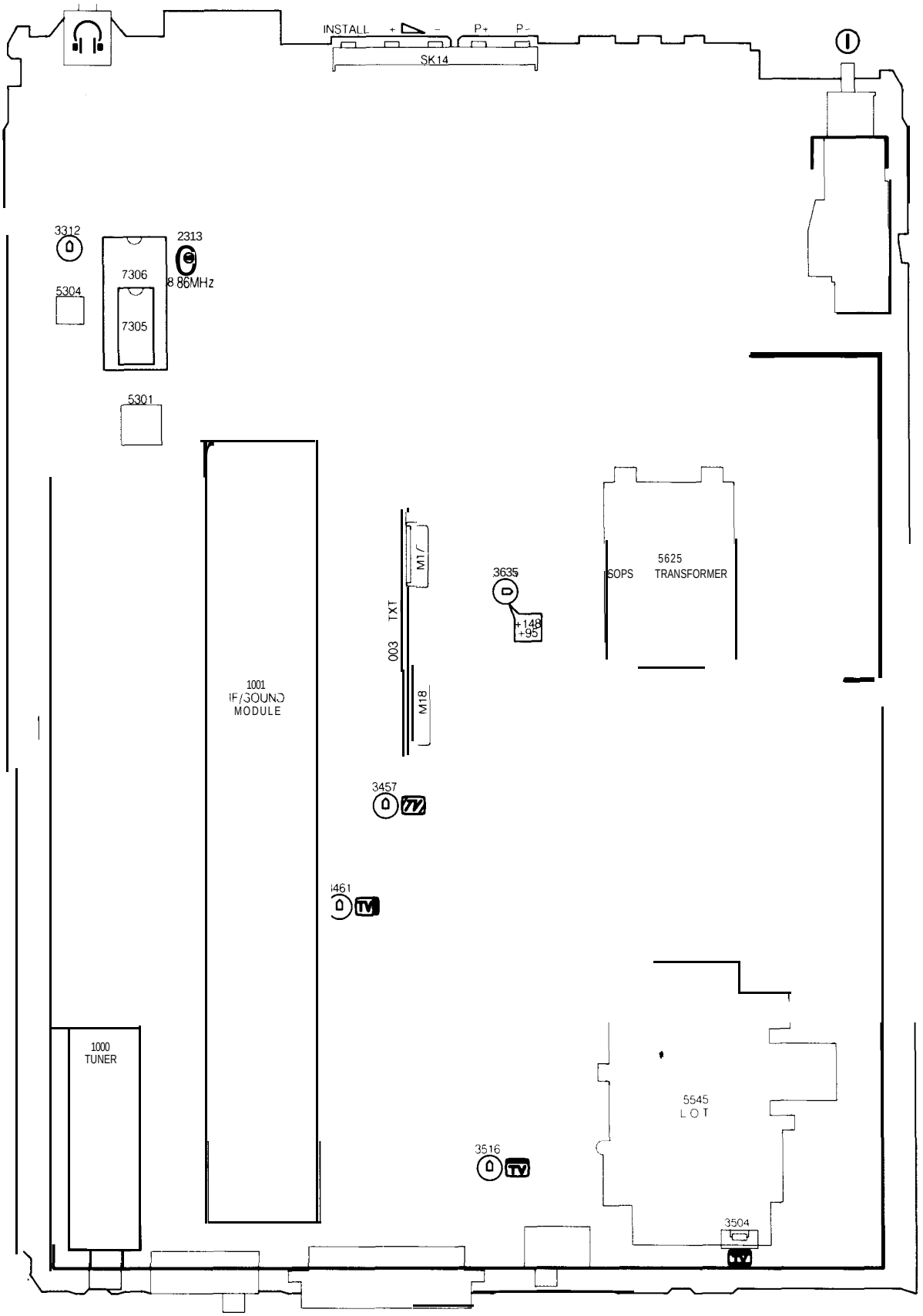
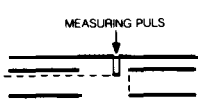


Fig. 7.1



2. MF/sound module adjustment (Fig 7.3)

2.1 The M.F. sound modulator

a. For multi-system France (BGLI).

Stereo + mono:

Connect a pattern generator (e.g PM 5518) to the tuner and adjust the generator to SECAM L with a frequency of 47.25 MHz (SECAM L'). Adjust L 5080 to minimum picture distortion.

- Adjust the pattern generator to PAL BG with a frequency of 475.25 MHz.

Stereo:

- Connect an oscilloscope to pin 17 of IC 7 100 (TDA 3856). Using L 5104 adjust the amplitude of the signal to its minimum value.

b. For Europe (BG) stereo and East-European multi system (BGDK) stereo.

Adjust the pattern generator to PAL BG with a frequency of 475.25 MHz.

- Connect an oscilloscope to pin 15 of IC 7 101 (TDA 3857). Using L 5 104 adjust the amplitude of the signal to its minimum value.

c. For NICAM (BGI) stereo.

- Adjust the pattern generator to PAL BG with a frequency of 475.25 MHz.
- Connect an oscilloscope to pin 15 of IC 7 100 (TDA 3857). Using L 5103 adjust the amplitude of the signal to its minimum value.

2.2 The FM sound modulator

a. For multi system France (BGLI) + Europe + mono UK.

Adjust the pattern generator to PAL BG with a frequency of 475.25 MHz with stereo L= 3kHz and R = 1 kHz.

5.5 MHz

Connect an oscilloscope to pin 2 of M 24. Using L 5 105 adjust the amplitude to its maximum value.

- 5.74 MHz (only for stereo)

Connect an oscilloscope to pin 3 of M 23. Using L 5 103 adjust the amplitude to its maximum value.

b. For East-European multi system (BGDK).

- 6.5 MHz.

Adjust the pattern generator to SECAM DK with a frequency of 475.25 MHz.

Connect an oscilloscope to pin 2 of M 24. Using L 5 105 adjust the amplitude to its maximum value.

- 5.74 MHz (only for stereo)

Adjust the pattern generator to PAL BG with a frequency of 475.25 MHz with stereo L= 3kHz and R = 1 kHz.

Connect an oscilloscope to pin 3 of M 23. Using L 5103 adjust the amplitude to its maximum value.

c. For NICAM

- NICAM I.

Adjust the pattern generator to PAL I with a frequency of 475.25 MHz.

Select analogue sound.

Connect an oscilloscope to pin 7 of IC 7100 (TDA 3857). Using L 5102 adjust the amplitude to its maximum value.

- NICAM BG.

Adjust the pattern generator to PAL **BG** with a frequency of 475.25 MHz.

Select analoaue stereo sound with L= 3kHz and R = 1kHz.

* 5.5 MHz.

Connect an oscilloscope to pin 7 of IC 7100 (TDA 3857).

Using L 5 102 adjust the amplitude to its maximum value.

- 5.74 MHz.

Connect an oscilloscope to pin 6 of IC 7100 (TDA 3857).

Using L 5101 adjust the amplitude to its maximum value.

2.3 AFC and picture demodulation:

Adjust the pattern generator to the system given in the table below (PAL BGI and SECAM BGDK to 475.25 MHz, SECAM L' to 47.25 MHz).

- Connnect an oscilloscope to pin 3 of connector G 29 and using L 5035 or L 5037 (see table) adjust the amplitude to its minimum value.
- Connect an oscilloscope to pin 11 of connector G 29 and using L 5036 or L 5038 (see table) adjust to 2V Dc.

SYSTEM	L5035/L5036	L5037/L5038
Multi French (BGLI) mono/stereo	SECAM L'	SECAM BG/PAL BG
Europe (BG) stereo	PAL BG	--
Europe (BG) mono	"	PAL BG
Multi Eastern- Europe (BGDK) stereo	SECAM K	
Multi Eastern- Europe (BGDK) mono	--	SECAM K
UK mono	--	PAL I
UK stereo	PAL I	

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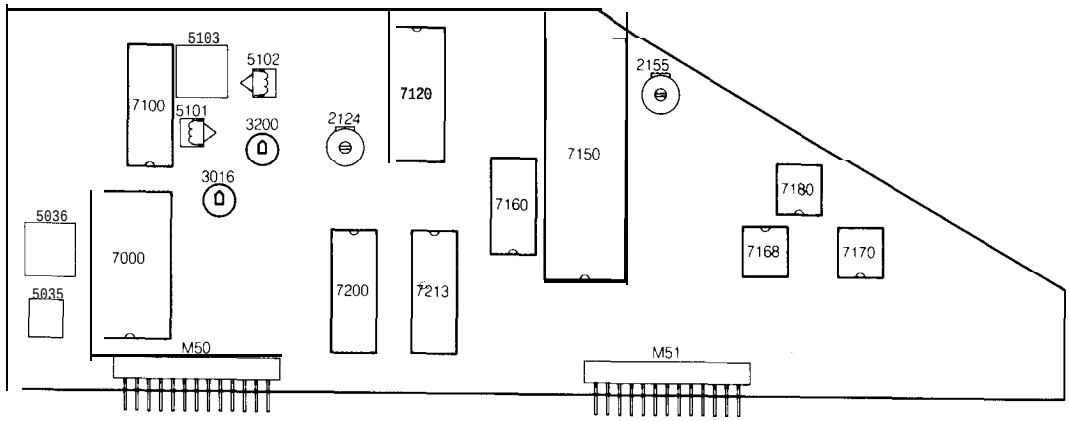
2.4 RF-AGC
If the picture from a strong local transmitter is distorted, adjust 3016 until the picture is not distorted.

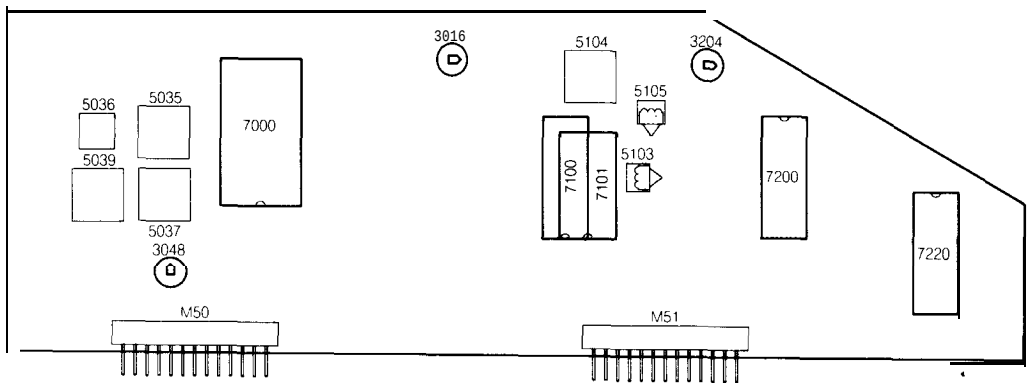
2.5 MF-AGC (Multi French (BGLI) system sets).
Connect a pattern generator and select a SECAM-L colour bar signal with a frequency of 475.25 MHz.
Connect an oscilloscope to pin 3 of connector G 29.
Using 3048 adjust the amplitude of the video signal to 1 .8 Vpp.

2.6 **Stereo matrix** (stereo and NICAM units)
Connect a pattern generator and supply a PAL BG signal with stereo sound. Select only the right-hand channel sound. Set the balance of the unit completely to the left.
Set 3204 (stereo units) or 3200 (NICAM PAL BG units) to minimum sound reproduction.

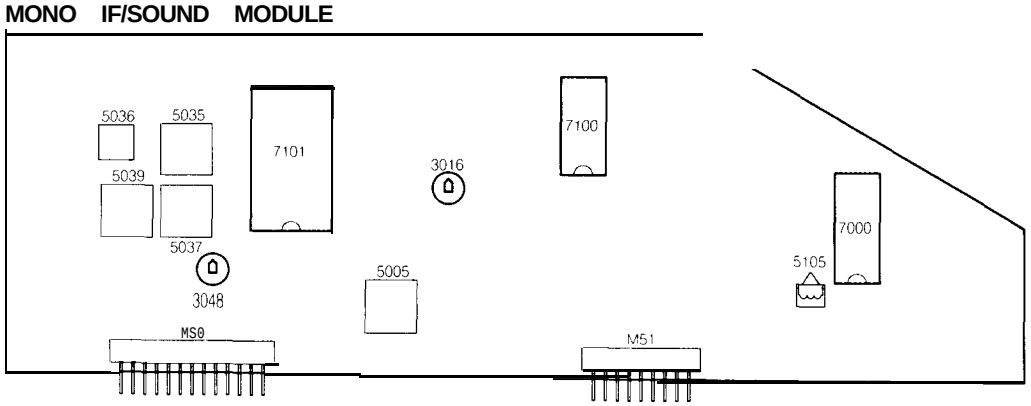
NICAM IF/SOUND MODULE



STEREO IF/SOUND MODULE



MONO IF/SOUND MODULE



I-ig. 7.3

PIP MODULE

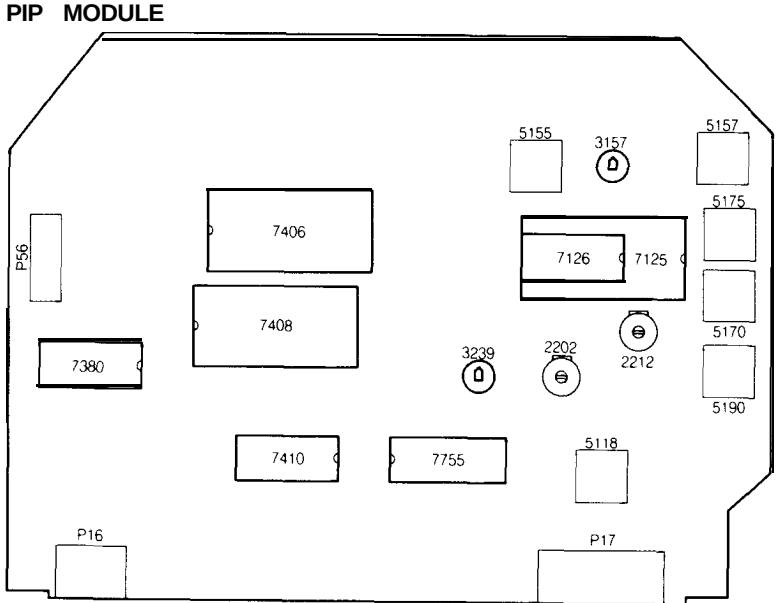


Fig. 7.4

3. Adjustments on the PIP module (Fig. 7.4)

Adjustment conditions

Before making each adjustment, ensure that a PIP picture with the prescribed signal is visible on the screen and that the unit has reached its operating temperature (after ≈ 10 min.).

3.1 Horizontal synchronization

Do not supply an aerial or generator signal.
Connect pin 28-IC7 125 to pin 13-IC7 125 if TDA4554 is present (PAL selection). Connect pin 5-IC7755 to earth.
Measure the frequency at pin 17-IC7755 and using 3239 set it to 15.625 Hz ± 25 Hz.
Remove the interconnection.

3.2 Chroma bandpass filter

a. Adjustment for PIP modules with TDA4554

Connect a signal generator (e.g. PM 5326) to pin 10 of P17 and set its frequency to 4.286 MHz/0.2 VPP.
Connect pin 27-IC7 125 to 13-IC7 125. Connect an oscilloscope to pin 15-IC7 125.
Set 51 18 to maximum amplitude.
Remove the interconnection.

b. Adjustment for PIP modules with TDA4510

Connect a signal generator (e.g. PM 5326) to pin 10 of P17 and set its frequency to 4.43 MHz/0.2Vpp.
Connect an oscilloscope to pin 9-IC7126.
Set 5118 to maximum amplitude.

3.3 PAL chroma auxiliary oscillator

Connect a pattern generator and supply a PAL colour bar pattern. Connect pin 17-IC7 125 (TDA4554) or pin 1 1 -IC7 126 (TDA4510) to earth.
Set 2202 so that the colour of the PIP picture is practically still.
Remove the interconnection.

3.4 NTSC chroma auxiliary oscillator for PIP modules with TDA4554

Connect a pattern generator and supply an NTSC M colour bar pattern. Connect pin 17-IC7 125 to earth. Set 2202 so that the colour of the PIP picture is practically still.
Remove the interconnection.

3.5 Delay line

Connect a pattern generator and supply a PAL colour bar signal. Connect the X-input of the oscilloscope to pin 1 -IC7 125 (TDA4554) or pin 1-IC7126 (TDA4510). Connect the Y-input of the oscilloscope to pin 3-IC7 125 (TDA4554) or pin 2-IC7 126 (TDA45 10). Set the oscilloscope to the X-Y position.
Set 5 155 and 5157 so that the vectors lie in one line (points which are furthest from the origin).
Set the pattern generator to the "DEM" mode.
Set R3 157 so that the vectors lie on top of one another in the origin.

3.6 SECAM identification for PIP modules with TDA4554

Connect a pattern generator and supply a SECAM colour bar signal.
Connect pin 27-IC7 125 to pin 13-IC7 125.
Connect an oscilloscope to pin 21 -IC7125.
Set 5190 to minimum DC level.
Remove the interconnection.

3.7 SECAM demodulators for PIP modules with TDA4554

Connect a pattern generator and supply a SECAM signal without contents (black). Connect pin 27-IC7125 to pin 13-IC7 125. Connect an oscilloscope to pin 1 -IC7 125. Using 5175, set the DC level during the scan equal to the DC level during the flyback.
In the same way set 5170, but now measure at pin 3-IC7 125.
Remove the interconnection.

4. Adjustments on the picture tube module

4.1 Picture width

Set using potentiometer 3525.

4.2 East/West correction

Set using potentiometer 3521. This setting is only for 25" and 28" units.

Repair tips

1. Servicing of SMDs (Surface Mounted Devices)

1.1 General cautions on handling and storage

a. Oxidation on the terminals of SMDs results in poor soldering. Do not handle SMDs with bare hands.

b. Avoid using storage places that are sensitive to oxidation such as places with sulphur or chlorine gas, direct sunlight, high temperatures or a high degree of humidity.
The capacitance or resistance value of the SMDs may be affected by this.

c. Rough handling of circuit boards containing SMDs may cause damage to the components as well as the circuit boards. Circuit boards containing SMDs should never be bent or flexed. Different circuit board materials expand and contract at different rates when heated or cooled and the components and/or solder connections may be damaged due to the stress. Never rub or scrape chip components as this may cause the value of the component to change. Similarly, do not slide the circuit board across any surface.

1.2 Removal of SMDs

a. Heat the solder (for 2-3 seconds) at each terminal of the chip. By means of litz wire and a slight horizontal force, small components can be removed with the soldering iron. They can also be removed with a solder sucker (see Fig. 8.1A) or:

b. While holding the SMD with a pair of tweezers, take it off gently using the soldering iron's heat applied to each terminal (see Fig. 8.1B).

c. Remove the excess solder on the solder lands by means of litz wire or a solder sucker (see Fig. 8.1C).

Caution on removal:

a. When handling the soldering iron, use suitable pressure and be careful.

b. When removing the chip, do not use undue force with the pair of tweezers.

c. The soldering iron to be used (approx. 30 W) should preferably be equipped with a thermal control (soldering temperature: 225 to 250°C).

d. The chip, once removed, must **never** be reused.

1.3 Attachment of SMDs

a. Locate the SMD on the solder lands by means of tweezers and solder the component on one side. Ensure that the component is positioned correctly on the solder lands (see Fig. 8.2A).

b. Next complete the soldering of the terminals of the component (see Fig. 8.2B).

Caution when attaching SMDs:

a. When soldering the SMD terminals, do not touch them directly with the soldering iron. The soldering should be done as quickly as possible; care must be taken to avoid damage to the terminals of the SMDs themselves.

b. Keep the SMD's body in contact with the printed board when soldering.

c. The soldering iron to be used (approx. 30 W) should preferably be equipped with a thermal control (soldering temperature: 225 to 250°C).

d. Soldering should not be done outside the solder land.

e. Soldering flux (of rosin) may be used, but should not be acidic.

f. After soldering, let the SMD cool down gradually at room temperature.

g. The quantity of solder must be proportional to the size of the solder land. If the quantity is too great, the SMD might crack or the solder lands might be torn loose from the printed board (see Fig. 8.31.

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OSD: ERR
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Flashing L
OSD: ERR

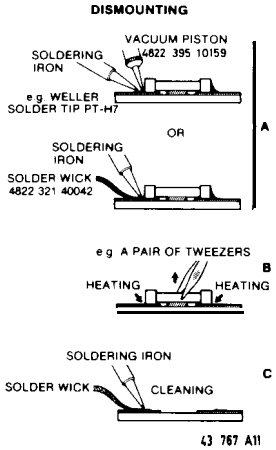


Fig. 8.1

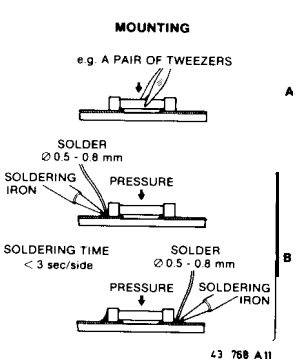


Fig. 8.2

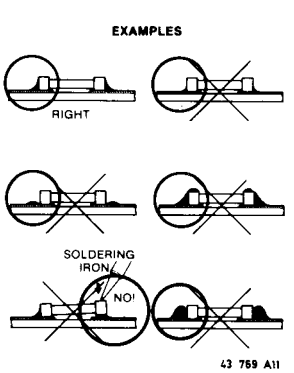


Fig. 8.3

2. Replacing the EEPROM IC7710

If the EEPROM has to be replaced during a repair, the microprocessor will load the EEPROM with a number of default values for the white balance, peak white limit and cut-off point settings.
However, all these values should be checked and adjusted, if necessary.
All options should also be set, the programs installed and personal preference set.

3. Table of error messages

Error indication	Description	Possible fault
OSD: ERR PIP	I^2C fault PIP module	* +5 on PIP module * IC7406
OSD: ERR TXT	I^2C fault TXT module	* +5 on teletext module * IC7800
OSD: ERR NICAM	I^2C fault IC7 160 (NICAM units)	* +5 on IF/sound module * IC7160, C2160, C2161, C2221, c2222 * IC7213
OSD: ERR 8415	I^2C fault IC7200 (stereo and NICAM units)	* + 14 on IF/Sound module * IC7200 * IC7220
OSD: ERR 8425	I^2C fault IC7213 (NICAM units) I^2C fault IC7220 (Stereo units)	* IC7213/IC7220
OSD: ERR EEPROM	I^2C fault IC7710	* IC7710
OSD: ERR TUNER	I^2C fault tuner	* Tuner * TS7003
OSD: ERR CHROMA	I^2C fault IC7309	* supply IC7309 (+9) * IC7309
Flashing LED	Internal fault in μP	* IC7708
OSD: ERR BUS	I^2C bus blocked	* C2714, C2715

1 . Service-Default-Mode

The GR2.2 is equipped with a service default mode. The service default mode is a fixed defined mode in which the unit can be placed.

1.1 Mode definition

The definition of the fixed mode in the service default mode is as follows:

all sound and picture controls are in the central position (with the exception of the volume which is set to low)

The set should be tuned to 475.25 MHz system:

- PAL BG, PAL/SECAM BG or PAL I for single system units (option 2 MULTI SYSTEM "OFF")
- SECAM L for multisystem units. (option 2 MULT SYSTEM "ON")
- SECAM DK for sets for Eastern-Europa with option 2 MULTI SYSTEM "ON".
- PAL BG for sets for Eastern-Europa with option 2 MULTI SYSTEM "OFF".

1.2 Switching on and off

The service default mode is switched on by briefly short-circuiting the pins M33 and M34 (SERVICE) behind the INSTALL key on the carrier panel when switching the unit on with the mains switch. In order to indicate that the unit is in the service default mode, an "SER" appears on the screen. The service default mode can only be switched off by switching the unit to standby (⏻). If the unit is switched off and then on again using the mains switch or mains plug, the service default mode remains switched on.

1.3 Operation and extra facilities

In addition to the fact that the unit can be operated normally, in the service default mode two extra functions are available:

Autostore

When operating the **install** key on the local control panel, the unit is tuned to the next transmitter frequency. This frequency is also stored under the selected programme number. Therefore the installation menu cannot be accessed in the service default mode!

• Service menu

The service menu is activated by first pressing the ◿ key and then at the same time the P+ key on the local control panel. The service menu now appears on the screen. The service menu offers the facility to set various options and make a number of picture tube settings. The various components in the service menu are selected using the coloured keys on the remote control. The various components themselves are adjusted using the + and ▪ keys on the remote control.The values and options set are immediately stored in the EEPROM.

Note 1:

If the service menu does not appear on the screen **and** the autostore function does not react, then the "LOCK" function is probably activated.

If the autostore function only does not react, the hotel mode is activated.

Note 2:

If a multisystem unit in the service default mode is to be used with the PAL/SECAM BG system, option 2 "MULTI SYSTEM" may be temporarily disabled "OFF".

Note 3:

If a multi-system set for Eastern-Europe in the service default mode is nevertheless to be used with the PAL BG system, option 2 "MULTI SYSTEM" may be temporarily disabled ("OFF").

2. Hotel mode

In the hotel mode the volume control is limited to a maximum to be set beforehand and the installation menu cannot be called up.

