

Published by:  
Service Department Audio



# SERVICE NEWSLETTER

**08.01** TYPENUMBER(S): **ACT100**

**INFORMATION** : Supplementary information of Newsletter item 2003.04.01:  
Actually, the product is not splash proof. No specific action can be done on the current product. Product management has agreed to replace the set as a service solution.

**REMARKS** :

**08.02** TYPENUMBER(S): **ACT200, ACT210**

**INFORMATION** : The USB socket might get damaged after heavy use. It is very time consuming to replace the socket. In order to reduce the repair time, the complete USB panel has been added as service spare part. The panel is now available with following codenumber:

1001 3140 118 85951 PCBA - USB SOCKET

**REMARKS** :

**08.03** TYPENUMBER(S): **ACT200, ACT210**

**INFORMATION** : Sometimes the units fail to power on because human perspiration is getting inside of the unit causing serious corrosion on the PCB. Actually, product is not splash proof. No specific action can be done on the current product. Product management has agreed to replace the set as a service solution.

**REMARKS** :

**08.04** TYPENUMBER(S): **AJ3970, MCR220BK/17**

INFORMATION : The position of the motor pins of CD drive 3103 309 05410 CD MCD2-SC ASSEMBLY has been rotated and thus does not fit to the CD board of above mentioned sets anymore. For that reason a new codenumber has been created for the CD drive with the old motor position. From now on please order:

201 3103 309 05501 CD MCD2-SC ASSEMBLY (ICD-01)

REMARKS :

**08.05** TYPENUMBER(S): **AX5200, AX5201, AX5202, AX5203, AX5210, AX5211, AX5212, AX5215, AX5219**

INFORMATION : In course of production following components have been changed to solve the problem "fuse blown out" and "membrane malfunction at high temperature":

1303 changed to 2422 086 11182 Fuse SM 1A 50V  
3417 changed to 4822 117 12925 RST SM 47kΩ 5%

REMARKS : Above modification has been implemented in production from week 0332 onwards.

**08.06** TYPENUMBER(S): **AZ1310**

INFORMATION : The MW tuning grid can be toggled as follows:  
1. Select MW source  
2. Hold the MODE button on the set depressed for at least 5 seconds  
→ The display shows either "Gr 9" (9kHz grid) or "Gr 10" (10kHz grid)

REMARKS :

**08.07** TYPENUMBER(S): **EXP210, EXP211, EXP213**

SYMPTOM : **IRIS CODE 2 5 4 4**  
Double pop sound is audible when skipping tracks.

CURE : The problem can be solved by deleting resistors 3339 and 3340:

REMARKS : The product phased out in July 2003.

**08.08 TYPENUMBER(S): EXP220, EXP221**

**INFORMATION** : Resume information gets lost when the set is switched off. This is a normal behaviour for EXP220 and EXP221 but it is not mentioned clearly in the Instruction For Use. Meanwhile, the document has been updated as follows:

**RESUME and HOLD**

You can interrupt playback and continue (after up to 1 minute in the disc stop position only) from the position where playback stopped (RESUME).

**REMARKS** : Updated IFU manuals have been implemented in production from week 0338 onwards.

**08.09 TYPENUMBER(S): EXP320, EXP321, EXP322, EXP325, EXP521**

**INFORMATION** : These models are packed with a CD-ROM containing the Music Match software and the User's Manual. Due to a program mistake the German version of the Music Match software cannot be installed. A modified CD-ROM is now available at Euroservice and can be ordered with codenumber 3140 118 72192.

**REMARKS** : The new CD-ROM has been implemented in production from week 0346 onwards.

**08.10 TYPENUMBER(S): FW-C380**

**INFORMATION** : Supplementary information to Newsletter item SNL2003.06.07 (focus coil burnt): The module is end of life and a new replacement for this module does not exist in current release activities. At the moment ESD tests are being performed to check for similar abnormal behaviour of the OPU. FW-C390 can be replaced without safety consequences, as there are no such complaints from 2002 projects onwards.

**REMARKS** :

**08.11 TYPENUMBER(S): FW-C579**

**INFORMATION** : Some customers may complain that the sensitivity of the subwoofer speaker box is too low to light up the level indicator. To fulfil this requirement, the subwoofer speaker box has been modified. New subwoofer speaker boxes are available with following codenumber:

8240 009 41111            BOX SPK ASSY SW579/17S

**REMARKS** : New subwoofer speaker boxes have been implemented in production from week 0334 onwards.

## 08.12 TYPENUMBER(S): LX3600D

INFORMATION : New firmware upgrade to version "29" has been released.

This upgrade forces the TV type to NTSC when Pro-scan is enabled.

### A. Preparation to upgrade the firmware:

1. Unzip "lx3600d\_v29.zip" (file is attached to this Newsletter).
2. Start the CD Burning software and create a new CD project (data disc) with the following settings:
  - File system : ISO9660
  - Format : Mode1, CD-ROM
  - Recording mode : Single Session (Track-At-Once), Finalized CD
3. Place the content of the zip-archive (1 file) into the root directory of the new CD project.
4. Burn the data onto a blank CDR.

Note: ISO9660 is mandatory, UDF discs are not supported !  
The final CDROM must not contain any other data except the file from the zip-archive.

### B. Procedure to apply the firmware upgrade:

1. Power up the set and open tray.
2. Insert the prepared Upgrade CDROM and close the tray.
3. The set will response and display the following messages:
  - LOAD [after the disc is read the tray will open to remove the disc]
  - ERASE 0 -> ERASE F ..... -> ERASE 0
  - WRITE F ..... -> WRITE 0
  - UPG END [displayed only for a short moment, if unsuccessful ERROR is shown]
  - DISC
  - LOAD [tray will close indicating that the upgrade process is completed]
4. Unplug the set to disconnect the mains supply.
5. The whole process should last for about 5 minutes.

### C. Reprogramming the DVD version Matrix

1. Put the set in Stop mode with tray open
2. Press buttons <9> <9> <9> <9> <AUDIO> <a> on the Remote Control, where "a" is as given below:

1 = /22 & /25 Europe	2 = /93 China
3 = /69 Asia Pacific	4 = /75 Australia/New Zealand
5 = IK India Kit	6 = /78 Latam
7 = LK Brazil Kit	9 = /17 USA

### D. How to read out the firmware versions to confirm upgrading

1. Power up the set and open tray in DVD mode.
2. Press <OSD> on the Remote control.
3. The TV screen will show:
  - SERVO: "servo version no" REG: "region number"
  - "Model" - "software date in yymmdd" - V "version no" "stroke version"

REMARKS : Zip-archive file "lx3600d\_v29.zip" is also available for download on the Philips Intranet: <http://pww.avic.ce.philips.com/serviceaudio/flash/>

**08.13 TYPENUMBER(S): LX3700D, LX3750W**

**SYMPTOM :** IRIS CODE 2 1 1 F

When LX3700D or LX3750W is connected via RGB cable to the EXT1 socket on some TV sets (e.g. 32PW9308), the TV set is switched to protection mode.

**CURE :** The root cause of the problem is the AV-device, which uses a non-compatible impedance on the FBL line (pin 16), i.e. 15Ω instead of 75Ω. As a result, the output voltage on the FBL-line is higher than 3V in RGB mode (which is the max. defined) and therefore interpreted as protection by the HIP-IC.

The problem can be solved by changing R1036 from 4.7kΩ to 1kΩ and adding R1035 of 2.4kΩ from the base of Q1003 to ground. After modification the voltage on the SCART output (measured at emitter of Q1003) drops to approx. 2.7V.

**REMARKS :** Above modification has been implemented in production from week 0338 onwards.

**08.14 TYPENUMBER(S): LX3700D, LX3750W**

**INFORMATION :** New firmware upgrade to version "VER 10141" has been released.

This upgrade solves language translation errors in the System Menu.

**A. Preparation to upgrade the firmware:**

1. Unzip "lx3700d\_v10141.zip" (file is attached to this Newsletter).
2. Start the CD Burning software and create a new CD project (data disc) with the following settings:  
Files system : ISO9660  
Format : MODE 1, CDROM  
Recording mode : Single session (Track-At-Once), finalized CD
3. Place the content of the zip-archive (1 file) into the root directory of the new CD project.
4. Burn the data onto a blank CDR/CD-RW.

Note: ISO9660 is mandatory, UDF discs are not supported!  
The final CDROM must not contain any other data except the file from the zip-archive.

**B. Procedure to apply the firmware upgrade:**

1. Power up the set and open the DVD tray.
2. Insert the prepared upgrade CD-ROM.
3. Close the tray and the set will auto read the disc.
4. Upon recognize the disc, the set will start to download the new firmware. The TV screen will show the following messages in sequence: "disc loading", "bank30.rom", "writing", "done"
5. The whole process takes less than 8 minutes after which the set shuts down and the TV screen becomes dark.  
Note: Do not press any buttons or interrupt the mains supply during the entire upgrading process, otherwise the set may become defective.
6. Unplug & re-plug the mains cable.
7. Press OPEN button directly and remove Upgrade CD-ROM.

### C. How to read out the software version to confirm upgrading

1. Keep no disc in DVD tray.
2. Press <123><OK> on the Remote Control.
3. The software version "VER 10141" is displayed on the TV screen.

REMARKS : Zip-archive "lx3700d\_v10141.zip" is also available for download on the Philips Intranet: <http://pww.avic.ce.philips.com/serviceaudio/flash/>

#### 08.15 TYPENUMBER(S): LX3700D, LX3750W

INFORMATION : Correction to Service Newsletter item SNL2003.04.09:  
The published instruction to change the Dealer (Tray Lock) mode was incorrect and should read:

1. Select Playback mode.
2. Hold SOURCE on the front panel depressed for at least 2 seconds.
3. Release SOURCE then press PLAY on the remote control immediately.
4. VFD will show "T-Lock"
5. Press OK on the remote control to activate the Tray Lock.
6. Repeat the procedure to release the Tray Lock.

REMARKS : Tray Lock can ONLY be activated in PLAY mode.

#### 08.16 TYPENUMBER(S): LX3700D, LX3750W, LX700

INFORMATION : Correction to the Service Manual, Electrical Partslist Power Board:  
Item BR901 should be a bridge rectifier diode instead of a Zener diode. The codenumber and article description reads:

BR901 9965 000 14176 Bridge Rectifier KBU808 8A 800V

REMARKS :

#### 08.17 TYPENUMBER(S): LX700

INFORMATION : Correction to the Service Manual, Electrical Partslist:

Page 8-14

IC1001 9940 000 00023 IC 39SF020A W/LX700 S.W. program

Q3011 9965 000 20268 2SC1623

Q3012 9965 000 20268 2SC1623

Page 5-4

Q204 9965 000 20268 2SC1623

REMARKS :

**08.18** TYPENUMBER(S): **MC-222**

INFORMATION : Correction to the Service Manual, mechanical parts list:  
The codenumbers of item 406, the Front Panel Assembly have been changed and should read:

406	3140 117 65621	FRONT PANEL ASSY (/22/25)
406	3140 117 66201	FRONT PANEL ASSY (/21/21M/30)

REMARKS :

**08.19** TYPENUMBER(S): **MC-500**

SYMPTOM : **IRIS CODE 2 1 7 1**  
Clock time is reset when switching the set to ECO Stand-by mode.

CURE : The problem can be solved by adding 2 resistors on the Combi Board:

3015	4822 117 12925	47kΩ 1% 0,063W 0603
3016	4822 051 30333	33kΩ 5% 0,063W 0603

For location of the resistors see component layout and circuit diagram in Service Manual.

REMARKS : Above modification has been implemented in production from week 0345 onwards.

**08.20** TYPENUMBER(S): **MC-M350**

SYMPTOM : **IRIS CODE 2 1 1 F**  
The set does not function.

CURE : The problem might be caused by a cold junction of RV701 on the Power Board.

REMARKS : Corrective actions have been implemented in production from week 0328 onwards.

**08.21 TYPENUMBER(S): MX3900D, MX3950D, MX5500D, MX5600D, MX5700D, MX5800SA, MX5900SA**

**INFORMATION** : TRAY LOCK mode  
In this mode all buttons work normal except for the Open/Close buttons DISC 1 – DISC 5. When the Open/Close button is pressed the display shows “TRAY LOCKED”.

Procedure to unlock the tray:

1. When the set is in DVD stop mode, hold the PROG button on the set depressed for at least 2 seconds. The display will show “TRAY UNLOCK ?”.
2. Press the PLAY button on the set to confirm. The display will show “TRAY UNLOCKED”.

**REMARKS** : Repeating the above procedure will lock the tray again.

**08.22 TYPENUMBER(S): MX3900D, MX3950D, MX5500D, MX5600D, MX5700D**

**INFORMATION** : New firmware versions for the DVD Back-end have been released:  
• “BEA3131PV31” for MX3900D, MX3950D  
• “PMK3131PV31” for MX5500D, MX5600D, MX5700D

The upgrades address the following issues:

- New sound setting for DVD source when playing DVD disc
- Trembling music is audible at speaker output when in Digital-In mode (for MX39x0D only)

All older sets brought in for repair should be upgraded as preventive action.

**A. Preparation to upgrade firmware:**

1. For MX3900D and MX3950D: Unzip zip-archive “mx39x0d\_ver\_bea3131pv31.zip” (attached).  
For MX5500D, MX5600D, MX5700D except /35 version: Unzip zip-archive “mx55xd\_ver\_pmk3131pv31.zip” (attached).
2. Start the CD Burning software and create a new CD project (data disc) with the following settings:  
File system : ISO9660  
Format : Mode1, CD-ROM  
Recording mode : Single Session (Track-At-Once), Finalized CD
3. Place the content of the zip-archive (1 file) into the root directory of the new CD project.
4. Burn the data onto a blank CDR.

Note: ISO9660 is mandatory, UDF discs are not supported !  
The final CDROM must not contain any other data except the file from the zip-archive.

**B. Procedure to apply the firmware upgrade:**

1. Power up the set and open tray 1.
2. Insert the prepared Upgrade CD-ROM and close the tray.
3. The set will display READING followed by DOWNLOAD
4. The TV OSD screen will show the following messages in sequence: Reading → Update BEA → Writing → done
5. The whole process takes less than 2 minutes.

Note: Do not press any key buttons or interrupt the mains supply during the entire upgrading process, otherwise the set may become defective.

6. Unplug & replug the mains cable.

7. Open tray 1 and remove the Upgrade CDROM.

### **C. How to read out the firmware version to confirm upgrading**

1. Select Disc with the Remote Control.

2. Press <SYSTEM MENU> on the Remote control.

3. Use the down key move ll the way down (4x) to bottom of "Setup Menu"

4. Use the right key move to the "sub-menu".

5. Use the down key move down (3x) to "Default" and down one more time to see the firmware version.

6. The TV screen shows: "xxxxx BEA313PV31 xxxxxx xxx"

REMARKS : The zip-archives are also available for download on the Philips Intranet: <http://pww.avic.ce.philips.com/serviceaudio/flash/>

### **08.23 TYPENUMBER(S): MX5500D, MX5600D, MX5700D**

INFORMATION : Sound level difference between playing DVD disc and CD disc or other source mode has been improved by the following changes:

- Upgrade the Backend firmware to version "PMK3131PV31" (see Newsletter item SNL2003.08.21)
- Replace item 6101 on the AV Board with BZX79-C11 (9337 129 20673)
- Check if the front microprocessor (IC 7100 on the Front Board) has version 20 or higher, otherwise replace it with codenumber 9965 000 22590.

REMARKS : Version numbers can be read out via Service Test Program.

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# SERVICE NEWSLETTER

## 07.01 TYPENUMBER(S): DVD737

INFORMATION : New firmware upgrade to version "DP330.4.1.19" has been released.

This upgrade addresses the following issues:

- Subtitle support for DivX<sup>®</sup>/MPEG-4 playback
- Support for the latest DivX<sup>®</sup> 5.1 version playback
- Expansion of small resolution video clips to full screen in same aspect ratio
- Set hangs when pressing Stop button during DivX<sup>®</sup> playback (for sets with firmware version "DP330.4.1.17")
- General improvement on MPEG-4 and DivX<sup>®</sup> playability

**This firmware upgrade is rated as critical! All older sets brought in for repair should be upgraded as preventive action!**

### A. Preparation to upgrade the firmware

1. Unzip "dvd737\_dp330\_4\_1\_19.zip" (file is attached to this Service Newsletter).
2. Start the CD Burning software and create a new CD project (data disc) with the following settings:
  - File system : ISO9660
  - Format : Mode1, CD-ROM
  - Recording mode : Single Session (Track-At-Once), Finalized CD
3. Place the content of the zip-archive (1 file) into the root directory of the new CD project.
4. Burn the data onto a blank CDR.

Note: ISO9660 is mandatory, UDF discs are not supported!  
The final CDROM must not contain any other data except the file from the zip-archive.

### B. Procedure to apply the firmware upgrade

1. Power up the set and open tray.
2. Insert the prepared Upgrade CDRom and close the tray.
3. The FTD on the set and TV screen will show the following messages:
  - LOAD (TV screen shows: DISC LOADING)
  - DATA (TV screen shows: READ)
  - UPGRADE (TV screen shows: UPGRADING followed by DONE when it is completed)
4. The tray opens for you to remove the CD-ROM.
5. Press <Standby> button to complete the upgrade.
6. The whole process should last less than 5 minutes.

