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Service Department Audio



BUSINESS CREATION UNIT AUDIO

SERVICE NEWSLETTER

06.01 TYPENUMBER(S): Philips CD-recorders and copy-protected Audio CDs

INFORMATION : A number of music record companies have introduced so-called "copy-protected" CDs. These CDs aim to obstruct copying to CDR discs via the PC while they are supposed to play on conventional CD-players.

However, in practice, the copy-protected CDs might not play on all models of Audio CD-recorders, DVD-recorders, PC-drives and in-car CD-players because these CDs are no longer in accordance with the CD Red Book specification.

If you get complaints from customers facing playback problems, please inform them that the CD is likely to be faulty, and advice the customers to take the CD back to the shop and ask for refund. We suggest refraining from debates about details of the copy-protection technology, as this technology is being applied by the music record company, and not by Philips.

REMARKS :

06.02 TYPENUMBER(S): ACT7585, AX2000, AX2001, AX2002, AX2003, AX2004, AX2011, AX5000, AX5001, AX5002, AX5003, AX5004, AX5006, AX5011, AX5012, AX5013, AX5014, AX5014, AX5015, AX5016, AX5017, AX5018, AX5021, AX5022, AX5023, AX5024, AX5025, AX5026

INFORMATION : In course of production, the microprocessor IC (item 7400) has been changed to a new (cheaper) type. The software remains unchanged. The new microprocessor can replace the original one without further modifications. The codenumber of the new IC reads as follows:

7400 3103 308 84360 TMP86CH21F-AX5000.1

REMARKS : The new microprocessor has been implemented in production from week 0140 onwards.

06.03 TYPENUMBER(S): AZ1018

INFORMATION : In course of production, the original CD drive "DA11N" has been replaced by the new ball-clamp version "DA11B1N" – 3103 309 05360.

When an old drive is replaced by a new one, the magnetic Clamper Ring Assembly (item 423) must be removed as well.

REMARKS : New CD drives have been implemented in production from week 0141 onwards.

06.04 TYPENUMBER(S): AZ1138

INFORMATION : Correction to the Service Manual, Electrical partslist:
The codenumber for the SDRAM IC KSA161622D is missing.
It should read:

IC3 9965 000 10689 KSA161622D (or HY75V161610DTC-7)

REMARKS :

06.05 TYPENUMBER(S): AZ1150, AZ1155

INFORMATION : To fix a problem during tuner search, the following capacitor on the Front Board has been changed:

2413 4822 126 14225 56pF NP0 50V

REMARKS : The modification has been implemented in production from week 0136 onwards.

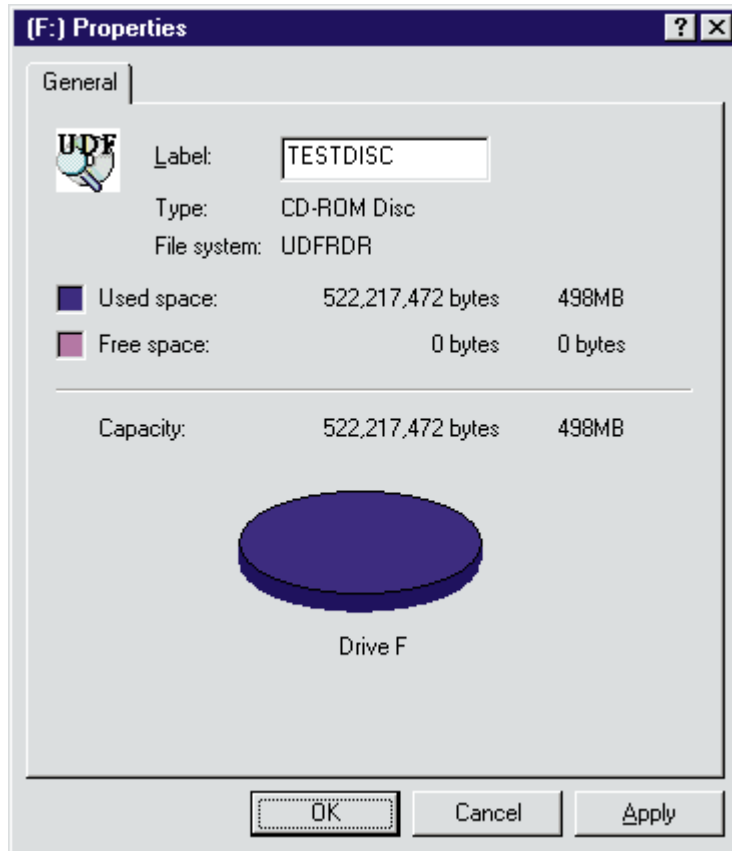
06.06 TYPENUMBER(S): AZ1150, AZ1155

SYMPTOM : **IRIS CODE 1 7 2 1**
The set does not play MP3 CD-R / CD-RW discs.