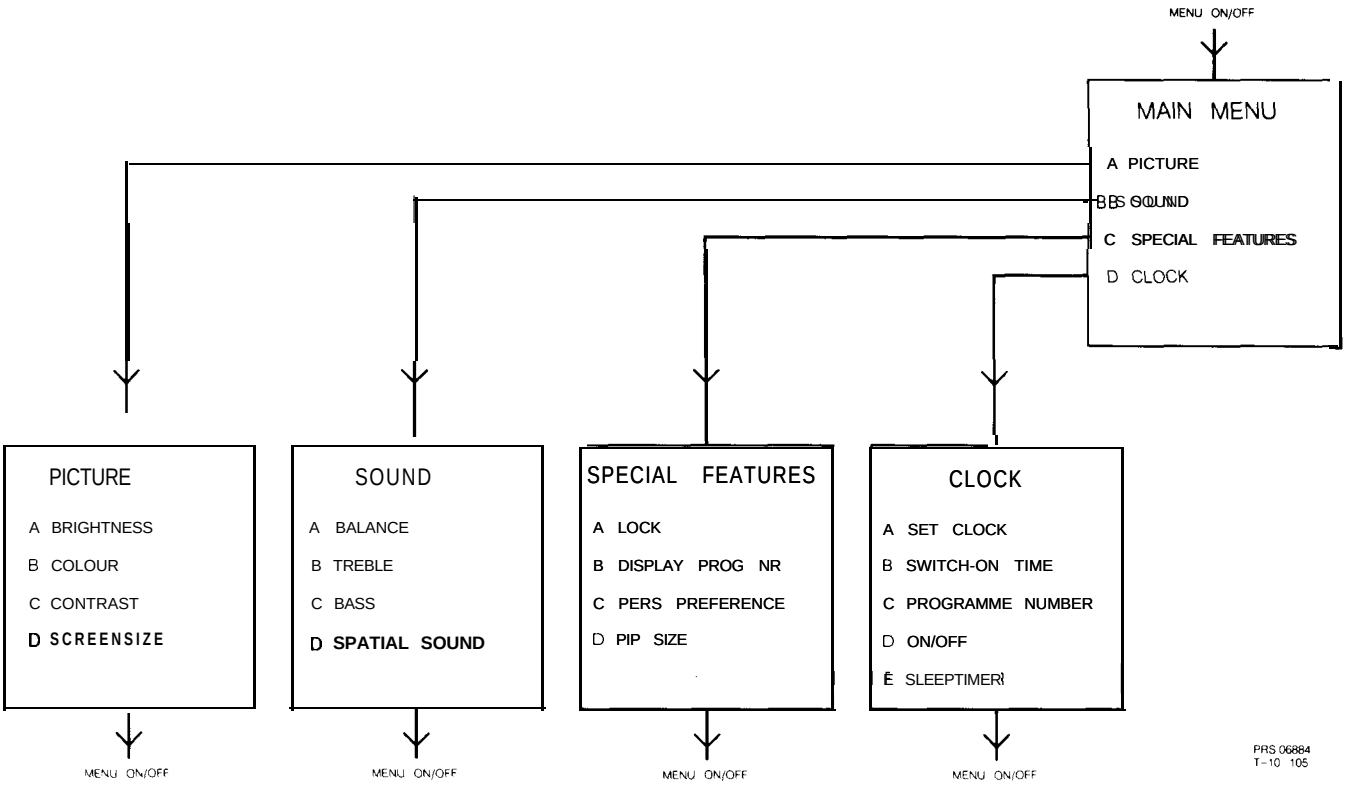
2.1 Switching the hotel mode on and off

Select programme number 38.

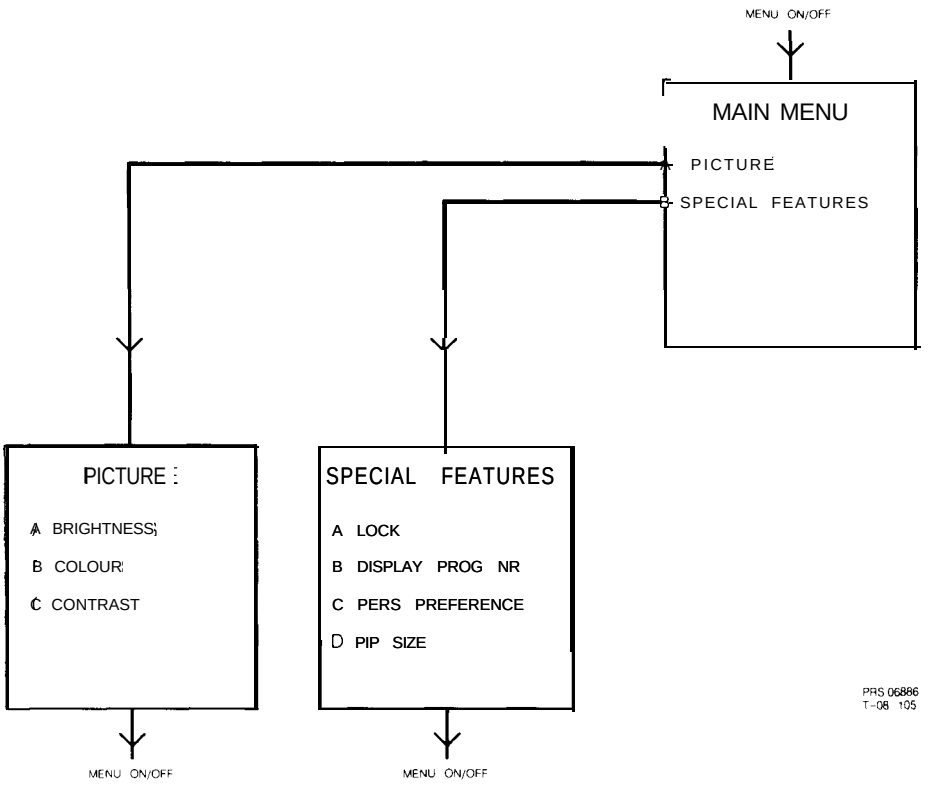
First press ◿ + and keep this depressed while pressing P -.

'Survey of menus

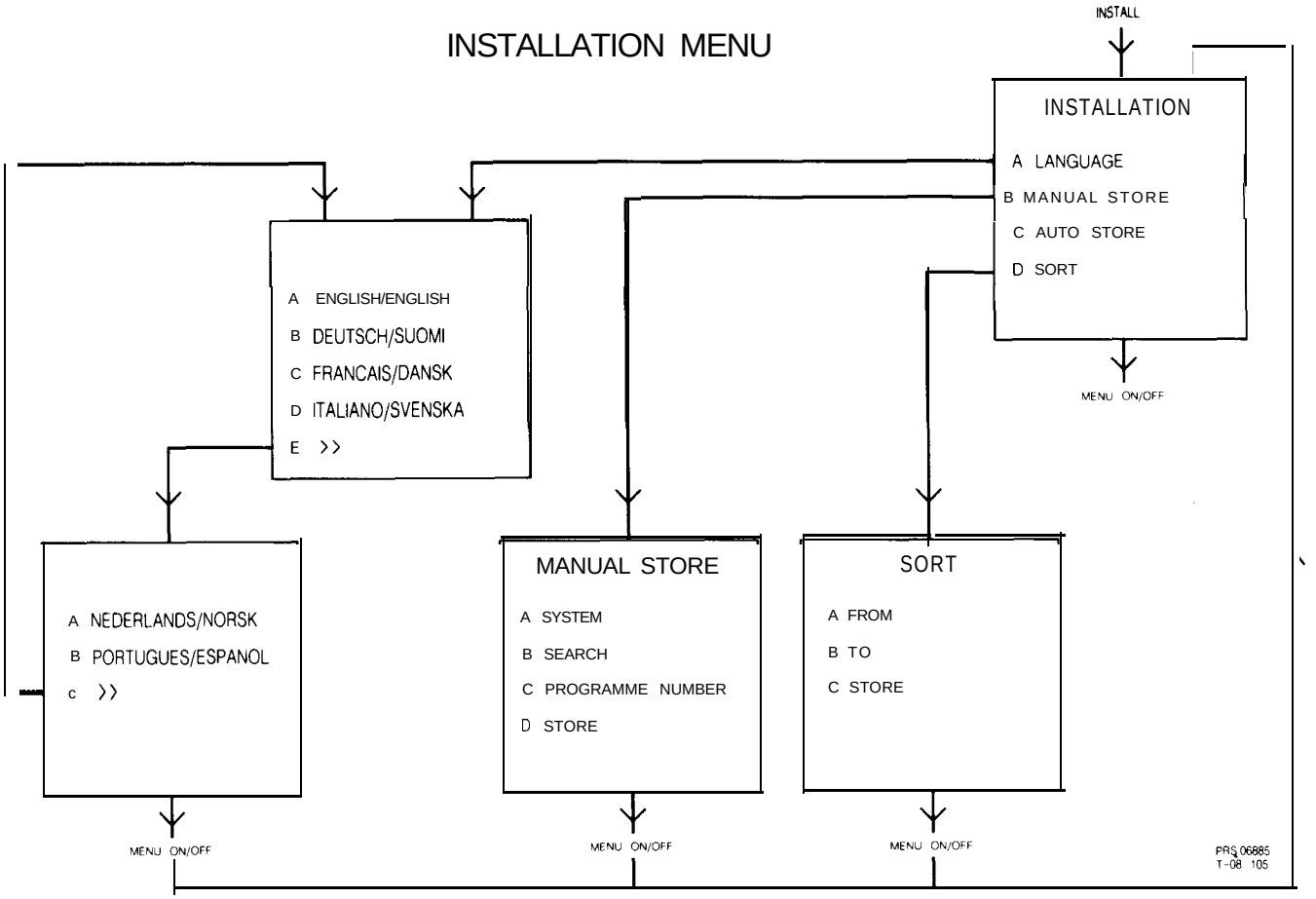
MAIN MENU STEREO



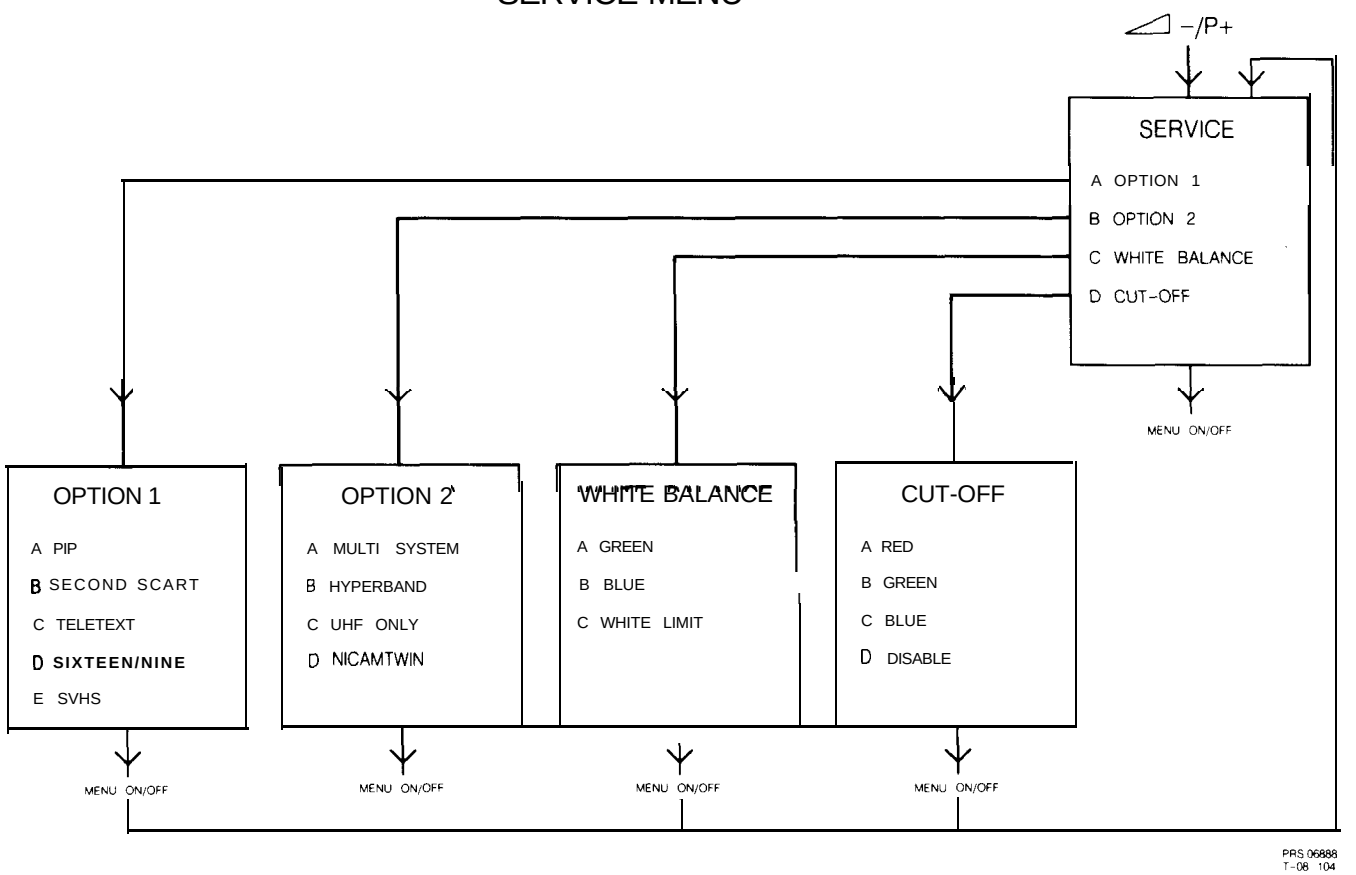
MAIN MENU MONO



INSTALLATION MENU



SERVICE MENU



Main c

3372	4
3373	4
3374	4
3375	4
3376	4
3380	4
3381	4
3394	4
3395	4
3450	4
3451	4
3452	4
3455	4
3456	4
3457	4
3458	4
3459	4
3460	4
3461	4
3463	4
3464	4
3465	4
3466	4
$3467^{3,4}$	4
$3467^{1,2}$	4
3468	4
3469	4
3470	4
3471'2	4
3471^{4}	4
3471^{3}	4
3473	4
3474	4
3475	4
3476	4
3477	4
3470	4
3483	4
3485	4
35013	4
$3501^{1,2}$	4
3501^{4}	4
$3502^{1,2}$	4
$3502^{3,4}$	4
$3503\blacktriangle^{1,2}$	4
$3503\blacktriangle^{3,4}$	4
3504	4
3505	4
3506	4
$3507^{1,2}$	4
$3507^{3,4}$	4
3508	4
3509	4
3510	4
3511	4
3513	4
3514	4
3515	4
3516	4
3517	4
3519	4
3523	4
3529	4
$3535^{3,4}$	4
3535'	4
35352	4
$3539^{3,4}$	4
$3539^{1,2}$	4
3540	4
3542	4

Spare parts list / Stückliste / Liste

Main Carrier

Mechanical parts

	4822 492 70871	spring wire
	4822 404 31174	bracket EURO module
	4822 256 91766	Spring fix.
)103	4822 466 93111	insulator
)170	4822 466 30395	shield for µP
)010	4822 265 30389	2p male
)011	4822 265 30389	2p male
)012	4822 26530351	5p male
)013	4822 26530378	4p male
)014	4822 29040295	7p male
)015	4822 265 40421	6p male
)016	4822 26440207	3p male
)017	4822 26750591	6p male
)018	482226450148	8p male
)019	4822 26440239	3p male
)022	4822 267 40666	3p male
)023	4822 264 40207	3p male
)024	4822 264 40207	3p male
)027	4822 265 30351	5p male
)028▲	4822 265 30877	3p
)029	4822 265 41086	9p male
)032	4822 290 40283	5p male
)035	4822 267 20387	SVHS-connector bushing
)039	4822 267 31014	
)040	4822 267 40878	3p male
)041	4822 276 50354	switch
)042▲	4822 256 30274	Fuse holder
)047	4822 267 30631	cinch fem. 2p
)049	4822 267 60243	euro connector
	4822 267 30546	6p female
	4822 267 50637	10p female

Jarious

1000	482221010436	U944C/IEC
1000	482221050124	UV916E/IEC
1002	4822526 10405	ferrite bead
1003	4822212 23667	infra red receiver
1004	482252610405	ferrite bead
1240	4822071 51602	fuse T1.6A
1242	4822071 51602	fuse T1.6A
1300	4822 242 70304	8,867MHz
1534	4822071 53151	fuse T315mA
1559	4822071 51002	fuse T1A
1580	482207151602	fuse T1.6A
1600	482207032002	fuse T2A
1601	4822 071 52502	fuse T2.5A
1702	482224270392	6MHz

⊣⊢

2001	4822 12440849	330µF 20% 16V
2002	4822 122 31797	22nF 10% 63V
2003	4822 122 31947	100nF 20% 63V
2008	4822 122 31765	100pF 5% 50V
2010	4822 12440435	10µF 20% 50V
2231	4822 12441525	100µF 20% 25V
2232	4822 122 32863	22nF 80% 50V
2233	4822 122 32863	22nF 80% 50V
2234	4822 12232863	22nF 80% 50V
2235	4822 122 32863	22nF 80% 50V
2236	4822 122 31784	4,7nF 10% 50V
2237	4822 122 31947	100nF 20% 63V
2238	4822 122 31784	4,7nF 10% 50V
2238[1b]	4822 12232597	6,8nF 10% 63V
2239	4822 122 31947	100nF 20% 63V
2240	4822 12440214	1000µF 20% 25V
2241	4822 122 31947	100nF 20% 63V
2242	4822 124 40214	1000µF 20% 25V
2243	4822 122 32863	22nF 80% 50V
2245	4822 122 32863	22nF 80% 50V
2246[1b]	4822 124 40849	330µF 20% 16V
2246	4822 124 41596	22µF 20% 50V
2248	4822 124 40849	330µF 20% 16V
2249	4822 122 32863	22nF 80% 50V
2250	4822 121 41857	10nF 5% 250V
2251	4822 121 41857	10nF 5% 250V
2252	4822 121 51252	470nF 5% 63V
2254	4822 121 51252	470nF 5% 63V
2255	4822 121 51252	470nF 5% 63V
2256	4822 122 32142	270pF 5% 63V
2257	4822 122 32142	270pF 5% 63V
2262	4822 122 32142	270pF 5% 63V
2263	4822 122 32142	270pF 5% 63V
2264	4822 121 51252	470nF 5% 63V
2265	4822 121 51252	470nF 5% 63V
2266	4822 124'41796	22µF 20% 16V
2300	4822 122 32482	22pF 5% 63V
2301	4822 122 31773	560pF 5% 50V
2303	4822 122 32142	270pF 5% 63V
2304[7]	4822 122 31773	560pF 5% 50V
2304	4822 122 32999	2,2nF 5%
2305	4822 126 10324	33pF 63V
2306	4822 122 31965	220pF 5% 63V
2307	4822 122 31965	220pF 5% 63V
2308	4822 122 32442	10nF 50V
2309	4822 122 32442	10nF 50V
2310	4822 122 32442	10nF 50V
2311	4822 122 33496	100nF 10% 63V
2312	4822 122 32442	10nF 50V
2313	4822 125 50045	20pF
2314	5322 121 42661	330nF 5% 63V
2315[2,4]	4822 122 32139	12pF 5% 63V
2315[1,3]	4822 122 32504	15pF 5% 50V
2316	4822 122 31825	27pF 10% 50V
2317	4822 122 33466	82pF 2%
2318	4822 122 32875	100pF 5% 50V
2319	4822 122 31825	27pF 10% 50V
2320[2,4]	4822 12231772	47pF 5% 50V
2320[1,3]	4822 122 31839	82pF 10% 50V
2321	4822 12231797	22nF 10% 63V
2322	4822 12231797	22nF 10% 63V
2323	4822 122 32542	47nF 10% 63V
2325	4822 12232542	47nF 10% 63V
2326[7,8]	4822051 10008	jumper
2326	4822 12233496	100nF 10% 63V
2328[1,3]	4822 12141856	22nF 5% 250V
2328[2,4]	4822 12142408	220nF 5% 63V
2329[1,3]	4822 12141856	22nF 5% 250V
2329[2,4]	4822 12142408	220nF 5% 63V
2330	4822 12231765	100pF 5% 50V
2331	4822 12231765	100pF 5% 50V
2332	5322 12231842	330pF 5% 63V
2333	4822 12142408	220nF 5% 63V
2334	4822 12231965	220pF 5% 63V
2335	4822 12231965	220pF 5% 63V
2336	4822 122 31797	22nF 10% 63V
2337	4822 122 31797	22nF 10% 63V
2338	4822 122 31797	22nF 10% 63V
2339	4822 122 33496	100nF 10% 63V
2340	4822 122 31797	22nF 10% 63V
2341	4822 122 31797	22nF 10% 63V
2342	4822 122 33496	100nF 10% 63V
2343	4822 12233496	100nF 10% 63V
2344	4822 12233496	100nF 10% 63V
2345	4822 12231797	22nF 10% 63V
2346	4822 122 31765	100pF 5% 50V
2347	4822 122 31769	18pF 5% 50V
2349	5322 122 31647	1nF 10% 63V
2350	4822 122 31797	22nF 10% 63V
2351	4822 122 31797	22nF 10% 63V
2352	5322 122 31647	1nF 10% 63V
2353	4822 122 33496	100nF 10% 63V
2354	4822 124 40242	1µF 20% 63V
2355	4822 124 40849	330µF 20% 16V
2356	4822 122 31797	22nF 10% 63V
2357	4822 122 31797	22nF 10% 63V
2358	4822 122 31797	22nF 10% 63V
2359	4822 122 31765	100pF 5% 50V
2360	4822 122 33496	100nF 10% 63V
2361	4822 122 33496	100nF 10% 63V
2362	4822 122 33496	100nF 10% 63V
2363	4822 122 31972	39pF 5% 50V
2365	5322 121 42661	330nF 5% 63V
2366	4822 124 41566	3,3µF 20% 50V
2367	4822 124 41578	6,8µF 20% 50V
2368	4822 122 32139	12pF 5% 63V
2370	4822 121 42408	220nF 5% 63V
2371	4822 122 31825	27pF 10% 50V
2372	4822 122 31825	27pF 10% 50V
2373	4822 122 31825	27pF 10% 50V
2374	4822 122 31772	47pF 5% 50V
2375	4822 122 31765	100pF 5% 50V
2376	4822 122 31765	100pF 5% 50V
2380	4822 122 31766	120pF 5% 50V
2381	4822 122 31766	120pF 6% 50V
2384	4822 122 31772	47pF 5% 50V
2385	4822 122 31765	100pF 5% 50V
2386	4822 122 33481	1,8nF 15%
2450	4822 124 80059	100µF 20% 25V
2451	4822 122 33496	100nF 10% 63V
2455	5322 122 31647	1nF 10% 63V
2455[2]	5322 122 33446	3,3nF 10% 63V
2456	4822 124 80059	100µF 20% 25V
2457	4822 122 33496	100nF 10% 63V
2458	4822 121 42937	2.7nF 1% 250V
2459	4822 122 33496	100nF 10% 63V
2460'	4822 122 31644	2,2nF 10% 63V
2460	4822 122 32442	10nF 50V
2461	5322 122 31647	1nF 10% 63V
2462	4822 122 31797	22nF 10% 63V
2464	4822 122 33496	100nF 10% 63V
2465	4822 124 40849	330µF 20% 16V
2466	4822 124 22403	10µF 20% 16V
2467	4822 122 33496	100nF 10% 63V
2468	4822 124 40244	2,2µF 20% 63V
2469	4822 124 41596	22µF 20% 50V
2470	4822 122 31772	47pF 5% 50V
2471	5322 121 42661	330nF 5% 63V
2473	5322 121 42661	330nF 5% 63V
2475	4822 122 33496	100nF 10% 63V
2506	4822 122 31727	470pF 5% 63V
2500[4]	4822 122 31771	390pF 5% 50V
2500[1,2]	4822 122 31965	220pF 5% 63V
2501	4822 122 33481	1,8nF 15%
2502	5322 124 41381	22µF 20% 50V
2505	4822 122 32542	47nF 10% 63V
2506[3]	4822 124 80062	470µF 20% 35V
2506[4]	4822 124 80063	680µF 20% 35V
2506[1,2]	4822 124 80065	1000µF 20% 50V
2507	4822 122 31797	22nF 10% 63V
2509	5322 124 41379	2,2µF 20% 50V
2524	4822 124 42167	4,7µF 20% 50V
2538	4822 121 43856	4.7nF 5% 250V
2539	4822 124 80057	330µF 20% 16V

Main ca

2545▲[1,2] 48
2545▲[3,4] 48
2546▲[1] 4E
2546▲[2] 4E
2546▲[3] 48
2546▲[4] 53
2547▲[1,2] 48
2547▲[3] 53
2547▲[4] 53
2549' 4E
25492 48
2550▲[1,2] 4E
2550▲[3] 48
2550▲[4] 53
2551 48
2559 4E
2560▲ 4 E
2570 48
2574 4E
2580 48
2585[2] 48
2585' 53
2588[1,2] 48
25884 53
2590 53
2600▲ 48
2605▲[1,2] 48
2605▲[3,4] 4E
2607▲ 4 E
2611 53
2617[3,4] 48
2617[1,2] 48
2620 53
2625 48
2626 48
2629 48
2630[3,4] 48
2630[1,2] 48
2631[3,4] 48
2631[1,2] 4 E
2632 4E
2636 48
2640 48
2641 4E
2646 48
2649 4E
2650 4E
2652 5:
2653 5:
2658 5:
2660 4E
2661 48
2662[3,4] 48
2662[1,2] 4 E
2663[3,4] 48
2663[1,2] 48
2664 5:
2670 4E
2671 48
2675[3,4] 48
2675[1,2] 4 f
2676 53
2704 48
2705 4f
2706 53
2707 48
2708 4f
2709 4f
2710 4E
2711 4E