### C. How to read out the firmware version to confirm upgrading

1. Power up the set.
2. Press <SYSTEM MENU> on the Remote Control.
3. Press <Stop> <Previous> and <Next> buttons on the Remote Control.
4. The TV screen will show: "VERSION : DP330.4.1.19 REG: x"

REMARKS : Zip-archive "dvd737\_dp330\_4\_1\_19.zip" is also available for download on the Philips Intranet:  
<http://pww.avic.ce.philips.com/serviceaudio/flash/>

#### 07.02 TYPENUMBER(S): LX3750W

SYMPTOM : **IRIS CODE 2 2 5 X**  
Wireless Interface reacts too sensitive, resulting in an unwanted start of wireless transmitter.

CURE : Change on Wireless Interface Board (page 11-6 and 11-7 of Service Manual):  
2130 4822 126 13879 220nF 20% 16V  
3133 4822 051 30562 5,6kΩ 5% 0,063W

REMARKS : Modification has been implemented in production from week 0337 onwards.

#### 07.03 TYPENUMBER(S): LX3750W

INFORMATION : In course of production following parts have been changed on the wireless amplifier board in order to prevent unwanted mute of the amplifier signal.

To solve this problem change on Wireless Amplifier board (page 11-15 till 11-17 of Service Manual):

3129 5322 117 13046 1,8kΩ 1% 0,063W 0603  
3158 2322 704 62202 2,2kΩ 1% 0,063W 0603

REMARKS : Modification has been implemented in production from week 0318 onwards.

**07.04 TYPENUMBER(S): LX3750W**

**INFORMATION** : Electrical partslist:  
In course of production following items have been changed on the Wireless Amplifier board. (chapter 11 of Service Manual):

2100	2222 601 55649	100nF	100V	10%	1206
2101	2222 601 55649	100nF	100V	10%	1206
2104	2222 601 55649	100nF	100V	10%	1206
2105	2222 601 55649	100nF	100V	10%	1206

**REMARKS** : Modification has been implemented in production from week 0323 onwards.

**07.05 TYPENUMBER(S): LX3750W**

**INFORMATION** : Electrical partslist:  
In course of production following parts have been changed on the Wireless Amplifier board in order to increase the current for both red and green LED (chapter 11 of Service Manual):

3148	4822 051 30102	1kΩ	5%	0,063W	0603
3149	4822 051 30102	1kΩ	5%	0,063W	0603
3151	4822 051 30223	22kΩ	5%	0,063W	0603

**REMARKS** : Modification has been implemented in production from week 0323 onwards.

**07.06 TYPENUMBER(S): LX3750W**

**INFORMATION** : Partslist Wireless Surround Loudspeaker boxes:  
The published partslist of the Wireless Module (chapter 11 of Service Manual) missed some components:

**Transmitter (all versions)**

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1105	2422 543 00723	Resonator 4MHz	20%		
2120	3198 016 31880	1,8pF	1%	50V	0603
2127	4822 126 14218	3,9pF	6%	50V	0603
2180	2020 021 91817	470μF	20%	16V	
2186	2238 867 74828	8,2pF	1%	50V	0603
2187	2020 552 96384	5,6pF	25%	50V	0603
2189	4822 126 14218	3,9pF	6%	50V	0603
2190	4822 126 14218	3,9pF	6%	50V	0603
2191	2020 552 96384	5,6pF	25%	50V	0603
5101	2422 535 94784	100nH	5%		0603
5104	2422 535 94613	6,8nH	5%		0603
5105	2422 535 94721	12nH	5%		0603
5107	2422 535 94776	4,7nH	3%		0603
5109	2422 535 94714	3,3nH	3%		0603
5112	2422 535 94716	8,2nH	5%		0603
5113	2422 535 94721	12nH	5%		0603
5116	2422 535 94716	8,2nH	5%		0603
5117	2422 535 94779	39nH	5%		0603
5118	2422 535 94715	5,6nH	5%		0603

7105	9340	188	10235	BFG520/X
7106	9340	188	10235	BFG520/X
7112	9337	725	40623	SA572D
7113	9322	180	21668	NJM4565M
7116	9322	180	21668	NJM4565M

### Receiver (all versions)

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1609	2422	543	00723	Resonator 4MHz 20%
2625	4822	123	14018	2,2µF 10% 10V
2702	2238	586	55639	18nF 10% 50V 0603
2703	2238	586	55639	18nF 10% 50V 0603
5603	2422	535	94785	1nH 3% 0603
5604	2422	535	94776	4,7nH 3% 0603
5605	2422	535	94782	56nH 5% 0603
5606	2422	549	45299	Trimmer 10mH
5614	2422	535	94716	8,2nH 5% 0603
6601	9340	550	65115	BB151
7601	9340	414	20115	BFC520
7606	5322	130	60159	BC846B
7705	4822	130	63087	BF545A
7710	9322	183	01668	LA1836M
7750	9322	183	39668	PIC12C508A
7770	9337	725	40623	SA572D
7780	9322	180	21668	NJM4565M
7790	9322	140	09668	L4931CD80

### Interface board

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3102	4822	117	11645	470Ω 1% 0,125W
3103	4822	117	11645	470Ω 1% 0,125W
3104	4822	117	11645	470Ω 1% 0,125W
3105	4822	117	11645	470Ω 1% 0,125W
3106	4822	051	10479	47Ω 2% 0,25W
5100	9965	000	18081	Transformer AUDIO (3053-016-1Y)
5115	2422	549	45464	Filter 20kHz
5120	2422	549	45464	Filter 20kHz
6140	9322	104	37685	LED VS SM SML-210LT (RHM0)
7100	9965	000	18082	IC L4931CDT120 (ST00)
7105	9965	000	18083	IC SM HT7550 (HOLTEK)
7145	9322	183	39668	PIC12C508A

### Amplifier board

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1100	9965	000	18078	LQR3215-0001G
2153	2222	586	18812	100nF 10% 50V 0603
2154	2222	586	18812	100nF 10% 50V 0603
5100	9965	000	18079	BEAD EMI XXXMH
5101	9965	000	18079	BEAD EMI XXXMH
5102	9965	000	18079	BEAD EMI XXXMH
5103	9965	000	18079	BEAD EMI XXXMH
5106	9965	000	18079	BEAD EMI XXXMH
5107	9965	000	18079	BEAD EMI XXXMH
7100	9965	000	18080	IC SM LM837MX (NSC) R
7101	9352	705	74518	IC SM TDA8920TH/N1 (PHSE) R

REMARKS :

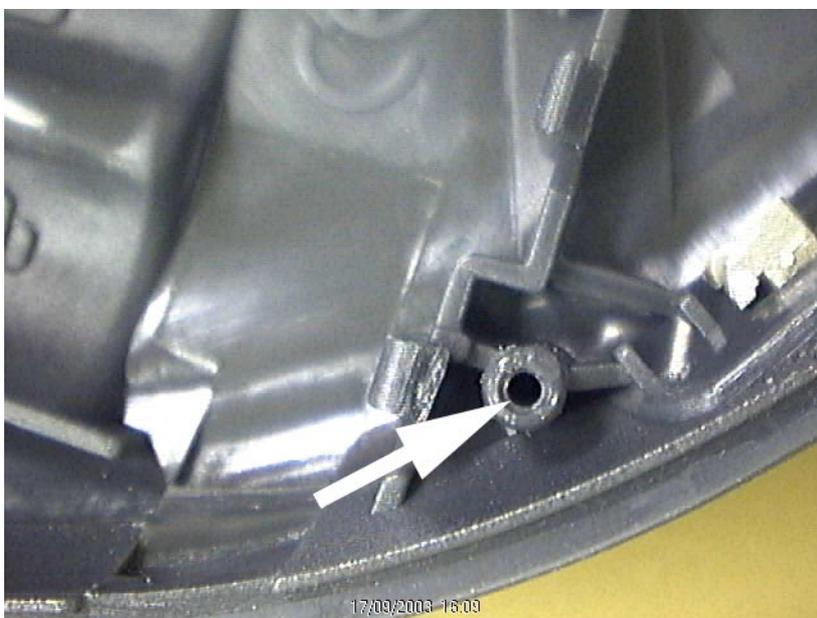
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# SERVICE NEWSLETTER

## 06.01 TYPENUMBER(S): ACT300

**INFORMATION** : In course of production a pole has been added to the Bottom Cabinet to strengthen the pcb supporting. If an old Bottom Cabinet needs to be replaced by a new one, we suggest to cut the pole as indicated in the drawing below:



**REMARKS** :

## 06.02 TYPENUMBER(S): AX2200, AX2201

**SYMPTOM** : **IRIS CODE 2 1 1 B**  
Set starts playback by itself and the keys are blocked.

**CURE** : The problem is caused by leakage of capacitor C113 (1 $\mu$ F).  
Replace the defective capacitor with the following type:

C113 3198 017 41050 CER2 0603 Y5V 10V 1 $\mu$ F

**REMARKS** :

**06.03** TYPENUMBER(S): **AX3200, AX3201, AX3202, AX3205, AX3211, AX3212, AX3213, AX3214, AX3215, AX3217, AX3218, AX3219, AX3221, AX3222, AX3223, AX3224**

**INFORMATION** : Correction to the Service Manual, mechanical partslist:  
The article descriptions of the Cabinet Assemblies (items 413) are incomplete and should read:

413	3103	308	99611	Cabinet-Assy-1 for AX3200, AX3201, AX3205, AX3215, AX3221, AX3224
413	3103	308	99711	Cabinet-Assy-2 for AX3202, AX3211, AX3212, AX3217, AX3218, AX3219, AX3222, AX3223

**REMARKS** :

**06.04** TYPENUMBER(S): **AZT3202**

**SYMPTOM** : **IRIS CODE 6 2 6 4**  
When the user stores more than 22 Tuner stations and the set is switched to CD and back again to Tuner mode, all the Tuner presets get cleared.

**CURE** : The problem is caused by software and has been fixed with a new version of the microcontroller. Unfortunately, this new microcontroller is no longer available for service because production has already been stopped in June 2003.

**REMARKS** : Please advise the customer to store not more than 22 stations.

**06.05** TYPENUMBER(S): **DVD737**

**INFORMATION** : New firmware upgrade to version "DP330.4.1.17" has been released.

The upgrade addresses the following issue:

- TV switches to External input with blank screen when the DVD player is switched to Standby mode.

All sets brought in for repair should be upgraded as preventive action.

**A. Preparation to upgrade the firmware**

1. Unzip "dvd737\_dp330\_4\_1\_17.zip" (file is attached to this Service Newsletter).
2. Start the CD Burning software and create a new CD project (data disc) with the following settings:  
File system : ISO9660  
Format : Mode1, CD-ROM  
Recording mode : Single Session (Track-At-Once), Finalized CD
3. Place the content of the zip-archive (1 file) into the root directory of the new CD project.
4. Burn the data onto a blank CDR.

Note: ISO9660 is mandatory, UDF discs are not supported !  
The final CDROM must not contain any other data except the file from the zip-archive.

### B. Procedure to apply the firmware upgrade

1. Power up the set and open tray.
2. Insert the prepared Upgrade CDRom and close the tray.
3. The FTD on the set and TV screen will show the following messages:
  - LOAD (TV screen shows: DISC LOADING)
  - DATA (TV screen: READ)
  - UPGRADE (TV screen shows: UPGRADING followed by DONE when it is completed)
4. The tray opens for you to remove the CD-ROM.
5. Press <Standby> button to complete the upgrade.
6. The whole process should last less than 5 minutes.

### C. How to read out the firmware version to confirm upgrading

1. Power up the set.
2. Press <SYSTEM MENU> on the Remote Control.
3. Press <Stop> <Previous> and <Next> buttons on the Remote Control.
4. The TV screen will show: "VERSION : DP330.4.1.17 REG: x"

REMARKS : Zip-archive "dvd737\_dp330\_4\_1\_17.zip" is also available for download on the Philips Intranet:  
<http://pww.avic.ce.philips.com/serviceaudio/flash/>

**06.06** TYPENUMBER(S): **FW-C255, FW-C330, FW-C380, FW-C390, FW-C399, FW-M355, FW-V330, FW-V355, FW-V535, FW-V537, FW-V595, FW-V785, FW-V787, FW-V795**

SYMPTOM : **IRIS CODE 2 6 1 9**  
CDC Tray does not open.

CURE : The Control Disc (item 32 in the exploded view diagram of 3CDC-LC module) is found deformed. The deformed disc can be replaced with the following spare part:

32 3103 304 06920 CONTROL-DISC

REMARKS : Improved parts have been implemented in production from week 0324 onwards.

**06.07** TYPENUMBER(S): **FW-C380**

INFORMATION : Sometimes the CDM (VAM2201/07) needs to be replaced because the focus coil is burnt. The problem may be caused by an external high current flow to the focus coil for a long time.  
Note that the driver IC at the module can't supply more than 600mA to the coil part. Hence, the heat effect needs a very long time passing through to the coil to obtain the coil burn-out.

REMARKS : No corrective actions have been taken as the module is already end of life and all new modules do not show such related problems.

**06.08** TYPENUMBER(S): **FW-C399, FW-C505, FW-C550, FW-C555, FW-C700, FW-C720, FW-C780, FW-C785, FW-C788, FW-C798, FW-P750, FW-V520, FW-V720, FW-V780, FW-V785, FW-V795**

**INFORMATION** : **AF9 Board** (not for FW-C798 & FW-V795)  
Correction to the parts list: Change elcap from 4,7µF to low leakage current 50V S 1µF:

2531	2022 020 00734	ELCAP RLA 50V S 1U PM20 A
2532	2022 020 00734	ELCAP RLA 50V S 1U PM20 A
2535	2022 020 00734	ELCAP RLA 50V S 1U PM20 A
2536	2022 020 00734	ELCAP RLA 50V S 1U PM20 A

**AF10 Board** (for FW-C798 & FW-V795 only)  
Correction to the parts list: Change elcap from 4,7µF to low leakage current 50V S 1µF:

2531	2022 020 00734	ELCAP RLA 50V S 1U PM20 A
2532	2022 020 00734	ELCAP RLA 50V S 1U PM20 A
2535	2022 020 00734	ELCAP RLA 50V S 1U PM20 A
2536	2022 020 00734	ELCAP RLA 50V S 1U PM20 A

**REMARKS** :

**06.09** TYPENUMBER(S): **LX700**

**INFORMATION** : LX700 is not equipped with a service test program. By following steps the user can read the software version and carry out some settings:

**A. To read out the software version of the set**

1. Power up the set
2. Hold the "BASS" button depressed for 5 seconds
3. The software version "VER03xx.x" is displayed on the display

**B. To format and reset the NVM (Non Volatile Memory)**

General Mode:

1. Power up the set
2. Hold the "TREBLE" button depressed for 5 seconds  
→ the set will return to default mode

Tuner Mode:

1. Power up the set and select "TUNER" source
2. Hold the "SURROUND" button depressed for 5 seconds
3. Adjust "VOLUME" to select 10kHz or 9kHz

**REMARKS** :

## 06.10 TYPENUMBER(S): LX3600D

INFORMATION : New firmware upgrade to version "27" has been released.

This upgrade prepares the firmware for new type versions/regions which require new DVD version matrix settings.

### A. Preparation to upgrade the firmware

1. Unzip "lx3600d\_v27.zip" (file is attached to this Service Newsletter).
2. Start the CD Burning software and create a new CD project (data disc) with the following settings:
  - File system : ISO9660
  - Format : Mode1, CD-ROM
  - Recording mode : Single Session (Track-At-Once), Finalized CD
3. Place the content of the zip-archive (1 file) into the root directory of the new CD project.
4. Burn the data onto a blank CDR.

Note: ISO9660 is mandatory, UDF discs are not supported !  
The final CDROM must not contain any other data except the file from the zip-archive.

### B. Procedure to apply the firmware upgrade

1. Power up the set and open tray.
2. Insert the prepared Upgrade CDROM and close the tray.
3. The set will show the following messages:
  - LOAD [after the disc is read, the tray will open for you to remove the disc]
  - ERASE 0 -> ERASE F ..... -> ERASE 0
  - WRITE F ..... -> WRITE 0
  - UPG END [only for a short moment, if unsuccessful ERROR is displayed]
  - DISC
  - LOAD [tray will close indicating that the upgrade process is completed]
4. Unplug the set to disconnect the mains supply.
5. The whole process should last approximately 5 minutes.

