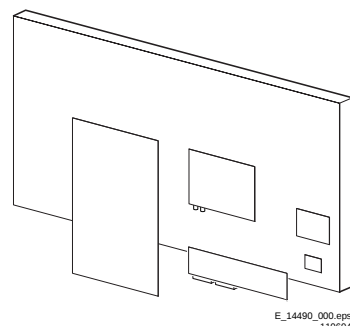


Service Service Service



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Service Manual

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1. Technical Specifications, Connections, and Chassis Overview

Index of this chapter:

1. Technical Specifications
2. Connections
3. Chassis Overview

Note: Figures below can deviate slightly from the actual situation, due to the different set executions.

1.1 Technical Specifications

1.1.1 Vision

Display type	: LCD, S-IPS
	: 16:9
Screen size	: 17 inch (44 cm)
	: 23 inch (59 cm)
	: 26 inch (66 cm)
Resolution (HxV)	: 1280(*3)x768 pixels
	: WXGA
Contrast ratio	: 400:1
Light output	: 450 cd/m ²
Viewing angle (HxV)	: 176x176 deg.
Tuning system	: PLL
Colour systems	: PAL B/G, D/K, I
	: SECAM B/G, D/K, L, L1
Video playback	: NTSC 4.43
	: NTSC 3.58
	: NTSC Play Back
	: PAL 60
	: PAL B/G Play Back
	: SECAM Play Back
Channel selections	: 100 presets
	: UVSH
Aerial input	: 75 ohm, IEC-type
Antenna	: 75 ohm, FM
Dimensions (WxHxD) in mm	: 17 inch: 578x375x240
	: 23 inch: 690x433x240
	: 26 inch: 788x504x270

1.1.2 Sound

Sound systems	: FM/FM (5.5-5.74)
	: BI NICAM BG - 2CS BG
	: NICAM B/G (5.5-5.85)
	: NICAM D/K (6.5-5.85) (Hung)
	: NICAM I (6.0-6.52)
	: NICAM L (6.5(AM)-5.85)
Maximum power	: 17 inch: 2 x 3 W _{rms}
	: 23 inch: 2 x 5 W _{rms}
	: 26 inch: 2 x 5 W _{rms}

1.1.3 Miscellaneous

Power supply:	
Mains voltage	: 95 - 240 V _{ac}
Mains frequency	: 50 / 60 Hz
Ambient conditions:	
- Temperature range	: +5 to +40 deg. C
- Maximum humidity	: 90 % R.H.
Power consumption	
- Normal operation	: 17 inch: 55 W
	: 23 inch: 96 W
	: 26 inch: 110 W

- Standby : < 3 W

1.2 Connections

1.2.1 Rear Connections

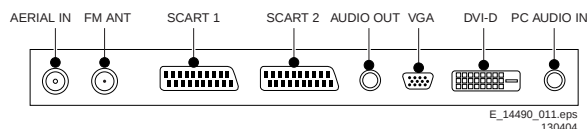
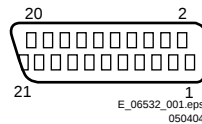


Figure 1-1 Rear connections

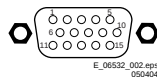
Aerial - In
- IEC-type Coax, 75 ohm

External 2: RGB/YUV - In and CVBS - In/Out**Figure 1-3 SCART connector**

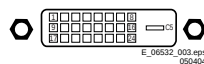
1	- Audio - R	0.5 V _{rms} / 1 kohm
2	- Audio - R	0.5 V _{rms} / 10 kohm
3	- Audio - L	0.5 V _{rms} / 1 kohm
4	- Audio - gnd	Ground
5	- Blue - gnd	Ground
6	- Audio - L	0.5 V _{rms} / 10 kohm
7	- n.c.	
8	- CVBS - status 0 - 2 V: INT	
	4.5 - 7 V: EXT 16:9	
	9.5 - 12 V: EXT 4:3	
9	- Green - gnd	Ground
10	- n.c.	
11	- n.c.	
12	- n.c.	
13	- Red - gnd	Ground
14	- FBL - gnd	Ground
15	- C - in	0.3 V _{pp} / 75 ohm
16	- n.c.	
17	- Video	Ground
18	- Video	Ground
19	- CVBS - out	1 V _{pp} / 75 ohm
20	- CVBS/Y - in	1 V _{pp} / 75 ohm
21	- Shielding	Ground

Audio - out

3	- Audio - R	0.5 V _{rms} / 1 kohm
2	- Audio - L	0.5 V _{rms} / 1 kohm

VGA**Figure 1-4 VGA Connector**

1	- Red	0.7 V _{pp} / 75 ohm
2	- Green	0.7 V _{pp} / 75 ohm
3	- Blue	0.7 V _{pp} / 75 ohm
4	-	Ground
5	-	Ground
6	-	Ground
7	-	Ground
8	-	Ground
9	- 5V_DC	+5 V _{dc}
10	-	Ground
11	-	Ground
12	- DDC_SDA	
13	- H-sync	0 - 5 V
14	- V-sync	0 - 5 V
15	- DDC_SCL	

DVI (for 23 and 26 inch models)**Figure 1-5 DVI connector**

1	- RX2-	
2	- RX2+	
3	- Ground	GND
4	-	n.c.
5	-	n.c.