Spare parts list / Stückliste / Liste

Main carrier

545▲[1,2]	4822 126 10202	1,5nF 10% 2KV	
545▲[3,4]	4822 126 11539	1,2nF 10% 2KV	
546▲[1]	4822 121 43061	8,2nF 5 % 1,6KV	
546▲[2]	4822 121 43076	11nF 5% 1600V	
546▲[3]	4822 121 70109	7,5nF 5 % 1,6KV	
546▲[4]	5322 121 44345	15nF 5 % 1,6KV	
547▲[1,2]	4822 121 40488	22nF 10% 400V	
547▲[3]	5322 121 44151	33nF 10% 400V	
547▲[4]	5322 121 44219	47nF 10% 400V	
549'	4822 121 42073	390nF 10% 400V	
549[2]	4822 121 42074	470nF 10% 400V	
550▲[1,2]	4822 12151527	390nF 5% 250V	
550▲[3]	4822 12151601	470nF 10% 200V	
550▲[4]	5322 12144128	680nF 10% 250V	
551	4822 12480069	1µF 20% 160V	
559	4822 12480059	100µF 20% 25V	
560▲	4822 12151408	33nF 10% 250V	
570	4822 12480071	22µF 20% 160V	
1574	4822 122 10175	2,2nF 10% 50V	
1580	4822 124 80061	1000µF 20% 25V	
1585[2]	4822 124 80058	68µF 20% 25V	
1585'	5322 12421731	10µF 20% 50V	
1588[1,2]	4822 122 31644	2,2nF 10% 63V	
1588[4]	5322 122 31647	1nF 10% 63V	
1590	5322 12142498	680nF 5 % 63V	
1600▲	4822 12441531	470nF 10% 250V	
1605▲[1,2]	4822 124 80053	220µF 20% 385V	
1605▲[3,4]	4822 124 80134	150µF 20% 400V	
1607▲	4822 12151469	1 nF 400V	
1611	5322 12441299	68µF 20% 25V	
1617[3,4]	4822 121 51252	470nF 5% 63V	
1617[1,2]	4822 121 51319	1µF 10% 63V	
1620	5322 12142465	68nF 5% 63V	
1625	4822 12240593	1nF 10% 1KV	
1626	4822 12240594	470pF 10% 1KV	
1629	4822 122 31784	4,7nF 10% 50V	
1630[3,4]	4822 124 23418	47µF 200V	
1630[1,2]	4822 124 80055	100µF 10% 160V	
1631[3,4]	4822 124 23418	47µF 200V	
1631[1,2]	4822 124 80055	100µF 10% 160V	
1632	4822 12611382	1nF 10% 1KV	
1636	4822 122 31644	2,2nF 10% 63V	
1640	4822 124 80061	1000µF 20% 25V	
1641	4822 124 80061	1000µF 20% 25V	
1646	4822 12480054	15µF 20% 50V	
1649	4822 122 33496	100nF 10% 63V	
1650	4822 122 33496	100nF 10% 63V	
1652	5322 122 32331	1nF 10% 100V	
1653	5322 122 32331	1nF 10% 100V	
1658	5322 122 32838	82nF 10% 63V	
1660	4822 124 80061	1000µF 20% 25V	
1661	4822 12441506	47µF 20% 16V	
1662[3,4]	4822 122 31965	220pF 5% 63V	
1662[1,2]	4822 122 32142	270pF 5% 63V	
1663[3,4]	4822 122 31765	100pF 5% 50V	
1663[1,2]	4822 122 31839	82pF 10% 50V	
1664	5322 12441379	2,2µF 20% 50V	
1670	4822 122 31766	120pF 5% 50V	
1671	4822 12142408	220nF 5% 63V	
1675'"	4822 124 80064	680µF 20% 50V	
1675[1,2]	4822 124 80065	1000µF 20% 50V	
1676	5322 122 32331	1nF 10% 100V	
1704	4822 122 32542	47nF 10% 63V	
1705	4822 122 31766	120pF 5% 50V	
1706	5322 12441299	68µF 20% 25V	
1707	4822 122 32442	10nF 50V	
1708	4822 122 31766	120pF 5% 50V	
1709	4822 122 32507	6,8pF 5% 5ov	
1710	4822 122 32507	6,8pF 5% 5ov	
1711	4822 122 31825	27pF 10% 50V	
1712	4822 122 31825	27pF 10% 50V	
1713	4822 124 41525	100µF 20% 25V	
1714	4822 122 31766	120pF 5% 50V	
1715	4822 122 31766	120pF 5% 50V	
1716	4822 122 33496	100nF 10% 63V	
1717	4822 122 31644	2,2nF 10% 63V	
1718	4822 122 33496	100nF 10% 63V	
1719	5322 121 42386	100nF 5% 63V	
1721	4822 122 32442	10nF 50V	
1722	4822 122 31947	100nF 20% 63V	
1781	4822 122 33496	100nF 10% 63V	
1850	4822 12441506	47µF 20% 16V	
1851	4822 122 31766	120pF 5% 50V	
1852	4822 122 33496	100nF 10% 63V	
1853	4822 122 31784	4,7nF 10% 50V	
1854	4822 122 33496	100nF 10% 63V	
1875	5322 12142386	100nF 5% 63V	

3001▲	4822052 10399	39Ω 5 % 0,33W	
3002	4822051 10223	22k 2 % 0,25W	
3003	482205120222	2k2 5 % 0,1W	
3010	4822051 10102	1 k 2% 0,25W	
3218	4822 11652228	680Ω 5 % 0,5W	
3219	4822 11652228	680Ω 5 % 0,5W	
3220	4822051 10392	3k9 2 % 0,25W	
3221	4822050 11002	Ik 1% 0,4W	
3222	4822 11652234	100k 5 % 0,5W	
3224	4822 11652256	2k2 5 % 0,5W	
3225	4822051 10272	2k7 2 % 0,25W	
3226	4822051 10333	33k 2% 0,25W	
3227	4822051 10333	33k 2% 0,25W	
3228	4822051 10151	150Ω 2 % 0,25W	
3229	4822051 10562	5k6 2 % 0,25W	
3230	4822 11652257	22k 5 % 0,5W	
3231	4822051 10472	4k7 2 % 0,25W	
3232[1b]	4822051 10008	jumper	
3232	4822051 10101	100Ω 2% 0,25W	
3233	4822051 10103	10k 2 % 0,25W	
3234	4822051 10223	22k 2% 0,25W	
3235	4822 051 10223	22k 2 % 0,25W	
3236	4822051 10122	1 k2 2% 0,25W	
3237"'	4822 051 10122	Ik2 2% 0,25W	
3237"'	4822 051 10562	5k6 2 % 0,25W	
3238	4822051 10122	1 k2 2% 0,25W	
3239	4822 11652207	1 k2 5% 0,5W	
3240▲	4822052 10828	8Ω2 5 % 0,33W	
3241▲	4822 052 10828	8Ω2 5 % 0,33W	
3242	4822051 10333	33k 2% 0,25W	
3243	4822051 10333	33k 2% 0,25W	
3244	4822051 10103	10k 2 % 0,25W	
3245	4822051 10103	10k 2 % 0,25W	
3246	4822 050 23301	330Ω 1% 0,6W	
3247	4822 11652175	100Ω 5 % 0,5W	
3248	482205023301	330Ω 1 % 0,6W	
3249	4822 11652175	100Ω 5 % 0,5W	
3249[1b]	4822 11652193	39Ω 5% 0,5W	
3250	4822050 11002	Ik 1% 0,4W	
325 1	4822 050 11002	Ik 1% 0,4W	
3253	482211652211	150Ω 5 % 0,5W	
3254	4822 11652211	150Ω 5% 0,5W	
3255	4822050 11002	Ik 1% 0,4W	
3256	4822050 11002	Ik 1% 0,4W	
3257	4822051 10334	330k 2% 0,25W	
3258	4822051 10334	330k 2% 0,25W	
3259	4822051 10334	330k 2% 0,25W	
3260	4822 051 10334	330k 2% 0,25W	
3261	4822 11680747	75Ω 5% 0,125W	
3262	4822 116 80747	75Ω 5 % 0,125W	
3263	4822 051 10008	jumper	
3263[1b]	4822051 10562	5k6 2% 0,25W	
3264	4822 051 10008	jumper	
3264[1b]	4822 051 10562	5k6 2 % 0,25W	
3265	4822 050 21008	1 Ω 1% 0,6W	
3266	4822 050 21008	1 Ω 1% 0,6W	
3267	4822 051 10103	10k 2 % 0,25W	
3268	4822 051 10103	10k 2 % 0,25W	
3300	4822 051 10822	8k2 2 % 0,25W	
3301	4822 051 10272	2k7 2 % 0,25W	
3302	4822 051 20222	2k2 5 % 0,1W	
3303[7,8]	4822051 10122	1 k2 2% 0,25W	
3303	4822 051 10332	3k3 2 % 0,25W	
3304	4822051 10182	1 k8 2% 0,25W	
3305	4822051 10431	430Ω 2% 0,25W	
3306	4822051 10103	10k 2 % 0,25W	
3307[2,4]	4822 051 10681	680Ω 2% 0,25W	
3307'"	4822 051 10821	820Ω 2% 0,25W	
3308	4822051 10331	330Ω 2% 0,25W	
3309	4822051 10331	330Ω 2% 0,25W	
3310	4822051 10512	5kl 2% 0,25W	
3311	4822051 10391	390Ω 2% 0,25W	
3312	4822 101 11186	470Ω 30% 0.1W	
3313[7,8]	4822 051 10103	10k 2 % 0,25W	
3313	4822051 10682	6k8 2 % 0,25W	
3314	4822051 10103	10k 2 % 0,25W	
3318	4822051 10472	4k7 2 % 0,25W	
3323	4822 11652272	330k 5% 0,5W	
3325	4822051 10271	270Ω 2 % 0,25W	
3326	4822051 10271	270Ω 2% 0,25W	
3327	4822050 11202	1k2 1 % 0,4W	
3328	482205110473	47k 2% 0,25W	
3330	4822051 10109	10Ω 2 % 0,25W	
3331	4822051 10109	10Ω 2% 0,25W	
3332	482205023901	390Ω 1 % 0,6W	
3334	482205021809	18Ω 1 % 0,6W	
3335	482211652184	18Ω 5% 0,5W	
3336▲[2,4]	4822 052 10189	18Ω 5 % 0,33W	
3336▲[1,3]	4822 052 10279	27Ω 5 % 0,33W	
3337▲[2,4]	4822 052 10189	18Ω 5 % 0,33W	
3337▲[1,3]	4822 052 10279	27Ω 5 % 0,33W	
3338	4822050 11002	Ik 1% 0,4W	
3339	4822 11652243	Ik5 5% 0,5W	
3340	482205011002	Ik 1% 0,4W	
3341	4822051 10103	10k 2 % 0,25W	
3342[2,4]	4822 051 10102	Ik 2% 0,25W	
3342[1,3]	4822 051 10122	1k2 2 % 0,25W	
3343	4822051 10104	100k 2 % 0,25W	
3344	4822051 10103	10k 2 % 0,25W	
3347	4822 11652219	330Ω 5 % 0,5W	
3348	4822 116 52219	330Ω 5 % 0,5W	
3349	4822 116 52219	330Ω 5 % 0,5W	
3350	482205011002	Ik 1% 0,4W	
335 1	4822 11652263	2k7 5 % 0,5W	
3352	4822 116 52263	2k7 5 % 0,5W	
3353	4822 11652263	2k7 5 % 0,5W	
3354	4822051 10221	220Ω 2 % 0,25W	
3357	4822051 10102	Ik 2% 0,25W	
3358	4822051 10331	330Ω 2 % 0,25W	
3359	4822051 10331	330Ω 2 % 0,25W	
3360	4822051 10102	Ik 2% 0,25W	
3361	4822051 10102	Ik 2% 0,25W	
3362	4822051 10472	4k7 2 % 0,25W	
3365	4822 11652272	330k 5% 0,5W	
3366	4822 11652297	68k 5% 0,5W	
3367	4822 11652175	100Ω 5 % 0,5W	
3368	4822 116 52175	100Ω 5 % 0,5W	
3369	4822 11652175	100Ω 5 % 0,5W	
3370	4822051 10472	4k7 2 % 0,25W	
3371	4822 051 10332	3k3 2 % 0,25W	

Main ca

3372	4
3373	4
3374	4
3375	4
3376	4
3380	4
3381	4
3394	4
3395	4
3450	4
3451	4
3452	4
3455	4
3456	4
3457	4
3458	4
3459	4
3460	4
3461	4
3463	4
3464	4
3465	4
3466	4
3467[3,4]	4
3467[1,2]	4
3468	4
3469	4
3470	4
3471'2	4
3471[4]	4
3471[3]	4
3473	4
3474	4
3475	4
3476	4
3477	4
3478	4
3483	4
3485	4
35013	4
3501[1,2]	4
3501[4]	4
3502[1,2]	4
3502[3,4]	4
3503▲[1,2]	4
3503▲[3,4]	4
3504	4
3505	4
3506	4
3507[1,2]	4
35073.4	4
3508	4
3509	4
3510	4
3511	4
3513	4
3514	4
3515	4
3516	4
3517	4
3519	4
3523	4
3529	4
3535[3,4]	4
3535'	4
35352	4
3539[3,4]	4
3539[1,2]	4
3540	4
3542	4

Spare parts list / Stückliste / Liste

Main carrier

3372	4822 051 10472	4k7 2 % 0,25W
3373	4822 051 10102	Ik 2% 0,25W
3374	4822 050 22702	27k 1% 0,6W
3375	4822 051 10331	330Ω 2 % 0,25W
3376	4822 051 10331	330Ω 2 % 0,25W
3380	4822 051 10101	100Ω 2 % 0,25W
3381	4822 051 10101	100Ω 2 % 0,25W
3394	4822 051 10683	68k 2% 0,25W
3395	4822 051 10683	68k 2% 0,25W
3450	4822 116 52238	12k 5% 0,5W
3451	4822 116 52175	100Ω 5 % 0,5W
3452	4822 116 52175	100Ω 5% 0,5W
3455	4822 051 10102	Ik 2% 0,25W
3456	4822 051 10682	6k8 2 % 0,25W
3457	4822 101 11191	10k 30%LIN 0.1W
3458	4822 051 10303	30k 2 % 0,25W
3459	4822 051 10823	82k 2% 0,25W
3460	4822 051 10333	33k 2 % 0,25W
3461	4822 101 11193	470k 30 % 0.1W
3463	4822 116 52251	18k 5 % 0,5W
3464	4822 051 10123	12k 2% 0,25W
3465	4822 051 10394	390k 2 % 0,25W
3466	4822 051 10681	680Ω 2% 0,25W
3467[3,4]	4822 050 21205	1M2 1 % 0,6W
3467[1,2]	4822 116 80692	2M2 5 % 0,2W
3468	4822 051 10682	6k8 2 % 0,25W
3469	4822 051 10229	22Ω 2 % 0,25W
3470	4822 116 52231	820Ω 5 % 0,5W
3471[1,2]	4822 116 52239	120k 5% 0,5W
3471[4]	4822 116 52245	150k 5 % 0.5W
3471[3]	4822 116 52258	220k 5% 0,5W
3473	4822 116 52265	270k 5% 0,5W
3474	4822 051 10392	3k9 2 % 0,25W
3475	4822 051 10184	180k 2% 0,25W
3476	4822 051 10683	68k 2% 0,25W
3477	4822 051 10474	470k 2% 0,25W
3478	4822 051 10393	39k 2% 0,25W
3483	4822 051 10479	47Ω 2 % 0,25W
3485	4822 051 20222	2k2 5% 0,1W
35013	4822 051 10101	100Ω 2% 0,25W
3501[1,2]	4822 051 10759	75Ω 2 % 0,25W
3501[4]	4822 051 10829	82Ω 2 % 0,25W
3502[1,2]	4822 053 10122	Ik2 5% 1W
3502[3,4]	4822 053 10272	2k7 5 % 1W
3503▲[1,2]	4822 052 10128	1Ω2 5 % 0,33W
3503▲[3,4]	4822 052 10478	4Ω7 5 % 0,33W
3504	4822 100 11684	100Ω 10 % 0.1W
3505	4822 051 10471	470Ω 2 % 0,25W
3506	4822 116 52242	130k 5 % 0,5W
3507[1,2]	4822 116 52233	10k 5 % 0,5W
3507[3,4]	4822 116 52238	12k 5% 0,5W
3508	4822 051 10228	2Ω2 5 % 0,25W
3509	4822 051 10228	2212 5% 0,25W
3510	4822 051 10228	2Ω2 5 % 0,25W
3511	4822 051 10228	2Ω2 5 % 0,25W
3513	4822 050 25601	560Ω 1 % 0,6W
3514	4822 051 10182	1k8 2 % 0,25W
3515	4822 051 10228	2Ω2 5 % 0,25W
3516	4822 101 11192	22k 30% 0.1W
3517	4822 051 10228	2Ω2 5 % 0,25W
3519	4822 051 10228	2Ω2 5 % 0,25W
3523	4822 051 10228	2Ω2 5 % 0,25W
3529	4822 051 10228	2Ω2 5 % 0,25W
3535[3,4]	4822 051 10151	150Ω 2 % 0,25W
3535'	4822 051 10221	220Ω 2 % 0,25W
35352	4822 051 51201	120Ω 1 % 0,25W
3539[3,4]	4822 053 20434	430k 5 % 0,25W
3539[1,2]	4822 053 20684	680k 5% 0,25W
3540	4822 051 51201	120Ω 1 % 0,25W
3542	4822 050 28201	820Ω 1 % 0,6W
3543	4822 051 10101	100Ω 2% 0,25W
35452	4822 111 70178	120Ω 5% 5W
3545'	4822 113 80565	180Ω 5% 5W
3545[3,4]	4822 116 83686	680Ω 5% 5W
3549	4822 116 52251	18k 5 % 0,5W
3550	4822 11652251	18k 5% 0,5W
3551	4822 050 25601	560Ω 1% 0,6W
3552	4822 050 25601	560f-1 1% 0,6W
3553▲	4822 052 10561	560Ω 5% 0,33W
3560[2]	4822 116 52247	16k 5% 0,5W
3560'	4822 116 52254	20k 5% 0,5W
3560[4]	4822 116 52274	36k 5% 0,5W
3560[3]	4822 116 52277	39k 5% 0,5W
3570▲	4822 052 10688	6118 5% 0,33W
3582	4822 050 25601	560Ω 1% 0,6W
3585▲	4822 052 10159	15Ω 5 % 0,33W
3588▲	4822 052 10561	560Ω 5 % 0,33W
3589	4822 050 21502	Ik5 1% 0,6W
3590	4822 116 52234	100k 5% 0,5W
3591	4822 051 10474	470k 2% 0,25W
3592	4822 051 10681	680Ω 2% 0,25W
3603▲	4822 053 21915	9M1 5 % 0,5W
3604	4822 113 80593	1,5Ω 10% 5W
3605▲	4822 052 10102	Ik 5% 0,33W
36068	4822 052 10102	1k 5% 0,33W
3610▲[1,2]	4822 052 10159	15Ω 5% 0,33W
3610▲[3,4]	4822 052 10688	6Ω8 5% 0,33W
3617	4822 116 52213	180Ω 5% 0,5W
3619	4822 116 52182	15Ω 5% 0,5W
3620	4822 053 12121	120Ω 5% 3W
3621[1,2]	4822 053 12279	27Ω 5% 3W
3621[3,4]	4822 053 12479	47Ω 5% 3W
3622	4822 053 12479	47Ω 5% 3W
3624	4822 053 10334	330k 5% 1W
3625	4822 116 52292	560k 5% 0,5W
3626	4822 113 80565	180Ω 5% 5W
3628	4822 051 10334	330k 2% 0,25W
3629	4822 051 10682	6k8 2% 0,25W
3631[3,4]	4822 050 21204	120k 1% 0,6W
3631[1,2]	4822 050 22204	220k 1% 0,6W
3634[3,4]	4822 116 52263	2k7 5 % 0,5W
3634[1,2]	4822 116 52269	3k3 5% 0,5W
3635	4822 101 11187	1k 30%LIN 0,1W
3636	4822 051 10224	220k 2% 0,25W
3637	4822 116 52175	100Ω 5% 0,5W
3647'"	4822 050 23303	33k 1% 0,6W
3647	4822 050 23603	36k 1% 0,6W
3648	4822 051 10273	27k 2% 0,25W
3649	4822 050 23309	33Ω 1% 0,6W
3658▲	4822 052 10688	6Ω8 5 % 0,33W
3659	4822 051 10181	180Ω 2% 0,25W
3660	4822 051 10101	100Ω 2% 0,25W
3661	4822 051 10361	360Ω 2% 0,25W
3662	4822 051 10221	220Ω 2% 0,25W
3663	4822 051 10562	5k6 2% 0,25W
3664	4822 051 10272	2k7 2% 0,25W
3665	4822 051 10103	10k 2% 0,25W
3666	4822 051 10102	1k 2% 0,25W
3667	4822 051 10361	360Ω 2% 0,25W
3668	4822 051 10102	1k 2% 0,25W
3669	4822 051 10102	Ik 2% 0,25W
3670	4822 051 10303	30k 2% 0,25W
3671	4822 050 11002	1 k 1% 0,4W
3672	4822 051 10103	10k 2% 0,25W
3673	4822 051 10472	4k7 2% 0,25W
3674	4822 051 10102	Ik 2% 0,25W
3675[1,2]	4822 116 52239	120k 5% 0,5W
3675[3,4]	4822 116 52284	47k 5% 0,5W
3676	4822 051 10103	10k 2% 0,25W
1677	4822 051 10118	1Ω1 5% 0,25W
3701	4822 051 10273	27k 2% 0,25W
3702	4822 051 10153	15k 2 % 0,25W
3707	4822 051 10182	Ik8 2% 0,25W
3718	4822 116 52215	220Ω 5 % 0,5W
3719	4822 116 52215	220Ω 5 % 0,5W
3720	4822 116 52215	220Ω 5% 0,5W
3721	4822 051 10103	10k 2 % 0,25W
3722	4822 051 10103	10k 2 % 0,25W
3723	4822 051 10103	10k 2 % 0,25W
3724	4822 051 10103	10k 2 % 0,25W
3725	4822 051 10103	10k 2 % 0,25W
3726	4822 051 10103	10k 2 % 0,25W
3727	4822 116 52175	100Ω 5 % 0,5W
3728	4822 116 52175	100Ω 5% 0,5W
3729	4822 051 10911	910Ω 2 % 0,25W
3730	4822 051 10221	220Ω 2% 0,25W
3732[1,2]	4822 053 11103	10k 5% 2W
3732[3,4]	4822 053 11332	3k3 5% 2W
3733[3,4]	4822 050 23902	3k9 1 % 0,6W
3733[1,2]	4822 116 52283.	4k7 5 % 0,5W
3734[3,4]	4822 050 23902	3k9 1 % 0,6W
3734[1,2]	4822 116 52283	4k7 5 % 0,5W
3736	4822 116 52175	100Ω 5 % 0,5W
3737	4822 050 11002	1 k 1% 0,4W
3741	4822 051 10123	12k 2% 0,25W
3742	4822 051 10332	3k3 2% 0,25W
3743	4822 051 10472	4k7 2 % 0,25W
3747	4822 051 10273	27k 2% 0,25W
3748	4822 051 10273	27k 2% 0,25W
3749	4822 051 10273	27k 2% 0,25W
3750	4822 051 10273	27k 2% 0,25W
3751	4822 051 10153	15k 2% 0,25W
3752	4822 116 52244	15k 5% 0,5W
3753	4822 051 10153	15k 2% 0,25W
3754	4822 051 10153	15k 2 % 0,25W
3755[1b]	4822 051 10008	jumper
3755	4822 051 10101	100Ω 2 % 0,25W
3756	4822 051 10101	100Ω 2% 0,25W
3757	4822 051 20222	2k2 5 % 0,1W
3758	4822 051 10392	3k9 2 % 0,25W
3759	4822 116 52175	100Ω 5 % 0,5W
3768	4822 051 10105	1M 5 % 0,25W
3770	4822 051 10473	47k 2% 0,25W
3771	4822 116 52251	18k 5% 0,5W
3772	4822 116 52276	3k9 5 % 0,5W
3775	4822 051 10101	100Ω 2 % 0,25W
3776	4822 051 10562	5k6 2 % 0,25W
3777	4822 116 52264	27k 5% 0,5W
3778	4822 116 52291	56k 5% 0,5W
3779	4822 116 52233	10k 5 % 0,5W
3780	4822 051 10103	10k 2 % 0,25W
3781	4822 051 10472	4k7 2% 0,25W
3849	4822 116 52218	300Ω 5 % 0,5W
3850	4822 116 52189	30Ω 5 % 0,5W
385 1	4822 116 80747	75Ω 5 % 0,125W
3852	4822 116 80747	75Ω 5 % 0,125W
3853	4822 116 80747	75Ω 5 % 0,125W
3854	4822 116 80747	75Ω 5% 0,125W
3855	4822 116 52201	75Ω 5 % 0,5W
3856	4822 051 10101	100Ω 2 % 0,25W
3857	4822 051 10331	330Ω 2 % 0,25W
3858	4822 051 10331	330Ω 2 % 0,25W
3859	4822 051 10331	330Ω 2 % 0,25W
3860	4822 116 80176	1Ω 5% 0,5W
3861	4822 051 10562	5k6 2 % 0,25W
1866	4822 051 10472	4k7 2 % 0,25W
3867	4822 116 80747	75Ω 5 % 0,125W
3868	4822 116 80747	75Ω 5 % 0,125W
3869	4822 11652175	100Ω 5% 0,5W
3870	4822 051 10103	10k 2 % 0,25W

Spare parts list / Stückliste / Liste

Main carrier

3871	4822 116 52175	100Ω 5 % 0,5W
3872	4822 051 10102	Ik 2% 0,25W
3874	4822 050 21008	1Ω 1 % 0,6W
3875	4822 051 10154	150k 2% 0,25W
3879	4822 051 10122	1k2 2 % 0,25W
3880	4822 051 10332	3k3 2 % 0,25W
3881	4822 116 52217	270Ω 5 % 0,5W
3882	4822 116 52217	270Ω 5 % 0,5W
3884	4822 051 10681	680Ω 2 % 0,25W
3885	4822 051 10821	820Ω 2 % 0,25W
3886	4822 051 10472	4k7 2 % 0,25W
3887	4822 116 52207	1 k2 5% 0,5W
3888	4822 116 52289	5k6 5 % 0,5W
3890	4822 051 10103	10k 2 % 0,25W
3723	4822 116 52234	100K 5 % 0,5W