### C. Reprogramming the DVD version Matrix

1. Put the set in Stop mode with tray open.
2. Press buttons <9> <9> <9> <9> <AUDIO> <a> on the Remote Control, where "a" is as given below:

1 = /22 & /25 Europe	2 = /93 China
3 = /69 Asia Pacific	4 = /75 Australia/New Zealand
5 = IK India Kit	6 = /78 Latam
7 = LK Brazil Kit	9 = /17 USA

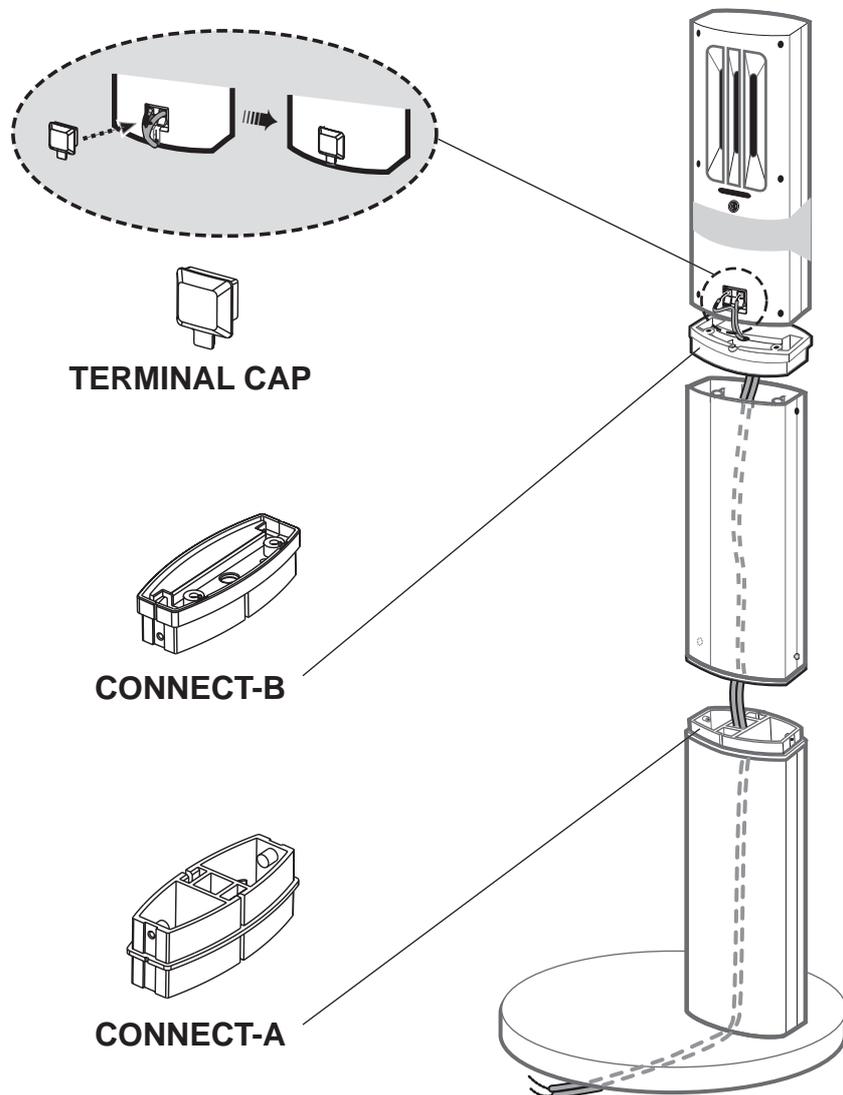
#### D. How to read out the firmware version to confirm upgrading

1. Power up the set and open tray in DVD mode.
2. Press <OSD> on the Remote control.
3. The TV screen will show:  
SERVO: "servo version no" REG: "region number"  
"Model" - "software date in yymmdd" - V "version no" "stroke version"

REMARKS : Zip-archive "lx3600d\_v27.zip" is also available for download on the Philips Intranet: <http://pww.avic.ce.philips.com/serviceaudio/flash/>

#### 06.11 TYPENUMBER(S): LX8000SA , LX8200SA

INFORMATION : LSBS8000 Speaker Stands (3139 118 79910)  
Following parts of the LSBS8000 are now available on service stock:  
9965 000 22306 CONNECT-A  
9965 000 22307 CONNECT-B  
9965 000 22374 TERMINAL CAP



REMARKS :

**06.12 TYPENUMBER(S): MC-i250/22**

**INFORMATION** : Correction to the Service Manual, Mechanical & Accessories partslist  
The codenumber of item 0102 should read:

0102 3140 119 50001 Panel Front Pre-Assy

**REMARKS** :

**06.13 TYPENUMBER(S): MC-V65**

**SYMPTOM** : **IRIS CODE 2 5 2 X**

When the volume is set to a very low level and the set is switched to Standby and switched ON again, the volume does not remain at the previous (low) level but the set blasts at high volume.

**CURE** : The problem is caused by the software. Unfortunately there is no service solution available because production had stopped already in July 2003.

**REMARKS** :

**06.14 TYPENUMBER(S): MRD210/37**

**INFORMATION** : Correction to the partslist, Main Board  
The codenumber of the programmed IC1001 should read:  
IC1001 9965 000 21568 IC 48 PIN MBM29LV800BA-70PFTN

**REMARKS** :

**06.15 TYPENUMBER(S): MRD300/37**

**INFORMATION** : Correction to the partslist, Main Board  
The codenumber of the programmed IC107 should read:

IC107 9965 000 21969 IC 40 PIN SST39VF080 3.3V

**REMARKS** :

**06.16 TYPENUMBER(S): MX3660D/21H, MX3660D/30, MX3660D/37 (see remarks)**

**INFORMATION** : Correction to the partslist, Main Board  
The codenumber of the programmed IC1001 should read:

IC1001 9965 000 21569 IC 48 PIN MBM29LV800BA-70PFTN

**REMARKS** : MX3660D/37 has been produced with old and new architecture.  
Above correction is valid for sets with new architecture only, i.e. sets with serial number "KN020xxxxxxx" onwards.

**06.17 TYPENUMBER(S): MX3800D**

- SYMPTOM** : **IRIS CODE 1 5 5 X**  
Sound is muted during tracknumber increase on CDs with live music content (non-stop CD), mixed CDs or CDs recorded in disc-at-once mode.
- CURE** : Unfortunately there is no technical solution available for this problem.
- REMARKS** : For critical customers not willing to accept these shortcomings, it may be necessary to work out a commercial solution like replacement by another set, e.g. LX3000D.

**06.18 TYPENUMBER(S): MX3900D, MX3950D, MX5500D, MX5600D, MX5700D, MX5800SA, MX5900SA**

- SYMPTOM** : **IRIS CODE 1 1 1 9**  
The set cannot be turned on and remains in Standby mode.
- CURE** : The problem is caused by damaged components (resistors open and capacitors crack) at the output of Power amplifier IC 7100, 7200 and 7300.

When one component is damaged the entire set of resistors & capacitors must be replaced. Note that the new capacitors have a higher voltage rating than the former built-in ones.

Codenumbers for the new resistors and capacitors read as follows:

Resistor	4822 051 10568	5,6Ω	5%	0,25W
Capacitor	2238 600 15619	560pF	10%	100V

The resistor & capacitor sets are:

- 2114, 2115, 3100 and 3102 at pin 16 of IC 7100
- 2122, 2126, 3101 and 3105 at pin 21 of IC 7100
- 2214, 2215, 3200 and 3202 at pin 16 of IC 7200
- 2222, 2226, 3201 and 3205 at pin 21 of IC 7200
- 2314, 2315, 3300 and 3302 at pin 16 of IC 7300
- 2322, 2326, 3301 and 3305 at pin 21 of IC 7300

**REMARKS** :

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# SERVICE NEWSLETTER

## 05.01 TYPENUMBER(S): **General Portable Audio**

**INFORMATION** : For Over Counter Exchange portable audio products, only a limited number of spare parts are available and no Service Manuals are prepared. A new survey, listing the service spare parts of those models has been published with Service Information A03-555 (3140 785 32720).

**REMARKS** :

## 05.02 TYPENUMBER(S): **AJ3980**

**INFORMATION** : Sometimes customers may complain poor sound or echo effects from the speakers. Unfortunately there is no service solution feasible. If technicians intend to replace the speaker it is advised not to change the phase of the speaker, as this may create acoustic feedback when the volume is adjusted to levels higher than 20.

**REMARKS** :

## 05.03 TYPENUMBER(S): **AX7201**

**SYMPTOM** : **IRIS CODE 2 1 5 1**  
Remote control does not function.

**CURE** : The problem is caused by the construction of the plug of the Remote control. To secure the remote control connection, the plug is designed to have 2 inserting steps. To remind the customer a sticker with the following text is added to the cable of the remote control:

*Push the plug firmly into /LINE OUT on the set  
You will hear a small click when fully inserted.*

**REMARKS** : The remote control with sticker has been implemented in production from week 0334 onwards.

**05.04 TYPENUMBER(S): AZ1300, AZ1305, AZ1310**

SYMPTOM : **IRIS CODE 1 6 2 5**

No disc is read.

CURE : In some cases the problem is caused by poor contact between the 16-pin connector (CN706) and the flex cable for the CD Drive. In course of production the old (black coloured) connector has been replaced by an improved one. The new connector (white colored) is now available with following codenumber:

CN706 9965 000 21417 CONNECTOR D100-SRA-16U

REMARKS : New connectors have been implemented in production from week 0309 onwards.

**05.05 TYPENUMBER(S): FB900**

SYMPTOM : Service workshops have reported problems in claim processing because the serial numbers are not conform to the Philips 14 digits serial number.

CURE : New serial numbers will be introduced for sets produced from week 0336 onwards. For warranty claims old serial numbers must be translated into new form as given below:

Old serial number format:   Year       Month       Serial number  
                                  **a**           **bb**           **xxxxx**

Conversion of old serial numbers can be done as follows:

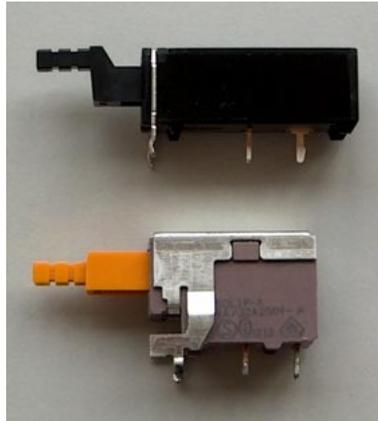
1. Add factory code "HE"
2. Add BOM and Service code "00"
3. Add additional "0" to year = 0**a**
4. Change month code to week code by month \* 4 = **bb** \* 4
5. Add additional "0" to the serial number = 0**xxxxx**

Example: Old serial number "2 12 12345" would become new serial number "HE 00 02 48 012345".

REMARKS :

**05.06** TYPENUMBER(S): **FR740/00, FR984/00S, FR994/00S, FR985/00, FR986/00S, FR995/00, FR996/00S**

**INFORMATION** : In course of production the mains switch (item 1056) has been changed. New mains switches are used from mains board layout stage .4 onwards.



New switch  
1056 2422 128 03065 Mains switch

Old Switch  
1056 4822 276 13224 Mains switch

**REMARKS** :

**05.07** TYPENUMBER(S): **FW380C**

**INFORMATION** : **Front Board**

Two different types of CD changer modules have been used in production – “3CDC-MG” and “3CDC-99”. The modules require individual microcontrollers (item 7401), available with the following codenumbers:

For sets with 3CDC-MG module:

7401 9965 000 16935 μP with software version “05”

For sets with 3CDC-99 module:

7401 3139 110 52140 μP with software version “09”

**REMARKS** : The type of CD changer module can be identified by a sticker, located on the sidewall of the module.

**05.08** TYPENUMBER(S): **HDD100**

**INFORMATION** : New firmware upgrade to version 4.0 has been released. This upgrade solves some general software problems.

To upgrade the firmware carry out the following steps:

1. Connect the AC/DC adapter to the player and the power supply.
2. Hook up the player with the computer via USB connection.
3. Launch **Philips Digital Media Manager** (PCDMM).
4. Click **PREFERENCES** at the bottom of the menu.
5. In the **PREFERENCES** menu, click **DOWNLOAD** to get onto the PHILIPS CUSTOMER CARE web site (or go directly to <http://www.philips.com/support/>).
6. Click the tab **Documentation & Downloads**, enter the model number “**HDD100**” and then click **Search**.

7. Click on the correct model number version and next to the row **Firmware Upgrade - software**, select the zip file of your preferred language.
8. Download the zip file with the firmware to a temporary directory or on the desktop by clicking **OK** and then **SAVE**.
9. Unzip the file.
10. Back to the **PCDMM**, in the **Preferences** menu click **UPGRADE**. Go to the temporary directory where the file was unzipped, point at the file "**Philips.mi4**" and click **OK** to start loading the firmware into your Audio Jukebox.
11. Once the firmware has been loaded, you may eject and unplug your Audio Jukebox from the computer's USB connector.

**IMPORTANT NOTE:** In order to optimize the performance of the new firmware, it is recommended to download and install also the latest PC Software (Digital Media Manager) from the web site.

REMARKS : Always use the AC/DC adaptor as power supply while upgrading.

**05.09** TYPENUMBER(S): **KEY003, KEY004, KEY005, KEY006**

INFORMATION : When connecting the player to a computer, customers may be prompted with the message "Disk is not formatted" or only a small part of the available memory can be accessed.

**IMPORTANT!**

In both cases, use only the customized **Philips KeyRing Audio Player Formatter** to format the player. **Do NOT** use Windows Explorer to format as this may damage the player!

Please carry out the following steps:

1. Insert the by-packed CD into the CD-ROM drive, and run the installation procedure. Follow the **Install Shield Wizard** screen instructions to complete installation. Press **Quit** to exit the CD-ROM.
2. Connect the player to the computer with the function switch in **PLAYBACK/ DOWNLOAD** position.
3. To format the player, on the PC task tray select **Start → Programs → Philips Key Ring Wearable Audio Player → Format** and follow the formatter instructions.

REMARKS :

**05.10** TYPENUMBER(S): **LX2000D, MRD200**

INFORMATION : Correction to the Service Manual, partslist page 9-10:

IC1 9965 000 21048 AM29F080B-90EC with software for LX2000D  
 IC1 9965 000 21435 AM29F080B-90EC with software for MRD200

REMARKS :

**05.11 TYPENUMBER(S): LX3700D, LX3750W**

**INFORMATION** : The Stands for the loudspeaker boxes are now available as service spare parts:

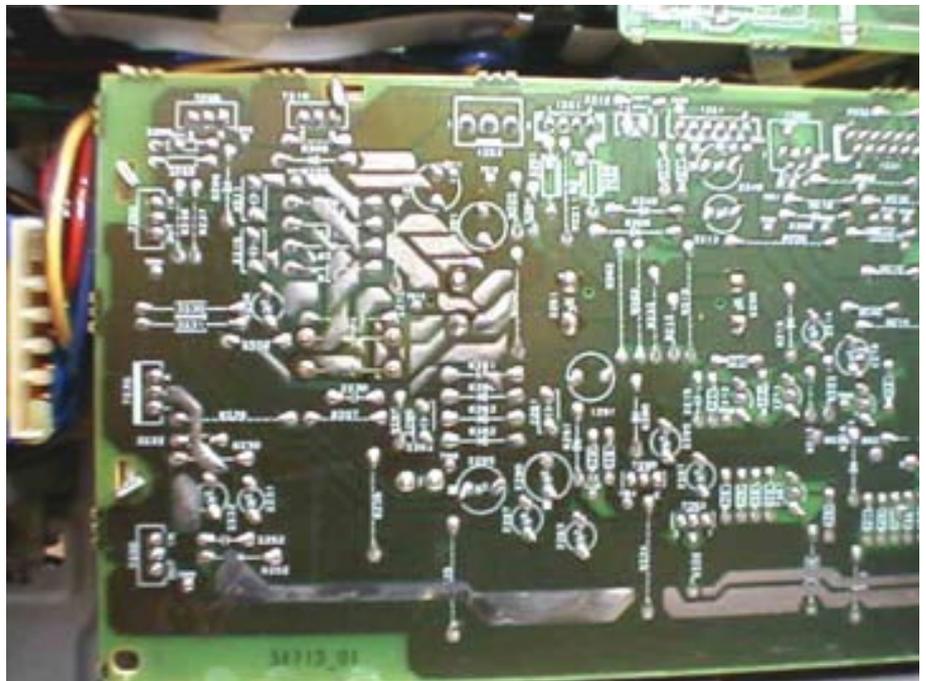
9965 000 21045	Stand for Satellite speaker
9965 000 21046	Rubber foot for Satellite speaker
9965 000 21047	Rubber holder for Centre speaker

**REMARKS** :

**05.12 TYPENUMBER(S): LX7000SA, LX8000SA, LX8200SA**

**SYMPTOM** : **IRIS CODE 1 1 6 L**

PC board turns brown from components 6250, 6251 and all over the area of 6210, 6211, 6212, 6213, 7250, 7230, 7260, 7295, 7210 on the Supply Board (pos. 1104-A). The area around the diodes 6250 and 6251 is the worst brown area on the PC board after few months of operating.



**CURE** : The PC board browning effect is caused by excessive heat generated by the supply regulators and the power devices.

There will be no short term solution as there are no safety or reliability issues. The operating temperature of the semiconductor junction is within the specification of the devices. The temperature of the PC board is also within the safety limits.

As long term solution, new layout stage .4 boards (3139 113 34714) will be implemented to improve the PC board browning phenomenon.

**REMARKS** :

**05.13 TYPENUMBER(S): LX7000SA, LX8000SA**

**SYMPTOM** : **IRIS CODE 1 5 1 X**  
No sound via SCART out.  
Resistors 3481 and 3482 are missing on the AVC board.

**CURE** : To solve the acoustic feedback problem some re-work (short term solution) was done to disable the SCART audio output by removing resistors 3481 and 3482 on the AVC board. As a result of this re-work, audio out via SCART to TV is muted in all modes.

**Short Term Service Solution:**

It is recommended to put back resistors 3481 and 3482 (470Ω 5% 0,06W – 4822 051 30471) onto the AVC board as service solution for customers complaining “No sound via SCART out”. This may cause acoustic feedback problems depending on the type of SCART of the TV used by customer (not all TVs will cause acoustics feedback problems).

**Long Term Solution:**

New AVC board (3139 113 35181) with extra muting circuit and new software version “30” (new mask µP 12NC: 3139 110 53571) will be introduced to solve the acoustic feedback problem without removing the two resistors.