CURE : The problem is caused by the recording format used by the customer. The present hardware/software supports only ISO9600 standard. UDF (Universal Disc Format) discs cannot be played on the set.

The customers should be advised to record their MP3 music discs according to ISO9600 standard.

REMARKS : UDF discs can be identified on any UDF compliant MS-Windows PC by opening the properties dialog of the corresponding CD-ROM drive.



For UDF discs the file system is detected as “UDFRDR”, “C2UDFFS”, “CDUDF” or similar, dependent on the operating system and the installed drive software. A special UDF-icon is displayed optionally.

06.07 TYPENUMBER(S): CDR602/00S

INFORMATION : Correction to the Service Manual, Mechanical partslist:
The correct codenumber for WORDMARK “PHILIPS” SILVER
CDR602 reads:

14 3104 120 00290 WORDMARK “PHILIPS” SILVER CDR602

REMARKS :

06.08 TYPENUMBER(S): CDR800, CDR802, CDR820, CDR822

INFORMATION : Correction to the Service Manual, Mechanical partslist:
The correct codenumber for WORDMARK reads:

225 3104 120 00290 WORDMARK “PHILIPS” SILVER BACKGR.

REMARKS :

06.09 TYPENUMBER(S): **FW-i1000/37**

INFORMATION : AF8 BOARD – Changes in course of production:

- From production week 0125 onwards, the following components have been changed to adapt the -3dB amplification reserve for CD:

Change	3513	4822 117 10833	10kΩ 1% 0,1W
Change	3514	4822 117 10833	10kΩ 1% 0,1W
Change	3515	4822 051 20472	4,7kΩ 5% 0,1W
Change	3516	4822 051 20472	4,7kΩ 5% 0,1W

- From production week 0125 onwards, the following components have been changed/deleted to adapt the gain to +6dB for AUX and to 0dB for CDR:

Change	3523	4822 117 11507	6,8kΩ 1% 0,1W
Change	3524	4822 117 11507	6,8kΩ 1% 0,1W
Change	3545	4822 051 20333	33kΩ 5% 0,1W
Change	3546	4822 051 20333	33kΩ 5% 0,1W
Delete	3688		
Delete	3689		

- From production week 0125 onwards, the following component has been changed to adjust the Subwoofer output level:

Change	3684	4822 117 11507	6,8kΩ 1% 0,1W
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REMARKS :

06.10 TYPENUMBER(S): **FW-i1000/37**

INFORMATION : The following components on the Supply & Left/Right Amplifier Board have been changed to improve reliability:

Change	3308	4822 116 52175	100Ω 5% 0,5W
Change	3310	4822 116 52256	2,2kΩ 5% 0,5W

REMARKS :

06.11 TYPENUMBER(S): **FW-i1000/37**

INFORMATION : The following Tact Switches on the Front Board have been changed to improve the tactile feeling:

1101, 1102, 1103, 1104, 1105, 1203, 1204, 1205, 1206, 1207, 1208, 1209, 1210, 1211, 1212, 1213, 1214, 1215, 1216, 1402, 1403, 1404, 1405, 1406, 1407, 1408, 1409, 1410, 1411, 1412, 1413, 1414, 1415, 1416, 1417, 1418, 1419

The new Tact Switches are available with codenumber 4822 276 13775.

REMARKS :

06.12 TYPENUMBER(S): FW-M55/22

INFORMATION : Correction to the Service Manual, Circuit drawing and Parts list for Front Board: The codenumber and the article description of item 1408 should read:

1408 4822 242 11033 RES XTL 4,332MHz

REMARKS :

06.13 TYPENUMBER(S): MC-30 (for /37 USA version only)

INFORMATION : In course of production, the following parts have been modified to meet the new 2002 UL safety requirements:

406 3140 117 63040 FRONT CABINET ASSY /37

426 3140 114 42050 CD TRAY /37

REMARKS : The modified parts will be implemented in production from week 0150 onwards.