Jumper

1221.. 1318	4822 05 1 10008	jumper
1319	4822 051 10152	Ik5 2% 0,25W
1320.. 1329	4822 051 10008	jumper
1330	4822 051 10102	Ik 2% 0,25W
1450.. 1867	4822 051 10008	jumper

5001	4822 157 60138	47µH
5240	4822 158 10551	27µH
5242	4822 158 10551	27µH
5301	4822 157 63075	7,95µH
5303	4822 15753906	47µH
5304	4822 157 63074	7.6µH 4.3MHz
5306	4822 32040081	470ns
5534▲[3,4]	4822 157 62771	coil
5534▲[1,2]	4822 158 10728	coil
5541▲	4822 157 63078	line driver
5545▲[2]	4822 140 10414	LOT 25"/28" BL
5545▲[1]	4822 140 10417	LOT 25"/28" BM
5545▲[3]	4822 140 10418	LOT 21" MN
5545▲[4]	4822 140 10435	LOT 21" NN
5549	4822 157 53069	coil balance
5554▲	4822 157 63079	AT4042197
5554▲[3]	4822 157 63161	AT4042/90G
5582	5322 15752539	15µH
5588	4822 15752505	33µH
5605▲	4822 15753995	100µH
5606▲	4822 157 53995	100µH
5619[1,2]	4822 156 21125	3,9µH
5619[3,4]	4822 157 51235	4µH 7 10%
5625▲[3,4]	4822 148 81159	SOPS trafo
5625▲[1,2]	4822 148 81168	SOPS trafo
5630	4822 157 60387	1µH
5631	4822 158 10551	27µH
5632	4822 158 10551	27µH
5661	4822 15752279	33µH 10%
5701	4822 157 52843	56µH 5%
5703	4822 157 52279	33µH 10%

6245	4822 13030621	1N4148
6246	4822 130 81139	LLZ-C3V3
6247	4822 130 81139	LLZ-C3V3
6248	4822 130 80446	LL4148
6249	4822 130 80446	LL4148
6300	4822 130 80446	LL4148
6302	4822 130 34382	BZX79-C8V2
6303	4822 130 34382	BZX79-C8V2
6310	4822 130 80884	LLZ-C5V1
6315	4822 130 80446	LL4148
6316	4822 13030621	1N4148
6317	4822 13030621	1N4148
6318	4822 051 10008	jumper
6319	4822 13034379	BZX79-C27
6320	4822 13080877	BAV103
6367	4822 130 80884	LLZ-C5V1
6464	4822 130 81015	LLZ-CI0
6465[3,4]	4822 130 34281	BZX79-F15
6465'	4822 130 61219	BZX79-F10
6465[2]	4822 130 80239	BZX79-F8V2
6466	4822 130 80446	LL4148
6467	4822 130 80446	LL4148
6503	4822 130 42488	BYD33D
6504	4822 130 80446	LL4148
6546	4822 13041275	BY228120
6547	4822 130 41602	BYW95C/20
6548	4822 13030621	1N4148
6551	4822 13042489	BYD33G
6560	4822 130 80446	LL4148
6561	4822 130 30864	BZX79-C68
6563	4822 130 80915	BYD74C
6570	4822 13042489	BYD33G
6571	4822 130 42488	BYD33D
6580	4822 130 80791	BYV28-200/20
6580[2]	4822 13082512	BYV29F-400
6585	4822 13042489	BYD33G
6590	4822 130 81141	LLZ-C43
6591	4822 13030621	1N4148
6592	4822 13080928	BZX79-C30
6610	4822 130 80446	LL4148
6611	5322 13034413	BZT03-C16
6612	4822 13030621	1N4148
6617	4822 130 31456	BZV85-C5V1
6621	4822 13042488	BYD33D
6622	4822 13030621	1N4148
6624	4822 13031933	1N5061
6625	4822 13031933	1N5061
6630[1,2]	4822 130 33531	BY229F-600
6630[3,4]	4822 130 81175	BYD74G
6640	4822 130 80914	BYD74B
6641	4822 130 80914	BYD74B
6646	4822 130 42488	BYD33D
6648[1,2]	4822 130 34488	BZX79-F12
6648[3,4]	4822 130 61219	BZX79-F10
6649	4822 13030621	1N4148
6660	4822 13030621	1N4148
6661	4822 13042488	BYD33D
6662	4822 130 80905	LLZ-F5V1
6663	4822 130 34281	BZX79-F15
6664[3,4]	4822 130 30862	BZX79-F9V1
6664[1,2]	4822 130 61219	BZX79-F10
6665	4822 130 80883	LLZ-C4V7
6666[1,2]	4822 130 80887	LLZ-C36
6666[3,4]	4822 130 81141	LLZ-C43
6669	4822 130 80446	LL4148
6670	4822 130 20272	E0102AA
6675	4822 13080914	BYD74B
6705	4822 130 80905	LLZ-F5V1
6707	4822 209 72895	TLUV5320
6708	4822 130 81145	LLZ-F2V4
6709	4822 13082037	HZT33

7003	4822 13042133	BC817
7240"'	4822 209 73253	TDA2613/N1
7240	4822 209 73853	TDA1521/N4
7243	5322 13042012	BC858
7244	4822 13042513	BC858C
7245	5322 13042136	BC848C
7246	5322 13042136	BC848C
7247	5322 13042136	BC848C
7248	4822 130 61207	BC848
7249	4822 130 61207	BC848
7301	4822 130 61207	BC848
7302	5322 13042012	BC858
7303	4822 130 61207	BC848
7305	4822 209 30389	TDA4510/V8
7306	4822 209 30837	TDA4650/V4/S1
7307	4822 209 31216	TDA4661
7308	4822 209 71512	TDA4565/V6
7309	4822 209 63733	TDA4680/V5
7310	4822 130 61207	BC848
7311	5322 209 10576	40538
7312	5322209 10576	40530
7341	4822 130 61207	BC848
7370	4822 130 61207	BC848
737 1	4822 130 61207	BC848
7372	4822 130 61207	BC848
7373	4822 130 61207	BC848
7374	4822 13061207	BC848
7455	5322 13042012	BC858
7470	4822 209 63423	TDA2579B/N2
7471	4822 13061207	BC848
7472	5322 13042136	BC848C
7500	4822 130 41344	BC337-40
7502	4822 130 60775	2SD1266P
7503	4822 13061236	BD234
7504	4822 130 61207	BC848
7505	5322 13042012	BC858
7540	4822 130 41344	BC337-40
7545[3,4]	4822 130 61265	BU508AF
7546[3]	4822 13042679	BUT11AF/1
7546[4]	4822 13062735	BUT12AF
7591	5322 13042012	BC858
7600	4822 209 63735	TDA8385/N2
7614A	4822 209 30992	CNR50
7625	4822 130 62735	BUT12AF
7661	5322 13044921	BD943
7663	4822 13042513	BC858C
7671	4822 130 61207	BC848
7672	4822 13061207	BC848
7703	4822 13061207	BC848
7704	4822 130 61207	BC848
7705	4822 130 61207	BC848
7706	4822 130 61207	BC848
7707	4822 130 61207	BC848
7708	4822 209 31209	UP GR2STL1-5.2
7708	4822 209 31211	UP GR2STL2-5.2
7708	4822 209 31212	UP GR2STL3-1.0
7708	4822 209 31213	UP GR2M1/2-5.1
7710	4822 209 62098	ST24C02AB1
7850	4822 130 61207	BC848
7885	4822 130 61207	BC848
7886	4822 130 61207	BC848

1) 25"/28" Black Matrix
1b) Black Matrix mono
2) 25"/28" Black Line
3) 2 1" Mini Neck
4) 21" Narrow Neck
7) system BG
8) system I

L1 = English, German. French. Italian, Dutch. Portugues
L2 = English, Finnish, Danish, Swedish, Norvegian, Spanish
L3 = English, GermaHungarian,Csech, Russian
M1/2 = L1 + L2

Mains module

4822 212 23664 mains module

Mechanical parts

0010⚠	4822 265 30389	2p male
0032⚠	4822 265 30389	2p male
0033⚠	4822 265 30877	3p male

26018	4822 121 40487	100nF 10% 400V
2602	4822 126 11141	2,2nF 10% 1KV
2604	4822 126 11141	2,2nF 10% 1kV

36018	4822 116 40211	PTC/NTC
3607	4822 050 23901	390Ω 1% 0,6W

5600⚠ 4822 157 63073 filter

6602	4822 13031933	1N5061
6603	4822 130 31933	1N5061
5604	4822 13031933	1N5061
5605	4822 13031933	1N5061

CRT module

1	4822 212 30057	CRT Black Matrix
2	4822 212 30058	CRT Black Line
3	4822 212 30059	CRT Mini Neck
4	4822 212 30061	CRT Narrow Neck

Mechanical parts

0017	4822 290 40283	5p male
0018	4822 267 40878	3p male
0019	4822 265 30378	4p male
0020	4822 290 40295	7p male
002 13	4822 255 70251	CRT socket
002 1	4822 255 70261	CRT socket
	4822 320 20188	focus cable
	4822 267 31168	3p female
	4822 267 50824	4p female
	4822 265 40252	7p female
	4822 290 40287	5p female
	4822 492 70871	spring

2301[4]	4822 122 31769	18pF 5% 50V
2301	4822 122 32482	22pF 5% 63V
2301[2]	4822 126 10324	33pF 63V
2331'	4822 122 31769	18pF 5% 50V
2331'	4822 122 31825	27pF 10% 50V
2331"	4822 122 32482	22pF 5% 63V
2331[4]	4822 122 32504	15pF 5% 50V
2344[3]	4822 124 21208	4,7µF 20% 50V
2344	4822 124 40246	4,7µF 20% 63V
2361[3]	4822 122 31769	18pF 5% 50V
2361[2]	4822 122 31825	27pF 10% 50V
2361[4]	4822 122 32139	12pF 5% 63V
2361'	4822 122 32504	15pF 5% 50V
2391	4822 121 43878	27pF 2% 500V
2411	4822 124 80057	330µF 20% 16V
2421	4822 122 32482	22pF 5% 63V
2431	4822 121 41689	100nF 10% 250V
2432[3]	4822 124 80056	47µF 20% 16V
2432	5322 124 41381	22µF 20% 50V
2433	5322 121 50885	33nF 5% 1KV
2434	5322 122 32334	220pF 10% 100V
2520	5322 124 41299	68µF 20% 25V
2521	4822 122 32891	68nF 10% 63V
2522	5322 121 42661	330nF 5% 63V
2523	4822 122 33105	56nF 10% 63V
2526[2]	4822 122 32856	8,2nF 10% 63V
2526'	5322 122 31648	12nF 10% 50V
2531[4]	4822 121 42408	220nF 5% 63V
2531	4822 121 43396	120nF 5% 63V
2532	4822 124 80066	1µF 20% 63V
2532[4]	4822 124 80067	4,7µF 20% 63V
2533	4822 124 40242	1µF 20% 63V

3301	4822 051 10131	130Ω 2% 0,25W
3302	4822 051 10362	3k6 2% 0,25W
3302[2]	4822 051 20222	2k2 5% 0,1W
3303	4822 051 10272	2k7 2% 0,25W
3304	4822 116 52239	120k 5% 0,5W
3304	4822 116 52239	120k 5% 0,5W
3309	4822 051 10118	1Ω1 5% 0,25W
3309[2]	4822 051 10479	47Ω 2% 0,25W
3310	4822 116 52219	330Ω 5% 0,5W
33112	4822 053 12123	12k 5% 3W
3311	4822 053 12153	15k 5% 3W
3312	4822 052 10271	270Ω 5% 0,33W
3313	4822 052 10271	270Ω 5% 0,33W
3314	4822 050 21502	1k5 1% 0,6W
3315	4822 051 10124	120k 2% 0,25W
3316	4822 051 10124	120k 2% 0,25W
3331	4822 051 10131	130Ω 2% 0,25W
3332	4822 051 10362	3k6 2% 0,25W
3332[2]	4822 051 20222	2k2 5% 0,1W
3333[3]	4822 051 10272	2k7 2% 0,25W
3333	4822 116 52263	2k 7 5% 0,5W
3334	4822 116 52239	120k 5% 0,5W
3338	4822 051 10118	1Ω1 5% 0,25W
33383	4822 051 10479	47Ω 2% 0,25W
3340	4822 116 52219	330215% 0,5W
3341	4822 053 12153	15k 5% 3W
3342	4822 052 10271	270Ω 5% 0,33W
3343	4822 052 10271	270Ω 5% 0,33W
3344	4822 050 21502	1k5 1% 0,6W
3345	4822 051 10681	680Ω 2% 0,25W
3361	4822 116 52208	130Ω 5% 0,5W
3362	4822 051 10362	3k6 2% 0,25W
3362[2]	4822 051 20222	2k2 5% 0,1W
3363	4822 051 10272	2k7 2% 0,25W
3364	4822 051 10223	22k 2% 0,25W
3368	4822 051 10118	1Ω1 5% 0,25W
3368[2]	4822 051 10479	47Ω 2% 0,25W
3370	4822 116 52219	330Ω 5% 0,5W
3371[2]	4822 053 12103	10k 5% 3W
3371	4822 053 12153	15k 5% 3W
3372	4822 052 10271	270Ω 5% 0,33W
3373	4822 052 10271	270Ω 5% 0,33W
3374	4822 050 21502	1k5 1% 0,6W
3382[2]	4822 051 10392	3k9 2% 0,25W
3382	4822 051 10432	4k3 2% 0,25W
3383	4822 116 52284	47k 5% 0,5W
3384	4822 116 52277	39k 5% 0,5W
3385	4822 051 10104	100k 2% 0,25W
3391	4822 116 52234	100k 5% 0,5W
3392	4822 051 10103	10k 2% 0,25W
3395	4822 051 10122	1k2 2% 0,25W
3396	4822 051 10124	120k 2% 0,25W
3397	4822 051 10124	120k 2% 0,25W
3411	4822 116 52249	1k8 5% 0,5W
3413	4822 116 52218	300Ω 5% 0,5W
3414	4822 051 10519	51Ω 2% 0,25W
3415	4822 116 52218	300Ω 5% 0,5W
3421[3]	4822 051 10104	100k 2% 0,25W
342 1	4822 051 10184	180k 2% 0,25W
3422	4822 051 10682	6k8 2% 0,25W
3423	4822 051 10105	1M 5% 0,25W
3431	4822 052 10181	1800 5% 0,33W
34314	4822 052 10271	270Ω 5% 0,33W
3432	4822 052 10399	39Ω 5% 0,33W
3433	4822 052 10108	1Ω 5% 0,33W
3434	4822 050 21502	1k5 1% 0,6W
3435	4822 050 21502	1k5 1% 0,6W
3436	4822 050 21805	1M8 1% 0,6W
3442	4822 116 52239	120k 5% 0,5W
3443	4822 051 10272	2k7 2% 0,25W
3446	4822 051 10683	68k 2% 0,25W
3447	4822 051 10152	1k5 2% 0,25W
3448	4822 051 10152	1k5 2% 0,25W
3449	4822 051 10333	33k 2% 0,25W
34492	4822 051 10393	39k 2% 0,25W
3512[2]	4822 051 10109	10Ω 2% 0,25W
3512'	4822 051 10181	180Ω 2% 0,25W
35182	4822 051 10101	100Ω 2% 0,25W
3518'	4822 051 10152	1k5 2% 0,25W
3520'	4822 116 52207	1k2 5% 0,5W
3526	4822 11652211	150Ω 5% 0,5W
3521	4822 101 20902	4k7 10% 0,05W
3522	4822 051 10152	1k5 2% 0,25W
3524	4822 051 10683	68k 2% 0,25W

Spare p

CRT mod

3525[4]	482
3525	482
3526	482
3526[4]	4 8 2
3527'	482
3527[3]	482
3527[2]	482
3528[3,4]	4 8 2
3528	482
3529	482
3529[3,4]	4 8 2
35304	482
3530	482
35314	482
3531	482
3532	482
3533	4 8 2
3534	482
3571	482
3572	482
3575	482
35764	482
3576'	482
3576[2]	4 8 2
3578	482
3580	482

Jumper

4001	482
4002	482

5401[2,3]	4 8 2
5401[4]	482
5401'	482
5530	482

6301	482
6331	482
6345	482
6361	482
6382	482
6411	482
6421	482
6519	482

7302[1,2]	4 8 2
7302[3,4]	4 8 2
7303	482
7304	482
7305	482
7331[1,2]	4 8 2
7331[3,4]	4 8 2
7333	482
7334	482
7335	482
7345	532
7361[1,2]	4 8 2
7361[3,4]	4 8 2
7363	482
7364	482
7365	482
7383	482
7391	482
7402⚠	5 3 2
7411	482
7421	482

CRT module

3525[4]	4822 100 20169	10k 10%	0,05W
3525	4822 100 20644	22k 10%	0.05W
3526	4822 051 10125	1M 2 5%	0,25W
3526[4]	4822 051 10563	56k 2%	0,25W
3527[1]	4822 051 10104	100k 2 %	0,25W
3527[3]	4822 051 10563	56k 2%	0,25W
3527[2]	4822 051 10823	82k 2%	0,25W
3528[3,4]	4822 051 10681	680Ω 2 %	0,25W
3528	4822 051 20222	2k2 5 %	0,1W
3529	4822 051 10008	jumper	
3529[3,4]	4822 051 10102	Ik 2%	0,25W
3530[4]	4822 051 10008	jumper	
3530	4822 051 10102	Ik 2%	0,25W
3531[4]	4823 051 10008	jumper	
3531	4822 051 10104	100k 2 %	0,25W
3532	4822 051 10103	10k 2 %	0,25W
3533	4822 116 52303	8k 2 5%	0,5W
3534	4822 052 10828	8Ω2 5 %	0,33W
3571	4822 051 10273	27k 2%	0,25W
3572	4822 051 10153	15k 2%	0,25W
3575	4822 051 10182	1k8 2 %	0,25W
3576[4]	4822 051 10101	100Ω 2 %	0,25W
3576[1]	4822 051 10151	150Ω 2 %	0,25W
3576[2]	4822 051 51201	120Ω 1 %	0,25W
3578	4822 116 52245	150k 5%	0,5W
3580	4822 051 10103	10k 2 %	0,25W

Jumper

41001	4822 051 10008	jumper
41002	4822 051 10008	jumper

5401[2,3]	4822 156 20915	33μH
5401[4]	4822 157 63788	18μH 10%
5401[1]	4822 158 10563	82μH 7.5%
5530	4822 152 20559	

6301	4822 13080877	BAV103
6331	4822 13080877	BAV103
6345	4822 13081015	LLZ-C 10
6361	4822 130 80877	BAV103
6382	4822 130 80877	BAV103
6411	4822 13032831	BZX79-F3V0
6421	4822 13080446	LL4 148
6519	4822 13080446	LL4148

7302[1,2]	4822 130	41773	BF869
7302[3,4]	4822 130	41782	BF422
7303	4822 130	61207	BC848
7304	4822 130	41782	BF422
7305	4822 130	41646	BF423
7331[1,2]	4822 130	41773	BF869
7331[3,4]	4822 130	41782	BF422
7333	4822 130	61207	BC848
7334	4822 130	41782	BF422
7335	4822 13041646		BF423
7345	5322 13042012		BC858
7361[1,2]	4822 130	41773	BF869
7361[3,4]	4822 130	41782	BF422
7363	4822 130	61207	BC848
7364	4822 130	41782	BF422
7365	4822 13041646		BF423
7383	4822 130	41782	BF422
7391	4822 130	41646	BF423
7402▲	5322 130	41982	BC848B
7411	4822 13040938		BC548
7742 .1	4822 13042513.		.BC858C
7530▲[3]	4822 130	61207	BC848
7530	5322 13041982		BC848B
7533	4822 13060111		2SA1359
7534	4822 13044283		BC636
7536▲	5322 13041982		BC848B
7537	5322 13041982		BC848B
7538▲	5322 13041982		808488

1) 25"/28" Black Matrix
2) 25"/28" Black Line
3) 21" Mini Neck
4) 21" Narrow Neck

Euro module

16 4822 4822 2 212 12 30074 30075 Euro module module ECO

Mechanical parts

0023	482226540442	10p male
0026	482226540442	10p male
0030	482226541086	9p male
0032	4822 26740666	3p male
0048	4822 267 60247	euro connector
0100	482225691879	holder
0050	4822 26751084	9p female
005 1	4822 29040285	3p female

2800	4822 121 51252	470nF 5% 63V
2801	4822 121 51252	470nF 5% 63V
2802	4822 121 51252	470nF 5% 63V
2803	4822 121 51252	470nF 5% 63V
2804	4822 122 33496	100nF 10% 63V
2805	4822 12233496	100nF 10% 63V
2806	4822 122 33496'	100nF 10% 63V
2807	4822 12441506	47μF 20% 16V
2810	4822 122 32142	270pF 5% 63V
2811	4822 122 32142	270pF 5% 63V
2812	4822 12233496	100nF 10% 63V
2813	4822 12232542	47nF 10% 63V
2814	4822 122 31759	18nF
2815	4822 122 33496	100nF 10% 63V
2816	4822 122 33496	100nF 10% 63V
2817	4822 122 33496	100nF 10% 63V
2818	4822 122 33496	100nF 10% 63V
2819	4822 12441525	100μF 20% 25V
2820	4822 12142408	220nF 5% 63V
2821	4822 12440433	47μF 20% 25V
2822	4822 12440435	10μF 20% 50V
2823	4822 122 33496	100nF 10% 63V
2831	4822 12440272	33μF 20% 16V
2833	4822 122 33496	100nF 10% 63V
2834	4822 122 33496	100nF 10% 63V

3800	4822	11652189	30115% 0,5W
3801	4822	11680747	75Ω 5 % 0,125W
3802	4822	11652211	150Ω 5 % 0,5W
3803	4822	116 52211	150Ω 5 % 0,5W
3804	4822050	11002	1k 1 % 0,4W
3805	4822050	11002	Ik 1% 0,4W
3806	4822051	10334	330k 2% 0,25W
3807	4822051	10334	330k 2% 0,25W
3808	4822051	10334	330k 2% 0,25W
3809	4822051	10334	330k 2% 0,25W
3810	4822051	10682	6k8 2 % 0,25W
3811	4822051	20222	2k2 5 % 0,1W
3812	4822051	10331	330Ω 2 % 0,25W
3813	4822	11652201	75Ω 5 % 0,5W
3814	4822051	10152	1 k5 2% 0,25W
3815	4822051	10472	4k7 2 % 0,25W
3816	4822	11652296	6k 8 5 % 0,5W
3817	4822	11652224	470Ω 5 % 0,5W
3818	4822	11652224	470Ω 5 % 0.5W
3819	4822051	10008	jumper
3820	4822051	10681	680Ω 2 % 0,25W
382 1	4822051	10008	jumper
3822	4822 051	10681	680Ω 2 % 0,25W
3823	4822051	10331	330Ω 2 % 0,25W
3824	4822051	10331	330Ω 2 % 0,25W
3825	4822051	10223	22k 2% 0,25W
3829	4822051	10102	Ik 2% 0,25W
3830	4822051	10683	68k 2% 0,25W
3831	4822051	10123	12k 2% 0,25W

Stereo I

2201	48
2202	48
2203	48
2204	48
2205	48
2206	48
2207	48
2208	48
2209	48
2210	48
2211	48
2212	49
2213	49
2214	48
2215	48
2216	48
2217	48
2218	48
2219	48
2220	53
2221	53
2222	48
2223	53
3012	48
3013	48
3014	48
3015	48
3016	48
3017	48
3019	48
3020	48
3021	48
3030	48
3031	48
3035	48
3036	48
3037	48
3038	48
3039	48
3040	48
3041	48
3042	48
3042	48
3043	48
3044	48
3046	48
3047	48
3048	48
3049	48
3050	48
3051	48
3052	48
3053	48
3055	48
3056	48
3058	48
3060	48
3061	48
3062	48
3063	48
3064	48
3065	48
3066	48
3081	48
3105	48
3106	48
3107	48
3108	48
3109	48

Spare parts list / Stückliste / Liste

Euro module

3832	4822 051 10102	Ik 2% 0,25W
3833	4822 051 10279	27Ω 2 % 0,25W
3835[16]	4822 051 10221	220Ω 2 % 0,25W
3836[15]	4822 051 10102	Ik 2% 0,25W
3836	4822 051 10271	270Ω 2 % 0,25W
3837	4822 052 10278	2Ω7 5 % 0,33W
3838	4822 116 80747	75Ω 5 % 0,125W

Jumper

4842	4822 051 10008	jumper
4844	4822 051 10008	jumper
4845	4822 051 10008	jumper
4847	4822 051 10008	jumper
4848	4822 051 10008	jumper
4849	4822 051 10008	jumper

5800	4822 15751462	10µH

6800	4822 130 80954	LLZ-C5V6
6801	4822 130 80446	LL4148
6803	4822 130 30621	1N4148

7800	5322 13044921	BD943
7801	5322209 10576	40538
7802	5322 209 10576	40538
7820	4822 13061207	BC848
7821	5322 13042136	BC848C
7823	4822 13061207	BC848
7824	5322 13042136	BC848C