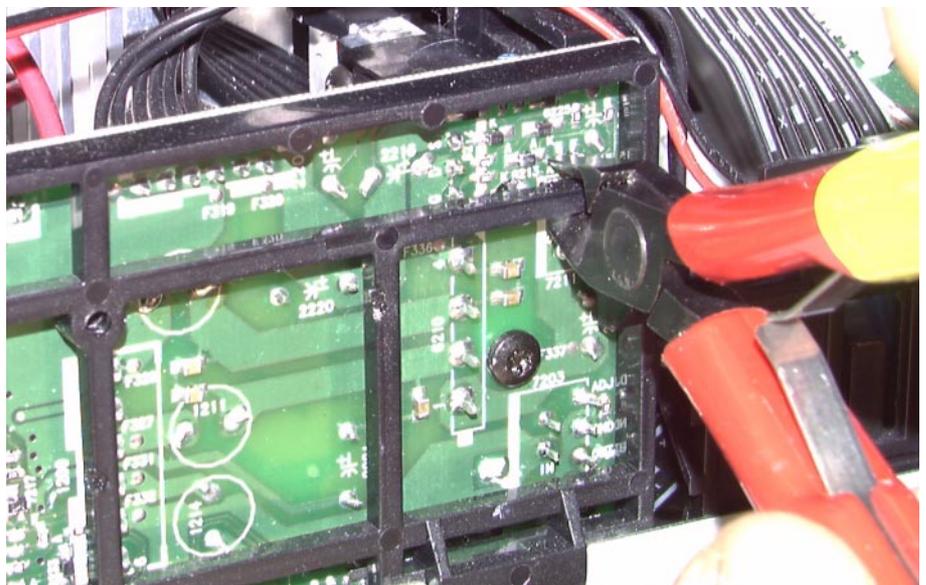
**REMARKS** :

**05.14 TYPENUMBER(S): LX9000R/22S/29S**

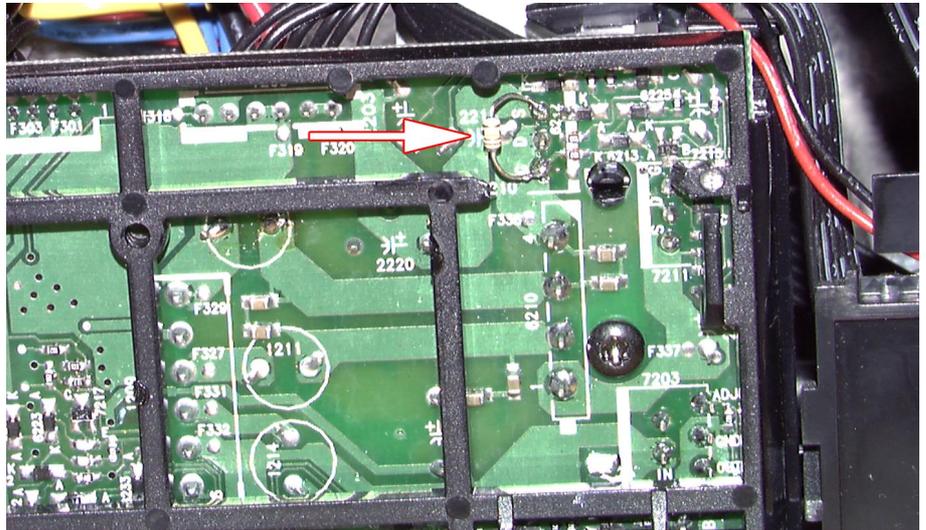
**SYMPTOM** : **IRIS CODE 1 5 1 6**  
No sound from loudspeakers.  
FET 7210 on Power Secondary Board blown.

**CURE** : Exchange defective FET and solder 100kΩ resistor between Gate and Source of 7210 (see pictures below).

1. Cut off rib of frame to get proper access to FET 7210



## 2. Solder 100kΩ resistor between Gate and Source of FET 7210



REMARKS : All sets have been reworked before shipment but some exhibition sets might have slipped through. It is recommended to check all sets brought in for repair and re-work them accordingly.

### 05.15 TYPENUMBER(S): **MZ-1000, MZ-1100, MZ-1200**

SYMPTOM : **IRIS CODE 1 1 3 F**  
Segments are missing on the display when the set is powered on from ECO Standby.

CURE : In course of production the LCD supplier has been changed and the driving circuit of the new LCD differs from the original design. The problem can be solved by changing the value of resistor 3541 on the Combi Board from 100kΩ to 2,2MΩ.

3541 319802132250 RST SM 0603 2,2MΩ ±5%

REMARKS : Above modification has been implemented in production from week 0320 onwards.

### 05.16 TYPENUMBER(S): **SA220, SA230, SA235**

INFORMATION : Customer gets the prompt "VOICE" on the display screen and is unable to get any response or sound from the unit.

The above problem can be resolved by upgrading the player with the latest firmware from the Philips support site as per the instructions below:

1. Go to <http://www.philips.com/support/>, select **Documentation & Downloads** then type in the model number.
2. Download the zipped file under Firmware upgrade Software to a temporary directory on your PC. And extract the zipped file.
3. Uninstall the existing driver at **START** → **PROGRAMS** → **Philips RUSH Audio Player** → **Uninstall**.
4. Restart your computer.
5. Run the unzipped "setup.exe" application to reinstall the driver.

6. Click **NEXT** to continue and **YES** to accept the terms of use to complete the installation.
7. At **START** → **PROGRAMS** → **Philips RUSH Audio Player** click **Recovery**.
8. The computer will prompt you to connect the RUSH player.
9. Remove the battery from the battery compartment of your RUSH player.
10. Hook up the player with your PC.
11. Press and hold the **PLAY** button while inserting a fresh battery into the player. Continue holding down the **PLAY** button for another 5 seconds.
12. An update screen will pop up, uncheck the **QUICK DOWNLOAD** box and click **START** to upgrade the firmware of your unit.
13. Please take care not to interrupt or unplug the player from the computer while the firmware upgrade is in progress.
14. Once the upgrading process is complete, you may click on the removal icon on the task tray to stop and eject the player.
15. When the message "The USB device can now be safely be removed from the system" appears, click **OK** the unit should now be able to resume operation.

REMARKS :

**05.17** TYPENUMBER(S): **SW8000SA/00S/01S/17S**

INFORMATION : Mechanical & Accessories Parts List  
The following part has been changed on request from the supplier:  
50 9965 000 20814 Speaker Driver 100W 6.5" 4Ω

REMARKS :

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# SERVICE NEWSLETTER

## 04.01 TYPENUMBER(S): ACT100

**INFORMATION** : Sometimes rust signs are found on the metal surface due to water and/or sweat stays between the set and the rubber part of the armband. The stainless steel material is claimed to be good enough for the set's application and the supplier cannot source an even better material. To avoid receiving more complaints from the customers, an addendum sheet with the following statement has been added to highlight the cleaning of the set after use:

Keep your set clean and dry

- Always remove the set from the armband when not using.
- Wipe your set and the rubber armband with a soft, damp cloth to clean off sweat and excess moisture.
- This product is not waterproof.

**REMARKS** : The addendum sheet has been applied in production from week 0331 onwards.

## 04.02 TYPENUMBER(S): ACT100, ACT200, ACT210, ACT300, ACT400

**INFORMATION** : Sometimes the rubber ring will drop off easily because the ring is too loose to match with the plastic housing. To solve the problem, the mould of the rubber ring has been modified by reducing the inner diameter. New Rubber Rings are now available with following codenumbers:

9965 000 20803	Rubber Ring (Blue)
9965 000 20804	Rubber Ring (Orange)
9965 000 20811	Rubber Ring (Gold Post)

**REMARKS** : Headphones with new Rubber Rings are used in production from week 0328 onwards.

**04.03 TYPENUMBER(S): ACT200, ACT210**

**INFORMATION** : Sometimes the headphone has no function because the wire is broken at the Y- junction point.. The junction was connected by glue. From week 0248 onwards, the wire connection method had been changed from glue connection to knot connection, and all the connection points must be cut out and scrapped during production. The headphone is available with following codenumber:

9082 100 00785            HEADPHONE SBCHJ020-77J

**REMARKS** : Modified headphones are used in production from week 0248 onwards.

**04.04 TYPENUMBER(S): AX7201**

**INFORMATION** : Electrical Partslist  
In course of production microprocessor IC 7403 has been changed from OTP to masked version. The new codenumber reads:

7403    3103 308 84641            MUP TMP86CM29BU AX7201

**REMARKS** :

**04.05 TYPENUMBER(S) : AZ2555, AZ2558**

**INFORMATION** : Correction to Service Manual, Electrical partslist  
The codenumber for the WooX speaker is missing. The part is available with following codenumber:

4340 702 20007            LSP 10W WOOX

**REMARKS** :

**04.06 TYPENUMBER(S): HDD100**

**INFORMATION** : Following new spare parts are now available on service stock:

3140 118 89531            Main board assembly  
3140 118 72071            CD-ROM – DFU and installation

**REMARKS** :

**04.07 TYPENUMBER(S): KEY003, KEY004, KEY005, KEY006**

**INFORMATION** : The CD-ROM containing DFU and installation is now available as service spare part:

3140 118 72121            CD-ROM – DFU and installation

**REMARKS** :

**04.08** TYPENUMBER(S): **LX2000D, LX3000D, LX3500D, MRD200, MX3550D, MX3600D, MX3700D, MX3800D**

SYMPTOM : **IRIS CODE 1 5 3 X**  
After playing the VCD portion the set is unable to play CD tracks of a VCD and CD combination disc.

CURE : There is no technical solution available but the problem can be resolved by turning the PBC function to "OFF" in the System Menu. In PBC OFF the combination disc will play normally.

REMARKS :

**04.09** TYPENUMBER(S): **LX3700D, LX3750W**

INFORMATION : The DVD tray may be locked because the Dealer (Tray Lock) mode is activated.

To activate and to release Tray Lock:  
Press source key for more than 2 seconds, then press the Play key.  
When the VFD displays "Tray Lock" press the OK key to confirm.

REMARKS :

**04.10** TYPENUMBER(S): **LX7000SA, LX8000SA, LX8200SA**

INFORMATION : New firmware upgrade has been released:  
• DVD Module Back End Application version 4.68.05  
• Servo Software version 7.13

This upgrade solves playability problems with SVCDs.

**A. Preparation to upgrade firmware:**

1. Unzip zip-archive "iic\_4\_68\_05\_servo.zip" (attached).
2. Start the CD Burning software and create a new CD project (data disc) with the following settings:  
File system : ISO9660  
Physical Format of CD : MODE 2 (CDROM XA)  
Recording mode : SINGLE SESSION (TRACK-AT-ONCE), FINALIZED CD
3. Place the content of the zip-archive into the root directory of the new CD project.
4. Burn the data onto a blank CD-RW.

Note: ISO9660 is mandatory, UDF discs are not supported !  
The final CD-ROM must not contain any other data except for the files from the zip-archive.

**B. Procedure to apply the firmware upgrade:**

1. Power up the set and select "DISC" source.
2. Adjust the volume to minimum to avoid any loud blast of noise.
3. Open the DVD tray and insert the prepared Upgrade CD-ROM.
4. Close the tray and the set will auto read the disc.
5. Upon recognise the disc, the set will start to download the new firmware (about 10-15 min). The LCD shows "DOWNLOAD".

Note: Do not disturb the set or press any other buttons when downloading is in progress!

6. Upon complete, the DVD tray will open automatically.
7. Remove the Upgrade CD-ROM and close the tray.

**C. How to read out the firmware version to confirm upgrading:**

1. Power up the set and select "DISC" source.
2. Press "SYSTEM MENU" key on the Remote Control, followed by the following key sequence:
  - "Cursor Down" key 4 times
  - "Cursor Right" key 1 time
  - "Cursor Down" key 4 times
3. Message "(C)PHILIPS '01-'02 5580 4.68.05 ....." will be displayed on the TV screen (where 4.68.05 indicates the new firmware version number).
4. Press "SYSTEM MENU" key on the Remote control to exit.

REMARKS : The zip-archive is also available for download on the Philips Intranet: <http://pww.avic.ce.philips.com/serviceaudio/flash/>

**04.11 TYPENUMBER(S): LX8200SA/22S**

INFORMATION : **Reprogramming of DVD version matrix**

Caution: This information is confidential and may not be distributed. Only qualified service persons should do the reprogramming.

The programmed version matrix has been changed from "222 036 08" to "222 037 08" due to the requirement on PAL P-Scan.

After replacement/repair, the customer settings and also the region code may be lost. Reprogramming will put the set back in the state in which it has left the factory, i.e. with the default settings and the correct region code.

Reprogramming will be done via the Remote Control. Complete version matrix to be entered is "PLAY 159 XXX XXX XX PLAY".

Do the following steps with the Remote Control:

1. Ensure no disc is loaded in the tray.
2. Set the Remote Control to DISC source.
3. Press <PLAY> followed by numerical keys <1> <5> <9>  
Remark: In the top left hand corner of the TV screen "X" will be displayed for all 4 keys which have been pressed.
4. Press now the following numerical keys (8 digits version matrix):  
for LX8200SA/22S : <2> <2> <2> <0> <3> <7> <0> <8>  
Remark: The TV screen will not show these 8 digits which have been pressed.
5. Press <PLAY> again.  
Caution: Wait for about 3 seconds for the set to reset to the required setting. The TV screen will turn blue and a loud sound becomes audible at the speaker output.
6. Disconnect mains to ensure proper reset.

**How to check the version matrix and the firmware version number of the set:**

1. Power up the set and select DISC source.
2. Press <SYSTEM MENU> on the Remote Control to enter the User Preference Manual (UPM), followed by the following key sequence:
  - <Cursor Down> key 4 times
  - <Cursor Right> key 1 time
  - <Cursor Down> key 4 times
3. Message "(C)PHILIPS 01- 02 5580 W.WW.WW ..... PXXXXXXX Y.YY.Y" will be displayed on the TV screen.  
W.WW.WW - indicates the BEA firmware version number  
PXXXXXXX - indicates the version matrix programmed  
Y.YY.Y - indicates the FEA (servo) firmware version number
4. Press <SYSTEM MENU> on the Remote control to exit.

REMARKS :

**04.12 TYPENUMBER(S): MC-M250**

INFORMATION : In course of production the microprocessor IC (7400) has been changed to solve the problem "no timer function in tuner mode". The codenumber of the new microprocessor reads:

7400 3140 110 52101 TMP86CS25-M250

REMARKS :

**04.13 TYPENUMBER(S): MC-M350, MC-V320**

SYMPTOM : **IRIS CODE M 5 4 X**

Strange speckle noise is audible after approximately half an hour during CD playback.

CURE : Problem is caused by the mismatch of TDM clock and TDM frame sync. data from Toshiba Servo IC (TC9462F) to ESS MPEG IC (ES3210). The problem is solved by adding a trigger inverter IC (MC74HC14A) in between the clock track of Servo & MPEG IC.

To repair the set, the CD main board has to be exchanged. New CD main boards with inverter IC are available with following codenumbers:

9965 000 21033 PBAS-CD Main M350  
9965 000 21034 PBAS-CD Main V320

REMARKS : The CD main boards have been implemented in production from week 0332 onwards.

**04.14 TYPENUMBER(S): MX3900D, MX3950D**

INFORMATION : Correction to the Service Manual, parts list:

Page 12-7

3139 118 56481 BE (BackEnd) PCB Assembly CD222

Page 13-2

345 3139 119 01401 Satellite LS Pack CS3950D/17S

346 3139 119 01411 Subwoofer Box SW3950D/17S

349 deleted

REMARKS :

**04.15 TYPENUMBER(S): MX3900D, MX3950D, MX5500D, MX5600D, MX5700D**

INFORMATION : New firmware versions for the DVD Back-end have been released:

- "BEA3131PV30" for MX3900D, MX3950D
- "PMK3131PV30" for MX5500D, MX5600D, MX5700D

The upgrades address some general playability issues.  
All older sets brought in for repair should be upgraded as preventive action.

**A. Preparation to upgrade firmware:**

1. For MX3900D and MX3950D: Unzip zip-archive "mx39x0d\_ver\_bea3131pv30.zip" (attached).  
For MX5500D, MX5600D, MX5700D except /35 version: Unzip zip-archive "mx55xxd\_ver\_pmk3131pv30.zip" (attached).
2. Start the CD Burning software and create a new CD project (data disc) with the following settings:  
File system: ISO9660, JOLIET  
Format: MODE 1: CDROM  
Recording mode: SINGLE SESSION (TRACK-AT-ONCE), FINALIZED CD
3. Place the content of the zip-archive (1 file) into the root directory of the new CD project.
4. Burn the data onto a blank CDR.

Note: ISO9660 is mandatory, UDF discs are not supported !  
The final CDROM must not contain any other data except the file from the zip-archive.

**B. Procedure to apply the firmware upgrade:**

1. Power up the set and open tray 1.
2. Insert the prepared Upgrade CD-ROM and close the tray.
3. The set will display READING followed by DOWNLOAD
4. The TV OSD screen will show the following messages in sequence: Reading → Update BEA → Writing → done
5. The whole process takes less than 2 minutes.  
Note: Do not press any key buttons or interrupt the mains supply during the entire upgrading process, otherwise the set may become defective.
6. Unplug & replugin the mains cable.
7. Open tray 1 and remove Upgrade CDROM.

### **C. How to read out the firmware version to confirm upgrading**

1. Select Disc with the Remote Control.
2. Press <SYSTEM MENU> on the Remote control.
3. Use the down key move ll the way down (4x) to bottom of "Setup Menu"
4. Use the right key move to the "sub-menu".
5. Use the down key move down (3x) to "Default" and down one more time to see the firmware version.
6. The TV screen shows: "xxxxx BEA313PV30 xxxxxx xxx"

REMARKS : The zip-archives are also available for download on the Philips Intranet: <http://pww.avic.ce.philips.com/serviceaudio/flash/>

### **04.16 TYPENUMBER(S): MX5000D**

INFORMATION : New firmware version "MXKI0005" for the B/E has been released.

