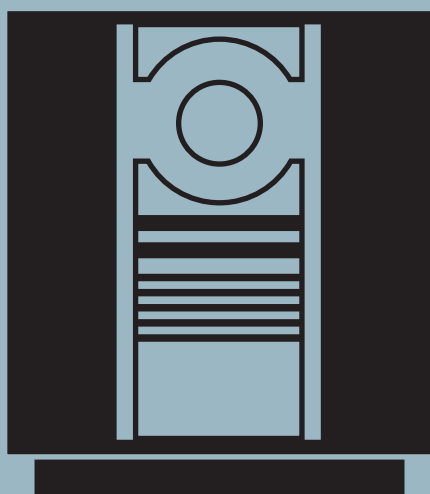


# BeoSound 3200

Type 2681, 2682, 2683, 2684, 2685, 2686, 2687, 2690

Supplement

English, German, French, Italian, Spanish



## CONTENTS

|                              |          |
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| Survey of modules .....      | 1.1      |
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This manual only contain the differences from the BeoSound 3000 to the BeoSound 3200. All other documentation can be found in the BeoSound 3000 manual.

2 Interface f/μPH8

18 Headphone

3 μPH8 Microcomputer

20 IR receiver and left door sensor

5 Display

21 Door sensor right

7 Codec

28 Light supply

8 Stabiliser

86 Tuner-FM/AM-RDS-Stereo decoder

9 Light and motor control

89 Interface f/CD PRO MKII

12 Power Supply, Input select & Pre-amp.

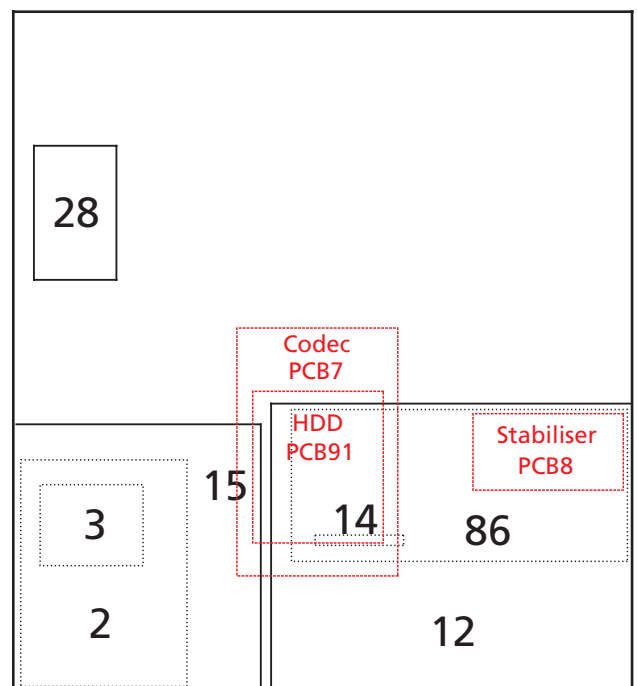
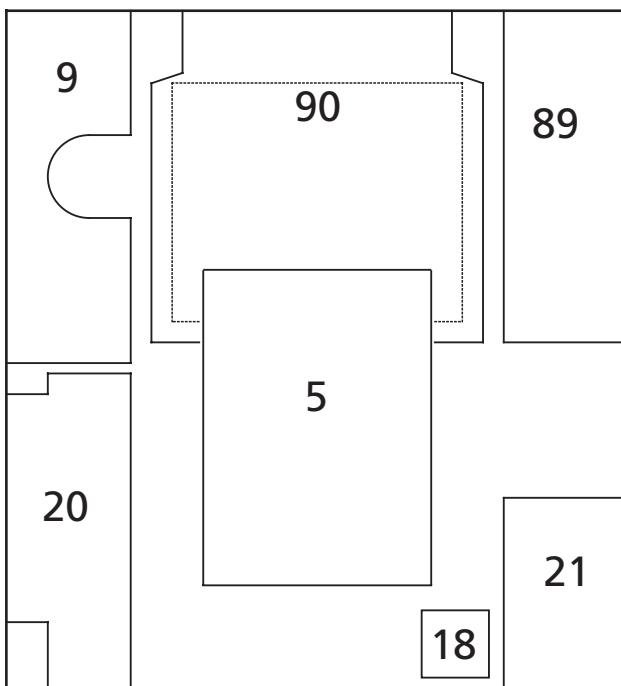
90 CD PRO MKII