15) Non PIP
16) PIP

Mono IF/sound module

5	4822 212 30064	IF MONO BGDK
6	482221230065	IF MONO BGLI
7	482221230066	IF MONO BG
8	482221230067	IF MONO I

Various

1010[8]	4822 242 70936	OFW31952
1010'	4822 242 72374	OFWG1961
1010[6]	482224281156	OFWG1965
1010[5]	482224281186	OFWK2954
1042[8]	4822 15330025	6MHz
1042	482224272211	5,5MHz
1043[6]	4822 15330025	6MHz
10435	4822 242 71375	6,5MHz
1043[8]	4822 24271841	6.0MHz
1102	482224270714	5,5MHz
1103[6]	482224271841	6.0MHz
1103[5]	4822242 72059	6,5MHz
1150	4822 242 81157	OFWL9453

2011	4822 124 40435	10µF 20% 50V
2012	4822 124 41577	4,7µF 20% 50V
2013	4822 122 31784	4,7nF 10% 50V
2014[6]	4822 122 31784	4,7nF 10% 50V
2014	4822 122 31797	22nF 10% 63V
2015	5322 121 42498	680nF 5% 63V
2016	4822 122 31784	4,7nF 10% 50V
2017	4822 122 33496	100nF 10% 63V
2018	4822 121 51252	470nF 5% 63V
2019	4822 122 31784	4,7nF 10% 50V
2035	4822 122 32507	6,8pF 5% 50V
2036	4822 122 31766	120pF 5% 50V
2037	4822 122 31766	120pF 5% 50V
2038	4822 122 31784	4,7nF 10% 50V
2039	4822 122 32504	15pF 5% 50V
2040	4822 122 31784	4,7nF 10% 50V
2041	4822 122 31784	4,7nF 10% 50V
2042	4822 122 32139	12pF 5% 63V
2044	4822 122 31797	22nF 10% 63V
2047	4822 122 33496	100nF 10% 63V
2048	4822 124 41506	47µF 20% 16V
2049	4822 122 33496	100nF 10% 63V
2050	4822 124 40849	330µF 20% 16V
2055	4822 122 31972	39pF 5% 50V
2056	4822 124 40435	10µF 20% 50V
2057	4822 122 31981	33nF 50V
2058	4822 122 31797	22nF 10% 63V
2059	4822 124 41566	3,3µF 20% 50V
2060	4822 122 31797	22nF 10% 63V
2080	4822 122 33464	56pF 2%
2081	4822 122 31794	180pF 2% 50V
2002	4822 122 32087	1,8pF 5% 50V
2113	4822 124 41596	22µF 20% 50V
2114	4822 122 31784	4,7nF 10% 50V
2115	4822 124 41577	4,7µF 20% 50V
2116	4822 124 40435	10µF 20% 50V
2117	4822 124 41576	2,2µF 20% 50V
2118	4822 124 40432	1500µF 20% 25V
2124	4822 122 32442	10nF 50V
2125	4822 124 40195	150µF 20% 16V
2126	4822 121 43898	8,2nF 10% 50V
2127	5322 121 42661	330nF 5% 63V
2129	5322 121 42661	330nF 5% 63V
2130	5322 121 42661	330nF 5% 63V
2131	4822 122 31797	22nF 10% 63V
2132	4822 122 31797	22nF 10% 63V
2133	4822 122 31797	22nF 10% 63V
2134	4822 124 41596	22µF 20% 50V
2135	4822 121 42408	220nF 5% 63V
2136	5322 121 42661	330nF 5% 63V
2137'	4822 122 31746	1000pF 5% 50V
2137	4822 126 11381	820pF 2%
2137[5]	4822 126 12075	680pF 2% 63V
2138[6]	4822 122 31771	390pF 5% 50V
21385	4822 126 12154	560pF 2% 50V
2139[5]	4822 122 31771	390pF 5% 50V
2139[6]	4822 126 12155	1nF 2% 50V
2141	4822 124 41577	4,7µF 20% 50V
2143	4822 122 31797	22nF 10% 63V
2150	4822 121 42408	220nF 5% 63V
2151	4822 124 40195	150µF 20% 16V
2160	4822 122 31784	4,7nF 10% 50V

3012	4822 051 10562	5k6 2 % 0,25W
3013	4822 051 10273	27k 2% 0,25W
3014	4822 051 10823	82k 2% 0,25W
3015[6]	4822 051 10104	100k 2 % 0,25W
3015	4822 051 10473	47k 2% 0,25W
3016	4822 100 11819	100k 30% 0,1W
3017	4822 051 10823	82k 2% 0,25W
3019	4822 051 10473	47k 2% 0,25W
3020	4822 051 10273	27k 2% 0,25W
3021	4822 051 10223	22k 2% 0,25W
3030	4822 051 10223	22k 2% 0,25W
3031	4822 051 10474	470k 2% 0,25W
3036	4822 051 10472	4k7 2 % 0,25W
3037	4822 051 10392	3k9 2% 0,25W
3038	4822 051 10472	4k7 2 % 0,25W
3039	4822 051 10392	3k9 2 % 0,25W
3040	4822 051 10472	4k7 2 % 0,25W
304 1	4822 051 10221	220Ω 2 % 0,25W
3042[6]	4822 051 10101	100Ω 2 % 0,25W
3042[5]	4822 051 10221	220Ω 2 % 0,25W
3042	4822 051 51201	120Ω 1 % 0,25W
3043	4822 116 52175	100Ω 5% 0,5W
3044	4822 051 10271	270Ω 2 % 0,25W
3046	4822 051 10681	680Ω 2 % 0,25W
3047	4822 051 10822	8k2 2 % 0,25W
3048	4822 101 11188	2k 30%LIN 0,1W
3049	4822 051 20183	18k 5% 0,1W
3050	4822 051 10272	2k7 2 % 0,25W
305 1	4822 051 10563	56k 2% 0,25W
3052[5,6]	4822 051 10471	470Ω 2 % 0,25W
3052'"	4822 051 10561	560Ω 2% 0,25W
3055	4822 051 10103	10k 2 % 0,25W
3056	4822 051 10471	470Ω 2 % 0,25W
3058	4822 051 10682	6k8 2 % 0,25W
3060	4822 051 10471	470Ω 2 % 0,25W
3061	4822 051 10333	33k 2% 0,25W
3062	4822 051 10563	56k 2% 0,25W
3063	4822 051 10272	2k7 2 % 0,25W
3064	4822 051 10563	56k 2% 0,25W
3065	4822 051 10563	56k 2% 0,25W
3066	4822 051 10824	820k 2% 0,25W
3067	4822 051 10681	680Ω 2 % 0,25W
3067[6]	4822 051 20222	2k2 5 % 0,1W
3068	4822 051 10392	3k9 2 % 0,25W
3080[8]	4822 051 10332	3k3 2 % 0,25W
3080[5]	4822 051 10472	4k7 2 % 0,25W
3080[6]	4822 051 10682	6k8 2 % 0,25W
3080'	4822 051 20222	2k2 5 % 0,1W
3081	4822 051 10829	82Ω 2 % 0,25W
3104	4822 052 10479	47Ω 5 % 0,33W
3105	4822 053 11271	270Ω 5% 2W
3107	4822 051 10151	150Ω 2 % 0,25W
3108	4822 051 10333	33k 2% 0,25W
3109	4822 051 10223	22k 2% 0,25W

Spare

Mono IF

3110	48
3111	48
3112	48
3113	48
3115	48
3116	48
3117	48
3118[5] 4	8
3118[6] 4	8
3118	48
3119	48
3120	46
3121	48
3122	48
3123[5,7] 4	8
3123[6] 4	8
3124.	48
3125	48
3126	48
3127	48
3129	48
3130	48
3131	48
3132	48
3140	48
3141	48
3142	48
3143	48
3144	48
3150	48
3151	48
3152	48
3153	48
3154	48

Jumper

4010..	48
4102	

5010	48
5010[6] 4	8
5035	48
5036[6] 4	8
5036	48
5037	48
5038	48
5039	48
5041[5] 4	8
5041[6] 4	8
5041	48
5042[7,8] 4	8
5042[5,6] 4	8
5080	48
5105	48
5150	48

6036	48
6037	48
6038	48
6039	48
6040	48
6041	48
6042	48
6043	48
6105	48
6106	48
6108	48

Mono IF/sound module

3110	4822051 10562	5k6 2 % 0,25W	
3111	4822051 10562	5k6 2 % 0,25W	
3112	4822051 10472	4k7 2 % 0,25W	
3113	4822051 10562	5k6 2 % 0,25W	
3115	4822051 10562	5k6 2 % 0,25W	
3116	4822050 11002	Ik 1% 0,4W	
3117	4822051 10104	100k 2 % 0,25W	
3118	4822051 10332	3k3 2 % 0,25W	[5]
3118	4822051 10472	4k7 2 % 0,25W	[6]
3118	4822051 20222	2k2 5 % 0,1W	
3119	4822051 10472	4k7 2 % 0,25W	
3120	4822051 10472	4k7 2 % 0,25W	
3121	4822051 10104	100k 2 % 0,25W	
3122	4822051 10331	330Ω 2 % 0,25W	
3123	4822051 10473	47k 2% 0,25W	[5,7]
3123	4822051 10563	56k 2% 0,25W	[6]
3124	4822051 10103	10k 2 % 0,25W	
3125	4822051 10103	10k 2 % 0,25W	
3126	4822051 10153	15k 2 % 0,25W	
3127	4822051 10153	15k 2 % 0,25W	
3129	4822 051 10224	220k 2% 0,25W	
3130	4822051 10682	6k8 2 % 0,25W	
3131	4822051 10102	1 k 2% 0,25W	
3132	4822051 10392	3k9 2 % 0,25W	
3140	4822051 10153	15k 2 % 0,25W	
3141	4822 051 10392	3k9 2 % 0,25W	
3142	4822051 10273	27k 2% 0,25W	
3143	4822051 10182	1 k8 2% 0,25W	
3144	4822 051 10182	Ik8 2% 0,25W	
3150	4822051 10103	10k 2 % 0,25W	
3151	4822051 20222	2k2 5 % 0,1W	
3152	4822051 10103	10k 2 % 0,25W	
3153	4822051 10103	10k 2 % 0,25W	
3154	4822051 10103	10k 2% 0,25W	

Jumper

1010.. 4102	4822 051 10008	jumper

5010	4822 157 63081	0.56µH 20%
5010	4822 157 63858	0,39µH [6]
3035	4822 157 53534	0,34µH 5%
5036	4822 157 53609	0,36µH 5% [6]
5036	4822 157 63824	0,36µH 5% 38,9mH z
5037	4822 157 53537	1,35µH 5%
5038	4822 157 63076	1.2µH 5 %
5039	4822 15752983	2N2
50415	4822 15320251	18µH 10%
50416	4822 15752983	2N2
504 1	4822 157 53001	27µH 10%
5042	4822 152 20677	[7,8]
5042	4822 157 53634	5,6µH 10% [5,6]
5080	4822 157 53539	0,27µH 5%
5105	4822 157 52511	0,83µH
5150	4822 157 62552	

6036	4822 13080446	LL4148
6037	4822 13080888	BA682
6038	4822 130 80888	BA682
6039	4822 13030621	1N4148
6040	4822 13080446	LL4148.
604 1	4822 13080446	LL4148
6042	4822 13080446	LL4148
6043	4822 13080446	LL4148
6105	4822 13080888	BA682
6106	4822 13080888	BA682
6108	4822 13080888	BA682
6112	4822 130 80884	LLZ-C5V1
6150	4822 130 80888	BA682
6151	4822 13080888	BA682

7000	4822 209 72812	TDA2549/C4
7030	5322 13042012	BC858
7031	4822 130 61207	BC848
7035	4822 13044121	BC338
7040	5322 13042012	BC858
7041	4822 130 61207	BC848
7100	4822 209 63105	TDA3843/V3
7101	4822 209 30278	TDA3827/V3
7102	4822 130 61207	BC848
7103	5322 13042136	BC848C
7104	5322 13041982	808488
7150	4822 13061207	BC848
7151	4822 130 61207	BC848

5) system BGBK
6) system BGLI
7) system BG
8) system I

Stereo IF/sound module

7	4822 212 30069	IF STEREO BG
6 5	4822 212 30072	IF STEREO BGLI
	4822 212 30073	IF STEREO BGDK

Various

1010'	4822242 72554	OFWG3254
1010	4822 24273936	OFWK3255 [5]
1010	4822242 80205	OFWK3261 [6]
1042	4822 24272211	5,5MHz
1101	4822 242 70485	5,74MHz
1102	482224271713	6,0MHz [6]
11025	4822 242 72057	6,5MHz
1103	4822 242 70714	5,5MHz
1150	4822 242 81157	OFWL9453
1200	4822 242 80208	10MHz

2011	4822 124 41506	47µF 20% 16V
2012	4822 124 41577	4,7µF 20% 50V
2013	4822 122 31784	4,7nF 10% 50V
2014	4822 122 31797	22nF 10% 63V
2015	5322 121 42498	680nF 5% 63V
2016	4822 122 31784	4,7nF 10% 50V
2017	4822 122 33496	100nF 10% 63V
2018	4822 121 51252	470nF 5% 63V
2035	4822 122 32506	5,6pF 5% 50V
2036	4822 122 31784	4,7nF 10% 50V
2037	4822 122 31784	4,7nF 10% 50V
2038	4822 122 33496	100nF 10% 63V
2039	4822 122 32083	8,2pF 5% 50V
2040	4822 122 31784	4,7nF 10% 50V
204 1	4822 122 31784	4,7nF 10% 50V
2042	4822 122 32139	12pF 5% 63V
2044	4822 122 31797	22nF 10% 63V
2047	4822 122 33496	100nF 10% 63V
2048	4822 124 41506	47µF 20% 16V
2049	4822 122 33496	100nF 10% 63V
2050	4822 124 40849	330µF 20% 16V
2051	4822 122 33496	100nF 10% 63V
2055	4822 122 31972	39pF 5% 50V
2056	4822 124 41576	2,2µF 20% 50V
2057	4822 122 31981	33nF 50V
2058	4822 122 31797	22nF 10% 63V
2059	4822 124 41407	0,47µF 20% 63V
2080	4822 122 33464	56pF 2%
2081	4822 122 31794	180pF 2% 50V
2113	4822 124 40435	10µF 20% 50V
2114	4822 122 32442	10nF 50V
2115	4822 124 41509	33µF 20% 35V
2117	4822 124 41576	2,2µF 20% 50V
2118	4822 124 41576	2,2µF 20% 50V
2119	4822 122 31797	22nF 10% 63V
2120	4822 124 41576	2,2µF 20% 50V
2123	4822 124 40242	1µF 20% 63V
2123	4822 124 41577	4,7µF 20% 50V [6]
2124	4822 124 41576	2,2µF 20% 50V
2125	4822 122 10527	910pF 2% 50V
2126	4822 122 31784	4,7nF 10% 50V
2127	4822 122 31746	1000pF 5% 50V
2127	4822 126 11381	820pF 2% [7]
2127	4822 126 12075	680pF 2% 63V [6]
2128	4822 122 10527	910pF 2% 50V [5]
2128	4822 126 11381	820pF 2%
2129	4822 122 31727	470pF 5% 63V [6]
21295	4822 122 33476	220pF 2% 50V
2130	4822 124 40195	150µF 20% 16V [6]
2133	4822 122 31797	22nF 10% 63V
2160	4822 122 31784	4,7nF 10% 50V
2200	4822 121 51252	470nF 5% 63V

Stereo I

2201	48
2202	48
2203	48
2204	48
2205	48
2206	48
2207	48
2208	48
2209	48
2210	48
2211	48
2212	48
2213	48
2214	48
2215	48
2216	48
2217	48
2218 4	8
2219	48
2220	53
2221	53
2222	48
2223	53
3012	48
3013	48
3014	48
3015	48
3016	48
3017	48
3019	48
3020	48
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3109	48

Spare parts list / Stückliste / Liste

Stereo IF/sound module

2201	4822 121 51252	470nF 5% 63V	
2202	4822 121 51252	470nF 5% 63V	
2203	482212231916	5,6nF 10% 63V	
2204	482212142408	220nF 5% 63V	
2205	4822 12231947	100nF 20% 63V	
2206	4822 12151252	470nF 5% 63V	
2207	4822 12151252	470nF 5% 63V	
2208	4822 12441509	33µF 20% 35V	
2209	4822 12441509	33µF 20% 35V	
2210	4822 122 31947	100nF 20% 63V	
2211	4822 12440198	470µF 20% 16V	
2212	4822 12440435	10µF 20% 50V	
2213	4822 122 31782	15nF 10% 50V	
2214	4822 122 31782	15nF 10% 50V	
2215	4822 122 31981	33nF 50V	
2216	4822 122 31916	5,6nF 10% 63V	
2217	4822 122 31981	33nF 50V	
2218	4822 122 31916	5,6nF 10% 63V	
2219	4822 12441577	4,7µF 20% 50V	
2220	5322 12142498	680nF 5% 63V	
2221	5322 12142498	680nF 5% 63V	
2222	4822 12441643	100µF 20% 16V	
2223	5322 122 31647	1nF 10% 63V	

3012	4822051 10562	5k6 2% 0,25W	
3013	4822051 10273	27k 2% 0,25W	
3014	4822051 10823	82k 2% 0,25W	
3015	4822 11652234	100k 5% 0,5W	
3016	4822 10011819	100k 30% 0,1W	
3017	4822051 10823	82k 2% 0,25W	
3019	4822051 10473	47k 2% 0,25W	
3020	4822051 10273	27k 2% 0,25W	
302 1	4822051 20183	18k 5% 0,1W	
3030	4822051 10223	22k 2% 0,25W	
3031	4822051 10474	470k 2% 0,25W	
3035	4822051 10682	6k8 2% 0,25W	
3036	4822051 10472	4k7 2% 0,25W	
3037	4822051 10392	3k9 2% 0,25W	
3038	4822051 10472	4k7 2% 0,25W	
3039	4822051 10472	4k7 2% 0,25W	
3040	4822051 10472	4k7 2% 0,25W	
3041	4822051 10221	220Ω 2% 0,25W	
3042	4822051 10151	150Ω 2% 0,25W	
3042	482205151201	120Ω 1% 0,25W	
3043	4822 11652175	1 oon 5% 0,5W	
3044	482205110271	270Ω 2% 0,25W	
3046	4822 11652228	680Ω 5% 0,5W	
3047	4822051 10822	8k2 2% 0,25W	
3048	4822 101 11188	2k 30%LIN 0,1W	
3049	4822051 20183	18k 5% 0,1W	
3050	4822 051 10272	2k7 2% 0,25W	
3051	4822 051 10563	56k 2% 0,25W	
3052	4822 051 10102	1 k 2% 0,25W	
3053	4822 11652233	10k 5% 0,5W	
3055	4822051 10103	10k 2% 0,25W	
3056	4822051 10471	470Ω 2% 0,25W	
3058	4822051 10472	4k7 2% 0,25W	
3060	4822051 10471	470Ω 2% 0,25W	
3061	4822051 10124	120k 2% 0,25W	
3062	4822051 10563	56k 2% 0,25W	
3063	4822051 10272	2k7 2% 0,25W	
3064	4822051 10224	220k 2% 0,25W	
3065	4822051 10124	120k 2% 0,25W	
3066	4822051 10824	820k 2% 0,25W	
3081	4822 051 10569	56Ω 2% 0,25W	
3105	4822053 11121	120Ω 5% 2W	
3106	4822051 10561	560Ω 2% 0,25W	
3107	4822051 10102	1 k 2% 0,25W	
3108	4822051 10561	560Ω 2% 0,25W	
3109	4822051 10562	5k6 2% 0,25W	
3110	4822 051 10562	5k6 2% 0,25W	
3112	4822051 10562	5k6 2% 0,25W	
3113	4822051 10562	5k6 2% 0,25W	
31155	4822051 10301	300Ω 2% 0,25W	
3115	4822051 10331	330Ω 2% 0,25W	
31176	4822051 10561	560Ω 2% 0,25W	
3117	4822 051 10681	680Ω 2% 0,25W	
3119	4822 051 10562	5k6 2% 0,25W	
3120	4822 051 10562	5k6 2% 0,25W	
3121"	4822051 10272	2k7 2% 0,25W	
3121[6]	4822051 10562	5k6 2% 0,25W	
3122	4822051 10122	1 k2 2% 0,25W	
3123	4822051 10561	560Ω 2% 0,25W	
3124	4822051 10008	jumper	
3125	4822051 10102	1 k 2% 0,25W	
3126	4822051 10102	1 k 2% 0,25W	
3127	4822051 10152	1 k5 2% 0,25W	
3128	4822051 10182	1 k8 2% 0,25W	
3150	4822051 10103	10k 2% 0,25W	
3151	4822051 20222	2k2 5% 0,1W	
3152	4822051 10103	10k 2% 0,25W	
3153	4822051 10103	10k 2% 0,25W	
3154	4822051 10103	10k 2% 0,25W	
3200	4822 051 10331	330Ω 2% 0,25W	
3201	4822051 10331	330Ω 2% 0,25W	
3202	4822051 10563	56k 2% 0,25W	
3203	4822051 10563	56k 2% 0,25W	
3204	4822 101 11191	10k 30% 0.1W	
3205	4822052 10229	22Ω 5% 0,33W	
3206	4822051 10478	4Ω7 5% 0,25W	
3207	4822051 10223	22k 2% 0,25W	
3208	4822051 10272	2k7 2% 0,25W	
3209	4822051 10333	33k 2% 0,25W	
3210	4822 050 11002	Ik 1% 0,4W	
3211	4822051 10101	100Ω 2% 0,25W	
3213	4822 116 52233	10k 5% 0,5W	
3214	4822051 10102	Ik 2% 0,25W	
3215	4822051 10102	Ik 2% 0,25W	
3216	4822051 10101	100Ω 2% 0.25W	

Jumper

4010.. 4205	4822 051 10008	jumper

5010	4822 15753302	
5010[6]	4822 157 61898	
5035	4822 157 53534	0,34µH 5%
5036"	4822 157 53609	0,36µH 5%
5036	4822 157 63824	0,36µH 5%
5037	4822 157 53537	1,35µH 5%
5038	4822 157 63076	1.2µH 5%
5039	4822 152 20678	33µH 10%
5080	4822 157 53539	0,27µH 5%
5103	4822 157 52511	0,83µH
5104	4822 157 63077	0.25µH 5%
5105	4822 157 52511	0,83µH
5042	4822 157 53634	5,6µH 10%
5042[6]	4822 157 62767	
5150	4822 157 63845	2,7µH

6037	4822 13080888	BA682
6038	4822 13080888	BA682
6039	4822 13030621	1N4148
6040	4822 130 80446	LL4148
604 1	4822 130 80446	LL4148
6042	4822 130 80446	LL4148
6043	4822 130 80446	LL4148
6106	4822 13080888	BA682
6107	4822 13080888	BA682
6108	4822 13080888	BA682
6109	4822 13080446	LL4148
6150	4822 13080888	BA682
6151	4822 13080888	BA682
6220	4822 13081015	LLZ-C 10

7000	482220972812	TDA2549/C4
7030	5322 13042012	BC858
7031	4822 130 61207	BC848
7035	4822 13044121	BC338
7040	532213042012	BC858
7100	4822 209 63059	TDA3856/V3
7101	4822 209 63784	TDA3857/V3
7102	4822 130 61207	BC848
7104	4822 130 61207	BC848
7150	4822 13061207	BC848
7151	4822 130 61207	BC848
7200	4822 209 63967	TDA8417/V3
7220	4822209 63734	TDA8425/V7
7232	5322 13041982	BC848B
7233	4822 13042513	BC858C

5) system BGDK
6) system BGLI
7) system BG

Nicam IF/sound module

	4822 212 30071	IF NICAM BG
	4822 212 30068	IF NICAM I

Various

1010[7]	4822 242 72554	OFWG3254
1010[8]	4822 242 72553	OFWJ3251
1042'	4822 242 72211	5,5MWHz
1042[8]	4822 153 30025	6MHz
1100	4822 242 70485	5,74MHz
1105[7]	4822 242 70714	5,5MHz
1105[8]	4822 242 71713	6,0MHz
11167	4822 242 72301	TH316BOM-20800DAF
1116[8]	4822 242 72303	TH316BQM
1127[7]	4822 242 81187	11.7MHz
1127[8]	4822 242 81188	13.104MHz
1138	4822 242 81189	17.472MHz
1191	4822 071 54001	fuse T400mA
1200	4822 242 80208	10MHz