This upgrade addresses incompatibility issues after repair/replacement of the MPEG board, like green picture, etc.

#### **A. Preparation to upgrade firmware:**

1. For /22S: Unzip zip-archive "mx5000d\_22s\_be\_ver\_mxki0005.zip"  
For /37S: Unzip zip-archive "mx5000d\_37s\_be\_ver\_mxki0005.zip"
2. Start the CD Burning software and create a new CD project (data disc) with the following settings:  
File system: ISO9660, JOLIET  
Recording mode: SINGLE SESSION, FINALIZED CD  
Physical format of CD: Mode 1: CDRom
3. Place the content of the zip-archive (1 file) into the root directory of the new CD project.
4. Burn the data onto the blank CDR.

Note: ISO9660 is mandatory, UDF discs are not supported !  
The final CD-ROM must not contain any other data except the files from the zip-archive.

#### **B. Procedure to apply the firmware upgrade via Remote control:**

1. Press OPEN button on set to open tray DISC1.
2. Press [CLEAR][2][5][8][0][CLEAR] buttons in sequence, where CLEAR = Press & hold STOP button down until the INVALID Logo disappears on the TV screen.  
- TV screen shows the B/E & F/E firmware versions, build time and EEPROM data.
3. Place B/E Upgrade CD-ROM onto tray.
4. Press PROGRAM button.  
The TV screen shows:
  - ERASE >>>>>>>>>>
  - WRITE >>>>>>>>>>
  - DONE
5. Press POWER button on set to turn it off and on again.
6. Press OPEN button on set to remove B/E CD-ROM from tray DISC1.
7. Repeat Step 1 and 2 again.

8. Press STOP button to clear the EEPROM.
  - The TV screen will show the upgraded B/E firmware version.
  - The set display will show EEP ERR because the EEPROM needs to be set.
9. Use the Up/Down arrow buttons to move to EEPROM address 12 and press:
  - [22][OK] for /37S version
  - [35][OK] for /22S version
10. Repeat likewise for address 13 and address 14 with:
  - [21][OK] and [01][OK] for /37S version
  - [33][OK] and [02][OK] for /22S version
 The TV screen will respond with region code "1" for /37S or "2" for /22S version.
11. Press RETURN button twice to exit. The information on the TV screen disappears.
 

Note: Do not interrupt the mains supply during the entire upgrading process, otherwise the set may become defective.

**C. How to read the firmware version to confirm upgrading via Remote control:**

1. Press OPEN button on set to open tray DISC 1.
2. Press [CLEAR][2][5][8][0][CLEAR] buttons in sequence, where CLEAR = Press & hold STOP button down until the INVALID Logo disappears on the TV screen.
  - TV screen shows the B/E & F/E firmware versions, build time and EEPROM data.
3. Press RETURN button to exit.

REMARKS : Zip-archive "mx5000d\_22s\_be\_ver\_mxki0005.zip" is attached to this Service Newsletter, zip-archive "mx5000d\_37s\_be\_ver\_mxki0005.zip" has already been distributed with Service Newsletter SNL2003.01.23.

The zip-archives are also available for download on the Philips Intranet: <http://pww.avic.ce.philips.com/serviceaudio/flash/>

**04.17 TYPENUMBER(S): MX5500D/37**

INFORMATION : Correction to the Service Manual, parts list:

Page 13-2

Mechanical & Accessories parts list – Main unit  
 345 3139 119 02201 Satellite LS Pack

Breakdown of Satellite LS Package

9965 000 20433	Front Speaker Box Left
9965 000 20434	Front Speaker Box Right
9965 000 20435	Surround Speaker Box Left
9965 000 20436	Surround Speaker Box Right
9965 000 20437	Center Speaker Box

REMARKS :

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# SERVICE NEWSLETTER

## 03.01 TYPENUMBER(S): **ACT300**

INFORMATION : Because of a changed production process, the Top Cabinet Assembly (item 401) has been split up into the following two parts:  
3140 114 45891      Top Panel  
3140 113 23242      Inlay-LCD

REMARKS :

## 03.02 TYPENUMBER(S): **AQ6688**

INFORMATION : Correction to the Service Manual, electrical partslist:  
The volume control (VR101) is missing. It is now available with codenumber:

VR101 4822 101 11429      Rotary VOL B10K

REMARKS :

## 03.03 TYPENUMBER(S): **AX2200, AX2201**

SYMPTOM : **IRIS CODE 1 1 1 1**  
Fuse F601 or transistor Q4 becomes defective when batteries are inserted reversely.

CURE : The problem is caused by the Spring-Battery-Plus, which is not guided properly by the ribs. It can be solved by fixing the battery spring plate firmly.

REMARKS : In course of production the mould of Middle Cabinet (item 13) has been modified to increase the wall thickness of the ribs.  
Modified cabinet parts have been implemented from week 0322 onwards.

**03.04** TYPENUMBER(S): **AX7201**

**INFORMATION** : Sometimes the remote control has no function because the cable is broken. These remote controls were assembled with a cable of 2.0mm diameter. In course of production the diameter of the cable has been changed to 2.5mm.

The new remote control is available with following codenumber:  
3140 118 51251          REMOTE CONTROL AX7201

**REMARKS** : Modified remote controls have been implemented in production from week 0252 onwards.

**03.05** TYPENUMBER(S): **AZ1500, AZ1505**

**SYMPTOM** : **IRIS CODE F 1 1 3**  
Jumping CD playback at higher sound volumes with DBB ON.

**CURE** : The problem can be solved by replacing both dampers (item 428 and 429) by new and softer dampers.

The new damper is available with following codenumber:  
3140 114 60570          DAMPER-RUBBER

**REMARKS** : New dampers have been implemented in production from week 0322 onwards.

**03.06** TYPENUMBER(S): **EXP311, EXP313**

**SYMPTOM** : **IRIS CODE S 7 1 9**  
ID3 tags are not displayed correctly. The song name (artist + title) can be filled in but if the next track has a shorter name, then the previous song's characters still remain at the end of the shorter name.

**CURE** : This is a software problem and has been solved with the implementation of the phase 2 design.

**REMARKS** : The production of phase 2 has been started from week 0246 onwards, factory code KT010246....

**03.07** TYPENUMBER(S): **EXP510, EXP511**

**SYMPTOM** : **IRIS CODE 1 1 7 1**  
"Charge Full" message never appears and the rechargeable batteries remain uncharged.

**CURE** : The problem is caused by a dry soldered joint on NTC resistor 3284.

**REMARKS** : Improvement actions have been implemented in production from week 0317 onwards.

**03.08** TYPENUMBER(S): **EXP510, EXP511**

SYMPTOM : **IRIS CODE 2 1 1 3**

No battery supply due to poor battery contact.

CURE : The problem is most probably caused by a bent battery spring after an accidental drop of the set and can be fixed by adding a rubber pad under Battery Spring (item 417).

REMARKS : The rubber pad has been added in production from week 0318 onwards.

**03.09** TYPENUMBER(S): **FW-C505, FW-C550, FW-C555, FW-C700, FW-C720, FW-C780, FW-C785, FW-C788, FW-C798, FW-P750, FW-V520, FW-V720, FW-V780, FW-V785, FW-V795**

INFORMATION : In course of production resistor 3434 on the Front Display Board has been changed to solve the "LED Blinking" problem:

3434 4822 051 30471 470Ω 5% 0,062W

REMARKS :

**03.10** TYPENUMBER(S): **LX2000D, LX3000D**

INFORMATION : New firmware upgrade to version "VER 0517 1 xx y" has been released.

The upgrade addresses the following issue:

- Sound is muted during tracknumber increase on CDs with live music content or on CDs recorded in disc-at-once mode.

All older sets brought in for repair should be upgraded as preventive action.

**A. Preparation to upgrade software:**

1. Unzip the zip-archive attached to this Service Newsletter
2. Start the CD Burning software and create a new CD project (data Disc) with the following settings:  
File system: ISO9660, JOLIET  
Format: MODE 1: CDROM  
Recording mode: SINGLE SESSION (TRACK-AT-ONCE), FINALIZED CD
3. Place the content of the zip-archive (1 file) into the root directory of the new CD project.
4. Burn the data onto a blank CDR

Note: ISO9660 is mandatory, UDF discs are not supported !  
The final CDROM must not contain any other data except the file from the zip-archive.

**B. Procedure to apply the software upgrade:**

1. Power up the set and open the DVD tray.
2. Insert the prepared Upgrade CDRom and close the tray.
3. The TV screen will show the following messages in sequence:  
“disc loading” → “bank30.rom” → “writing” → “done”
4. The whole process takes less than 10 seconds after which the set shuts down and the TV screen becomes dark.  
Note: Do not press any buttons or interrupt the mains supply during the entire upgrading process, otherwise the set may become defective.
5. Unplug & replug the mains cable
6. Open the DVD tray and remove Upgrade CDRom.
7. Reset the system by using the Remote control, select System Menu → Feature setup → Default → Reset

**C. How to read out the software versions to confirm upgrading**

1. Open the DVD tray
2. Press <123> <OK> on the Remote control.
3. The software version “VER 0517 1 xx y” is displayed on the TV screen. The region code (digit “y”) should remain as before upgrading, otherwise restore the region code as described in the Service Manual on page 2-1.

**D. Before returning the set to customer**

1. Check & ensure that the TV system and Video out are setup as in the table below:

Type/Version	TV-System	Video Out
LX2000D/21H	AUTO	Pr Pb Y
LX2000D/30S	AUTO	Pr Pb Y
LX2000D/33S	NTSC	Pr Pb Y
LX3000D/19	NTSC	SCART
LX3000D/21L	NTSC	Pr Pb Y
LX3000D/21S	NTSC	Pr Pb Y
LX3000D/22S	PAL	SCART
LX3000D/30S	AUTO	Pr Pb Y
LX3000D/37S	NTSC	S-Video

REMARKS : Zip-archive file “lx3000d\_v0517\_1.zip” is for LX2000D and LX3000D family except /35S  
The zip-archive is also available for download on the Philips Intranet:  
<http://www.icap.sv.philips.com/serviceaudio/flash/>

**03.11 TYPENUMBER(S): LX2000D/21H, LX3000D/21S/22S, LX3500D/21H, MX3800D/21H/22S**

INFORMATION : Additional information to Service Newsletter SNL2003.02.20: “AC socket + Ring + connector assemblies” can be ordered with the following codenumbers:

9965 000 19619 for LX2000D/21H, LX3000D/21S/22S, LX3500D/21H  
9965 000 19620 for MX3800D/21H/22S

REMARKS :

**03.12 TYPENUMBER(S): MC-i250**

**INFORMATION : L/R Loudspeaker Box Breakdown**

Selected spare parts are now available for the L/R Loudspeaker Boxes:

9965 000 18471	Grille Assembly
9965 000 18472	Grommet
9965 000 18473	Rubber Foot

**Combi Board**

In course of production following coils have been changed because of a new supplier:

5300	2422 536 00614	Coil 18,5T 0.5-2UEW 5,6D B
5301	2422 536 00614	Coil 18,5T 0.5-2UEW 5,6D B
5302	2422 536 00614	Coil 18,5T 0.5-2UEW 5,6D B
5303	2422 536 00614	Coil 18,5T 0.5-2UEW 5,6D B

REMARKS :

**03.13 TYPENUMBER(S): MRD250**

**INFORMATION :** The Direction for Use and the Quick User Guide can be ordered with following codenumbers:

9965 000 17170	Direction For Use
9965 000 17171	Quick User Guide

REMARKS :

**03.14 TYPENUMBER(S): MX3900D, MX3950D**

**INFORMATION :** Correction to the Service Manual, partslist

Page 6-9

7100	3139 110 53491	TMP88CU74F with mark "3900S53491"
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Page 11-11

7105	9965 000 19029	M29F002BT-70K1 with SW program
------	----------------	--------------------------------

Page 12-8

7300	9965 000 18638	M29F800DT-70N1 with SW program
------	----------------	--------------------------------

REMARKS :

**03.15 TYPENUMBER(S): MX3900D, MX3950D**

SYMPTOM : **IRIS CODE 1 1 1 9**

The set powers up and returns immediately to standby mode.

CURE : The problem is caused by a blown NFR resistor (3290) on the AV board. The NFR blows out due to high inrush current during power up. It can be solved by lowering the value of this resistor to:

3290 4822 052 10108 1Ω 5% 0,33W

REMARKS :

**03.16 TYPENUMBER(S): MX3900D, MX3950D, MX5500D, MX5600D, MX5700D**

INFORMATION : New firmware upgrades have been released for the DVD back-end:  
• Version "BEA3131PV28" for MX3900D, MX3950D  
• Version "PMK3131PV28" for MX5500D, MX5600D, MX5700D

The upgrade addresses some general playability problems.

All older sets brought in for repair should be upgraded as preventive action.

**A. Preparation to upgrade software:**

1. Unzip the zip-archive attached to this Service Newsletter
2. Start the CD Burning software and create a new CD project (data disc) with the following settings:  
File system: ISO9660, JOLIET  
Format: MODE 1: CDROM  
Recording mode: SINGLE SESSION (TRACK-AT-ONCE), FINALIZED CD
3. Place the content of the zip-archive (1 file) into the root directory of the new CD project.
4. Burn the data onto a blank CDR

Note: ISO9660 is mandatory, UDF discs are not supported !  
The final CDROM must not contain any other data except the file from the zip-archive.

**B. Procedure to apply the software upgrade:**

1. Power on the set and open tray 1.
2. Insert the prepared Upgrade CDROM and close the tray.
3. The set will display "READING" followed by "DOWNLOAD"
3. The TV OSD screen will show the following messages in sequence:  
"Reading" → "Update BEA" → "Writing" → "done"
4. The whole process takes less than 2 minutes.  
Note: Do not press any buttons or interrupt the mains supply during the entire upgrading process, otherwise the set may become defective.
5. Unplug & replugin the mains cable.
6. Open tray 1 and remove Upgrade CDROM.

**C. How to read out the software versions to confirm upgrading:**

1. Select Disc with the Remote Control
2. Press <SYSTEM MENU> on the Remote control.
3. Use the down key move ll the way down (4x) to bottom of "Setup Menu".
4. Use the right key move to the "sub-menu".
5. Use the down key move down (3x) to "Default" and down one more time to see the software version.
6. The TV screen will show "xxxxx BEA313PV28 xxxxxx xxx".

REMARKS : Zip-archive "mx39x0d\_ver\_bea3131pv28.zip" is for MX3900D and MX3950D, zip-archive "mx55xxd\_ver\_pmk3131pv28.zip" is for MX5500D, MX5600D, MX5700D except /35 version.

The zip-archive is also available for download on the Philips Intranet:  
<http://www.icap.sv.philips.com/serviceaudio/flash/>

**03.17 TYPENUMBER(S): MX5500D, MX5600D, MX5700D**

INFORMATION : Correction to the Service Manual, partslist

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7100 3139 110 53491 TMP88CU74F with mark "5500S53501"

REMARKS :

**03.18 TYPENUMBER(S): MZ-1000, MZ-1100, MZ-1200**

INFORMATION : **Module Power Box – Class D Amplifier Board**

In course of production the following capacitors have been changed to increase the voltage rating of the capacitor:

2503	4822 126 14585	100nF 10% 50V
2504	4822 126 14585	100nF 10% 50V

**Module Power Box – Supply Board**

In course of production the following parts have been changed for standardization reasons:

1202	2422 030 00329	Mains Socket for /22 version
1202	2422 030 00328	Mains Socket for /37 version
6211	4822 130 31603	1N4006 for /37 version
6212	4822 130 31603	1N4006 for /37 version
6213	4822 130 31603	1N4006 for /37 version
6214	4822 130 31603	1N4006 for /37 version

In course of production the following capacitor has been changed to solve leakage issue:

2206	4822 126 13482	470nF +80/-20% 16V
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REMARKS :

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# SERVICE NEWSLETTER

## 02.01 TYPENUMBER(S): **GENERAL**

**INFORMATION** : Due to the ever changing software-production house & self recording, we are sometimes confronted with discs that cannot be played in all sets. The cause of the problem may be "incorrect recorded discs not fulfilling the specification" making it impossible to solve the problem in the set. As we want to improve future developments we would like to receive all discs, brought in with playability problems.

**REMARKS** : Problem discs should be sent to the Quality Manager of BCT AV Systems at the address below:

Philips Electronics Singapore Pte Ltd  
BCT AV Systems  
Development Quality  
620A Lorong 1, Toa Payoh  
Building TP1, Level 2  
Singapore 319762  
Attn: Mr Mok Fook Weng

## 02.02 TYPENUMBER(S): **ACT200 (psa[64], ACT210 (psa[128)**

**INFORMATION** : In case you encounter any of the following situations:

- The player can't be powered up
- The player hangs or freezes at a particular track
- The player does not behave properly after reformatting from PC

Please apply the recovery procedure published at below Nike-Philips web page: [http://www.nike-philips.com/pop\\_freezing.jsp?lang=en](http://www.nike-philips.com/pop_freezing.jsp?lang=en)

**REMARKS** :

**02.03 TYPENUMBER(S): ACT300**

**INFORMATION** : In course of production following parts have been changed in order to reduce the standby current and to solve the intermittent power-off problem:

2230	4822 126 14549	33nF X7R 16V 0603
3232	3198 031 01050	1M $\Omega$ 5% 0402
3236	4822 117 13548	1k $\Omega$ 5% 0402

**REMARKS** : Modification has been implemented in production from week 0311 onwards.

**02.04 TYPENUMBER(S): AJ3160**

**SYMPTOM** : **IRIS CODE 1 1 7 1**  
Clock time cannot be adjusted.

**CURE** : The structure of the mould for the Time Set Pole has been redesigned. The improved part is available with codenumber:

9965 000 13670 Time Set Pole

**REMARKS** : Improved parts have been implemented in production from week 0236 onwards.

**02.05 TYPENUMBER(S): AJ3475**

**SYMPTOM** : **IRIS CODE 2 2 1 X**  
The set cannot receive weak Radio Clock Control signal (auto time adjustment does not work).