14 Master Link Audio interface

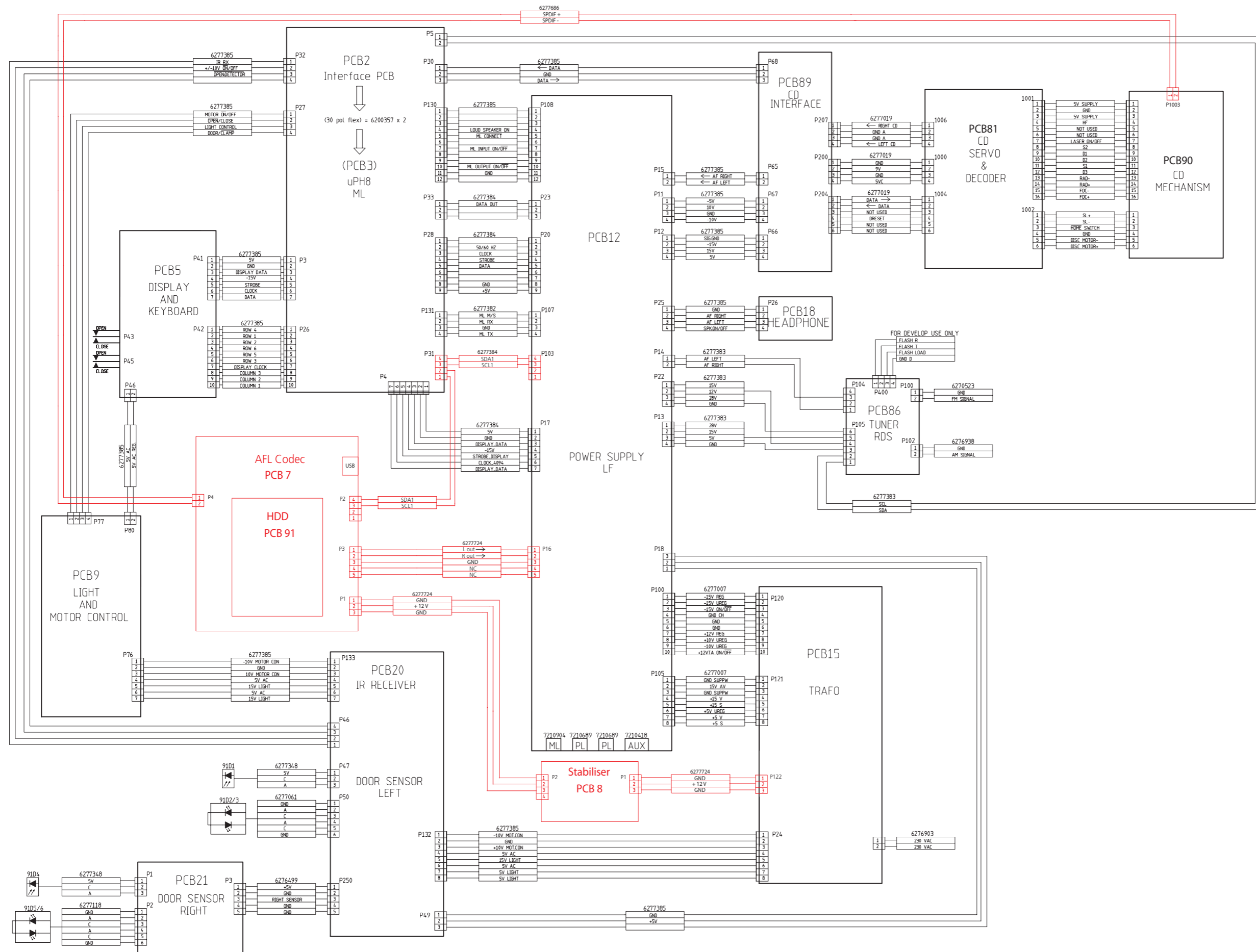
91 Hard Disk Drive

15 Transformer

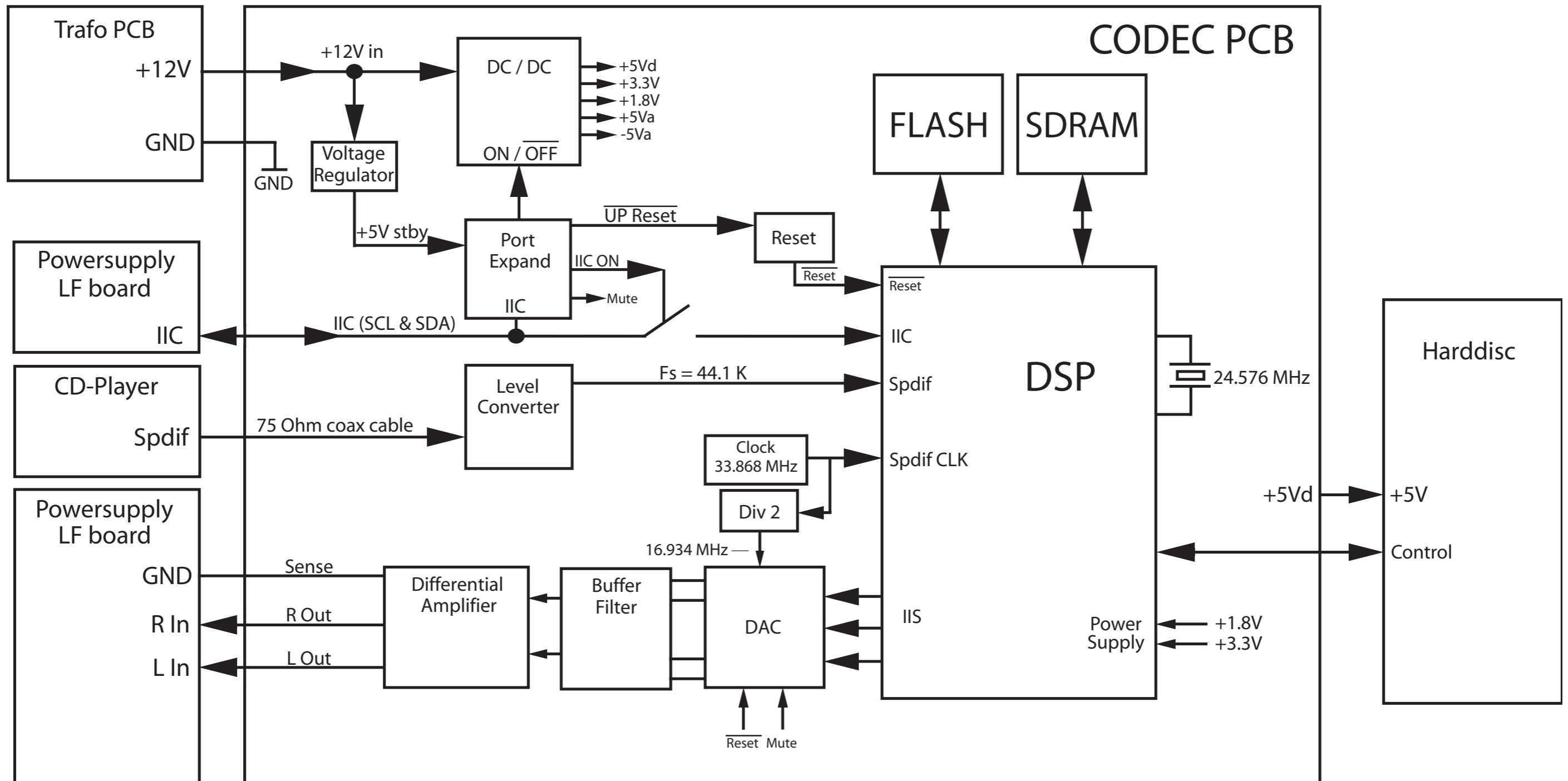
Documentation on the modules marked with black can be found in the BeoSound 3000 service manual (part no. 3538952 and 3538953).



Wiring diagram



Block diagram





**Front**

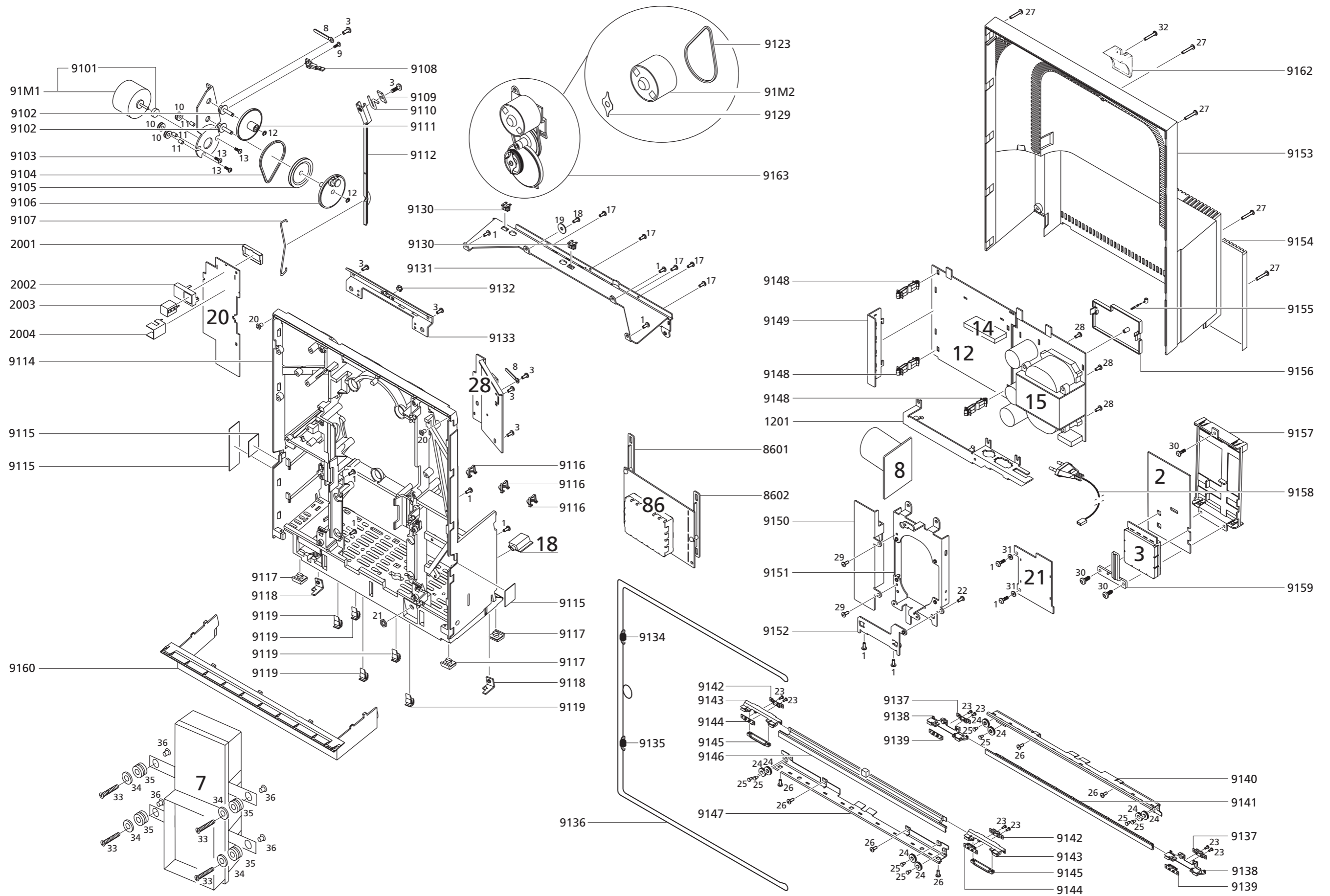
|          |         |  |
|----------|---------|--|
| 9001     | 3162622 | Cover, left                                    |
| 9002     | 3162830 | Glass, left                                    |
| 9003     | 2802056 | Ring f/clamper with magnet strips              |
| 9004     | 3017028 | Wheel  |
| 9005     | 2830111 | Cylinder pin                                   |
| 9006     | 3162652 | Clamper  |
| 9007     | 3153031 | Clamper, complete                              |
| 9008     | 2819251 | Spring   |
| 9009     | 3165027 | Cover f/clamper                                |
| 9010     | 3904213 | Alu foil w/tape                                |
| 9011     | 3162461 | Cover f/CD                                     |
| 9012     | 8230100 | PCB w/lamp                                     |
| 9013     | 3131356 | Light cabinet                                  |
| 9014     | 3322145 | Window   |
| 9015     | 3322137 | Window   |
| 9016     | 2572045 | Spacer   |
| 9017     | 7500270 | Contact spring                                 |
| 9018     | 2816257 | Ground spring                                  |
| 9019     | 2776761 | Set of buttons                                 |
| 9020     | 3451770 | Front piece, complete                          |
| 9021     | 2917025 | Ball   |
| 9022     | 2816235 | Spring   |
| 9023     | 2311045 | Magnet top                                     |
| 9024     | 3333017 | Rubber damping                                 |
| 9025     | 2812132 | Compression spring                             |
| 9026     | 3112418 | Chassis  |
| 9027     | 2810254 | Tension spring                                 |
| 9028     | 3162623 | Cover, right                                   |
| 9029     | 3162831 | Glass, right                                   |
| <hr/>    |         |  |
| 05Module | 8001362 | Display  |
| 0501     | 8330286 | LED backlight module                           |
| 0502     | 7500272 | Contact rubber                                 |
| 0503     | 2574079 | Rubber pad                                     |
| 0504     | 3370148 | Foil   |
| 0505     | 3151285 | Holder, upper                                  |
| 0506     | 3151292 | Holder, lower                                  |
| <hr/>    |         |  |
| 05DP1    | 8330259 | Display, lower                                 |
| 05DP2    | 8330468 | Display, upper                                 |
| <hr/>    |         |  |
| 09Module | 8001550 | Light and motor control                        |
| <hr/>    |         |  |
| 89Module | 8001823 | Interface f/CD PRO MKII                        |
| <hr/>    |         |  |
| 90Module | 8420240 | CD PRO MKII incl. pos. no. 9021, 9022 and 9023 |
| <hr/>    |         |  |