6	- SCL_DVI	
7	- SDA_DVI	
8	-	n.c.
9	- RX1-	
10	- RX1+	
11	- Ground	GND
12	-	n.c.
13	-	n

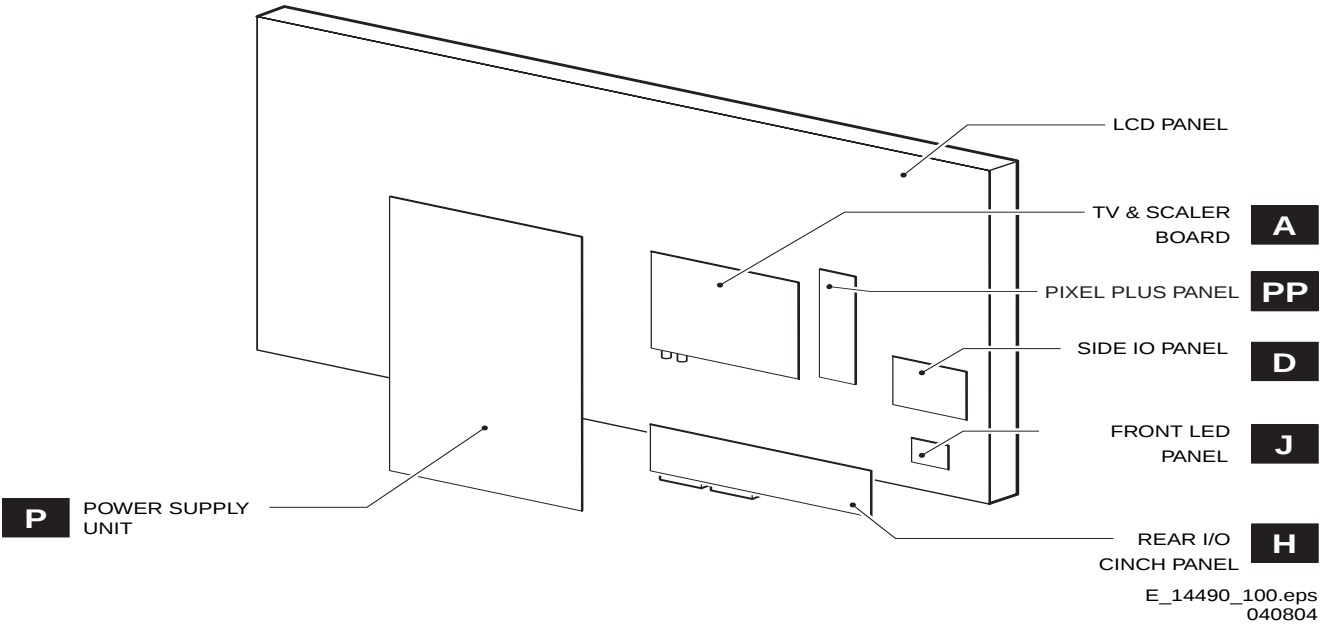


Figure 1-7 Chassis Overview

Device Replacement

The last step in the repair process is to solder the new component on the board. Ideally, the (LF)BGA should be aligned under a microscope or magnifying glass. If this is not possible, try to align the (LF)BGA with any board markers. To reflow the solder, apply a temperature profile according to the *IC data sheet*. So as not to damage neighbouring components, it may be necessary to reduce some temperatures and times.

More Information

For more information on how to handle BGA devices, visit this URL: <http://www.atyourservice.ce.philips.com> (needs subscription). After login, select "Magazine", then go to "Workshop Information". Here you will find Information on how to deal with BGA-ICs.

2.3.4 Lead Free Solder

Some PWBs in this chassis are "lead-free **prepared**". This is indicated on the PWB by the PHILIPS lead-free logo (either by a service-printing or by a sticker). It does not mean that lead-free solder is actually used!

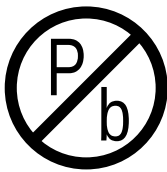


Figure 2-2 Lead-free logo

2.3.5 Practical Service Precautions

- **It makes sense to avoid exposure to electrical shock.** While some sources are expected to have a possible dangerous impact, others of quite high potential are of limited current and are sometimes held in less regard.
- **Always respect voltages.** While some may not be dangerous in themselves, they can cause unexpected reactions - reactions that are best avoided. Before reaching into a powered TV set, it is best to test the high voltage insulation. It is easy to do, and is a good service precaution.

3. Directions for Use

You can download this information from the following website:

<http://www.philips.com/support>