**CURE** : The problem is caused by the sensitivity and bandwidth performance of the IC used in the RCC antenna assembly. The long-term solution is to change to another IC and to redesign the RCC receiver circuitry. The new RCC Antenna assembly is now available for service with the following codenumber:

9965 000 18191 RCC-ASSY-(281)

**REMARKS** : Modification has been implemented in production from week 0310 onwards.

**02.06 TYPENUMBER(S): AX3202**

**INFORMATION** : Electrical partslist:  
In course of production item 3309 VDR 1mA/5V5 has been changed to NTC. The codenumber of the NTC reads:

3309 2322 615 33103 NTC SM 0603 0W125 10k $\Omega$   $\pm$ 5%

**REMARKS** : Modification has been implemented in production from week 0312 onwards.

**02.07** TYPENUMBER(S): **AX5200, AX5201, AX5202, AX5203, AX5210, AX5211, AX5212, AX5215, AX5219**

**INFORMATION** : Electrical Partslist: In course of production following components have been changed/deleted:

2319	2022 029 00646	TANTAL CAP 470µF ±20% 6,3V
3309	2322 615 33103	NTC 10kΩ ±5%
7202	Deleted	

**REMARKS** : Modification has been implemented in production from week 0312 onwards.

**02.08** TYPENUMBER(S): **AZ5150**

**SYMPTOM** : **IRIS CODE 2 5 3 X**  
Echo effect is audible when an MP3 CD with high vocals is played back.

**CURE** : It is an inherent architectural problem which cannot be solved. The Echo effect has been accepted by the commercial department.

**REMARKS** : For critical customers not willing to accept above shortcomings, it may be necessary to work out a commercial solution, e.g. replacement by another set: AZ5130 (will be launched in May 2003).

**02.09** TYPENUMBER(S): **AZ5150**

**INFORMATION** : The Microprocessor IC is bonded on the Control board. In case of defects the whole Control board assembly has to be replaced. The Control board assembly is now available with codenumber 9965 000 17454.

**REMARKS** :

**02.10** TYPENUMBER(S): **AZ5150**

**SYMPTOM** : **IRIS CODE 3 1 1 3**  
Cannot play CD when the set is supplied with batteries.

**CURE** : The problem can be solved with following adaptations:  
1. Delete U2 (LM7808) and U3 (LM7805) and replace with a regulator board assembly. The regulator board assembly is available with codenumber 9965 000 16959.  
2. Change R142 to 10Ω and change R78 to 680Ω.

Detailed rework instruction can be downloaded from the Philips intranet:  
[http://pww.avic.ce.philips.com/serviceaudio/downloads/rework/az5150\\_pcb\\_rework\\_instruction.pdf](http://pww.avic.ce.philips.com/serviceaudio/downloads/rework/az5150_pcb_rework_instruction.pdf)

**REMARKS** : Modification has been implemented in production from week 0303 (production code KZ040303...) onwards.

**02.11 TYPENUMBER(S): CDR795, CDR796**

- SYMPTOM : **IRIS CODE S 5 6 X**  
Display shows "COPY PROTECT". The set does not make a copy of copy protected CDs at all.
- CURE : For legal reasons it is not possible with these sets to make any copy of copy protected CDs. In contrary to previous models the set does not automatically make an analog copy.
- REMARKS :

**02.12 TYPENUMBER(S): CDR795, CDR796, CDR800, CDR802, CDR820, CDR822**

- SYMPTOM : **IRIS CODE S 5 1 X**  
No sound is audible when playing MP3 CDs, except on headphone.
- CURE : This phenomenon occurs when the customer has a digital connection to his receiver or amplifier. The digital output of the CDR module is automatically muted when MP3 CDs are played back. For MP3 CD playback an analog connection to the receiver or amplifier is necessary in parallel to the digital connection.
- REMARKS : In the Instruction For Use of CDR79x following is stated:  
**In compliance with the SDMI (Secure Digital Music Initiative) the digital outputs will be inactivated when playing an MP3 CD.**

**02.13 TYPENUMBER(S): EXP210, EXP211, EXP212, EXP213, EXP311, EXP313, EXP511**

- INFORMATION : Sometimes fuse 1251 gets blown when the batteries are put in reverse position. The "-ve" plate may touch the edge of the "+ve" contact plate and form a closed loop circuit which draws high current. The solution is to modify the cabinet by increasing the wall thickness of the contact plate holder so that no contact will be made when a battery is inserted reversely.
- REMARKS : Modified cabinets have been implemented in production from week 0313 onwards.

**02.14 TYPENUMBER(S): FW-C870, FW-P880**

- INFORMATION : The codenumber of the Front-Cloth Frame Assembly of the L/R Loudspeaker Box has been changed to 4340 702 50040.
- REMARKS :

**02.15 TYPENUMBER(S): FW-M355**

**SYMPTOM** : **IRIS CODE 1 5 1 6**  
No loudspeaker output after power on. If the Mains supply is reduced to around 109V or lower, the loudspeaker sound comes back again.

**CURE** : The problem is caused by MOSFET 7302 (STP16NE06) on the Combi board being short-circuited. This results in a high DC voltage at the supply pin of the Power amplifier IC AN17830. The Internal over-voltage protection circuit of AN17830 will mute the output. For repair a MOSFET with higher current & heat dissipation - BUK7535-55A (codenumber 9340 561 95127) - is recommended.

**REMARKS** :

**02.16 TYPENUMBER(S): FW-M355**

**SYMPTOM** : **IRIS CODE 1 6 1 0**  
CD does not work, the set does not response to basic operations like open/close tray. Other sources work normally.

**CURE** : The problem is caused by a mismatch between the Front microprocessor IC and the CDC Module.

Check the type of the CDC module built-in the set and solve the problem as follows:

**CDC Module = 3139 118 77860**

1. Replace  $\mu$ P IC 7400 on the Front board with 3139 110 53141 (with print mark "M355S53141")
2. Replace resistors 3507 & 3508 on the Combi board with 4822 051 30332 3,3k $\Omega$  5% 0,1W

**CDC Module = 3103 308 54580**

1. Replace  $\mu$ P IC 7400 on the Front board with 3103 308 84531 (with print mark "M355TIV85431")
2. Replace resistors 3507 & 3508 on the Combi board with 4822 051 30562 5,6k $\Omega$  5% 0,1W

**REMARKS** : For more information refer to Service Informaion A02-163 and Service Manual FW-M355.

**02.17 TYPENUMBER(S): FW-V520, FW-V720, FW-V780, FW-V785, FW-V795**

**INFORMATION** : The complete printed board assembly MPEG01B has been added as service spare part. The codenumber reads 3139 118 54470.

**REMARKS** :

**02.18 TYPENUMBER(S): LX2000D, LX3000D, LX3500D, MX3550D, MX3600D, MX3700D, MX3800D**

**INFORMATION** : New firmware upgrade to version "0315 2 xx y", "0326 2 xx y" respectively "0115 4 xx y" has been released.

This upgrade addresses the following issues:

- TV switch over to 14:9 mode when a DVD movie with 16:9 format is played on the set
- OSD Language errors

The new firmware versions are released as service solutions only and will not be used on production sets.

It is recommended to upgrade all sets brought in for repair as preventive action.

**A. Preparation to upgrade firmware:**

1. Unzip the zip-archive attached to this Service Newsletter
2. Start the CD Burning software and create a new CD project (data disc) with the following settings:  
File system: ISO9660, JOLIET  
Format: MODE 1: CDROM  
Recording mode: SINGLE SESSION (TRACK-AT-ONCE), FINALIZED CD
3. Place the content of the zip-archive (1 file) into the root directory of the new CD project
4. Burn the data onto a blank CDR

Note: ISO9660 is mandatory, UDF discs are not supported!  
The final CDROM must not contain any other data except the file from the zip-archive.

**B. Procedure to apply the firmware upgrade:**

1. Power up the set and open the DVD tray
2. Insert the prepared Upgrade CDROM and close the tray
3. The TV screen will show the following in sequence:  
disc loading → bank30.rom → writing → done
4. The whole process takes less than 10 seconds after which the set shuts down. TV screen will become dark.  
Note: Do not press any key buttons or interrupt the mains supply during the entire upgrading process, otherwise the set may become defective.
5. Unplug & replug the mains cable
6. Open the DVD tray and remove the Upgrade CDROM
7. Reset the system by using the Remote control, select System Menu - Feature setup - Default - Reset

**C. How to read out the firmware versions to confirm upgrading:**

1. Open the DVD tray
2. Press <123> <OK> on the Remote control
3. The firmware version “VER 0315 2 xx y”, “VER 0326 2 xx y” resp. “VER 0115 4 xx y” is displayed on the TV screen. The region code (digit “y”) should remain as before upgrading, otherwise proceed to Service Manual page 2-1 to change the region code.

**D. Before returning the set to the customer:**

1. Check & ensure that the TV system and Video out are setup as follows:

Type/Version	TV-System	Video Out
LX2000D/21H	AUTO	Pr Pb Y
LX2000D/30S	AUTO	Pr Pb Y
LX2000D/33S	NTSC	Pr Pb Y
LX3000D/19	NTSC	Pr Pb Y
LX3000D/21L	NTSC	Pr Pb Y
LX3000D/21S	NTSC	Pr Pb Y
LX3000D/22S	PAL	SCART
LX3000D/30S	AUTO	Pr Pb Y
LX3000D/37S	NTSC	S-VIDEO
LX3500D/21H	AUTO	Pr Pb Y
LX3500D/21R	AUTO	Pr Pb Y
LX3500D/33S	NTSC	Pr Pb Y
LX3500D/37S	NTSC	Pr Pb Y
MX3550D/37S	NTSC	S-Video
MX3600D/37	NTSC	S-Video
MX3700D/37S	NTSC	S-Video
MX3800D/21H	AUTO	Pr Pb Y
MX3800D/22S	PAL	SCART
MX3800D/33S	NTSC	Pr Pb Y

REMARKS : Zip-archive file “lx3000d\_v0315\_2.zip” is for LX2000D and LX3000D family except /35S  
 Zip-archive file “lx3500d\_v0326\_2.zip” is for LX3500D family except /35S  
 Zip-archive file “mx3xx0d\_v0115\_4.zip” is for MX3550D, MX3600D, MX3700D & MX3800D except /35S

Zip-archives are also available for download on the Philips Intranet:  
<http://pww.avic.ce.philips.com/serviceaudio/flash/>

**02.19** TYPENUMBER(S): **LX2000D, LX3000D, LX3500D, LX7000SA, LX8000SA, MRD200, MX3550D, MX3600D, MX3700D, MX3800D**

**SYMPTOM** : **IRIS CODE 1 1 5 0**  
Pressing the TV/AV button on both, TV or DVD remote control, switches the DVD to TV/AV mode. This disrupts DVD play when the customer tries to switch the TV set to external mode.

**CURE** : The problem occurs because the same RC code (TV/AV) is used for both, the TV and the DVD set. This is defined by the product specification and therefore the behaviour is normal. A technical respectively a service solution is not feasible.

The only solution around this problem is as follows:

1. Press the TV/AV button on the RC to switch the TV set to external source
2. Press the Disc button on the RC to switch the DVD receiver to DVD mode
3. Load the DVD and continue to play the disc

**REMARKS** : New 2004 models will not have this problem anymore.

**02.20** TYPENUMBER(S): **LX2000D/21H, LX3000D/21S/22S, LX3500D/21H, MX3800D/21H/22S, SW2000/00S/02S, SW3000/00S, SW3500/02S, SW3800/00S, SW7000SA/00S/01S, SW8000SA/00S/01S**

**SYMPTOM** : **IRIS CODE 1 1 1 0**  
The mains socket is damaged and the set is not operational.

**CURE** : Replace the damaged mains socket with an improved one, codenumber 9665 000 17353.

**REMARKS** : Improved sockets have been implemented in production from week 0310 onwards.

**02.21** TYPENUMBER(S): **LX3000D/22S**

**SYMPTOM** : **IRIS CODE 1 5 5 6**  
Acoustic feedback is audible when the set is in TV/AV mode and the TV set is in External mode.

**CURE** : The problem can be solved by muting the Left & Right audio output on the Scart connector. This is realized on the new Scart board assembly which is available with codenumber 9965 000 18474.

**REMARKS** : The new Scart board assembly has been implemented in production from serial number KQ030321180890 onwards.

**02.22 TYPENUMBER(S): LX7000SA,LX8000SA**

**INFORMATION** : New DVD Module Back End firmware upgrade to version “4.67.06” has been released.

This upgrade addresses the following issue:

- VCD stop during play (VCD Playability problem)

It is recommended to upgrade all sets brought in for repair as preventive action.

**A. Preparation to upgrade firmware:**

1. Unzip the zip-archive “4\_67\_06\_download.zip” attached to this Service Newsletter
2. Start the CD Burning software and create a new CD project (data disc) with the following settings:  
File system: ISO9660  
Physical Format of CD: MODE 2 (CDROM XA)  
Recording mode: SINGLE SESSION (TRACK-AT-ONCE), FINALIZED CD
3. Place the content of the zip-archive files into the root directory of the new CD project
4. Burn the data onto a Blank CD-RW

Note: ISO9660 is mandatory, UDF discs are not supported!  
The final CDROM must not contain any other data except the files from the zip-archive.

**B. Procedure to apply the firmware upgrade:**

1. Power up the set and select “DISC” source
2. Adjust the volume to the minimum to avoid any loud blast of noise
3. Open the DVD tray and insert the prepared Upgrade CDROM
4. Close the DVD tray
5. The set will detect the Upgrade CDROM and start to download the new firmware. “DOWNLOAD” is shown on the display.  
Note: The download process will take about 10...15 minutes. Do not disturb the set or press any other buttons while download is in progress!
6. Upon complete, the DVD tray will open automatically
7. Remove the Upgrade CDROM and close the tray

**C. How to read out the firmware versions to confirm upgrading:**

1. Power up the set and select “DISC” source
2. Press “SYSTEM MENU” key on the Remote Control, followed by pressing the following key sequence:  
<Cursor Down> key 4 times  
<Cursor Right> key 1 time  
<Cursor Down> key 4 times
3. Message “(C)PHILIPS '01-'02 5580 4.67.06 .....” will be shown on the TV screen (“4.67.06” indicates the new firmware version number)
4. Press “SYSTEM MENU” key on the Remote control to exit

**REMARKS** : The zip-archive is also available for download on the Philips Intranet: <http://www.icap.sv.philips.com/serviceaudio/flash/>

**02.23 TYPENUMBER(S): LX7000SA, LX8000SA**

**INFORMATION : Re-programming of DVD version matrix**

**Caution: This information is confidential and may not be distributed. Only qualified persons should do the programming.**

After replacement/repair, the customer settings and also the region code may be lost. Re-programming will put the set back in the state in which it has left the factory, i.e. with the default settings and the allowed region code.

Reprogramming will be done via the Remote Control.  
The complete version matrix to be entered is  
'PLAY 159 XXX XXX XX PLAY'.

**Do the following steps with the Remote Control:**

- 1) Ensure that no disc is loaded in the tray.
- 2) Set the Remote Control to DISC source.
- 3) Press <PLAY> followed by numerical keys <1> <5> <9>  
Remark: Top left hand corner of the TV screen will display "X" for all these 4 keys that you have pressed.
- 4) Press now the following numerical keys (8 digits version matrix):  
Remark: Nothing will be displayed on the TV screen for all these 8 digits that you have pressed.

for LX7000SA/21R:	<3> <2> <3>	<0> <3> <2>	<0> <8>
for LX7000SA/21S:	<4> <2> <3>	<0> <3> <2>	<0> <8>
for LX7000SA/22S:	<2> <2> <2>	<0> <3> <0>	<0> <8>
for LX8000SA/21R:	<3> <2> <3>	<0> <3> <1>	<0> <8>
for LX8000SA/21S:	<4> <2> <3>	<0> <3> <1>	<0> <8>
for LX8000SA/22S:	<2> <2> <2>	<0> <3> <0>	<0> <8>
for LX8000SA/33S:	<3> <2> <3>	<0> <3> <1>	<0> <8>
for LX8000SA/37S:	<1> <1> <1>	<0> <2> <9>	<0> <8>

- 5) Press <PLAY> again.  
Caution: Wait for about 3 seconds until the set has reset to the required setting. The color of the TV screen will turn to blue followed by a loud sound at the speaker output.
- 6) Disconnect mains to ensure proper reset.

### How to check the version matrix and the software version number of the set:

- 1) Power up the set and select DISC source.
- 2) Press <SYSTEM MENU> on the Remote Control to enter the User Preference Manual (UPM), followed by the following key sequence:  
<Cursor Down> key 4 times  
<Cursor Right> key 1 time  
<Cursor Down> key 4 times
- 3) Message "(C)PHILIPS '01-'02 5580 W.WW.WW ..... PXXXXXXXXX Y.YY.Y" will be displayed on the TV screen:

W.WW.WW indicates the BEA software version number  
PXXXXXXXXX indicates the version matrix programmed  
Y.YY.Y indicates the FEA (servo) software version number

- 4) Press <SYSTEM MENU> on the Remote control to exit.