06.14 TYPENUMBER(S): MC45, MC-50, MC-70

INFORMATION : Training Manual for the "3 Disc Tray Changer 3DTC" is available with codenumber 3103 785 25140.

The document provides detailed mechanical instructions on the 3DTC and covers the following topics:

- Replacing the CD drive
- Dismantling and reassembling of jammed trays
- Replacing the gears

REMARKS :

06.15 TYPENUMBER(S): MZ7/22, MZ7/34

INFORMATION : Correction to the Service Manual, Circuit drawing and Parts list for Front Board: The codenumber and the article description of item 1408 should read:

1408 4822 242 11033 RES XTL 4,332MHz

REMARKS :

06.16 TYPENUMBER(S): SA100, SA101, SA107, SA125, SA126

INFORMATION : The software provided with the product does not support the new Microsoft operating systems Windows 2000, Windows ME and Windows XP.

Customers using Windows ME can download an updated version of the free RealJukebox 2 Basic from Real Networks at the following url: <http://www.real.com>

REMARKS :

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05.01 TYPENUMBER(S): **General CD Portable**

INFORMATION : The Remote Control AY3767 (3103 309 72380) is no longer available as service spare part. It is superseded by the new Remote Control AY3768 – 3140 118 50980.

The AY3768 has 4 buttons while the AY3767 had only 3. The Skip back button on the AY3768 may not work with some models.

REMARKS :

05.02 TYPENUMBER(S): **AE2380**

SYMPTOM : **IRIS CODE 1 2 5 X**
Reception is poor in all bands.

CURE : The problem might be caused by defective capacitors C37 and C38. Exchange capacitors C37 and C38, 100nF 4822 126 13838

REMARKS : Improved capacitors are used in production from week 118 onwards.

05.03 TYPENUMBER(S): **AQ6688**

INFORMATION : The Flywheel Assemblies of the Tape Deck are now available as service spare parts and can be ordered with the following codenumbers:

24	9965 000 10920	Flywheel Assembly (L)
44	9965 000 10921	Flywheel Assembly (R)

REMARKS :

05.04 TYPENUMBER(S): AX1000, AX1001

INFORMATION : Correction to the Service Manual, Circuit Diagram Control/Supply part
The servo driver IC 7256 should read SA111259FTA.

In course of production the above mentioned IC has been replaced
by IC SA111259AFTA (a low power version).

The new IC requires an adapted supply voltage and thus diode
SB140 (pos. 6152) has been added along with.

The location of 6152 can already be found in the existing Service
Manual. The codenumbers of the new components read as follows:

6152	5322 130 81917	SB140
7256	9322 171 12671	SC111259AFTA

REMARKS : The above modification has been implemented in production from
week 0135 onwards.

**05.05 TYPENUMBER(S): AX2000, AX2001, AX2002, AX2003, AX2011, AX5000–AX5004,
AX5006, AX5011–AX5018, AX5021–AX5027**

SYMPTOM : **IRIS CODE 1 1 1 X**
Fuse 1251 is blown.

CURE : The problem might be caused by an unstable supply regulation
circuit. Solution is to change 2262 from 3,3nF to 100pF.
2262 4822 122 31765 100pF 5% 50V

REMARKS : The modification has been implemented in production from week
0127 onwards.

05.06 TYPENUMBER(S): AZ1030, AZ1035, AZ1050, AZ1055

INFORMATION : It might happen that sets are returned with broken Bracket-Cassette
(item 501). The broken area is around the holder for Cassette Door
Spring. From production week 0108 onwards the part has been
strengthened by increasing the wall thickness of the holder.
The improved Bracket-Cassette can be ordered as follows:
501 3103 304 64080 Bracket-Cassette

REMARKS :

05.07 TYPENUMBER(S): AZ1550, AZ1570, AZ1574, AZ1575

INFORMATION : In course of production the microprocessor has been changed to a
new version. The circuit and layout diagrams of the Control board and
Key board have been changed as well.

For repair information of the new Control board and Key board
assemblies, refer to the following Service Information:

A01-555	3140 785 22840	for AZ1570, AZ1574 and AZ1575
A01-556	3140 785 22850	for AZ1550

REMARKS : The new microprocessors and the new boards have been
implemented in production from week 0135 onwards.

05.08 TYPENUMBER(S): AZ8352, AZ8357, AZ8562, AZ8567

INFORMATION : The potentiometer 3563 (4822 102 10453) is no longer available as service spare part. It can be replaced by 4822 102 10447.