**Screws**

|   |         |                 |
|---|---------|-----------------|
| 1 | 2013144 | Screw 3 x 8mm   |
| 2 | 2036036 | Screw 2.5 x 4mm |
| 3 | 2013118 | Screw 3 x 8mm   |
| 4 | 2013172 | Screw 3 x 6mm   |
| 5 | 2036085 | Screw 2.5 x 6mm |
| 6 | 2038118 | Screw 3 x 6mm   |
| 7 | 2038133 | Screw 3 x 11mm  |

---

Chassis





**Chassis**

|          |         |  |
|----------|---------|--|
| 9101     | 2722055 | Belt pulley  |
| 9102     | 2831070 | Shaft  |
| 9103     | 3151277 | Holder   |
| 9104     | 2732076 | Belt   |
| 9105     | 2722054 | Belt pulley  |
| 9106     | 2700152 | Gear wheel, complete                                   |
| 9107     | 2819295 | Spring   |
| 9108     | 6276391 | Wire w/switch  |
| 9109     | 3035062 | Slide shoe   |
| 9110     | 2819254 | Spring   |
| 9111     | 2700092 | Gear wheel   |
| 9112     | 2854153 | Arm  |
| 9114     | 3114455 | Chassis incl. pos. no. 9117, 9118, 9119, 9133 and 9152 |
| 9115     | 3947546 | Copper tape - 16.5m                                    |
| 9116     | 3152747 | Wire holder  |
| 9117     | 3103303 | Foot   |
| 9118     | 2642030 | Clamp  |
| 9119     | 2311029 | Clip   |
| 9123     | 2732092 | Belt   |
| 9129     | 2815032 | Leaf spring  |
| 9130     | 2311030 | Clip   |
| 9131     | 2548254 | Bracket  |
| 9132     | 3010033 | Stop f/transport screw                                 |
| 9133     | 3031587 | Bracket  |
| 9134     | 2810133 | Tension spring   |
| 9135     | 2810155 | Spring   |
| 9136     | 3955042 | Cord   |
| 9137     | 2391086 | Locking piece  |
| 9138     | 3152727 | Holder   |
| 9139     | 2391087 | Locking piece  |
| 9140     | 2548247 | Bracket  |
| 9141     | 3013095 | Guide rail incl. pos. no. 9137, 9138 and 9139          |
| 9142     | 2391086 | Locking piece  |
| 9143     | 3152727 | Holder   |
| 9144     | 2391087 | Locking piece  |
| 9145     | 3035060 | Slide shoe   |
| 9146     | 3013096 | Guide rail incl. pos. no. 9142, 9143, 9144 and 9145    |
| 9147     | 2548247 | Bracket  |
| 9148     | 3030116 | Hinge  |
| 9149     | 3358275 | Heat sink  |
| 9150     | 3358274 | Heat sink  |
| 9151     | 3152730 | Holder   |
| 9152     | 3124121 | Mounting plate   |
| 9153     | 3430605 | Rear cover   |
| 9154     | 3164900 | Cable cover  |
| 9155     | 3151321 | Strap  |
| 9156     | 3300120 | Screen   |
| 9157     | 3031682 | Frame  |
| 9158     | 6100273 | Mains cable, type 2681-2690 (EU-LAT)                   |
|          | 6100329 | Mains cable, type 2682 (GB)                            |
|          | 6100307 | Mains cable, type 2683-2686 (USA-CDN-TWN)              |
|          | 6100331 | Mains cable, type 2684 (JPN)                           |
|          | 6100332 | Mains cable, type 2685 (AUS)                           |
|          | 6100386 | Mains cable, type 2687 (KOR)                           |
| 9159     | 3031689 | Holder f/PCB3  |
| 9160     | 2560279 | Rail   |
| 9162     | 3152757 | Holder f/antenna                                       |
| 9163     | 2755072 | Gearbox, complete                                      |
| 91M1     | 8400190 | Motor  |
| 91M2     | 8400189 | Motor  |
| 02Module | 8006796 | Interface f/μPH8                                       |
| 03Module | 8000909 | Microprocessor   |
| IC3      | 8344212 | APP SW   |
| IC6      | 8343712 | EEPROM   |

|                |         |   |
|----------------|---------|---|
| 07Module       | 8420268 | HDR-A Kit, complete                       |
| 08Module       | 8100096 | Back-up, complete                         |
|                | 3153037 | Holder                                    |
|                | 2038149 | Screw 3 x 8mm                             |
|                | 3947613 | Foamtape                                  |
| 12/14/15Module | 8000913 | PCB12/14/15 EU, complete                  |
|                | 8000914 | PCB12/14/15 US, complete                  |
| 1201           | 3152799 | Holder                                    |
|                |         | Sockets, see wiring diagram               |
| 18Module       | 8001817 | Headphone                                 |
| 20Module       | 8005738 | IR receiver and left door sensor          |
| 2001           | 3300124 | Screen, inner                             |
| 2002           | 3300123 | Screen, outer                             |
| 2003           | 3304135 | Shielded box                              |
| 2004           | 3300129 | Screen                                    |
| 91D1           | 6277348 | Wire - Plug with reception diode          |
| 91D2           | 6277061 | Wire - Plug with transmitter diode, left  |
| 91D3           | 6277061 | Wire - Plug with transmitter diode, right |
| 21Module       | 8006799 | Door sensor right                         |
| 91D4           | 6277348 | Wire - Plug with reception diode          |
| 91D5           | 6277118 | Wire - Plug with transmitter diode, right |
| 91D6           | 6277118 | Wire - Plug with transmitter diode, right |
| 28Module       | 3358279 | Light supply                              |
| 86Module       | 8006800 | Tuner-FM/AM-RDS-Stereo decoder EU/US      |
|                | 8006801 | Tuner-FM/AM-RDS-Stereo decoder JAP        |
| 8601           | 3031683 | Bracket f/PCB86, right                    |
| 8602           | 3031684 | Bracket f/PCB86, left                     |

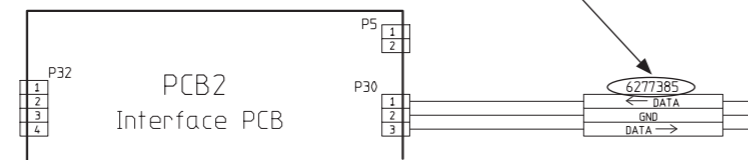
**Screws, washers etc.**

|    |         |                   |
|----|---------|-------------------|
| 1  | 2013144 | Screw 3 x 8mm     |
| 3  | 2013118 | Screw 3 x 8mm     |
| 8  | 7530119 | Solder tag        |
| 9  | 2011310 | Screw 2.2 x 4.5mm |
| 10 | 2938237 | Bushing           |
| 11 | 2930074 | Spacer            |
| 12 | 2390001 | Lock washer       |
| 13 | 2036061 | Screw 2.6 x 6.5mm |
| 17 | 2038149 | Screw 3 x 8mm     |
| 18 | 2013218 | Screw             |
| 19 | 2625002 | Washer            |
| 20 | 2389064 | Nut               |
| 21 | 2380145 | Nut               |
| 22 | 2058017 | Screw 3 x 8mm     |
| 23 | 2036066 | Screw 2.5 x 2.7mm |
| 24 | 2724078 | Cord pulley       |
| 25 | 2364019 | Rivet             |
| 26 | 2011050 | Screw 3 x 8mm     |
| 27 | 2038094 | Screw 3 x 10mm    |
| 28 | 2039064 | Screw 3 x 12mm    |
| 29 | 2039062 | Screw 3 x 5mm     |
| 30 | 2039035 | Screw 3 x 8mm     |
| 31 | 2622052 | Washer            |
| 32 | 2039014 | Screw 3 x 20mm    |
| 33 | 2042076 | Screw 4 x 10mm    |
| 34 | 2622024 | Washer            |
| 35 | 2938277 | Rubber bushing    |
| 36 | 2930106 | Bushing           |

**Wire bundles**

See wiring diagram page 2.1

The part no. is printed on the diagram above the wire bundle, as shown.