### Setting the TV system default

- 1) Press <SYSTEM MENU> on the Remote Control to enter the User Preference Manual (UPM).
- 2) From the User Preference Manual on the TV screen, select TV SYSTEM to change the TV system default accordingly as shown in the table below:

Version	Region	TV system default
/21R	Region 3	AUTO
/21S	Region 4	NTSC
/22S	Region 2	PAL
/30S	Region 4	AUTO
/33S	Region 3	AUTO
/37S	Region 1	NTSC

- 3) Press <SYSTEM MENU> on the Remote control to exit.

REMARKS :

#### 02.24 TYPENUMBER(S): MC-90

INFORMATION : Front Display Board  
The programmed Flash  $\mu$ P with software version "U19U1\_V22" is now available as service spare part:  
7106 3139 110 53281 Flash  $\mu$ P with software "U19U1\_V22"

REMARKS :

**02.25 TYPENUMBER(S): MC-100, MC-105, MC-110**

**INFORMATION** : Some customers are complaining poor sound with self recorded tapes. Please note that the tape module meets below design specification and that the recording performance cannot be improved anymore:

Frequency response (R/P) : 250...6300Hz (0 to -8dB)  
Record/Playback S/N : > 36 dB  
Overall distortion : < 7%

**REMARKS** :

**02.26 TYPENUMBER(S): MC-i200**

**INFORMATION** : Internet Audio Module "iAM-G3.0" (3103 308 54660) including printed board, housing and fan has been added to the partslist. "iAM-G3.0" can be used as direct replacement for the older 2nd generation Internet Audio Module "iAM-G2.0".

**REMARKS** :

**02.27 TYPENUMBER(S): MC-i200, MC-i250**

**INFORMATION** : Factory Test Server Application has been released

The Factory Test Server serves two purposes:

1. To test the Internet streaming of the module, without having a Broadband Internet connection present.
2. To program the Set 12NC into the module after replacement.

The Factory Test Server Application is available on CD-ROM. Codenumber reads 9965 000 15496.

Note: For detailed instructions on how to install, setup and use this application please refer to "Factory Test Server Application Manual", included on the CD-ROM.

**REMARKS** :

**02.28 TYPENUMBER(S): MC-M250**

**SYMPTOM** : **IRIS CODE C 1 4 X**  
Noise is audible during CD Playback.

**CURE** : Noise can be eliminated by adding a 100µF/10V electrolytic capacitor between pin 16 of IC 7552 and ground. The capacitor is available with codenumber 4822 124 40207.

**REMARKS** : New Combi boards with improved power supply circuitry have been implemented in production from week 0303 onwards. For detailed information on new Combi board assembly, please refer to Service Manual 3140 785 32051 (Revision 1.1).

**02.29 TYPENUMBER(S): MC-M250**

**INFORMATION** : In course of production the Combi board assembly has been changed to fulfill the new European GSP interference rules.  
For detailed information on new Combi board assembly, please refer to Service Manual 3140 785 32051 (Revision 1.1).

**REMARKS** : The new Combi board assembly has been implemented in production from week 0303 onwards.

**02.30 TYPENUMBER(S): MC-V65**

**SYMPTOM** : **IRIS CODE 1 3 3 X**  
Ghost image appears with all VCDs.

**CURE** : Change L302 & L401 from 2,2µH to beads core inductor. The beads core inductor is available with codenumber 9965 000 17109.

**REMARKS** : Modification has been implemented in production from week 0303 onwards.

**02.31 TYPENUMBER(S): MC-V65**

**SYMPTOM** : **IRIS CODE 2 5 1 4**  
Doesn't play particular MP3 discs.

**CURE** : Due to restrictions of the selected MPEG IC this set can only playback MP3 tracks recorded with sampling frequencies up to 44kHz (as mentioned in the Instruction For Use).  
This problem cannot be solved technically and has been accepted by the commercial department.

**REMARKS** : For critical customers not willing to accept above shortcomings, it may be necessary to work out a commercial solution, e.g. replacement by another set: MC-V320 (will be launched in May 2003).

**02.32 TYPENUMBER(S): MX3800D**

**SYMPTOM** : **IRIS CODE 1 1 4 9**  
The Front grille bar hits the w00x driver, producing loud cracking noise.

**CURE** : The problem has been solved by moving the w00x driver 5mm away from the Front grille bar. For repairs replace the complete Sub-woofer Box with an improved one – codenumber 9665 000 17801.

**REMARKS** : Improved Sub-woofers have been implemented in production from serial number KQ010301067606 onwards.

**02.33** TYPENUMBER(S): **MX3800D/21H**

SYMPTOM : **IRIS CODE 3 1 1 0**

After 10...30 minutes of operation the set shuts down to standby mode.

CURE : The phenomenon is caused by a thermal problem. Due to poor ventilation IC903 becomes too hot. Heat ventilation has been improved by adding hole(s) on Power board versions C and higher. For repairs replace the complete Power board with an improved one – codenumber 9665 000 18105.

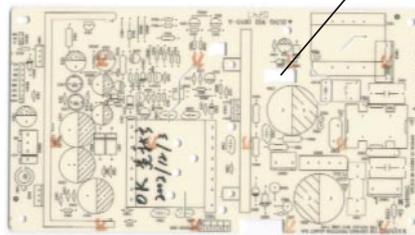


old Power board



improved Power board ver. C

hole(s) added  
(Transformer is removed for clearer view)



improved Power board ver. E

REMARKS :

**02.34** TYPENUMBER(S): **MX3900D, MX3950D**

INFORMATION : Correction to the Service Manual, Partslist  
Page 11-11:

7105 9965 000 19029 M29F002BT-70K1 with SW program

Page 12-8:

7300 9965 000 18638 M29F800DT-70N1 with SW program

REMARKS :

**02.35 TYPENUMBER(S): MX5000D**

INFORMATION : Clarification of part code on page 10-3  
Pos 27 (9965 000 13467 3DVD Mechanism KPJ P/U) is a complete DVD module (Loader, Drive unit & Frontend pc board) with reference to the Exploded View Drawing on page 10-1 & 10-2. It consists of all the service parts listed on page 8-7 and has no relation to the Exploded View on page 8-8.

REMARKS :

**02.36 TYPENUMBER(S): MZ7, MZ-9**

INFORMATION : Mechanical & Accessories Parts List  
The following part has been added to the parts list:  
0107 3139 114 67121 Lightguide CDC Select

REMARKS :

**02.37 TYPENUMBER(S): MZ-1000, MZ-1100, MZ-1200**

INFORMATION : No RDS Feature  
Although an RDS circuitry is included in the Combi circuits, the above sets are not equipped with an RDS feature and therefore no service part codes are published in the service documents.

REMARKS :

**02.38 TYPENUMBER(S): MZ-1000, MZ-1100, MZ-1200**

INFORMATION : Service partslist Slot Loader Module:  
The CD drive "DA23SR" 3103 309 05450 and the suspensions for the CD drive 3103 304 73480 are now available on service stock.

REMARKS : Codenumbers are already stated in the Service Manual.

Published by:  
Service Department Audio



# SERVICE NEWSLETTER

## 01.01 TYPENUMBER(S): **General Portable Audio**

**INFORMATION** : For service category 1 portable audio products only a limited number of spare parts is available and no Service Manual is published. A new survey listing the service spare parts of those models has been published with Service Information A03-550 (3140 785 32520).

**REMARKS** :

## 01.02 TYPENUMBER(S): **ACT210**

**INFORMATION** : The cloth tab (ribbon) for popping out the battery of the charger is often sticking out between the body of the charger and the compartment cover. It is a natural tendency to "pull" on the tab, which then immediately breaks the plastic piece that holds the cover into the body of the charger. The problem is caused by the over-size ribbon, which sticks out from the battery compartment after first time use. From week 0250 onwards the ribbon length is checked according to specification 43 ±2mm.

**REMARKS** : The Charger is available via following codenumber:  
3103 308 84540 /00C version  
3140 118 51380 /05 version  
3140 118 51210 /17 version

## 01.03 TYPENUMBER(S): **AZ1008, AZ1011, AZ1012, AZ1013, AZ1080, AZ1081**

**INFORMATION** : In course of production the microprocessor IC (7801) has been changed from type TC9457F-014 to TC94A23F. The codenumber of the new microprocessor reads 9322 194 16671.

**REMARKS** : Change has been implemented in production from week 0238 onwards.

**01.04** TYPENUMBER(S): **AZ1140, AZ1141, AZ1142, AZ1143, AZ1145, AZ1146, AZ1147, AZ1148**

**INFORMATION** : In course of production the microprocessor IC (7801) has been changed from type TMP86CH29F to TMP86CH21F. The codenumber of the new microprocessor reads 3140 110 51281.

**REMARKS** : Change has been implemented in production from week 0248 onwards.

**01.05** TYPENUMBER(S): **AZ1500, AZ1505**

**INFORMATION** : Correction to the Service Manual, electrical partslist  
The codenumber of the function switch 1592 is missing:

1592 2422 127 00542 SWI SLID 4P 3POS

**REMARKS** :

**01.06** TYPENUMBER(S): **AZ5050**

**SYMPTOM** : **IRIS CODE 2 5 5 1**  
Skips tracks during playback of some CDs.

**CURE** : Some CDs with scratched surfaces can be played on some CD Players but cannot be played on this set. Root cause cannot be found and no repairing solution can be provided because production of this model has stopped.

**REMARKS** : 2 successor models are available – AZ5150 from now onwards and AZ5130 from April 2003 onwards.

**01.07** TYPENUMBER(S): **AZ5150**

**INFORMATION** : The remote control is now available as service spare part and can be ordered with the following codenumber:

9965 000 16290 REMOTE CONTROL

**REMARKS** :

**01.08** TYPENUMBER(S): **AZ5150**

**SYMPTOM** : **IRIS CODE 1 5 1 X**  
MP3-CD cannot be read after a VCD has been played.

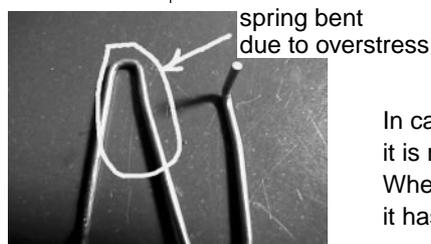
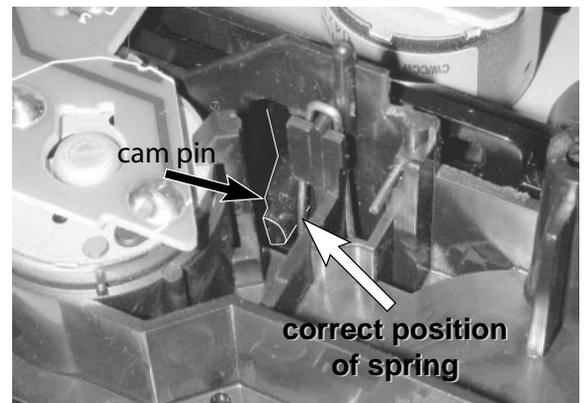
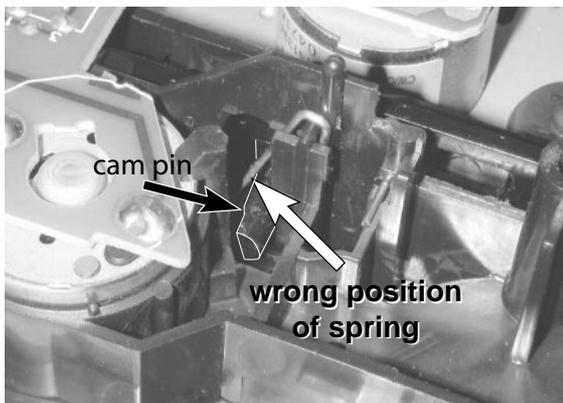
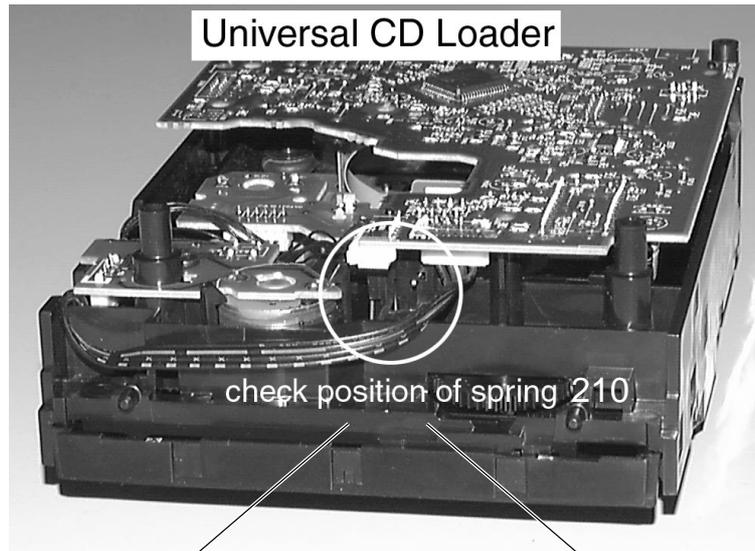
**CURE** : The phenomenon is caused by a software problem for which we cannot offer any repair solution. Customers should be informed to switch off the set by setting the POWER slider to OFF, and select DISC function again. Then the set can play any CD normally.

**REMARKS** :

**01.09** TYPENUMBER(S): **CDR795, CDR796, MC-i200**

**SYMPTOM** : **IRIS CODE 1 6 2 6**  
CD tray does not open fully.

**CURE** : The problem is most probably caused by a wrong mounted spring 210. The spring is mounted on the wrong side of the cam pin protruding through the cabinet frame. For details see pictures below.



In case the spring has been found in the "wrong position", it is recommended to check it before re-aligning. When the spring is deformed as shown in the left picture, it has to be straightened before mounting it again.

**REMARKS** :

**01.10 TYPENUMBER(S): EXP431, EXP510, EXP511**

**INFORMATION** : New firmware upgrade to version "40" has been released.

The upgrade addresses the following issues:

- Improved playability for CDDA and MP3 discs (audible clicks)
- Improved search mode for CDDA
- Increased buffer to (pre-) store filename / disc location
- Favorites mode remains active after stand-by
- Minor improvements in the user-interface

It is recommended to upgrade all sets brought in for repair as preventive action.

**A. Preparation to upgrade firmware:**

1. Start the CD Burning software and create a new CD project (data disc) with the following settings:  
File system: ISO9660, JOLIET  
Recording mode: SINGLE SESSION, FINALIZED CD
2. Place the file "exp431\_40.upg" resp. "exp510\_511\_40.upg" into the root directory of the new CD project. Files are attached to this Service Newsletter.
3. Burn the data onto a blank CD-R(W).

Note: ISO9660 is mandatory, UDF discs are not supported !

**B. Procedure to apply the firmware upgrade:**

1. Put the prepared CD-R(W) into the CD player
2. Supply the CD player via the AC/DC adapter
3. Press the MODE key for 3 seconds until version number and "Upgrade?" are shown on the display.
4. Press the PLAY key to start the upgrade. "Upgrading" (scrolling) will be shown while the upgrade is in progress.
5. "Upgrade complete" will scroll when the process is finished.
6. Press STOP or just wait until the CD player goes to stand-by.

**C. How to read out the firmware version to confirm upgrading**

1. Close the CD door
2. Supply the CD player via the AC/DC adapter
3. Press the MODE key for 3 seconds until version number and "Upgrade?" are shown on the display.

**REMARKS** : The upgrade files are also available for download on the Philips Internet: <http://www.audio.philips.com/expanium/firmware.asp>

**01.11 TYPENUMBER(S): FR965, FR966, FR975, FR976, FR984, FR985, FR986, FR994, FR995, FR996**

- SYMPTOM** : No signal from subwoofer in Surround or Stereo mode even it is shown on display.
- CURE** : This phenomenon can be solved by resetting the set. Reset is done via pressing simultaneously Bass and Treble Keys while switching the mains on.
- REMARKS** : Cause of this phenomenon could not be defined until now. All kind of source inputs might show this lack of Sub-woofer signal. In some modes the customer can choose for subwoofer output but then center speaker is missing.

**01.12 TYPENUMBER(S): FW-C155**

- SYMPTOM** : **IRIS CODE H 5 4 0**  
When the set is switched to standby, noise is audible from the loudspeakers.
- CURE** : Further to the solution published in Service Newsletter SNL2002.08.03 it is very important that resistor 3504 on the Front board (connected to pin 79 of Front uProcessor IC 7100) has the correct value.  
  
Check & ensure resistor 3504 is 100Ω, otherwise replace it with 100Ω (4822 051 30101).
- REMARKS** :

**01.13 TYPENUMBER(S): FW-C550, FW-C780**

- INFORMATION** : Correction to Service Newsletter SNL2002.06.10  
1) FW-C780 should be deleted; it is not affected by this problem.  
2) The correct codenumber for the 135W woofer reads 9965 000 11653.
- REMARKS** :

**01.14 TYPENUMBER(S): FW-C798/21, FW-V795/21M Power Booster Amplifier (PWB-C798/01, PWB-V795/01)**

**SYMPTOM** : **IRIS CODE 1 1 1 1**  
Power Booster Unit becomes defective after a few hours of usage.  
  
Fuse blown, burnt (blacken) track and some elcaps along the power lines (+38V & -38V) and power amplifier ICs are defective.