REMARKS :

05.09 TYPENUMBER(S): CDR785, CDR786, FW-R7, FW-R8, FW-R88

SYMPTOM : **IRIS CODE 2 6 1 9**
CDR tray does not open. The display shows "OPEN CDR" but the set does not react on the Open/Close key.
When sets are brought in for repair with the above or similar failure description the failure can hardly or not be reproduced. An exchange of the CDR-module does not solve the problem.

CURE : There is no solution available for this problem. The customer has to be informed that this failure will occur when the set is operated in a certain sequence.

When the set hangs up it can be restarted by one of the following:

- pull mains cord off and plug it on again
- switch power off, wait 15s and switch power on again (CDR785, CDR786 only)

REMARKS : The easiest way to reproduce the problem:

- open the CDR tray and remove the disc
- press PLAY (with the tray still open) and wait until the message "INSERT DISC" appears
- change to another source (e.g. CD1, 2, 3, AUX)
- change source back to CDR

→ "OPEN CDR" is shown, but the tray does not open.
The CDR-module can only be restarted by a reset.

05.10 TYPENUMBER(S): EXP501, EXP503

INFORMATION : Correction to the Service Manual, Accessories (chapter 1-3):
AC/DC Adaptor AY3170 cannot be used for above mentioned sets (insufficient output current). The correct adaptors read

AY3160/00A	4822 219 10257	for EXP501/00
AY3160/17	4822 219 10017	for EXP503/17

REMARKS :

05.11 TYPENUMBER(S): FW-C28, FW-C38, FW-C39, FW-C40, FW-C55, FW-C58, FW-C71, FW-C72, FW-C80, FW-C85, FW-C90, FW-C200, FW-C220, FW-C280, FW-C290, FW-C380, FW-C500, FW-C550, FW-C700, FW-C720, FW-i1000, FW-M55, FW-P75, FW-P78, FW-P88, FW-P750, FW-C780, FW-C870, FW-P900, FW-P880, FW-V28, FW-V39, FW-V55, FW-V83, FW-V220, FW-V320, FW-V720

INFORMATION : Service Manual, Partslist for Tape mechanism
The Coil activator lever (pos. 20) is now available as service spare part. It can be ordered with codenumber 9965 000 10777.

REMARKS :

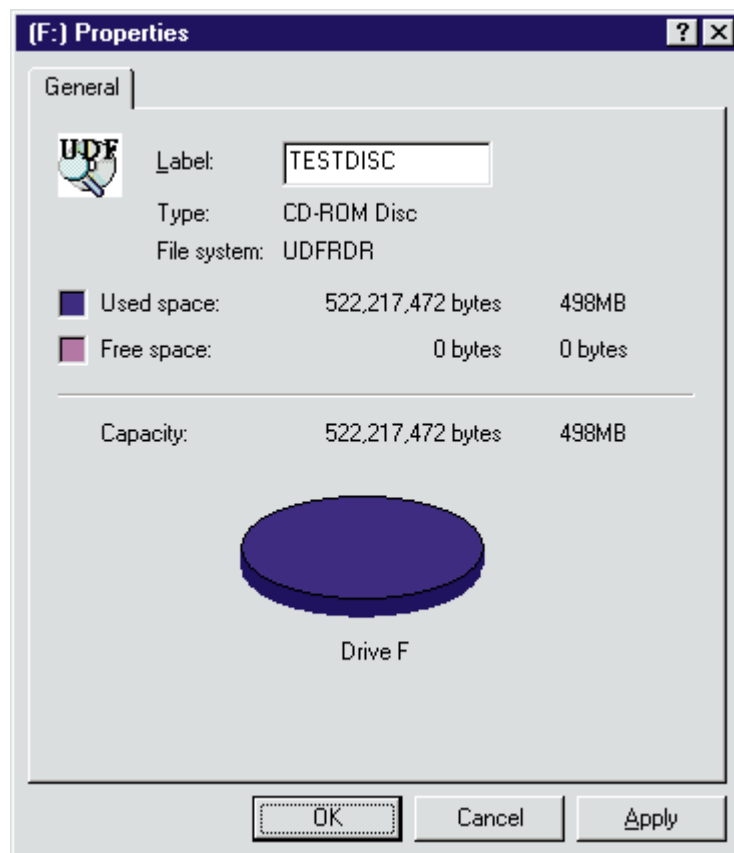
05.12 TYPENUMBER(S): FW-M55, FW-V39, FW-V55, FW-V220, FW-V320, FW-V720

SYMPTOM : **IRIS CODE 1 7 2 1**
The set does not play MP3 CD-R / CD-RW discs.