**Parts not shown**

3657455 Product cover

**Packing**

3392405 Outer carton  
3397824 Foam packing  
3946038 Foil

**User's Guide**

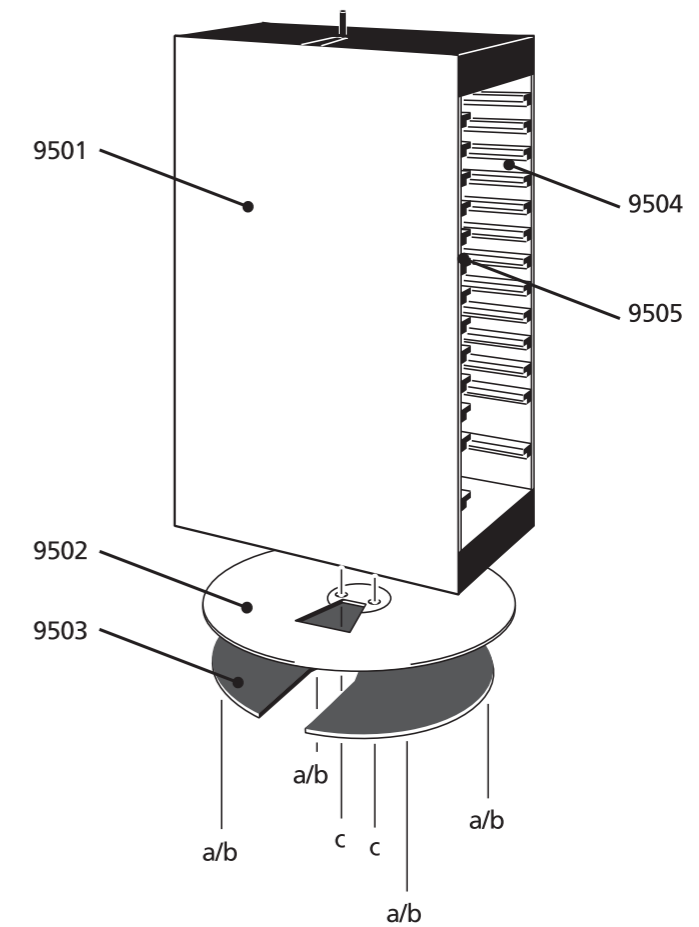
3508588 Danish  
3508589 Swedish  
3508590 Finnish  
3508591 English  
3508592 German  
3508593 Dutch  
3508594 French  
3508595 Italian  
3508596 Spanish  
3508597 Portuguese  
3508598 Greek  
3508599 Russian  
3508600 Japanese  
3508601 Taiwanese  
3508602 Korean

**Supplement**

3504709 Danish  
3504710 Swedish  
3504711 Finnish  
3504712 English  
3504713 German  
3504714 Dutch  
3504715 French  
3504716 Italian  
3504717 Spanish  
3504718 Portuguese  
3504719 Greek  
3504720 Russian  
3504721 Japanese  
3504722 Taiwanese  
3504723 Korean

**Stand, type 2051**

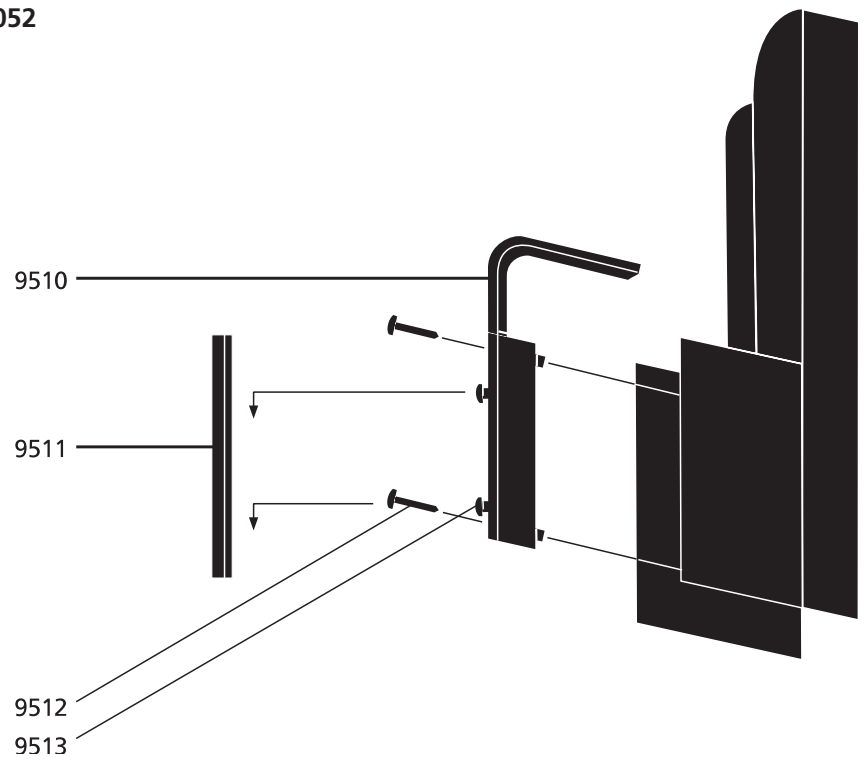
1205111, silver  
1205194, green  
1205196, black  
1205198, blue  
1205199, red



|      |         |                     |
|------|---------|---------------------|
| 9501 | 3451589 | Cover plate, silver |
|      | 3451591 | Cover plate, green  |
|      | 3451592 | Cover plate, black  |
|      | 3451593 | Cover plate, blue   |
|      | 3451594 | Cover plate, red    |
| 9502 | 3458890 | Cover plate         |
| 9503 | 2752043 | Bottom              |
| 9504 | 3013094 | Guide rail, right   |
| 9505 | 3013094 | Guide rail, left    |

|   |         |                |
|---|---------|----------------|
| a | 3103390 | Foot, spike    |
| b | 3103392 | Foot, soft     |
| c | 2046040 | Screw 6 x 63mm |
| c | 2046041 | Screw 6 x 66mm |

3502921 Setting-up guide  
3397953 Foam packing  
3392423 Outer carton

**Center wall bracket, black, type 2052**  
1205266

---

|      |         |                        |
|------|---------|------------------------|
| 9510 | 2777061 | Handle, right and left |
| 9511 | 1205266 | Wall bracket           |
| 9512 | 2038130 | Screw 3 x 25mm         |
| 9513 | 2043016 | Screw 4 x 10mm         |
|      | 2930126 | Bush                   |

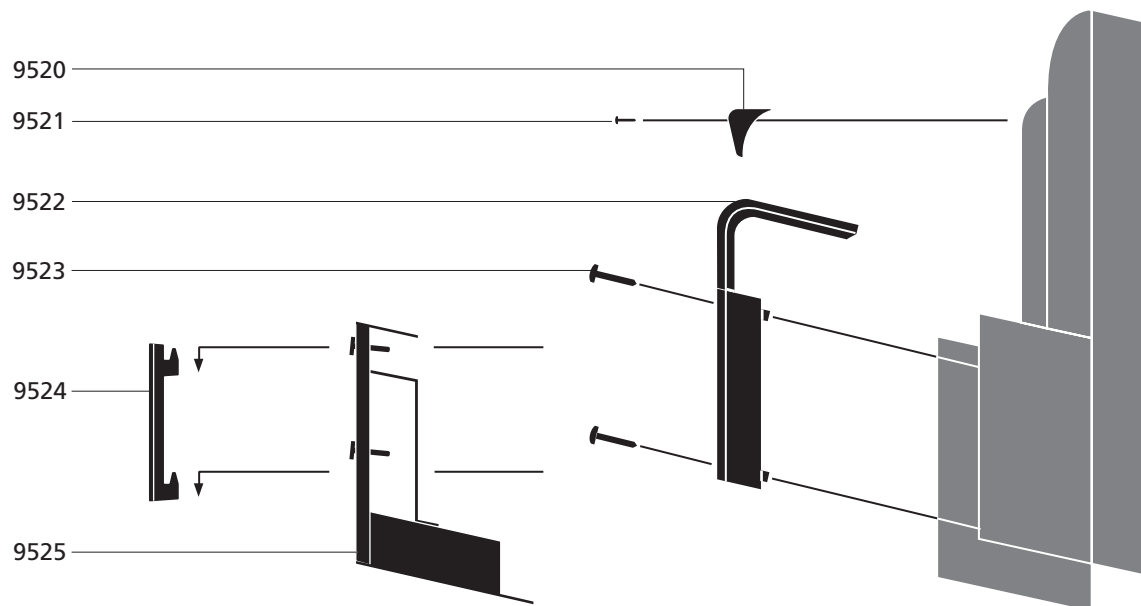
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|         |                  |
|---------|------------------|
| 3390432 | Wire holder      |
| 3502922 | Setting-up guide |