⊣⊢

2011	4822 124 41506	47µF 20% 16V
2012	4822 124 41577	4,7µF 20% 50V
2013	4822 122 31797	22nF 10% 63V
2014	4822 122 31797	22nF 10% 63V
2015	5322 121 42498	680nF 5% 63V
2016	4822 122 31784	4,7nF 10% 50V
2017	4822 122 33496	100nF 10% 63V
2042	4822 122 32139	12pF 5% 63V
1044	4822 122 31797	22nF 10% 63V
1047	4822 122 33496	100nF 10% 63V
1049	4822 122 33496	100nF 10% 63V
1050	4822 124 40849	330µF 20% 16V
2071	4822 122 31972	39pF 5% 50V
1072	4822 124 40435	10µF 20% 50V
1073	4822 122 31981	33nF 50V
2075	4822 122 31797	22nF 10% 63V
1076	4822 124 41407	0,47µF 20% 63V
2077	4822 122 31916	5,6nF 10% 63V
2100	4822 124 40242	1µF 20% 63V
1101	4822 122 31746	1000pF 5% 50V
1102	4822 122 31746	1000pF 5% 50V
,102	4822 122 32765	820pF 10% 63V
2104	4822 122 31784	4,7nF 10% 50V
1106	4822 124 41576	2,2µF 20% 50V
2107	4822 124 41576	2,2µF 20% 50V
2108	4822 122 32862	10nF 80% 50V
2109	4822 124 41509	33µF 20% 35V
2110	4822 122 31947	100nF 20% 63V
2116	5322 122 31647	1nF 10% 63V
2119	4822 124 40198	470µF 20% 16V
2122	4822 122 32862	10nF 80% 50V
2123	4822 122 31768	180pF 5% 50V
2124	4822 122 31768	180pF 5% 50V
2125	4822 122 32597	6,8nF 10% 63V
2126	5322 122 31647	1nF 10% 63V
2127	5322 122 31647	1nF 10% 63V
2128	4822 122 31808	150pF 10% 50V
2129	4822 122 32862	10nF 80% 50V
2130	4822 122 31808	150pF 10% 50V
2131	4822 122 31766	120pF 5% 50V
2132	4822 122 32862	10nF 80% 50V
2133	4822 121 41854	150nF 5% 63V
2134	5322 122 31647	1nF 10% 63V
2135	4822 122 32862	10nF 80% 50V
2136	4822 122 31808	150pF 10% 50V
2137	4822 122 31947	100nF 20% 63V
2138	4822 122 32862	10nF 80% 50V
2140	4822 121 42408	220nF 5% 63V
2141	4822 122 31784	4.7nF 10% 50V
2143	5322 122 31647	1nF 10% 63V
2150	4822 122 32863	22nF 80% 50V
2151	4822 124 41506	47µF 20% 16V
2160	4822 122 31765	100pF 5% 50V
2161	4822 122 31765	100pF 5% 50V
2168	4822 122 31947	100nF 20% 63V
2169	4822 124 41506	47µF 20% 16V
2170'	4822 122 31782	15nF 10% 50V
2170[8]	4822 122 31916	5,6nF 10% 63V
2171'	4822 122 31981	33nF 50V
2171[8]	5322 122 31648	12nF 10% 50V
2173	4822 122 31773	560pF 5% 50V
2174	4822 122 33498	2,7nF 10% 63V
2175	4822 122 32999	2,2N 5%
2176	4822 121 51252	470nF 5% 63V
2177	4822 122 32863	22nF 80% 50V
2180'	4822 122 31782	15nF 10% 50V
2180[8]	4822 122 31916	5,6nF 10% 63V
2181	5322 122 31648	12nF 10% 50V
2181	4822 122 31981	33nF 50V
2183	4822 122 31773	560nF 5% 50V
2184	4822 122 33498	2,7nF 10% 63V
2185	4822 122 32999	2,2nF 5%
2186	4822 121 51252	470nF 5% 63V
2187	4822 122 32863	22nF 80% 50V
2188	4822 124 41506	47µF 20% 16V
2189	4822 122 32863	22nF 80% 50V
2190	4822 122 31947	100nF 20% 63V
2191	4822 124 41643	100µF 20% 16V
2193	4822 124 40849	330µF 20% 16V
2194	4822 122 31947	100nF 20% 63V
2198	4822 121 51252	470nF 5% 63V
2200	4822 121 51252	470nF 5% 63V
2201	4822 121 51252	470nF 5% 63V
2202	4822 122 31766	120pF 5% 50V
2203	4822 124 41509	33µF 20% 35V
2204	4822 124 41509	33µF 20% 35V
2205	4822 122 31947	100nF 20% 63V
2207	4822 121 51252	470nF 5% 63V
2209	4822 121 51252	470nF 5% 63V
2210	4822 124 41577	4,7µF 20% 50V
2211	4822 121 42408	220nF 5% 63V
2213	4822 124 40195	150µF 20% 16V
2214	4822 122 31947	100nF 20% 63V
2215	4822 124 41506	47µF 20% 16V
2218	4822 122 31981	33nF 50V
2217	6322 121 42498	680nF 5% 63V
2218	4822 124 41643	100µF 20% 16V
2218	5322 121 42498	680nF 5% 63V
2220	4822 122 31916	5,6nF 10% 63V
2223	4822 122 31916	5,6nF 10% 63V
2224	4822 122 31981	33nF 50V
2225	4822 122 31782	15nF 10% 50V
2226	4822 122 31782	15nF 10% 50V

3012	4822 051 10562	5k6 2% 0,25W
3013	4822 051 10273	27k 2% 0,25W
3014	4822 051 10823	82k 2% 0,25W
3015	4822 051 10104	100k 2% 0,25W
3016	4822 100 11819	100k 30% 0,1W
3019	4822 051 10473	47k 2% 0,25W
3020	4822 051 10273	27k 2% 0,25W
302 1	4822 051 20183	18k 5% 0,1W
3030	4822 051 10223	22k 2% 0,25W
3035	4822 051 10472	4k7 2% 0,25W
304 1	4822 051 10221	220Ω 2% 0,25W
3042'	4822 051 10151	150Ω 2% 0,25W
3042[8]	4822 051 10101	100Ω 2% 0,25W
3044	4822 051 10271	270Ω 2% 0,25W
3047	4822 050 21001	100Ω 1% 0,6W
3052	4822 051 10102	Ik 2% 0,25W
3055	4822 051 10103	10k 2% 0,25W
3056	4822 051 10471	4700 2% 0,25W
3058	4822 051 10682	6k8 2% 0,25W
307 1	4822 051 10124	120k 2% 0,25W
3072	4822 051 10471	4700 2% 0,25W
3073	4822 051 10824	820k 2% 0,25W
3074	4822 051 10563	56k 2% 0,25W
3075	4822 051 10272	2k7 2% 0,25W
3076	4822 051 10224	220k 2% 0,25W
3077	4822 051 10124	120k 2% 0,25W
3078	4822 051 10102	Ik 2% 0,25W
3079	4822 05-I 10101	100Ω 2% 0,25W
3100	4822 051 10561	560Ω 2% 0,25W
3101	4822 051 10331	330Ω 2% 0,25W
3102	4822 051 10681	680Ω 2% 0,25W
3105	4822 051 10561	560Ω 2% 0,25W
3106	4822 051 10561	560Ω 2% 0,25W
3107	4822 051 10122	Ik2 2% 0,25W
3108	4822 051 20222	2k2 5% 0,1W
3109	482205311121	120Ω 5% 2W
3110	4822 051 10102	Ik 2% 0,25W
3116	4822 051 10471	470Ω 2% 0,25W
3122	4822 051 10471	470Ω 2% 0,25W
3123	4822 051 10332	3k3 2% 0,25W
3124	4822 051 10332	3k3 2% 0,25W
3125	4822 051 10223	22k 2% 0,25W
3127	4822 051 10104	100k 2% 0,25W
3128	4822 051 10223	22k 2% 0,25W
3129	4822 051 10103	10k 2% 0,25W
3130	4822 051 10223	22k 2% 0,25W
3131	4822 051 10392	3k9 2% 0,25W
3133	4822 051 10333	33k 2% 0,25W
3134	4822 051 10103	10k 2% 0,25W
3135	4822 051 10103	10k 2% 0,25W
3136	4822 051 10104	100k 2% 0,25W
3137	4822 051 10104	100k 2% 0,25W
3138	4822 051 10105	1M 5% 0,25W
3139	4822 051 10273	27k 2% 0,25W
3140	4822 051 10824	820k 2% 0,25W
3141	4822 051 10152	Ik5 2% 0,25W
3142	4822 051 10103	10k 2% 0,25W
3143	4822 051 10102	Ik 2% 0,25W
3150	4822 052 10278	2Ω7 5% 0,33W
3158	4822 051 10473	47k 2% 0,25W
3159	4822 051 10473	47k 2% 0,25W
3160	4822 051 10331	330Ω 2% 0,25W
3161	4822 051 10331	330Ω 2% 0,25W
3168	4822 052 10278	2Ω7 5% 0,33W
31707	4822 051 10682	6k8 2% 0,25W
3170[8]	4822 051 20183	18k 5% 0,1W
3171[7]	4822 051 10122	Ik2 2% 0,25W
31718	4822 051 10332	3k3 2% 0,25W
3172	4822 051 10472	4k7 2% 0,25W
3173	4822 051 10472	4k7 2% 0,25W
3177'	4822 051 10682	6k8 2% 0,25W
31778	4822 051 10472	4k7 2% 0,25W
3180'	4822 051 10682	6k8 2% 0,25W
3180[8]	4822 051 20183	18k 5% 0,1W
3181[7]	4822 051 10122	Ik2 2% 0,25W
3181[8]	4822 051 10332	3k3 2% 0,25W
3182	4822 051 10472	4k7 2% 0,25W
3183	4822 051 10472	4k7 2% 0,25W
3188	4822 052 10109	10Ω 5% 0,33W
3190	4822 051 10471	470Ω 2% 0,25W
3200	4822 101 11191	10k 30% 0.1W
3201	4822 051 10822	8k2 2% 0,25W
3202	4822 051 10512	5kI 2% 0,25W
3203	4822 051 10563	56k 2% 0,25W
3204	4822 051 10563	56k 2% 0,25W

Spare parts list / Stückliste / Liste

Nicam IF/sound module

3205	4822052 10229	22Ω 5 % 0,33W
3206	4822051 10331	330Ω 2 % 0,25W
3208	4822051 10331	330Ω 2 % 0,25W
3209	4822051 10103	10k 2 % 0,25W
3210	4822051 10102	1 k 2% 0,25W
3213	4822051 10478	4Ω7 5 % 0,25W
3214	4822051 10223	22k 2% 0,25W
3215	4822051 10272	2k7 2 % 0,25W
3216	4822051 10333	33k 2% 0,25W
3217	4822051 10102	1 k 2% 0,25W
3218	4822 051 10101	100Ω 2% 0,25W

Jumper

4000[7]	4822 051 10393	39k 2% 0,25W
4000[8]	4822 051 10392	3k9 2% 0,25W

3010	4822 15753302	
5035	4822 15753534	0,34µH 5%
5036	4822 157 63824	0,36µH 5%
5042	4822 157 62767	
5042	4822 157 53634	5,6µH 10%
5101	4822 15752511	0,83µH
5102	4822 15752511	0,83µH
5103	4822 157 63077	0.25µH 5%
5123	4822 157 50975	1 mH
5124	4822 15750975	1 mH

6070	4822 13080446	LL4148
6071	4822 130 80446	LL4148
6072	4822 13080446	LL4148
6075	4822 13080446	LL4148
6127	5322 13034953	BB405B
6134	5322 13031684	BB809
6140	4822 13080446	LL4148
6190	4822 13080446	LL4148
6191	4822 13080954	LLZ-C5V6
6225	4822 130 81015	LLZ-C10

7000	4822 209 72812	TDA2549/C4
7035	4822 13044121	BC338
7073	6322 13042012	BC858
7078	4822 13042513	BC858C
7100	4822 209 63784	TDA3857/V3
7106	4822 130 61207	'BC848
7108	6322 13042012	BC858
7120	4022 209 30909	TDA8732/C1
7133	4822 13061207	BC848
7150	4022 209 30014	SAA7280/M2
7160	4822 130 61207	BC848
7161	4822 13061207	BC848
7168	4822 209 73236	TDA1543/N2
7170	4822 209 83163	LM833N
7180	4822209 83163	LM833N
7190	6322 13041983	BC858B
7191	4822 13044121	BC338
7200	4822 209 30147	TDA8415
7213	4822 209 63734	TDA8425/V7
7217▲	5322 13041982	BC848B

7) BG

8) I

TXT module

10	4822 212 30062	IVT TXT europe
10	4822 212 30063	IVT TXT nordic
11	4822 2 12 30076	TXT spain
12	4822 212 30077	TXT easteurope
13	4822 212 30078	TXT europe
14	4822 212 30079	TXT nordic

Connectors

	4822 265 40469	BTB AU 6P
	4822 265 40471	BTB AU 8P

Various

1800	4822 242 81191	27MHz
1820	4822 242 71508	6MHz
1870	4822 071 53151	Fuse 315mA

2801	4822 122 31797	22nF 10% 63V
2802	4822 122 31746	1000pF 5% 50V
2803	4822 122 31774	56pF 5% 50V
2804	4822 122 32504	15pF 5% 50V
2805	4822 122 33496	100nF 10% 63V
1806	4822 122 33496	100nF 10% 63V
2807	4822 122 33496	100nF 10% 63V
2808	4822 122 33496	100nF 10% 63V
2810	4822 122 33496	100nF 10% 63V
,820	4822 122 32504	15pF 5% 50V
2820[11]	4822 126 10324	33pF 63V
1821	4822 122 32504	15pF 5% 50V
2821[11]	4822 126 10324	33pF 63V
2823	4822 122 33496	100nF 10% 63V
,825	4822 122 31772	47pF 5% 50V
2826	4822 122 31772	47pF 5% 50V
,830	4822 122 33496	100nF 10% 63V
1832	4822 122 33496	100nF 10% 63V
1833	4822 122 33496	100nF 10% 63V
1834	4822 124 40435	10µF 20% 50V
,836	4822 122 31965	220pF 5% 63V
,850	4822 122 33496	100nF 10% 63V
1860	4822 122 31825	27pF 10% 50V
,861	4822 122 33496	100nF 10% 63V
,862	4822 122 31774	56pF 5% 50V
1863	4822 122 33496	100nF 10% 63V
2870	4822 124 41643	100µF 20% 16V
2871	4822 124 41506	47µF 20% 16V
2872	4822 124 40272	33µF 20% 16V

3802	4822 051 10273	27k 2% 0,25W
3803	4822 051 10103	10k 2 % 0,25W
3804	4822 051 10122	Ik2 2% 0,25W
3805	4822 051 10122	Ik2 2% 0,25W
3806	4822 051 10221	220Ω 2 % 0,25W
3809	4822 116 52176	10Ω 5 % 0,5W
3810	4822 116 52207	1 k 2 5% 0,5W
3811	4822 051 10122	Ik2 2% 0,25W
3812	4822 051 10122	Ik2 2 % 0,25W
3813	4822 051 10122	Ik2 2% 0,25W
3814	4822 051 10122	Ik2 2% 0,25W
3815	4822 116 52207	Ik 2 5% 0,5W
3816	4822 116 52207	1k 2 5% 0,5W
3817	4822 051 10122	Ik2 2% 0,25W
3818	4822 051 10122	Ik2 2% 0,25W
3819	4822 051 10122	Ik2 2% 0,25W
3820	4822 051 10471	470Ω 2 % 0,25W
3821	4822 051 10102	Ik 2% 0,25W
3822	4822 051 10103	10k 2 % 0,25W
3823	4822 051 10105	1M 5 % 0,25W
3824	4822 051 20222	2k2 5 % 0,1W
3825	4822 051 20222	2k2 5 % 0,1W
3826	4822 116 52175	100Ω 5% 0,5W
3827	4822 116 52175	100Ω 5% 0,5W
3830	4822 051 10829	82Ω 2 % 0,25W
3831	4822 051 10821	820Ω 2 % 0,25W
3832	4822 051 10102	Ik 2% 0,25W
3833	4822 051 10102	1k 2 % 0,25W
3834	4822 051 10681	680Ω 2 % 0,25W
3835	4822 051 10103	10k 2 % 0,25W
3836	4822 051 10473	47k 2% 0,25W
3837	4822 051 10102	1k 2 % 0,25W
3838	4822 051 10473	47k 2% 0,25W
3839	4822 051 10151	150Ω 2 % 0,25W
3840	4822 051 10228	2Ω2 5 % 0,25W
3842	4822 051 10561	560Ω 2 % 0,25W
3850	4822 116 52206	120Ω 5 % 0,5W
3851	4822 051 10102	Ik 2% 0,25W
3852	4822 051 10102	1k 2 % 0,25W
3853	4822 116 52206	120Ω 5 % 0,5W
3854	4822 051 10102	1k 2 % 0,25W
3855	4822 051 10102	1k 2 % 0,25W
3856	4822 116 52206	120Ω 5 % 0,5W
3857	4822 051 10102	Ik 2% 0,25W
3858	4822 051 10102	1k 2 % 0,25W
3860	4822 051 10272	2k7 2 % 0,25W
3861	4822 051 10562	5k6 2 % 0,25W
3862	4822 051 10333	33k 2% 0,25W
3863	4822 051 10223	22k 2% 0,25W
3864	4822 051 10103	10k 2 % 0,25W
3865	4822 051 10392	3k9 2 % 0,25W
3866	4822 051 10272	2k7 2 % 0,25W
3867	4822 116 52206	120Ω 5 % 0,5W
3868	4822 051 10101	100Ω 2 % 0,25W
3869	4822 051 10821	820Ω 2 % 0,25W
3870	4822 050 24701	470Ω 1 % 0,6W
3871	4822 050 22201	220Ω 1 % 0,6W
3872	4822 051 10331	330Ω 2 % 0,25W
3873	4822 051 10271	270Ω 2 % 0,25W
3874	4822 051 10181	180Ω 2 % 0,25W
3890[9]	4822 051 10102	1k 2 % 0,25W
3890[13]	4822 051 10103	10k 2 % 0,25W
3890[14]	4822 051 10153	15k 2% 0,25W
3890[10]	4822 051 10272	2k7 2 % 0,25W
3890"	4822 051 10562	5k6 2 % 0,25W
3890[12]	4822 051 10822	8k2 2 % 0,25W

Jumper

4801.. 4862	4822 051 10008	jumper

5800	4822 15753302	
5801	4822 15220677	
5834	4822 157 53001	27µH 10%
5870	4822 157 51157	3.3µH

6800	4822 130 8292 1	LLZ-F3V9
6840	4822 130 80446	LL4148
6850	4822 130 80446	LL4148
6851	4822 130 80446	LL4148
6852	4822 130 80446	LL4148
6860	4822 130 80446	LL4148
6870	4822 130 80905	LLZ-F5V1
6871	4822 130 81227	LLZ-F5V6

7800	4822 209 31214	SAA5246P/E
7800[12]	4822 209 31215	SAA5246P/H
7810	4822 209 61805	HY6264P-15
7810"	4822 209 72681	MSM5165AL-12RS
7820[12]	4822 209 30281	PCF84C81A/097

TXT module

'820[9,10]	4822 209 31089	PCF84C81A/098
'820[11]	4822 209 62479	MAB8461/W196
'82 1	4822 130 61207	BC848
'822	4822 130 61207	BC848
'831	4822 13042513	BC858C
'833	5322 13042136	BC848C
'850	5322 13042136	BC848C
'851	5322 13042136	BC848C
'852	5322 13042136	BC848C
'860	4822 130 61207	BC848
'861	5322 13060159	BC846B
'862	5322 13042136	BC848C
'863	4822 130 61207	BC848
'870	4822 13041344	BC337-40
'871	5322 13042012	BC858
'872	4822 13041344	BC337-40

	IVT Europe BGLI
0)	IVT Nordic
1)	CCT Spain
2)	CCT Europe BGDK
3)	CCT Europa BGLI
4)	CCT Nordic

PIP module

4822 212 23605 PIP module

Connectors

	4822 265 30828	5p female
	4822 265 40472	10p female
	4822 265 40503	5p male

Various

1155	4822 320 40051	delay line DL711
1201	4822 242 70304	8,867238 MHz
1212	4822 242 70736	7.159090 MHz

2103	4822 122 32444	33pF 5% 50V
2105	4822 122 31766	120pF 5% 50V
2118	4822 12231775	680pF 5% 5ov
2119	4822 122 31808	150pF 10% 50V
2120	4822 12231807	1200pF 5 % 50V
2125	4822 122 32863	22nF 80% 50V
2155	4822 122 32862	10nF 80% 50V
2158	4822 12232862	10nF 80% 50V
2160	4822 12440242	1µF 20% 63V
2161	4822 12441576	2,2µF 20% 5ov
2162	4822 12232893	100nF 80% 50V
2171	4822 12231961	68pF 5% 63V
2172	4822 12611175	22pF 5% 50V
2176	4822 12611175	22pF 5% 50V
2177	4822 122 31961	68pF 5% 63V
2180	4822 122 31768	1 80pF 5% 5ov
2181	4822 122 31768	1 80pF 5% 5ov
2185	4822 122 32863	22nF 80% 50V
2187	4822 122 32863	22nF 80% 50V
2189	4822 122 31746	1 OOOpF 5% 50V
2196	4822 122 32893	1 00nF 80% 50V
2197	4822 122 31385	22pF 50V
2201	4822 122 31746	1 OOOpF 5% 50V
2202	4822 125 50045	20pF
2211	4822 12231746	1000pF 5% 50V
2212	4822 12550045	20pF
2220	5322 12142661	330nF 5 % 63V
2222	4822 12232542	47nF 10% 63V
2227	5322 12231842	330pF 5% 63V
2230	4822 12440242	1µF 20% 63V
2232	4822 12441678	22µF 20% 25V
2234	4822 122 33496	100nF 10% 63V
2235	4822 12441578	6,8µF 20% 5ov
2238	4822 12142937	2.7nF 1% 250V
2239	4822 122 32893	1 00nF 80% 50V
2250	4822 12151115	270nF 10% 63V
2251	5322 122 31647	1nF 10% 63V
2255	4822 122 31766	120pF 5% 50V
2260	4822 122 32893	1 00nF 80% 50V
2270	4822 122 32893	100nF 80% 50V
2340	4822 12441506	47µF 20% 16V
2345	4822 12441506	47µF 20% 16V
2350	4822 12440849	330µF 20% 16V
2351	4822 12441643	100µF 20% 16V
2380	4822 122 32927	220nF
2381	4822 122 32927	220nF
2382	4822 122 32927	220nF
2383	4822 122 32927	220nF
2384	4822 122 32927	220nF
2385	4822 12232927	220nF
2390	4822 122 32893	1 00nF 80% 50V
2399	4822 122 31746	1000pF5%50V
2404	4822 122 31965	220pF 5% 63V
2405	4822 122 32862	10nF 80% 50V
2409	4822 122 31965	220pF 5% 63V
2410	4822 122 32862	10nF 80% 50V
2413	4822 122 31765	100pF 5% 50V
2414	4822 12232862	10nF 80% 50V
2415	4822 12231965	220pF 5% 63V
2430	4822 122 32893	1 00nF 80% 50V
2432	4822 122 32893	1 00nF 80% 50V
2434	4822 122 32893	1 00nF 80% 50V
2438	4822 12142472	10nF 10% 50V
2439	4822 12141856	22nF 5% 250V
2440	4822 12231965	220pF 5% 63V
2441	4822 122 31727	470pF 5% 63V
2442	4822 12440242	1µF 20% 63V
2446	4822 122 32893	1 00nF 80% 50V
2448	4822 122 32893	1 00nF 80% 50V
2450	4822122 32856	8,2nF 10% 63V
2455	4822 122 31972	39pF 5% 50V
2459	4822 12441997	470µF 10V
2466	4822 122 32893	1 00nF 80% 50V
2444	4822051 10224	220k 2% 0,25W
3103	4822051 10821	820Ω 2% 0,25W
3104	4822051 10821	820Ω 2% 0,25W
3105	4822051 10362	3k6 2 % 0,25W
3106	4822 11652233	10k 5 % 0,5W
3107	4822051 10103	10k 2 % 0,25W
3108	4822051 10103	10k 2 % 0,25W
3155	4822051 10391	3909 2% 0,25W
3156	4822051 10122	1 k2 2% 0,25W
3157	4822 10011391	330Ω 30% LIN
3158	4822051 10759	75Ω 2 % 0,25W
3170	4822051 10112	Ikl 2% 0,25W
3175	4822051 10621	620Ω 2% 0,25W
3196	4822050 11002	1k 1 % 0,4W
3200	4822051 10103	10k 2 % 0,25W
3201	4822051 10103	10k 2 % 0,25W
3202	4822051 10103	10k 2 % 0,25W
3211	4822051 10103	10k 2 % 0,25W
3212	4822051 10103	10k 2 % 0,25W
3214	4822051 10102	Ik 2% 0,25W
3220	4822051 10512	5kl 2% 0,25W
3221	4822 11652233	10k 5 % 0,5W
3222	4822051 10008	jumper
3227	4822 116 52299	7k5 5 % 0,5W
3228	4822051 10472	4k7 2 % 0,25W
3231	4822051 10682	6kB 2% 0,25W
3232	4822051 10229	22Ω 2 % 0,25W
3233	4822051 10471	470Ω 2 % 0,25W
3234	4822 051 10361	360Ω 2 % 0,25W
3235	4822051 10122	1 k2 2% 0,25W
3236	4822051 10471	470Ω 2 % 0,25W
3237	4822051 10332	3k3 2 % 0,25W
3238	4822 051 10333	33k 2% 0,25W
3239	4822 10011319	4k7 30% LIN
3241	4822051 10271	270Ω 2 % 0,25W
3242	482205011002	1k 1 % 0,4W
3250	4822051 10911	910Ω 2 % 0,25W
3265	4822051 10104	100k 2 % 0,25W
3270	4822051 10103	10k 2 % 0,25W
3275	4822051 10103	10k 2 % 0,25W
3276	4822051 10102	1 k 2% 0,25W
3330	4822051 20008	on 5% 0,1W
3335	4822051 10271	270Ω 2 % 0,25W
3336	4822 051 10432	4k3 2 % 0,25W
3337	4822051 10122	1 k2 2% 0,25W
3338	4822051 10332	3k3 2 % 0,25W
3340	4822051 10202	2k 2% 0,25W
3341	4822052 10229	22Ω 5 % 0,33W
3345	4822052 10229	22Ω 5 % 0,33W
3353	4822052 10568	5Ω6 5 % 0,33W

PIP modu

3354	482
3390	482
339 1	482
3394	482
3395	482
3398	482
3399	482
3404	482
3405	482
3410	482
3411	482
3412	482
3414	482
3416	482
3434	482
3436	482
3437	482
3438	482
3440	482
3441	482
3442	482
3444	482
3446	482
3448	482
3450	482
3452	482
3454	482
3460	482
3461	482
3462	482
3463	482
3464	482
3470	482
3618	482
3621	482
3997	482
3997	482

Jumper

4001.. 4415	482
5118	482
5155	482
5157	482
5170	482
5175	482
5190	482
5400	482
5402	482
5403	482
5406	482
5408	482
5410	482
6300	482
7103	532
7105	532
7125	482
7126	482
7200	532
7210	532
7233	532
7234	532
7335	532
7337	532
7338	532
7350	482