CURE : This problem is caused by the recording format used by the customer. The present hardware supports only ISO9660 standard, UDF (Universal Disc Format) discs cannot be played on the set.

The customers should be advised to record their MP3 discs according to ISO9660 standard.

REMARKS : UDF discs can be identified on any UDF compliant MS-Windows PC by opening the properties dialog of the corresponding CD-ROM drive.



For UDF discs the file system is detected as “UDFRDR”, “C2UDFFS” or similar, dependent on the operating system and the installed driver software. A special UDF-icon is displayed optionally.

05.13 TYPENUMBER(S): FW-V220, FW-V320

INFORMATION : Additional information to SNL2001.03.13 – MP3 noise problem
 With this proposed modification the set might fail to detect the presence of the microphone. This is solved by changing resistor 3682 on the Combi board to 100Ω (4822 051 30101).

REMARKS :

05.14 TYPENUMBER(S): FW-V220, FW-V320

INFORMATION : From production week 0127 onwards, the ETF7 Module has been changed to ETF7 ND/DD/FF Ferro version.
 Details of values and stuffing differences have already been published on page 9-1 of the existing Service Manuals.

REMARKS :

05.15 TYPENUMBER(S): FW-V220, FW-V320

INFORMATION : In course of production the following changes have been introduced to improve the VCD performance:

MPEG board 7202 software has been upgraded to version 12.

Front board microprocessor 7401 software has been upgraded to:

- version 23 for FW-V220 (recognized by print mark V220S52911) and
- version 25 for FW-V320 (recognized by print mark V320S52921).

Note: Because matching between the 2 ICs is important, the table below gives the various working combinations for the 2 ICs, their software versions and codenumbers.

Model	PC Board	Item No.	Software Version	Workable combination			Service code	Remarks
FW-V220	MPEG	7202	11	x			-	no longer available
			12		x	x	9965 000 08683	
	Front	7401	19	x	x		-	
			23			x	9965 000 10199	with Cue/Review
FW-V320	MPEG	7202	11	x			-	no longer available
			12		x	x	9965 000 08683	
	Front	7401	20	x	x		-	
			25			x	9965 00010198	with Cue/Review

REMARKS :

05.16 TYPENUMBER(S): FW-V220, FW-V320

INFORMATION : In course of production all the Tact Switches on the Front & Combi board have been changed from 2422 128 02917 to 4822 276 13775 to improved the tactile feeling.

REMARKS :

05.17 TYPENUMBER(S): FW-V220, FW-V320, FW-V720

INFORMATION : When the set is in Tuner, Tape or AUX mode, resistor 3700 on the Karaoke board can overheat. This is solved by changing resistor 3244 on the MPEG board from 220Ω to 4,7kΩ (4822 051 30472).

REMARKS :

05.18 TYPENUMBER(S): MC-20, MC-30

INFORMATION : In course of production, the Tape Deck module has been changed from “ETF6” to “ETF8”. For repair information of the ETF8 tape deck module refer to Service Information A01-554 (3140 785 22830).

REMARKS : ETF8 modules are used in production from week 137 onwards.

05.19 TYPENUMBER(S): MC-20, MC-30, MC-45, MC-50, MC-70, MC145, MC145C, MC148

SYMPTOM : **IRIS CODE 1 1 6 X**
On the ETF6 mechanism, the lever (item 23) is deformed due to overheating of Solenoid (item 20). The transistors 7612 and 7614 are also burnt.

CURE : The problem is resolved by replacing:
1. Transistors 7612 and 7614 with higher current rating type PMBT2907, codenumber 4822 130 11201
2. Solenoid assembly with improved version, codenumber 9965 000 10778
3. Coil Lever activator, codenumber 9965 000 10777

REMARKS : New Solenoids are used in production from week 0131 onwards.

05.20 TYPENUMBER(S): MC45, MC-50, MC-70

INFORMATION : Resistor 4124 on the Front Display Board has been changed from 0Ω to 10Ω (4822 051 30109) to solve Tape head bounce problem when play stops (additional head moving up and down).