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**System wall bracket, black, type 2087**

1208766




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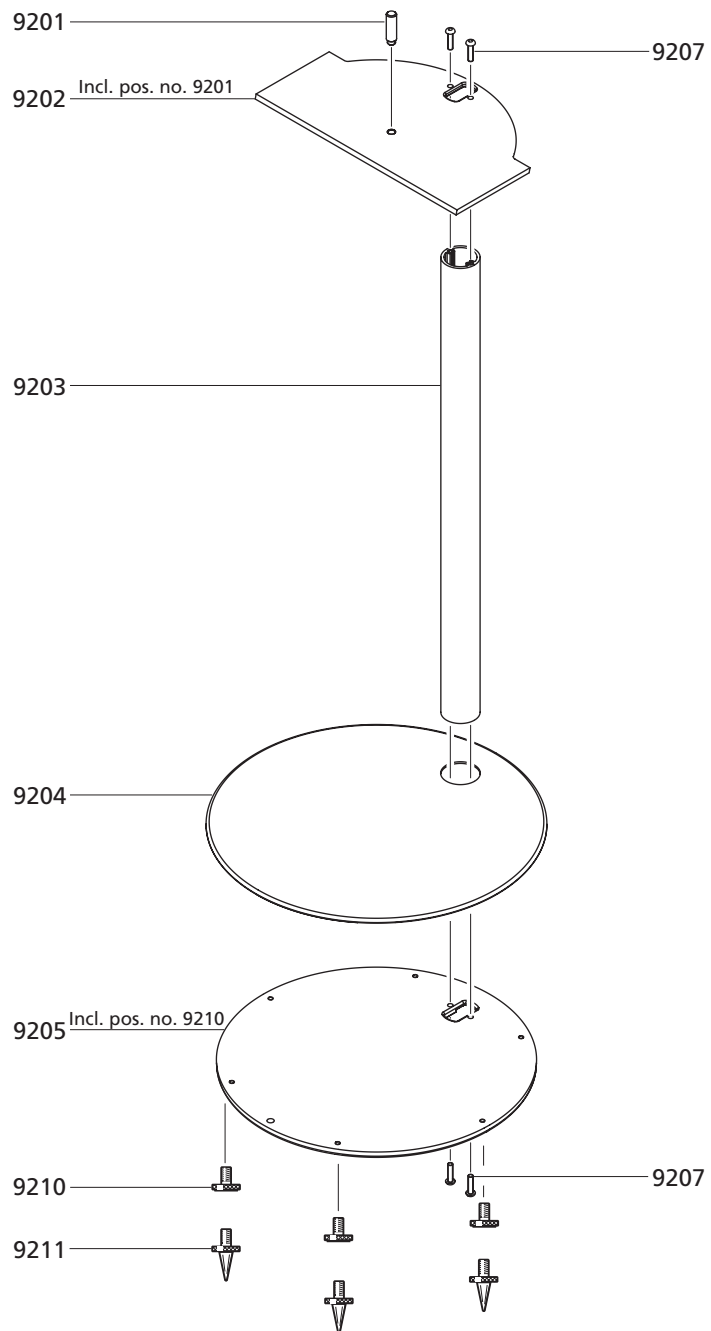
|      |         |                               |
|------|---------|-------------------------------|
| 9520 | 3152790 | Holder f/antenna              |
| 9521 | 2039014 | Screw 3 x 20mm                |
| 9522 | 2777061 | Handle, right and left        |
| 9523 | 2038130 | Screw 3 x 25mm                |
| 9524 | 3031319 | Wall plate                    |
| 9525 | 1208726 | System wall bracket, complete |

---

|         |                        |
|---------|------------------------|
| 3390341 | Screw assortment       |
| 3390432 | Wire holder assortment |
| 3502996 | Setting-up guide       |
| 3392185 | Outer carton           |
| 3397774 | Foam packing           |

---

Floor center stand – type 2068



|      |         |                               |
|------|---------|-------------------------------|
| 9201 | 2993045 | Pin                           |
| 9202 | 3459259 | Top plate incl. pos. no. 9201 |
| 9203 | 2950217 | Aluminium tube                |
| 9204 | 3459258 | Cover plate                   |
| 9205 | 2752082 | Foot incl. pos. no. 9210      |
| 9207 | 2044064 | Screw M5x20mm                 |
| 9210 | 3103392 | Foot "soft"                   |
| 9211 | 3103390 | Foot "spike"                  |

|         |  |  |
|---------|--|--|
| 3390615 | Bag incl. 4 pcs. of 9207, 6 pcs. of 9211 and 1 allen key |  |
| 3504636 | Setting-up guide   |  |
| 3392709 | Outer carton   |  |
| 3396132 | Foam packing top/bottom                                  |  |

## TM (test mode) names/function for adjustments and service

### Tuner test modes

TM 01: Automatic offset-adjustment for FM  
 TM 02: Manual offset-adjustment for FM  
 TM 03: Status for offset-adjustment  
 TM 04: Variant status  
 TM 06: Check RDS name  
 TM 07: Setting up of tuner variant

### Master test modes

TM 20: Test of display functions  
 TM 21: Open ML-out  
 TM 22: Test of keyboard functions  
 TM 23: Software version  
 TM 24: Service operation counter  
 TM 25: Open ML-in  
 TM 27: Service of error detection  
 TM 28: Validity test for ROM/RAM/EEPROM  
 TM 31: Set default settings  
 (TM 31 defaults all CD settings, radio settings and deletes all tracks from CD MEM!)  
 TM 32: Read-out of product ID  
 TM 34: Read-out of options  
 TM 35: Power down ON  
 TM 36: Power down OFF  
 TM 37: Set default settings  
 (TM 37 does not default CD MEM)

### CD test modes

TM 61: Focus on  
 TM 62: Focus off  
 TM 63: Starts turntable motor  
 TM 64: Stops turntable motor  
 TM 65: Light pen to outermost position  
 TM 66: Light pen to the innermost position  
 TM 67: Starts CD  
 TM 68: Stops CD  
 TM 70: Updates tracklist in EEPROM  
 TM 71: Power on the CODEC module  
 TM 78: Dump HDD serial number to EEPROM (used at replacement of the HDD)

## Test mode activating

Wait 20 - 30 sec. after connecting to mains.  
 By means of keyboard from St.by mode: Press **Display 0 2 5 8** with no more than 2 sec. between the individual enterings.  
 By means of remote control from St.by (can only be done if the product is not in option 0) :  
 Press **SHIFT 9 0 2 5 8** with only 2 sec. between.  
 The remote control has to be in RADIO or CD option.  
 In TM the tuner is fully functional and may overwrite the display but the TM will continue.

## Deactivating

Press ● and the display shows "TM OFF" or disconnect from mains.

**Glass doors lock**

When the glass doors are locked it is not possible to open them by magic open. The glass doors can only be locked if the product is in St. by, the glass doors are closed and only by remote control.

Press **SHIFT 9 0 3 6 9** with no more than 2 sec. between the individual entering.

The display shows "LOCKED".

To unlock the glass doors press **SHIFT 9 0 3 6 9** with no more than 2 sec. between the individual entering.

The display shows "UNLOCKED".

The function will be remembered in NVRAM after disconnecting from mains.

From TM01 to TM09.

- Wait 20 - 30 sec. after connecting to mains.
- By keyboard from St.by mode: Press **Display 0 2 5 8 RADIO** with no more than 2 sec. between the individual entering. Then key in the TM no.
- By remote control from St.by (can only be done if the product is not in option 0):
- Press **SHIFT 9 0 2 5 8** with no more than 2 sec. between the individual entering. Then key in TM no.