Spare parts list / Stückliste / Liste

PIP module

3354	4822051 10271	270Ω 2 % 0,25W
3390	4822051 10151	150Ω 2 % 0,25W
3391	4822051 10181	180Ω 2 % 0,25W
3394	4822051 10151	150Ω 2 % 0,25W
3395	4822051 10181	180Ω 2 % 0,25W
3398	4822051 10151	150Ω 2 % 0,25W
3399	4822051 10181	180Ω 2 % 0,25W
3404	4822 051 10431	430Ω 2 % 0,25W
3405	4822 051 10361	360Ω 2 % 0,25W
3410	4822051 10391	390Ω 2 % 0,25W
3411	4822051 10471	470R 2% 0,25W
3412	4822051 10751	750Ω 2 % 0,25W
3414	4822051 10471	470Ω 2 % 0,25W
3416	4822051 10182	Ik8 2% 0,25W
3434	4822051 10473	47k 2% 0,25W
3436	4822051 10473	47k 2% 0,25W
3437	4822051 10101	100Ω 2 % 0,25W
3438	4822051 10513	51 k 2% 0,25W
3440	4822 116 52222	390Ω 5 % 0,5W
3441	4822 051 10519	51 Ω 2% 0,25W
3442	4822051 10919	91 Ω 2% 0,25W
3444	4822 11652175	100Ω 5 % 0,5W
3446	4822 11652175	100Ω 5 % 0,5W
3448	4822 051 10392	3k9 2 % 0,25W
3450	4822 051 10471	470Ω 2 % 0,25W
3452	4822 051 10471	470Ω 2 % 0,25W
3454	4822 051 10471	470Ω 2 % 0,25W
3460	4822 11652231	820R 5% 0,5W
3461	4822 11652259	2k4 5 % 0,5W
3462	4822051 10333	33k 2% 0,25W
3463	4822 116 52299	7k5 5 % 0,5W
3464	4822 051 10472	4k7 2% 0,25W
3470	4822 052 10108	1Ω 5 % 0,33W
3618	4822052 10568	5Ω6 5 % 0,33W
3621	4822051 10105	1 M 5% 0,25W
3997	4822051 10339	33Ω 2 % 0,25W
3997	4822 051 10279	27Ω 2 % 0,25W

lumper

1001.. 1415	4822 051 10008	jumper

5118	4822 157 60435	10,3µH 6 %
5155	4822 157 60433	7,2µH 6 %
5157	4822 157 60434	9,4µH 6 %
5170	4822 157 60432	10,3µH
5175	4822 157 60432	10,3µH
5190	4822 157 60432	10,3µH
5400	4822 15750943	12µH 10%
5402	4822 15750943	12µH 10%
5403	4822 15752333	100µH 10%
5406	4822 157 50943	12µH 10%
5408	4822 15750943	12µH 10%
5410	4822 15750943	12µH 10%

6300	4822 130 80906	LLZ-C7V5

7103	5322 13041982	BC848B
7105	5322 13041982	BC848B
7125	4822 209 63927	TDA4554/V1
7126	4822 209 30389	TDA4510/V8
7200	5322 13041982	BC848B
7210	5322 13041982	BC848B
7233	5322 13041983	BC858B
7234	5322 13041982	BC848B
7335	5322 13041982	BC848B
7337	5322 13041982	BC848B
7338	5322 13041982	BC848B
7350	4822 13042616	BC818-40
7380	4822209 60479	TEA5114A
7400	5322 13041983	BC858B
7402	5322 13041983	BC858B
7404	5322 13041983	BC858B
7406	4822 209 62473	SDA9087
7408	4822 209 63291	SDA9088/2Ω
7410	4822 209 63644	SDA9086-3
7755	4822 209 72363	TDA2579A/N8

Control module DAS

	4822	4822	212	212	30036	30029	control	control	module	module

Connectors

A	4822 265 30384	mains K11
A	4822 265 40596	mains K25
	4822 264 40207	3p male
	4822 265 30951	4p male

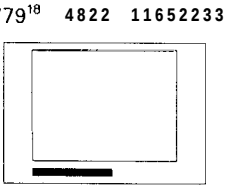
Various

A	4822 276 12597	Mains switch
	4822 267 31014	Headphone socket
	4822 276 50354	Swith assembly
	4822 212 23667	IR receiver GP1U52YP
	4822 209 72895	LEDTLUV5320
	4822 256 91766	LED holder

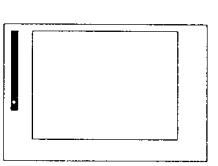
2233	4822 12143526	47nF 5% 100V
2234	4822 12143526	47nF 5 % 100V
2713	5322 12421189	100µF 20% 40V

3246	4822 11652219	330Ω 5 % 0,5W
3247	4822 11652175	100Ω 5 % 0,5W
3248	4822 11652219	330Ω 5 % 0,5W
3249	4822 11652175	100Ω 5 % 0,5W
3729	4822 11652232	910Ω 5 % 0,5W
3730	4822 11652215	220Ω 5 % 0,5W
3775	4822 11652175	1000 5 % 0,5W
3776"	4822 116 52264	5K6 5 % 0,5W
3776[18]	4822 11652289	27K 5% 0,5W
3777[17]	4822 11652289	27K 5% 0,5W
3777[18]	4822 11652264	5K6 5 % 0,5W
3778[17]	4822 11652233	56K 5% 0,5W
3778[18]	4822 116 52291	10K 5 % 0,5W
3779"	4822 11652291	10K 5 % 0,5W
3779[18]	4822 11652233	56K 5% 0,5W

17)



18)



Service
Service
Service

GR2.1

AA 92.01

Service Information

(GB)

1. Modified circuits

During production several modifications have been made to the SOPS, line and raster circuits.
The modified circuits are illustrated in Fig.1.
The service code numbers of the modified components are given a table:

2. Modified adjustment for picture tube control

The electrical adjustment 1.13, 1.14 and 1.15 on page 7.1 of the service manual must be modified as follows:

1.13 White balance

Connect a pattern generator and select a white screen. Switch in the service menu (see chapter 9) and select "WHITE BALANCE".
Adjust the value of "GREEN" to 51 and the value of "BLUE" to 46. In most cases no further adjustment is necessary.

1.14 Peak white limit

Switch in the service menu (see chapter 9) and select "WHITE BALANCE".
Adjust "WHITE LIMIT" to the values:
43 for black-line sets
53 for non black-line sets
53 for 21" sets.

1.15 Picture tube cut-off points

Connect a pattern generator and select a black screen. Switch in the service menu and select "CUT OFF". Adjust the value for "RED" and for "GREEN" to 16, and adjust "BLUE" to 15. In most cases no further adjustment is necessary.

3. Service default mode

In order to bring a set into the service default mode the antenna and generator signals should first be removed. Once the set has been brought into the service default mode (see page 9.1 of the service manual) the antenna and generator signals may be input.

4. Coordination position+ numbers on main panel

The coordinates on pages 6.21 and 6.22 are incorrect.
The correct coordinates are given in Fig.2.

5. Picture tube panel

The designations of connector C20 (as given on the print lay-outs of the picture tube panel on page 6.24 of the service manual) are incorrect.
The correct designations are given in the fig. 3.

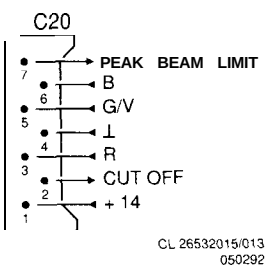


Fig. 3

Published by Consumer Electronics Printed in The Netherlands 4822 727 19095

(NL)

1. Gewijzigde circuits

Gedurende produktie hebben zich enkele wijzigingen voorgedaan in het SOPS-, lijn en raster circuit.
In Fig. 1 zijn de gewijzigde schema's weergegeven.
De service codenummers van de gewijzigde komponenten zijn in een tabel vermeld:

2. Gewijzigde afregelingen voor aansturing van de beeldbuis

De electrische afregelingen 1.13, 1.14 en 1.15 op pagina 7.1 van de service manual moeten als volgt gewijzigd worden:

1.13 Witbalans

Sluit een patroongenerator aan en kies een wit beeld. Schakel het servicemenu in (zie hoofdstuk 9) en kies "WHITE BALANCE".
Regel de waarde van groen ("GREEN") af op 51, en van blauw ("BLUE") op 46 af. In de meeste gevallen is er nu geen verdere afregeling noodzakelijk.

1.14 Piekwit begrenzing

Schakel het servicemenu in (zie hoofdstuk 9) en kies "WHITE BALANCE".
Regel "WHITE LIMITE" af op de waarde:
43 voor black-line apparaten
53 voor niet-black-line apparaten
53 voor 21" apparaten

1.15 Afknijppunten van de beeldbuis

Sluit een patroongenerator aan en kies een zwart beeld. Schakel het servicemenu in en kies "CUT OFF". Regel de waarde van rood ("RED") en van groen **("GREEN")** op 16 en van blauw ("BLUE") op 15. In de meeste gevallen is er nu geen verdere afregeling noodzakelijk.

3. Service default mode

Om een apparaat in de service default mode te brengen dient men het antenne- of generatorsignaal eerst te verwijderen.
Nadat het apparaat in de service default mode is gebracht (zie pagina 9.1 van de service manual) mag het antenne- of generatorsignaal toegevoerd worden.

4. Coördinaten positienummers op het hoofdpaneel.

Op pagina 6.21 en 6.22 zijn de codrdinaten foutief weergegeven. Fig. 2 geeft de juiste coördinaten weer.

5. Beeldbuispaneel.

De benamingen van de connector C20 (vermeld op de printlayouts van de beeldbuispanelen op pagina 6.24 van de service manual) zijn foutief weergegeven.
In fig. 3 vindt u de juiste benamingen.

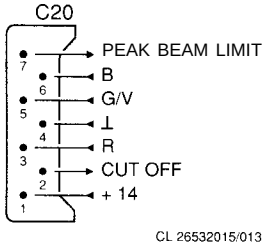


Fig. 3

(D)

1. Geänderte Versorgungskreise.

Während der Produktion haben sich einige Änderungen im SOPS-, Linien- und Rasterkreis ergeben. Abb. 1 zeigt die geänderten Schemen.
Die Service-Kodenummern der geänderten Komponente sind in einer Tabelle aufgeführt.

2. Geänderte Abstimmung für das Ansteuern der Bildröhre.

Die elektrischen Abstimmungen 1.13, 1.14 und 1.15 auf Seite 7.1 des Service-Manuals müssen folgendermaßen geändert werden.

1.13 Weißausgleich.

Schließen Sie einen Patronengenerator an und wählen Sie ein weißes Bild. Schalten Sie das Service-Menü ein (siehe Kapitel 9) und wählen Sie **"WHITE BALANCE".**
Stimmen Sie den Wert von grün ("GREEN") auf 51 ab und den von blau ("BLUE") auf 46 ab. In den meisten Fällen ist dann keine weitere Abstimmung erforderlich.

1.14 Begrenzung Spitzenweiß.

Das Service-Menü einschalten (siehe Kapital 9) und wählen Sie "WHITE BALANCE".
"WHITE BALANCE" abstimmen auf die Werte:
43 für Black-line-Gerate
53 für nicht-Black-line-Geräte
53 für 21" Geräte.

1.15 Unterbrechungspunkte der Bildröhre.

Schließen Sie einen Patronengenerator an und wählen Sie ein schwarzes Bild. Schalten Sie das Service-Menu ein und wählen Sie "CUT OFF". Stimmen Sie den Wert von rot ("RED") und von grün ("GREEN") auf 16 ab, den von blau ("BLUE") auf 15. In den meisten Fallen ist jetzt keine weitere Abstimmung erforderlich.

3. Service Standardeinstellung.

Um ein Gerät in die Service-Standardeinstellung zu bringen, muß man zuerst das Antennen- oder Generatorsignal entfernen.
Nachdem das Gerät sich in der Service-Standardeinstellung befindet (siehe Seite 9.1. Service-Manual) darf das Antennen oder Generatorsignal zugeführt werden.

4. Koordinate Positionsnummern auf der Haupt-Platine.

Auf den Seiten 6.21 und 6,22 sind die Koordinaten falsch wiedergegeben. Abb. 2 zeigt die richtigen Koordinaten.

5. Bildröhren-Platine.

Die Bezeichnungen für Anschluß C 20 (in den Print-Layouts der Bildröhren-Platinen auf Seite 5,24 des Service-Manuals) sind falsch.
In Abb.3 sehen Sie die korrekten Bezeichnungen.

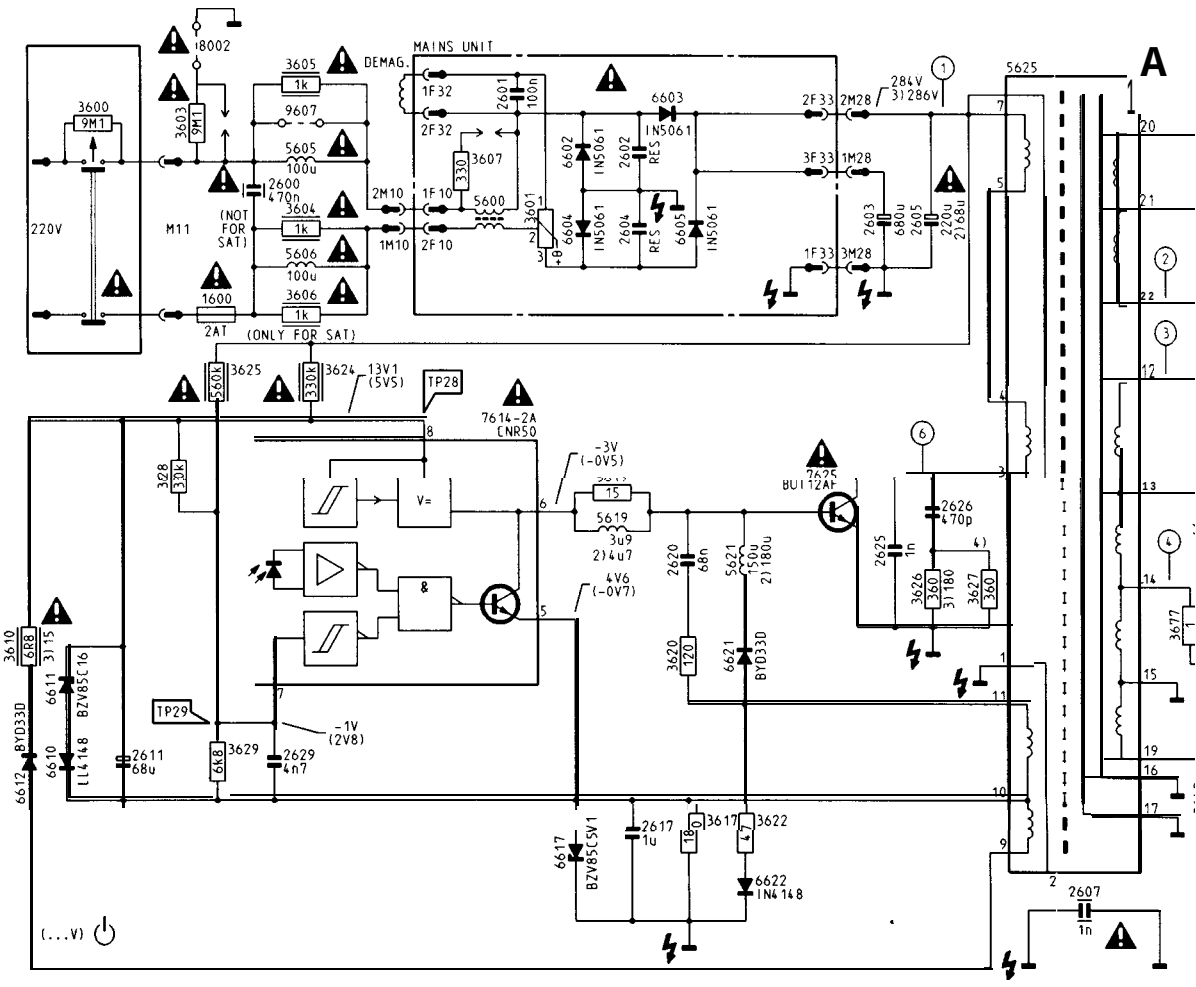
SOPS circuit

REMARKS/REMARQUES/ANMERKUNGEN/NOTE

PRESENT IN SETS:
PRESENT SUR LES APPAREILS:
ANWESEND IN GERÄTEN
PRESENTE SUI MODELLI:
PRESENTE SOBRE MODELLOS:

1) NON BLACK-LINE 25"/28"
2) NON BLACK-LINE 21"
3) BLACK-LINE 25"/28"
4) NOT BLACK-LINE + BLACK-LINE 25"/28"

*	1)	2)	3)
2460	1n	10n	4n7
2546	8n2	7n5	11n
~~2549~~	~~330n~~	-	470n
~~3336~~	~~27~~	15	~~22~~
~~3337~~	~~27~~	15	~~22~~
~~3560~~	20k	~~33k~~	16k
6463	BZX79F10	BZX79F15	BZX79F8V2



Line circuit

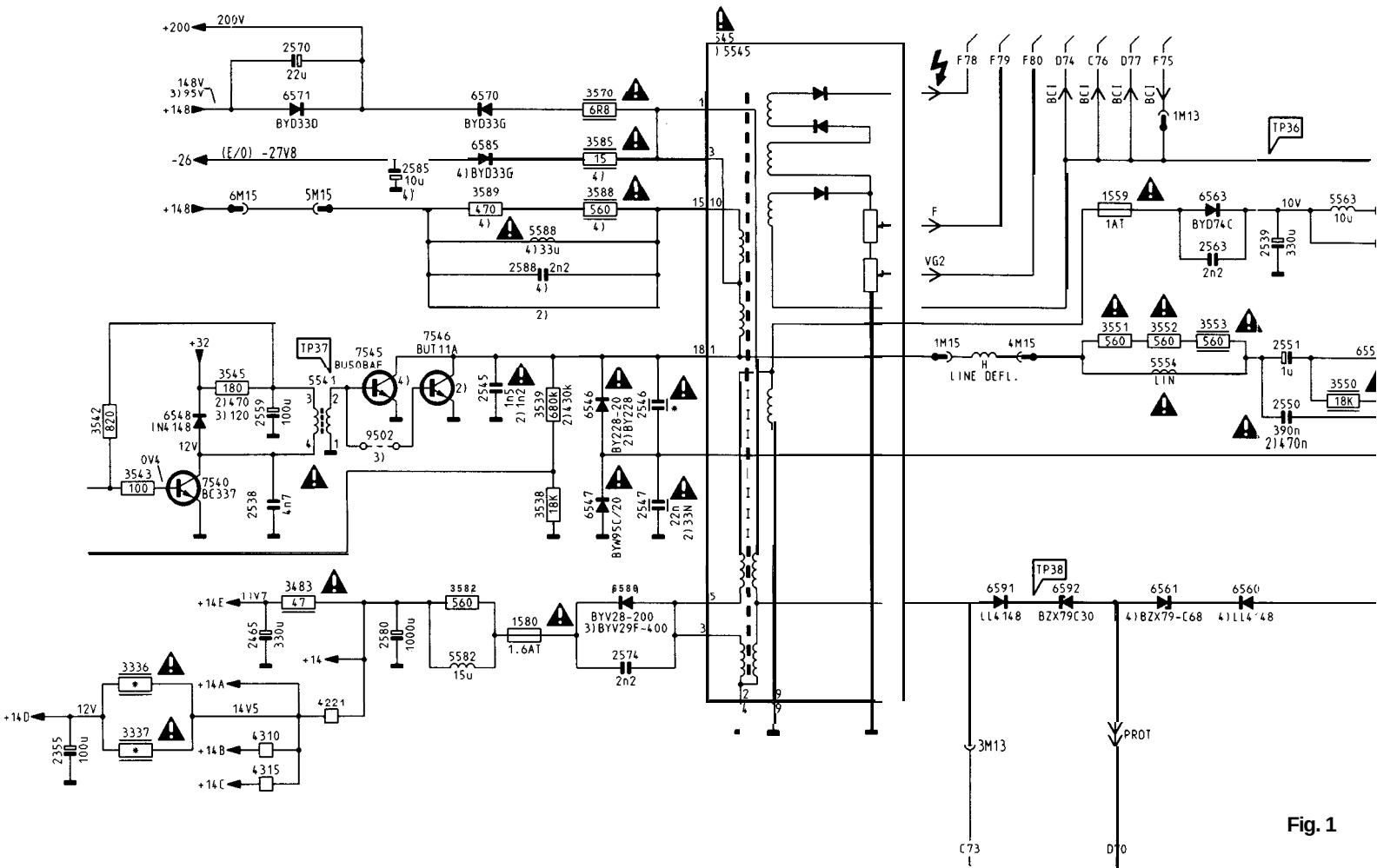
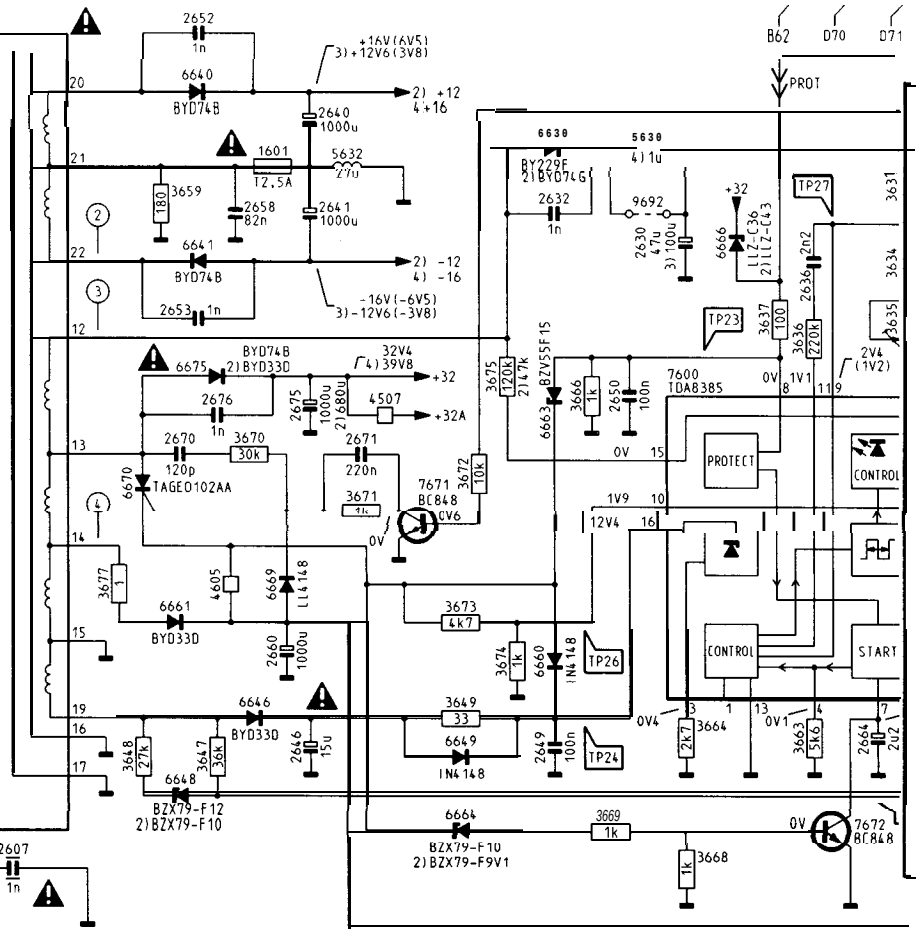


Fig. 1



SOPS circuit		
3663	4822 051 10562	5k6 2 % 0,25W
3674	4822 051 10102	1k 2 % 0,25W
6611	5322 130 80442	BZV85-C16
6670	4822 130 20272	TAGE0102AA
7614▲	4822 209 30992	CNR50-selected

Line circuit		
2538	4822 12143079	4n7 5% 250V
2539	4822 12480057	330µF 20% 16V
2546	4822 12143076	11nF 5% 1600V
2546	4822 12143065	7,5nF 5% 2kV
2546	4822 12142523	8,2nF 5% 2kV
3483▲	4822051 10479	4702% 0,25W
3545A	4822 11170178	120Ω 5% 5w
3545A	4822 11683618	470Ω 5% 5w
6561	4822 13030864	BZX79-B68
6570	4822 13042489	BYD33G
6580	4822 130 80791	BYV28-200
6580	4822 13082512	BYV29F-400
6585	4822 13042489	BYD33G

Frame circuit		
3503▲	4822 052 10128	1Ω2 5 % 0,33W
3503▲	4822 052 10158	1Ω5 5 % 0,33W
3518	4822 051 10101	100Ω 2 % 0,25W
3520	4822 116 52211	150Ω 5% 0,5W
3535	4822 116 52253	2k 5% 0,5W
3535	4822 11652231	82005% 0,5W

Frame circuit

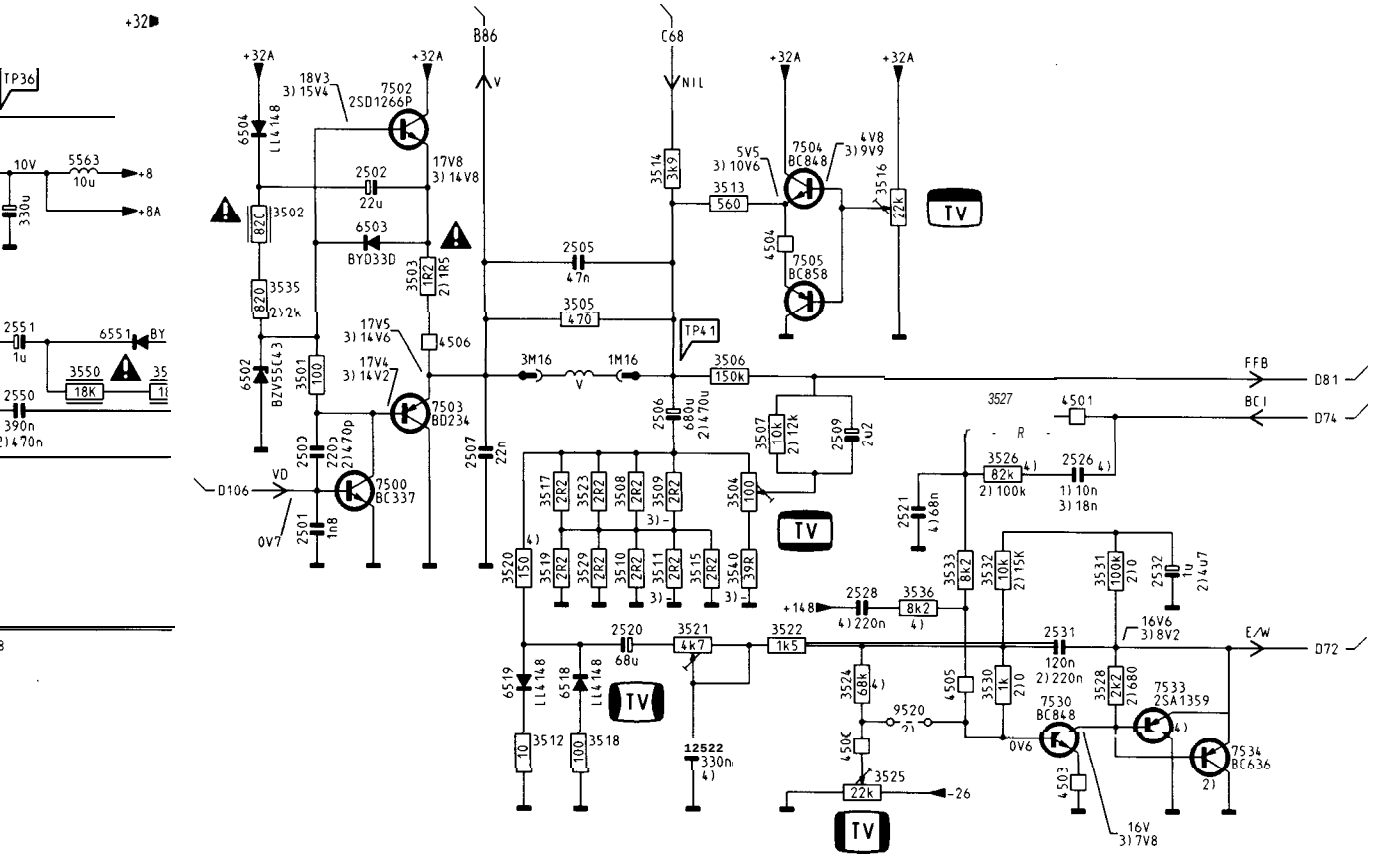


Fig. 1

(F)

1. Circuits modifies

Nous avons, au cours de la production, procédé a quelques modifications au niveau du circuit SOPS, lignes et definition.
Les circuits modifies sont indiqués sur la figure 1.
Les numeros de code d'entretien des composants modifies sont donnés par un tableau:

2. Réglages modifies pour la commande du tube-&ran

Les réglages électriques 1.13, 1.14 et 1.15 décrits dans la page 7.1 du manuel d'entretien doivent être modifies comme suit:

1.13. Equilibre du blanc
Raccorder un generateur de trames et choisir un écran blanc. Faire appel au menu d'entretien (voir chapitre 9) et selectionner "WHITE BALANCE". Regler la valeur du vert ("GREEN") sur 51 et celle du bleu ("BLUE") sur 46. Dans la plupart des cas, il n'est plus utile de procéder à d'autre réglage.