**CURE** : The problem is caused by too high fluctuation of the mains supply voltage. It can be resolved by changing the following:  
1) C34 to 6800µF 63V (9965 000 16684)  
2) C35 to 6800µF 63V (9965 000 16684)  
3) U1 to TDA7293 (9965 000 16683)  
4) U1 to TDA7293 (9965 000 16683)

**REMARKS** : Above modification has been implemented in production from week 0310 onwards.

**01.15 TYPENUMBER(S): LX3000D, LX3500D, MX3550D, MX3600D, MX3700D, MX3800D**

**INFORMATION** : New firmware upgrades have been released.  
For LX3x00D : version "0113 1 xx y"  
For MX3xx0D : version "0115 1 xx y"

**The upgrades address the following issues:**

**For MX3.. range only**

- 5 seconds (or more) pause between the end of one audio track to the next audio track.
- Abnormal noise in sound when playing a DVD with multi-angle feature & DTS sound system.
- No center channel in Tuner-, Aux-, TV/AV-mode.
- Center speaker low sound in DVD-mode (applicable for sets upgraded earlier to software version 0930 4 only)
- Rear left channel volume level lowered after mute / unmute action.
- TV remote control switches the DVD set to Standby. With this upgrade the DVD set will not switch to Standby except when it is in TV/AV source. *Note: This upgrade must run concurrently with new IC981 (label "31") on the Key board in order to be effective (see also SNL2003.01.16).*
- Subtitle problem (refreshes only when the next dialogue starts).

**For LX3... range only**

- 5 seconds (or more) pause between the end of one audio track to the next audio track. This problem was not completely resolved in previous upgrade (see SNL2002.08.06).
- TV remote control switches the DVD set to Standby. With this upgrade the DVD set will not switch to Standby except when it is in TV/AV source. *Note: This upgrade must run concurrently with new IC981 (label "31") on the Key board in order to be effective (see also SNL2003.01.16).*
- Subtitle problem (refreshes only when the next dialogue starts).
- Cannot play the audio tracks on VCD with CD combination disc.

The new firmware versions are implemented in production from week 0304 onwards. All older sets brought in for repair should be upgraded as preventive action.

#### **A. Preparation of the Upgrade CD-ROM:**

1. Unzip the appropriate zip-archive attached to this Service Newsletter.
2. Start the CD Burning software and create a new CD project (data disc) with the following settings:  
File system: ISO9660, JOLIET  
Format: MODE 1: CDROM  
Recording mode: Single Session (Track-At-Once), Finalized CD
3. Place the content of the zip-archive (1 file) into the root directory of the new CD project.
4. Burn the data onto a blank CDR.

Note: ISO9660 is mandatory, UDF discs are not supported !  
The final CDROM must not contain any other data except the file from the zip-archive.

#### **B. Procedure to apply the software upgrade:**

1. Power up the set and open the DVD tray.
2. Insert the prepared Upgrade CDROM and close the tray.
3. The TV screen will show the following messages in sequence:  
disc loading → bank30.rom → writing → done
4. The whole process takes less than 10 seconds after which the set shuts down. TV screen will become dark.  
Note: Do not press any buttons or interrupt the mains supply during the entire upgrading process, otherwise the set may become defective.
5. Unplug & replug the mains cable
6. Open the DVD tray and remove Upgrade CDROM.
7. Reset the system by using the Remote control, select  
System Menu → Feature setup → Default → Reset.

#### **C. How to read out the software versions to confirm upgrading**

1. Open the DVD tray
2. Press <123> <OK> on the Remote control.
3. The software version "VER 0113 1 xx y" is displayed on the TV screen. The region code (digit "y") should remain as before upgrading, otherwise proceed to Service Manual page 2-1 to change the region code.

#### **D. Before returning the set to customer**

1. Check & ensure that the TV system and Video out are setup as follows:

Type/Version	TV-System	Video Out
LX3000D/19	NTSC	Pr Pb Y
LX3000D/21L	NTSC	Pr Pb Y
LX3000D/21S	NTSC	Pr Pb Y
LX3000D/22S	PAL	SCART
LX3000D/30S	AUTO	Pr Pb Y
LX3000D/37S	NTSC	S-Video
LX3500D/21H	AUTO	Pr Pb Y
LX3500D/21R	AUTO	Pr Pb Y
LX3500D/33S	NTSC	Pr Pb Y
LX3500D/37S	NTSC	Pr Pb Y
MX3550D/37S	NTSC	S-Video
MX3600D/37	NTSC	S-Video
MX3700D/37S	NTSC	S-Video
MX3800D/21H	AUTO	Pr Pb Y
MX3800D/22S	PAL	SCART
MX3800D/33S	NTSC	Pr Pb Y

REMARKS : "lx3000d\_v0113\_1.zip" is for LX3000D family except /35S  
 "lx3500d\_v0113\_1.zip" is for LX3500D family except /35S  
 "mx3xx0d\_v0115\_1.zip" is for MX3550D, MX3600D, MX3700D and MX3800D except /35S

The zip-archives are also available for download on the Philips Intranet: <http://pww.avic.ce.philips.com/serviceaudio/flash/>

**01.16 TYPENUMBER(S): LX3000D, LX3500D, MX3550D, MX3600D, MX3700D, MX3800D**

SYMPTOM : **IRIS CODE 1 1 5 2**  
 TV remote control standby button switches the DVD receiver to Standby mode even if it is not in TV/AV source.

CURE : 1) Upgrade the DVD firmware to:  
 • VER 0113 1 xx y for LX3...range  
 • VER 0115 1 xx y for MX3...range  
 2) Replace the microprocessor IC981 on the Key board with 9965 000 16413 and stick a label "31" onto the body of the IC for identification.

For details on the firmware upgrade see SNL2003.01.15.

REMARKS : New microprocessors have been implemented in production from week 0249 onwards and can be recognized by a label "31" on it's body and by set serial number KQ02.....

Caution: It is best to upgrade the firmware before replacing the microprocessor because a set with old firmware may not perform properly with the new IC.

**01.17 TYPENUMBER(S): LX3000D, LX3500D, MRD200, MX3550D, MX3600D, MX3700D, MX3800D**

**INFORMATION** : Further to earlier announced Service Information on the changeover of DVD module from KIT572SE to KIT772SI some old spare parts are no longer available.

This involves mainly the following old parts:

- 1) 9965 000 13082 Servo pc board assembly
- 2) 9965 000 13083 DVD Drive mechanism
- 3) 9965 000 13084 Loader mechanism without Servo board and DVD Drive mechanism
- 4) 9965 000 12822 Complete KIT572SE Module

The problem can be solved by replacing the defective DVD Module with the new one KIT772SI (9965 000 15489).  
KIT772SI is 100% pin compatible to the old module.

Note: Do check stock status before replacement.

**REMARKS** : For more details refer to the following Service Information:  
A02-178 LX3000D & LX3500D family  
A02-179 MX3550D, MX3600D, MX3700D & MX3800D family  
A02-180 MRD200 family

**01.18 TYPENUMBER(S): LX3500D/21H**

**SYMPTOM** : **IRIS CODE 1 3 3 X**  
Pixel Plus CTV's picture wavy at the lower part of the CTV screen when the DVD set is placed in a rack just below the CTV.

**CURE** : The problem is due to DVD set interfering CTV's picture and can be resolved by replacing the Mains transformer with an improved version:

Pos 50 9965 000 16682 Mains Transformer 230V

**REMARKS** : Improved Mains transformers have been implemented in production from week 0245 with serial number KQ010245007353 onwards.

**01.19 TYPENUMBER(S): LX7000SA, LX8000SA**

**SYMPTOM** : **IRIS CODE 1 5 2 X**  
The sound output level in DVD mode is much lower than in SACD mode. At maximum volume on SACD the amplifiers are clipping due to overload.

**CURE** : This problem is resolved by fine tuning of software setting in the front microprocessor for the DVD and SACD modes. The improved microprocessors are available with codenumber 9965 000 16200.

**REMARKS** :

**01.20 TYPENUMBER(S): LX7000SA, LX8000SA**

**SYMPTOM :** IRIS CODE 1 3 1 0

No picture on the TV set.

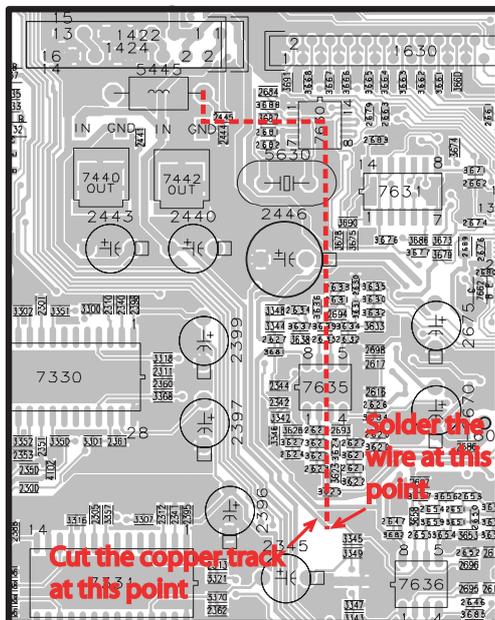
**CAUSE :**

- According to Scart connection specification, pin 16 should indicate the presence of RGB or CVBS signal to the TV set (“High” means RGB signal and “Low” means CVBS signal).
- The problem TV set uses pin 16 for function switching (“High” means External mode).
- In our DVD set pin 16 is set to “High” in all modes, this will cause the problem TV set to switch to External mode permanently rendering all other selections inactive.

**CURE :**

1. Cut the +5V6 supply to resistor 3470.
2. Connect a wire from resistor 3470 to coil 5445 (+5V\_DVD on Schematic diagram).
3. See figure 1..4 for details.

Figure 1





2. The suggested cure/solution is only meant for helping customers who complain, to overcome the deficiency in the TV set.

**01.22 TYPENUMBER(S): MX1050D, MX1060D**

**INFORMATION** : Below mentioned problems/complaints cannot be solved technically and have been accepted by the commercial department.

1) **IRIS CODE 1 5 4 X**

Cracking noise while playing DVD or CD at low volume (step 1 or 2) is audible via the Surround speakers. This is valid for sets equipped with DVD main board with STi5505 IC.

2) **IRIS CODE 1 5 4 X**

Squeaking sound is audible via all speakers when playing DVD or CD at low volume (step 1 or 2). This is valid for sets equipped with DVD main board with STi5519 IC.

3) **IRIS CODE 1 1 7 X**

Set locks to Stereo mode when playing a CD-Extra disc, making it impossible to change mode with the Surround mode button. This is valid for sets equipped with DVD main board with STi5519 IC.

4) 1st Generation sets with defective DVD modules using STi5505 that require upgrade to STi5519. After rework action, the Surround mode key has no function in all modes (Tuner, TV, DVD..). The set always remains in Stereo Mode.

**REMARKS** : For critical customers not willing to accept above shortcomings, it may be necessary to work out a commercial solution, e.g. replacement by another set: MX3800D (Europe) or MX3700D (USA).

**01.21 TYPENUMBER(S): MX1050D/22, MX1060D/22S**

**INFORMATION** : After replacement of the DVD main board by a new one with STi5519 (9965 000 12052), it is important to ensure that the default settings are correctly set. This can be done by the following the upgrading procedure given below.

**A. Preparation of the Upgrade CD-ROM:**

1. Unzip the file  
"mx1060d\_philips\_sti5519\_uk\_011213\_6ch\_7d5b7360.zip"  
attached to this Service Newsletter
2. Start the CD Burning software and create a new CD project (data disc) with the following settings:  
File system: ISO9660, JOLIET  
Recording mode: SINGLE SESSION, FINALIZED CD
3. Place the content of the zip-archive into the root directory of the new CD project.
4. Burn the data onto a blank CDR.

Note: ISO9660 is mandatory, UDF discs are not supported !  
The final CD-ROM must not contain any other data except the files from the zip-archive.

**B. Procedure to apply the software upgrade via Remote control:**

1. Power up the set and press DVD button
2. Press Eject button to open the tray
3. Press Menu button
4. Press <760> with the numeric buttons
5. Press <1> with the numeric buttons to select 'YES' for upgrade
6. Place the Upgrade CD-ROM on tray and press Eject button to close tray
7. The set will start reading the disc and the TV screen will display "color bars" when upgrading is done.
8. Press Power button to bring the set into Standby mode and unplug mains cord.
9. With the Frequency Up & Down keys depressed re-plug the mains cord. The set display will show EEP ERASE and go into Standby mode after a few seconds.
10. Press DVD source to power up the set
11. Press Eject button to remove the Upgrade CD-ROM.

REMARKS : The zip-archive is also available for download on the Philips Intranet: <http://pww.avic.ce.philips.com/serviceaudio/flash/>

**01.23 TYPENUMBER(S): MX5000D/37S**

INFORMATION : New firmware upgrades have been released.  
B/E version "MXKI0005" and F/E version "33-680111".

These upgrades address the following issue:

- Addition of DVD+RW playability

Note: Both B/E and F/E firmwares must be upgraded to be effective.

The new firmware versions have been implemented in production from week 0243 onwards.

**A. Preparation of the B/E Upgrade CD-ROM:**

1. Unzip the file "mx5000d\_37s\_be\_ver\_mxki0005.zip" attached to this Service Newsletter.
2. Start the CD Burning software and create a new CD project (data disc) with the following settings:  
File system: ISO9660, JOLIET  
Recording mode: SINGLE SESSION, FINALIZED CD  
Physical format of CD: Mode 1: CDROM
3. Place the content of the zip-archive (1 file) into the root directory of the new CD project.
4. Burn the data onto a blank CDR.

Note: ISO9660 is mandatory, UDF discs are not supported !  
The final CD-ROM must not contain any other data than the file from the zip-archive.

### **B. Preparation of the F/E Upgrade CD-ROM:**

1. Unzip the file "mx5000d\_fe\_ver\_33-680111.zip" attached to this Service Newsletter.
2. Start the CD Burning software and create a new CD project (data disc) with the following settings:  
File system: ISO9660, JOLIET  
Recording mode: SINGLE SESSION, FINALIZED CD  
Physical format of CD: Mode 1: CDRom
3. Place the content of the zip-archive (1 file) into the root directory of the new CD project.
4. Label name for CDR: KENWOOD
5. Burn the data onto a blank CDR.

Note: ISO9660 is mandatory, UDF discs are not supported !

The final CD-ROM must not contain any other data than the file from the zip-archive.

### **C. Procedure to apply the B/E firmware upgrade via Remote Control:**

1. Press OPEN button on set to open tray DISC 1.
2. Press [CLEAR][2][5][8][0][CLEAR] buttons in sequence, where CLEAR = Press & hold STOP button down until the INVALID Logo disappears on the TV screen.
  - TV screen shows B/E & F/E firmware versions, build time and EEPROM data.
3. Place B/E Upgrade CD-ROM into tray.
4. Press PROGRAM button.  
TV screen will show:
  - ERASE >>>>>>>>>>
  - WRITE >>>>>>>>>>
  - DONE
5. Press POWER button on set to off and on again.
6. Press OPEN button on set to remove B/E CD-ROM from tray DISC 1.
7. Repeat Step 1 and 2 again.
8. Press STOP button to clear EEPROM.
  - The B/E firmware version on TV screen will display the upgraded version.
  - The set display will show EEP ERR because the EEPROM needs to be set.
9. Use the Up/Down arrow buttons, move to EEPROM address 12 and press [22][OK]
10. Repeat for address 13 with [21][OK] and address 14 with [01][OK]
  - The TV screen will response with region code: 1
11. Press RETURN button twice to exit. The information on TV screen will disappear.

#### D. Procedure to apply the F/E firmware upgrade

1. Press OPEN button on set to open tray DISC 1.
2. Place F/E Upgrade "KENWOOD" CD-ROM onto tray.
3. Press PLAY button.
  - The set will start loading the new firmware and the tray may open/close in between the firmware loading.
  - NO DISC will be displayed on the Set display after about 30 seconds when loading is done.
4. Press POWER button on the set to off and on again.
5. Press OPEN button on set to remove "KENWOOD" CD-ROM from tray DISC 1.

Note: Do not switch the Mains supply off during upgrading because it will cause the set to be defective.

#### E. How to read the firmware version to confirm upgrading via Remote control:

1. Press OPEN button on set to open tray DISC 1.
2. Press [CLEAR][2][5][8][0][CLEAR] buttons in sequence, where CLEAR = Press & hold STOP button down until the INVALID Logo disappears on the TV screen.
  - TV screen will show the B/E & F/E firmware versions, build time and EEPROM data.
3. Press RETURN button to exit.

REMARKS : The zip-archives are also available for download on the Philips Intranet: <http://pww.avic.ce.philips.com/serviceaudio/flash/>

#### 01.24 TYPENUMBER(S): SW7000SA/00S/01S (Active Subwoofer)

INFORMATION : **Correction to Service Newsletter SNL2002.08.18**  
The published modification to increase the bass level of the Subwoofer was incomplete. Capacitor C422 must be changed as well. The final solution reads as follows:

##### Amplifier Board

Change C402 to	0,0022μF	5%	100V	(9965 000 16321)
C403 to	0,047μF	5%	100V	(9965 000 16322)
C406 to	33nF	5%	250V	(5322 121 42489)
C422 to	68nF	5%	250V	(5322 121 42662)
R403 to	33kΩ	1%	0,6W	(4822 050 23303)

##### Input Board

Change R301 to	2,2kΩ	5%	1/6W	(9965 000 12515)
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REMARKS :