**TM01**

Automatic offset-adjustment for FM is done by letting the tuner search for the frequency 100 MHz (84 MHz for Japan) and when the signal is found the offset will be calculated and stored in NVRAM. The display shows "A OFFSET".

If failure the display shows "TM ERROR".

**TM02**

Manual offset-adjustment for FM is done by key-in a frequency. The tuner search tunes for this frequency and the offset will be calculated and stored in NVRAM.

The display shows "M OFFSET".

If failure the display shows "TM ERROR".

**TM03**

Read-out offset status.

If the offset-adjustment is needed the display shows "TM ERROR".

If the result of the offset-adjustment is positive the display shows "OFFSET n".

If the result of the offset-adjustment is negative the display shows "OFFSET -n".

The figure n is in steps of 12.5 kHz.

**TM04**

Read-out variant status: EUROPA (EU) FM, EUROPA (EU) FM/AM, USA (US) and JAPAN (JP). The display shows e.g. "EU FM/AM".

If failure the display shows "TM ERROR".

**TM06**

Checking that the RDS name of the radio programme in question is RDS-PS.

The display shows "TM OK".

If wrong RDS name or if name is missing the display shows "TM ERROR".

## TM07

Tuner variant setup:

If from EU or AUS to US:

Key in the 3 digits indicating the choice.

No. 0: 003 = variant US

No. 1: 001 = RDS on, or 000 = RDS off

No. 2: 175 = FM starts in 500 kHz

No. 3: 216 = FM stops in 500 kHz

No. 4: 075 = Deemphas in  $\mu$ s

No. 5: 000 = LW starts in kHz dividing with AM raster. 0 if no LW

No. 6: 000 = LW stops in kHz dividing with AM raster. 0 if no LW

No. 7: 053 = MW starts in kHz dividing with AM raster. 0 if no MW

No. 8: 171 = MW stops in kHz dividing with AM raster. 0 if no MW

No. 9: 010 = AM raster. Steps in kHz. 0 if no AM

If from US or AUS to EU.

No. 0: 001 = variant EU FM. (002 if EU FM/AM)

No. 1: 001 = RDS on, or 000 = RDS off

No. 2: 175 = FM starts in 500 kHz

No. 3: 216 = FM stops in 500 kHz

No. 4: 050 = Deemphas in  $\mu$ s

No. 5: 017 = LW starts in kHz dividing with AM raster. 0 if no LW

No. 6: 031 = LW stops in kHz dividing with AM raster. 0 if no LW

No. 7: 058 = MW starts in kHz dividing with AM raster. 0 if no MW

No. 8: 179 = MW stops in kHz dividing with AM raster. 0 if no MW

No. 9: 009 = AM raster. Steps in kHz. 0 if no AM

If from EU or US to AUS

No. 0: 005 = variant AUS

No. 1: 001 = RDS on, or 000 = RDS off

No. 2: 175 = FM starts in 500 kHz

No. 3: 216 = FM stops in 500 kHz

No. 4: 050 = Deemphas in  $\mu$ s

No. 5: 000 = LW starts in kHz dividing with AM raster. 0 if no LW

No. 6: 000 = LW stops in kHz dividing with AM raster. 0 if no LW

No. 7: 058 = MW starts in kHz dividing with AM raster. 0 if no MW

No. 8: 179 = MW stops in kHz dividing with AM raster. 0 if no MW

No. 9: 009 = AM raster. Steps in kHz. 0 if no AM



## TM20

Checking the display by showing 3 types of letters in 3 rounds until all pixels are used/tested.

Press **PLAY** to shift between icons in the display.

## TM21

Opens the signal from AUX-plug to the ML-output.

The display shows "AUX 2 ML".

## TM22

Test of key-board functions.

By pressing a key for instance **CD** the display will show "CD".

The testmode can only be ended by IR-remote control command "STOP".

This testmode can only be activated by IR-remote control command.

## TM23

Before activating TM23, right after have connected the mains, you need to activate all sources (radio, CD and CD MEM).

Read out of Software version. Press **PLAY** to continue.

AP xx.xxx = Application processor. (Main CPU)

OS xx.xxx = APOS

IO xx.xxx = I/O processor

TU xx.xxx = Tuner processor. (Tuner-FEP)

CD xx.xxx = CD processor. (CD-FEP)

CDM xx.xxx = PPI CODEC

## TM24

Service running counter.

First the Stand-by time will appear.

Press **PLAY** to toggle between the different counters.

- St. by time
- Radio-mode time
- CD-mode time
- CD MEM-mode time
- AUX-mode time
- N.Radio-mode time
- N.Music-mode time
- ML active time
- Theft protection active time
- Number of times the theft protection has been unlocked.
- CD Copy-active time

All numbers are stated in interval of 10. (e.g. 3 = 30.)

When all counters have been shown the display will ask for a new test mode.

## TM25

Opens ML-in.

A source must be selected to have a correct measurement.

Signal coming from the ML-in, exit on the PL and AUX as by normal selection.

## TM27

Service Error detection.

The last registered errors regarding EEPROM, ML, IIC-bus, RS232 driver, CD and lids can be read-out. This test mode is also used for deleting all error-registrations.

To toggle between error indications press **PLAY**. When all errors are read press **PLAY** to reset all errors registered or press **STOP** to keep error register.

By pressing ▲ or ▼ the time for errors will be shown.

YY.MM.DD

hh.mm.ss.

MEM: last EEPROM error.

- 2: EEPROM writes error
- 3: EEPROM reads error
- 4: EEPROM reads error only FF
- 11: EEPROM writes overflow
- 12: EEPROM controls init fail
- 13: EEPROM controls calloc fail
- 99: EEPROM content error

ML: Last error regarding to ML.

- 8: Link tied down
- 16: Link tied up
- 32: Configuration impossible

IIC: Component which gave the last error regarding IIC-bus.

- 102: Tuner FEP
- 136: Sound Processor
- 208: Clock

SER: The last error from the RS232 driver.

- 02: CDA queue not attached
- 03: CDA error timeout
- 04: CDA error unknown buf addr
- 05: CDA error data expected
- 06: CDA error unknown CMD
- 07: CDA error checksum
- 08: CDA error RX timeout
- 09: CDA error out of buffers
- 10: CDA error uart overrun
- 11: CDA error uart framing
- 12: CDA error uart parity

CD: CD error.

- 2: Focus error  
The CD could not focus within the time limit.
- 3: Radial error  
Set when the CD did not get on track after several retries.
- 4: Turntable motor error  
Set when the disc did not spin up or down within the limit.
- 5: PLL lock error  
Set when PLL is out of lock during tracking mode.
- 6: Jump error  
Set when a seek could not be performed or an error occurred during a binary search.
- 7: Subcode error  
Set when a subcode could not be read within the time limit.

- 8: TOC read error  
Set when the TOC could not be read, no access possible to lead-in.
- 20: Serial communication overrun error  
Expected command byte, but received a data byte.
- 22: Serial communication noise error  
Check did not match.
- 23: Serial communication software error  
Queue full.
- 37: Selection error

OS: Error in the operation system.

- 07: IL TLG from FEP to APOS
- 08: IL TLG from APOS to FEP
- 09: IL RX TX BUF limit
- 13: FEP does not exist

IO: Last error in the I/O driver.

- 01: IIC1 2 error
- 05: Cannot configure FEP
- 06: FEP communication error
- 07: IL TGL from FEP to APOS
- 08: IL TGL from APOS to FEP
- 09: Interlink RX TX BUF limit
- 14: FEP does not exist
- 21: MLSL timeout error
- 22: MLSL TX BUF full TLG does not send
- 23: ML key lost key repaired
- 24: External communication not allowed in preproject
- 25: LSL format error
- 26: LS IR format error
- 27: LSL TX imposs
- 28: LSL link tied up
- 29: LSL link tied down
- 30: Generic ICB error
- 31: ICB L7 timeout
- 32: ICB L7 illegal timeout
- 33: ICB L7 out of repositories
- 34: ICB L7 illegal L7 ack
- 35: ICB L7 Acknowledge unexpected
- 36: ICB L7 read response unexpected
- 37: ICB L7 illegal resource type
- 38: ICB L7 resource still running
- 39: ICB L7 resource already free
- 40: ICB L7 illegal IOP service
- 41: ICB L7 illegal IOP object
- 42: ICB L7 telegram flushed
- 43: ICB L7 resource disabled
- 44: ICB L7 HW clock illegal command
- 45: ICB L7 HW clock illegal event
- 46: ICB L2 retrans limit reached
- 47: IIC component disabled
- 48: Power down of IOP impossible
- 49: CDS bus disabled

AP: Last error in the main micro-processor.