1.14 Limitation maximale du blanc
Faire appel au menu entretien (voir chapitre 9) et selectionner "WHITE BALANCE"
Regler "WHITE LIMITE" sur la valeur:
43 pour les appareils 'black-line'
53 pour les appareils non 'black-line'
53 pour les appareils 21"

1.15 Points de coupure du tube-écran
Raccorder un generateur de trames et choisir un écran noir.
Faire appel au menu entretien et selectionner "CUT-OFF". Regler la valeur du rouge ("RED") et du vert ("GREEN") sur 16 et celle du bleu ("BLUE") sur 15. Dans la plupart des cas, il n'est plus utile de faire d'autre reglage.

3. Mode implicite d'entretien

Pour mettre un appareil en mode implicite d'entretien, le signal antenne ou generateur doit être éliminé. Après avoir mis l'appareil en mode implicite d'entretien (voir page 9.1 du manuel d'entretien), on peut ajouter le signal antenne ou generateur.

4. Coordonnées des numéros de position sur la platine principale

Les coordonnees mentionnees en pages 6.21 et 6.22 ne sont pas correctes.
Les bonnes coordonnees sont données par la figure 2.

5. Platine TRC

Les denominations du connecteur C20 (indiquées sur les descriptions de circuit des platines TRC dans la page 6.24 du manuel d'entretien) ne sont pas correctes.
Vous trouverez les bonnes denominations sur la fig. 3

(I)

1. Circuito modificato

Durante la produzione sono state apportate alcune modifiche nel circuito SOPS, di linea e di quadro.
Nella fig. 1 sono riportati gli schemi modificati.
I numeri di codice per il servizio relativi ai componenti modificati sono riportati in una tabella;

2. Regolazioni modificate per il pilotaggio dello schermo

Le regolazioni elettriche 1.13, 1 .14 e 1.15 di pagina 7.1 del service manual devono essere modificate nel modo seguente:

1.13 Bilanciamento del bianco
Collegare un generatore di monoscopio e scegliere una immagine bianca. Inserire il service menu (vedasi capitolo 9) e scegliere "WHITE BALANCE".
Regolare il valore del verde ("GREEN") su 51, e del blu ("BLUE") su 46. Nella maggior parte dei casi non sono ora necessarie ulteriori correzioni.

1.14 Limitazione di picco del bianco
Inserire il service menu (vedasi capitolo 9) e scegliere "WHITE BALANCE".
Regolare "WHITE BALANCE" sul valore:
43 per apparecchi black-line
53 per apparecchi non black-line
53 per apparecchi a 21".

1.15 Punti limite dello schermo
Collegare un generatore di monoscopio e scegliere una immagine nera. Inserire il service menu e scegliere "CUT OFF". Regolare il valore del rosso ("RED") e del verde ("GREEN") su 16 e del blu ("BLUE") su 15. Nella maggior parte dei casi non sono ora necessarie ulteriori correzioni.

3. Predisposizione per la manutenzione dell'apparecchio

Per predisporre un apparecchio per la manutenzione, occorre per prima cosa sopprimere il segnale dell'antenna o del generatore.
Dopo aver predisposto l'apparecchio per la manutenzione, (vedasi pagina 9.1 del service manual), si può riapplicare il segnale dell'antenna o del generatore.

4. Valori delle coordinate sulla scheda principale.

A pagina 6.21 e 6.22, le coordinate sono riportate in modo errato. La Fig. 2 riporta le coordinate corrette.

5. Scheda dello schermo

Le denominazioni del connettore C20 (indicato nel layout del circuito stampato della scheda dello schermo a pagina 6.24 del service manual) sono riportate in modo errato.
Nella fig.3 sono riportate le denominazioni corrette.

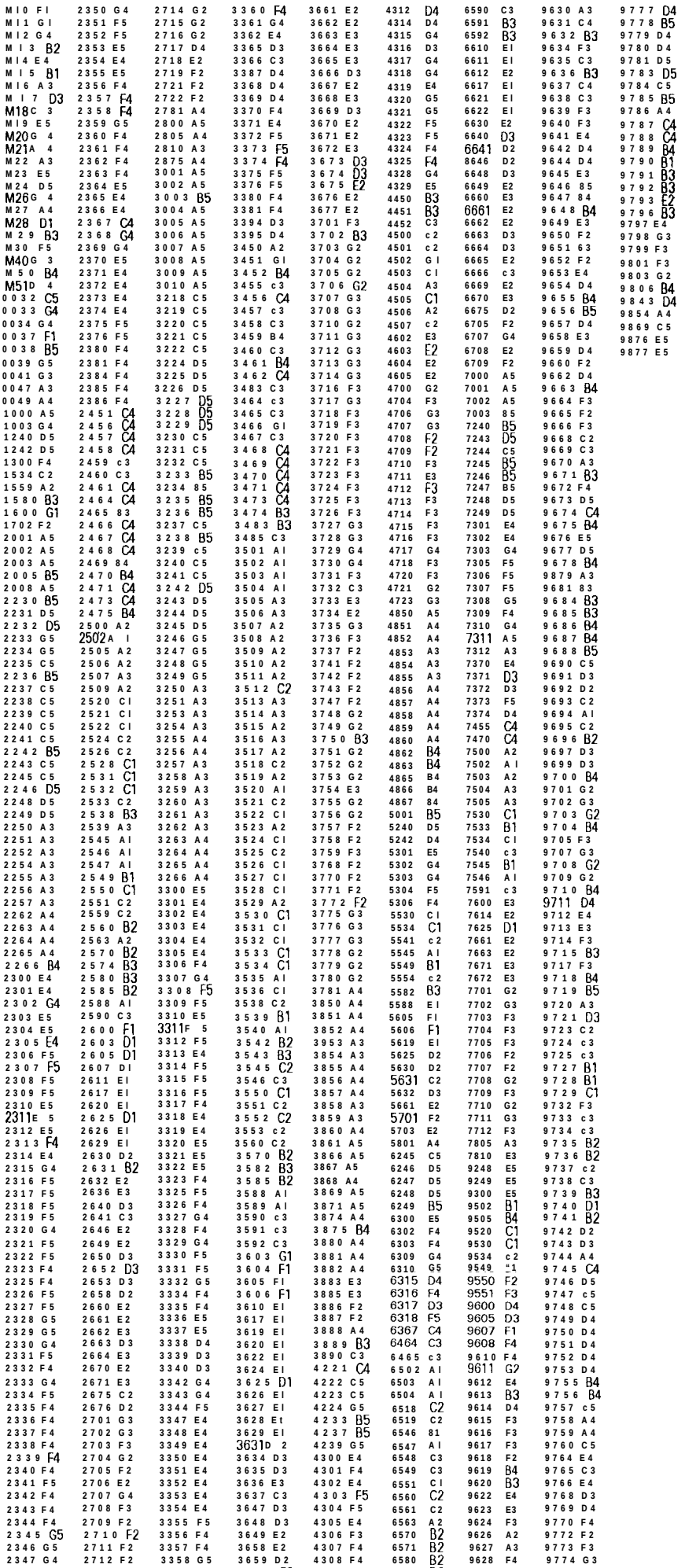


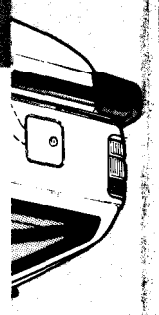
Fig. 2

Service
Service
Service

GR2.1 / GR2.2

AA / AB 92.02

Service Information



(GB) Vg2, white drive, white limiter and cut-off settings

Table I shows the Vg2 settings of the various types of picture tubes used in chassis CP1 10, GR2.1 and GR2.2.
Table II provides an overview of the settings for: white limiter, white balance (gain and cut-off points for chassis GR2.1 and GR2.2).

(D) Vg2, Weißabgleich, Weißspitzenbegrenzer- und Sperrpunktablgleich

In der Tabelle I sind die Vg2-Einstellungen von verschiedenen Bildröhrentypen angegeben, die in den Chassis VP1 IO, GR2.1 und GR2.2 benutzt werden.
In der Tabelle II ist eine Übersicht der folgenden Einstellungen enthalten:
Weißspitzenbegrenzung (white limiter),
Weißabgleich (gain) und Sperrpunktabgleich fur Chassis GR2.1 und GR2.2.

(NL) Vg2, Witbalans, Piekwit begrenzer en afknijppuntinstelling

In tabel I staan de Vg2 instellingen vermeld van de diverse typen beeldbuizen gebruikt in chassis CP110, GR2.1 en GR2.2.
In tabel II staat een overzicht van de afregelingen: piekwit begrenzing (white limiter), witbalans (gain en afknijppunten voor chassis GR2.1 en GR2.2).

(F) Réglages Vg2, commande du blanc, limitateur de crête de blanc et valeurs de coupure

Le tableau I mentionne les réglages Vg2 pour les differents types de tubes-image utilisés dans les chassis CP110, GR2.1 et GR2.2.
Le tableau II donne un aperçu des réglages suivants:
limitateur de crête de blanc (white limiter), balance du blanc (gain et valeurs de coupure pour les chassis GR2.1 et GR2.2).

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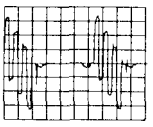
TABLE I / TABEL I / TABELLE I / TABLEAU I

	CP110	GR2.1	GR2.2
21" Mini Neck A51EAM31X45		120v ± 5v	120v ± 5v
21" Narrow Neck A51 EAL55X73			120v ± 5v
25" 45AX A59EAK51X03		120v ± 5v	
28" 45AX A66EAK51X03	130v ± 5v	130v ± 5v	
25" Black Matrix A59EAK71X03		110V ± 5 v	120v ± 5v
28" Black Matrix A66EAK71X03	130v ± 5v	120v ± 5v	130v ± 5v
25" Black Line A59EAK22X13		145v ± 5v	
28" Black Line A66EAK22X13		145v ± 5v	
25" Black Line S A59EAK222X13			145V ± 5V
28" Black Line S A66EAK222X13			145v ± 5v
25" Black Line Matrix A59EAK220X13		135v ± 5v	
28" Black Line Matrix A66EAK220X13		135v ± 5v	

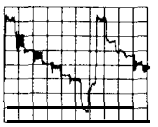
TABLE II / TABEL II / TABELLE II / TABLEAU II

White Drive Nit Balans Weißabgleich Zommande du blanc	Red Rood Rot Rouge	60
	Green Groen Grün Vert	52
	Blue Blauw Blau Bleu	49
Cut-off Afknijppunt instelling Sperrpunktabgleich Valeurs de coupure	Red Rood Rot Rouge	56
	Green Groen Grün Vert	16
	Blue Blauw Blau Bleu	15
White limiter Piekwit begrenzing Weißspitzenbegrenzer Limitateur de crête de blanc	110° Black Line	43
	45 AX 28”	53
	45 AX 25”	53
	90°	53

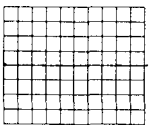
Oscillogrammes / Oszillogramme / Oscillogrammes



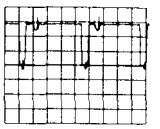
TP 1
0.2 Vldiv AC
20 µS/div



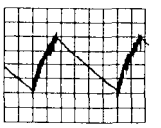
TP 8
50 mV/div AC
10 µS/div



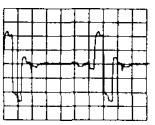
TP 146
0.2 Vldiv DC
0.5 mS/div



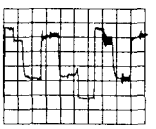
TP 21
0,5 V/div DC
5 µS/div



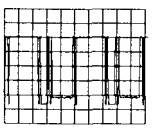
TP 26
0,1 Vldiv AC
5 mS/div



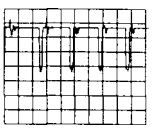
TP 2
0,2 Vidiv AC
20 µS/div



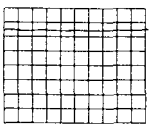
TP 9
0,5 Vldiv AC
10 µS/div



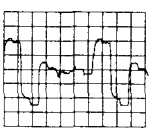
TP 15
1 Vldiv AC
0.2 mS/div



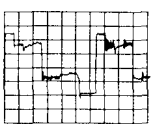
TP21
0,5 Vldiv DC
10 µS/div



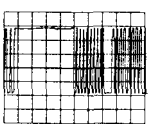
TP 27
1 V/div DC



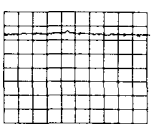
TP 3
0.2 Vldiv AC
10 µS/div



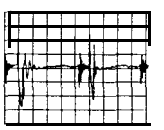
TP 10
0,5 Vldiv AC
10 µS/div



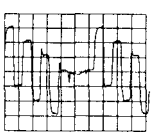
TP 16
1 V/div DC
0.1 mS/div



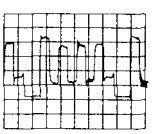
TP 22
1 V/div DC



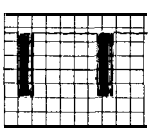
TP 27 6
50 mV/div AC
10 mS/div



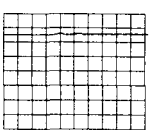
TP 4
0,2 Vldiv AC
10 µS/div



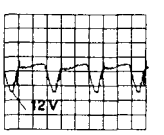
TP 11
0.5 Vldiv AC
10 µS/div



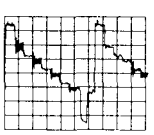
TP 17
1 V/div DC
20 mS/div



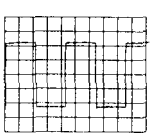
TP 23
1 V/div DC



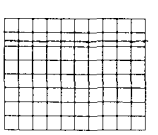
TP 28
0,5 Vidiv AC
5 µS/div



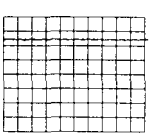
TP 5
0.1 V/div AC
10 µS/div



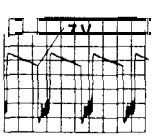
TP 12
1 V/div AC
10 µS/div



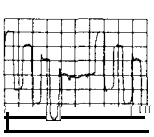
TP 18
2 V/div DC
20 mS/div



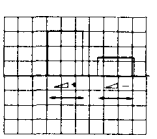
TP 24
5V/div DC



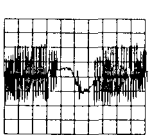
TP 28
1 /div AC
10 mS/div



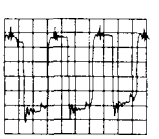
TP 6
0.2 Vldiv AC
10 µS/div



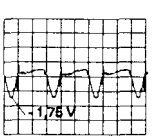
TP 13
1 V/div DC
1 S/div



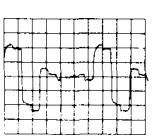
TP 19
50 mV/div AC
10 µS/div



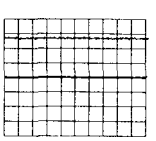
TP 25
0,2 Vldiv AC
5 µS/div



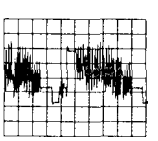
TP 29
0,5 Vldiv AC
5 µS/div



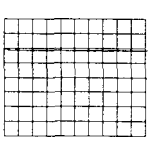
TP 7
0.2 Vidiv AC
10 µS/div



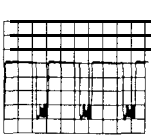
TP 14
1 V/div DC
0.5 mS/div



TP 20
0.5 V/div AC
10 µS/div

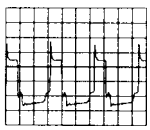


TP 26
1 Vidiv DC

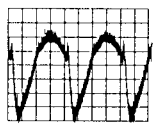


TP 29 6
1 Vidiv AC
10 mS/div

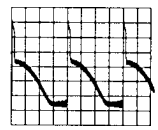
Oscillogrammes / Oszillogramme / Oscillogrammes



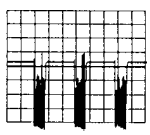
TP 30
2 Vldiv DC
5 µS/div



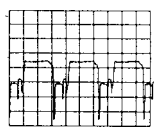
TP 36
0,2 V/div AC
5 mS/div



TP41 b
5 V/div AC
5 mS/div

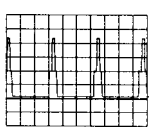


TP 30 6
1 V/div DC
10 mS/div



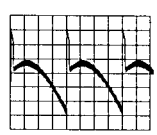
TP 37
2 V/div AC
20 µS/div

TP41 c
0.1 V/div AC
5 mS/div

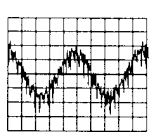


TP 31
2 V/div DC
20 µS/div

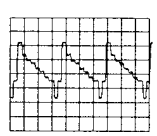
TP 38
20 mV/div AC
20 µS/div



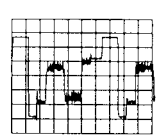
TP 41 d
5 Vldiv AC
5 mS/div



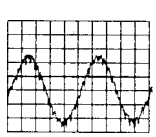
TP 32
50 mV/div DC
0.2 mS/div



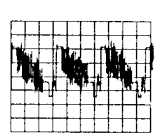
TP 39
0.2 Vldiv AC
20 µS/div



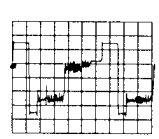
TP 51
130 V_{pp}
115 V_{pp} for 21"



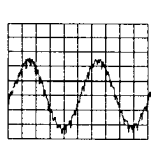
TP 33
2 V/div DC
0,2 mS/div



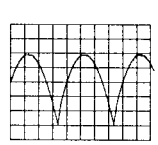
TP 40
0,5 Vldiv AC
20 µS/div



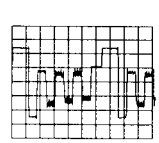
TP 52
120 V_{pp}
115 V_{pp} for 21"



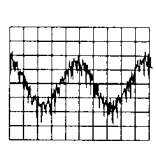
TP 34
2 Vldiv DC
20 µS/div



TP 41
2 Vldiv AC
5 mS/div

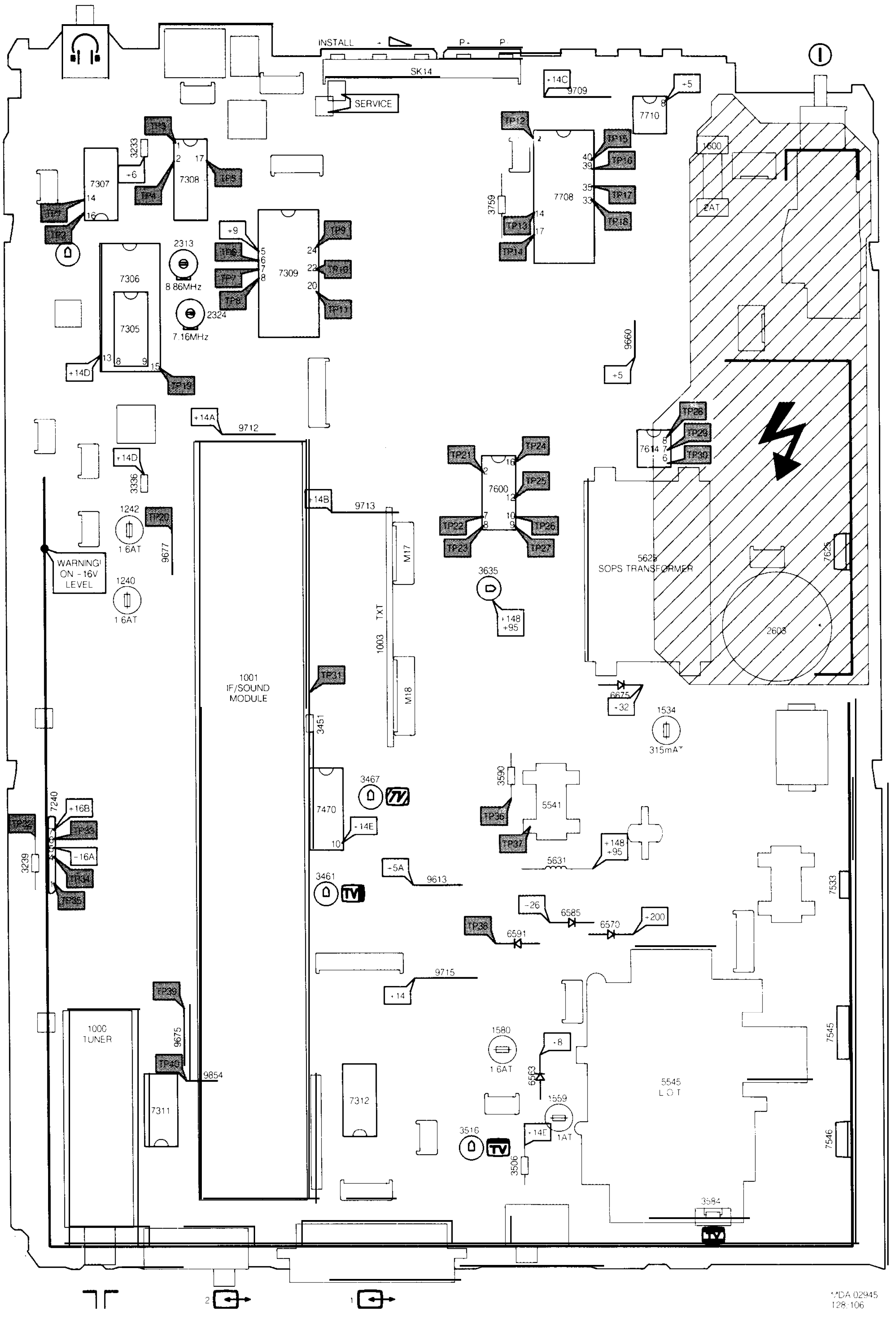


TP 53
120 V_{pp}
110 V_{pp} for 21"



TP 35
50 mV/div DC
0.2 mS/div

TP 41 a
5 Vldiv AC
5 mS/div


INSTALL
SK14
SERVICE
P+
P
7307
7308
7306
7305
7309
7708
7710
7600
7614
1001
IF/SOUND
MODULE
1000
TUNER
7311
7312
7470
7240
5625
SOPS TRANSFORMER
5541
5545
L.O.T
2313
8.86MHz
2324
7.16MHz
1242
1.6AT
1240
1.6AT
1534
315mAT
1580
1.6AT
1559
1AT
WARNING!
ON -16V
LEVEL
1003
TXT
M17
M18
MDA 02945
128.106

Blockdiagram / Blockschaltbild / Schéma-bloc

CHASSIS GR2.2 | 5.3 | 5.4 | CHASSIS GR2.2