- 16: Illegal timer ID
- 17: Timer not free
- 21: Illegal date value
- 22: Illegal time value
- 23: Illegal timer parameters
- 32: Illegal simple message ID
- 33: Out of message buffers
- 34: Message buffer virtual limit reached
- 64: Non ISR func. called from ISR
- 65: Physical stack limit reached
- 66: Stack virtual limit reached
- 67: Out of IAS objects
- 68: IAS signal lost
- 69: Overflow in IAS FIFO
- 70: IR queue not attached
- 71: LSL queue not attached
- 72: Scan queue not attached
- 73: Active keyscan queue not attached
- 74: Uart 0 queue not attached
- 75: TIIC queue not attached
- 76: RIIC queue not attached
- 77: Out of power down callback OBJ
- 78: Power down entered with timer running
- 79: Watchdog reset

IOP: Last error in the I/O microprocessor.

- 01: Watchdog reset
- 02: ICB layer 2 timeout
- 03: ICB layer 7 illegal service
- 04 ICB layer 7 illegal object
- 05: Reg mem data frame not valid
- 06: Data frame not valid
- 07: Illegal port ID
- 08: LSL TX impossible
- 09: LSL tied up
- 10: LSL tied down
- 11: IIC slave buffer full
- 12: IIC slave transmit timeout
- 13: IIC illegal switch port
- 14: IIC2 slave addressed
- 15: IIC conditional polling timeout
- 16: IOP IIC error
- 17: PD entered while service waitning
- 18: TP ICBL7 illegal command
- 19: TP module HW error APOS
- 21: TP clock error APOS

CD MEM: Last error in CD MEM

- 00: No error
- 01: Illegal command
- 02: Illegal group id value
- 03: Illegal cd id value
- 04: Illegal track id value
- 05: Execution error
- 06: Command not allowed now
- 07: Operation not allowed now
- 08: Illegal name
- 09: Bad song
- 10: Record failure
- 11: Illegal return code
- 16: HDD format error
- 17: HDD internal error
- 18: HDD access error
- 19: HDD copy failure
- 20: HDD move error
- 21: HDD bin full
- 22: HDD delete error
- 23: HDD defragment error

#### TM28

This TM checks the function of ROM, RAM, EEPROM. (O, A, P).

To readout TM, O and A have to be (+).

E.g. MEM +-+ indicates error in the EEPROM.

#### TM31

(During TM31, do not disconnect the mains before "OK" is displayed. This can take several minutes).

Default settings for sale purpose.

Option: 1  
 Volume: 32  
 Balance: 0  
 Bass: 0  
 Treble: 0  
 Loudness: OFF

|                                       |
|---------------------------------------|
| Radio programs erased.                |
| CD settings erased.                   |
| CD MEM erased (all tracks is deleted) |

! (TM37 is similar, but does not contain the CD MEM step)

Timer settings erased.

After default settings the display shows DEFAULT TM ERROR.

If error occurs in TM the display will show TM ERROR.

Item-number, serial-number, type-number, master pin-code, running counter and all offset adjustments will not be erased.

#### TM32

ID-readout of the product.

Press **PLAY** to toggle between the ID-numbers.

Item = 7 figures.

Type = 4 figures.

Serial = 8 figures.

MA PIN = OK or ERR.

If error in the readout all figures = 0.

---

|   |  |
|---|--|
| TM34  | Option readout.  |
| TM35  | Power down ON.<br>When power down mode is possible the display = TM OK.  |
| TM36  | Power down OFF.<br>When power down mode is not possible the display = TM OK.   |
| TM37  | Default settings for sale purpose.<br>Option: 1<br>Volume: 32<br>Balance: 0<br>Bass: 0<br>Treble: 0<br>Loudness: OFF<br>Radio programs erased.<br>CD settings erased.<br>Timer settings erased.<br>After default settings the display shows DEFAULT TM ERROR.<br>If error occurs in TM the display will show TM ERROR.<br>Item-number, serial-number, type-number, master pin-code, running counter and all offset adjustments will not be erased. |
| To use CD test modes it is necessary to select CD, in the TM the HF-signal will not be used |  |
| TM61  | Focus ON.<br>The CD-pen will try to focus.<br>This TM can only be turned off by using TM62.  |
| TM62  | Focus OFF.<br>The CD-pen will be turned OFF.   |
| TM63  | Starts turntable motor.<br>This TM can only be turned off by using TM64.   |
| TM64  | Turns off the turntable motor.   |
| TM65  | Light pen to outermost position.<br>The optical pickup unit goes to the outermost position and stays there.<br>This TM can only be turned off by TM66. Do not give other commands in the meantime.   |
| TM66  | Light pen to the innermost position.<br>The optical pickup unit goes to the innermost position and stays there.  |

**TM67**

The CD starts playing.

**TM68**

The CD stops playing.

When error in CD-TM the Error-number refers to TM27 CD-errors.

**TM70**

Updates tracklist in EEPROM (is used when HDD is replaced).

(Can take several minutes, depending on the amount of recorded material).

**TM71**

CODEC power on.

Is used to power up the CODEC module when the module is flash updated.

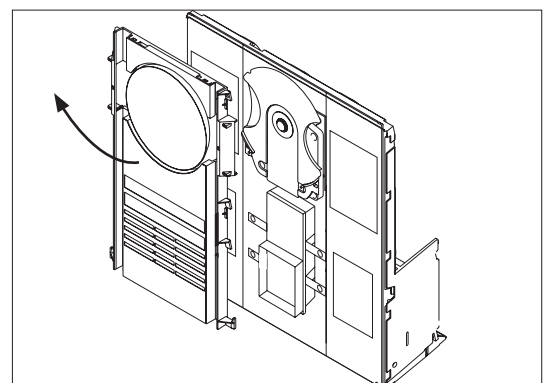
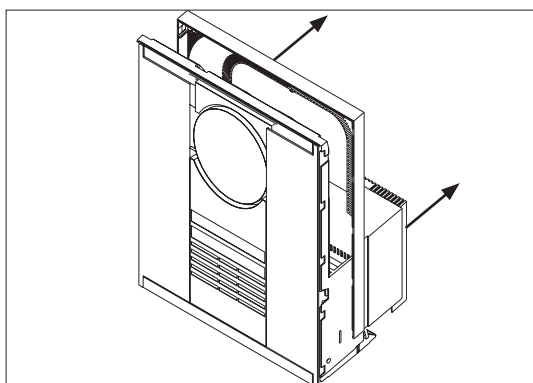
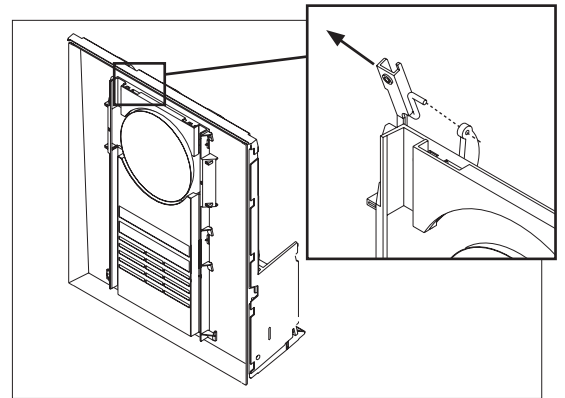
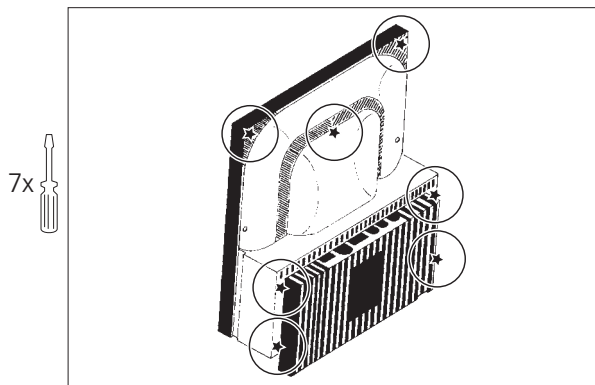
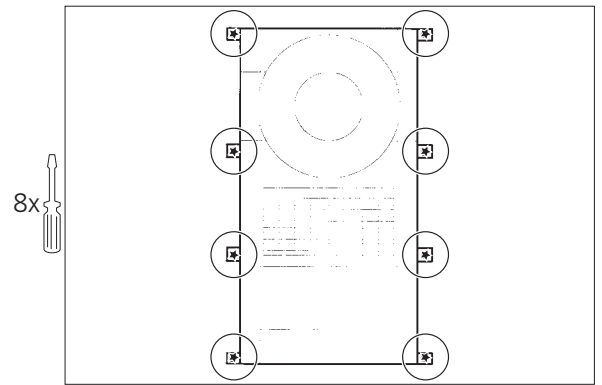
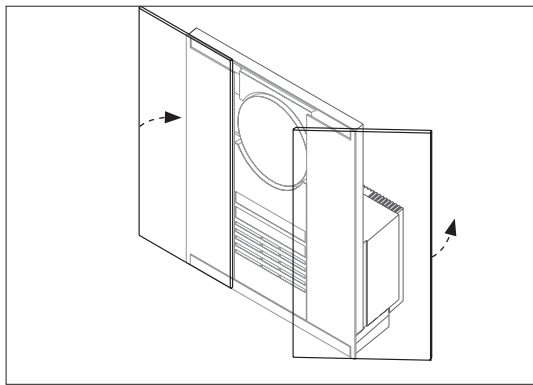
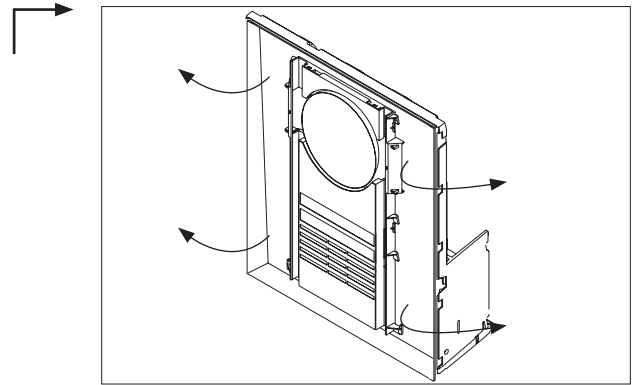
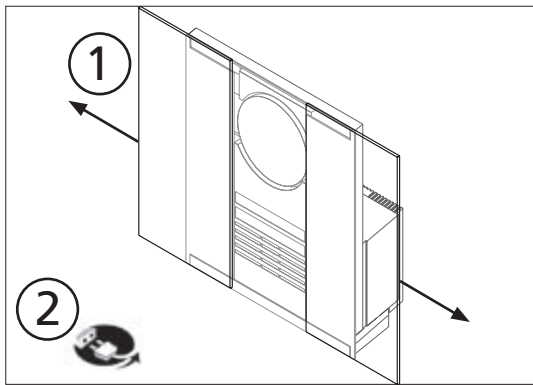
The display show "FLASH" during the testmode.

**TM78**

Store HDD serial number in EEPROM.

(Is used after replacement of the HDD).

BeoSound 3200 in service position





## Service tool

This is a short description of the service tool, a full description will follow the HDR-A kit.

When ordering a HDR-A kit you will be able to:

Copy the contents from the old HDD to the new (depending on the defect)

Flash update the PPI sw on the CODEC module

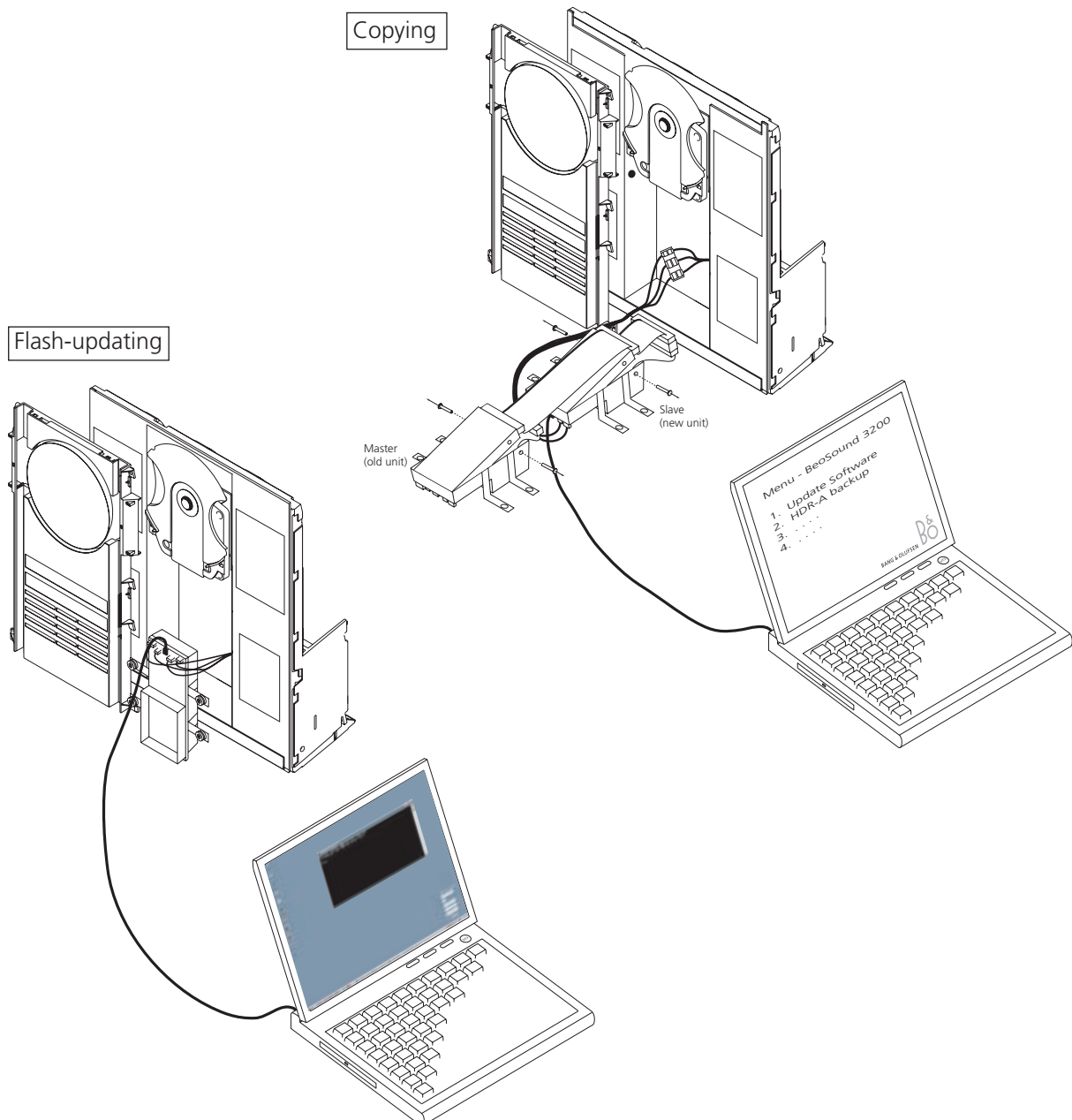
Outread the HDD serial number

Format every single group (red, blue, yellow or green)

Etc.

All actions is performed by connecting the CODEC module to a computer via USB cable.

All cables will follow the HDR-A kit (and the service tool program is downloaded from the Retail System).



## Insulation test

Each set must be insulation tested after having been dismantled.  
Make the test when the set has been reassembled and is ready to be returned to the customer.

Flashovers must not occur during the testing procedure!

Make the insulation test as follows:

Short-circuit the two pins of the mains plug and connect them to one of the terminals of the insulation tester. Connect the other terminal of the insulation tester to the chassis pin of the headphone socket.

NOTE!

To avoid damaging the set it is essential that both terminals of the insulation tester have good contact.

Slowly turn the voltage control of the insulation tester until a voltage of 2.5kV and max. 10mA is obtained. Maintain that voltage for one second, then slowly turn it down again.

## Isolationsprüfung

Nach der Zerlegung muß bei jedem Gerät eine Isolationsprüfung vorgenommen werden.

Prüfung vornehmen, wenn das Gerät zusammengebaut und zur Auslieferung an den Kunden bereit ist.

Während der Prüfung dürfen keine Überschläge auftreten!

Isolationsprüfung folgendermaßen vornehmen:

Beide Stifte des Netzsteckers kurzschließen und mit einer der Klemmen des Isolationsprüfers verbinden. Andere Klemme des Isolationsprüfers am Masseanschluß der Kopfhörerbuchse anschließen.

ACHTUNG!

Um Beschädigungen des Geräts zu vermeiden, müssen beide Klemmen des Isolationsprüfers unbedingt einen einwandfreien Kontakt haben.

Spannungseinstellung des Isolationsprüfers langsam auf eine Spannung von 2,5 kV und max. 10mA erhöhen. Diese Spannung eine Sekunde beibehalten, anschließend langsam verringern.