REMARKS :

05.21 TYPENUMBER(S): MC45, MC-50, MC-70

INFORMATION : Resistor 3769 on the ETF6 board has been changed from 12kΩ to 5,6kΩ (4822 051 20562) to improve the S/N ratio on recordings with Ferro cassettes.

REMARKS :

05.22 TYPENUMBER(S): MC-55

SYMPTOM : **IRIS CODE 2 3 3 X**
When playing certain VCD's, picture has blocking effect.

CURE : Solution is to replace the MPEG Decoder IC LS188 by the newer version LS188C. The codenumber of the new IC reads:
IC601 9965 000 10820 LS188C

REMARKS : The new IC LS188C has been implemented in production from week 0132 onwards.

05.23 TYPENUMBER(S): MC-55

INFORMATION : Correction to Service Manual, Electrical partslist:
The codenumber for the power amplifier LA4282 is missing:
IC802 4822 209 31855 LA4282

REMARKS :

05.24 TYPENUMBER(S): MC-70

INFORMATION : The length of Flex Cable 1136 has been increased from 18cm to 22cm to prevent dislodge from the socket during transportation.
The new cable is available with codenumber 3139 110 35900.

REMARKS :

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04.01 TYPENUMBER(S): **AE2110, AE2150, AE2155**

INFORMATION : The Tuning Knob is now available with codenumber 9965 000 10427.

REMARKS :

04.02 TYPENUMBER(S): **AX1000, AX1001**

INFORMATION : Correction to Service Manual, Mechanical partslist
The codenumbers for below spareparts are wrong and should read:

402	3140 117 50250	Button-Set-Play/Stop
403	3140 117 60260	Button-Set-Prev/Next
407	3140 114 35770	Slider-Resume
408	3140 114 36180	Brake
409	3103 301 06500	Spring-Slider-Open 2
411	3140 114 35780	Slider-Open
412	3140 114 35800	Adapter-Button-Set-Play/Stop
413	3140 114 35810	Adapter-Button-Set-Prev/Next
414	3103 309 05320	CD-Drive DA23LNPH

REMARKS :

04.03 TYPENUMBER(S): **AX1000, AX1001**

INFORMATION : Additional information to Service Newsletter SNL2001.03.01:
AX1000 and AX1001 are produced with different CD-drives DA23LPH and DA23LNPH. DA23LPH is no longer available as service sparepart and has been standardized to the DA23LNPH - 3103 309 05320.

To replace DA23LPH by DA23LNPH, the Microprocessor IC 7400 has to be replaced too.

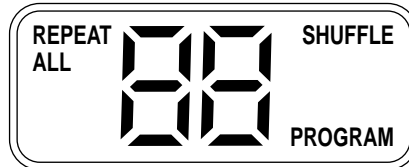
7400 3140 110 50980 (matches with DA23LPH) or
7400 3140 110 51120 (matches with DA23LNPH)

REMARKS : Above information can also be found in Service Manual 3140 785 22550, page 5-2.

04.04 TYPENUMBER(S): **AZ1110, AZ1111, AZ1112, AZ1114, AZ1116, AZ1117, AZ1118, AZ1119, AZ8084, AZ8085, AZ8086, AZ8087**

INFORMATION : Correction to Service Manual:
There are some mistakes in the CD Service Test Program.

- To enter the Service Program, hold **PLAY & STOP** buttons depressed while switching CD mode ON.
- Disc Motor test : press **MODE** button and the disc motor turns clockwise.
- Display Test : the correct display pattern is



REMARKS :

04.05 TYPENUMBER(S): **AZ1550, AZ1560, AZ1564, AZ1565**

INFORMATION : In course of production, the Control Board has been upgraded to layout stage 4.
For repair information of the new Control Board see Service Information A01-552 (3140 785 22780)

REMARKS : The modification has been implemented in production from week 0013 onwards.

04.06 TYPENUMBER(S): **AZ1560, AZ1564, AZ1565**

INFORMATION : Correction to Service Manual, Electrical partslist:
Following capacitors on the Feature Board should read:

2556	4822	126	14585	100nF	10%	X7R	50V
2557	4822	126	14585	100nF	10%	X7R	50V

REMARKS :

04.07 TYPENUMBER(S): **AZ1570, AZ1574, AZ1575**

INFORMATION : Correction to Service Manual:
The schematic and layout diagrams of the Control Board are wrong.
For corrected diagrams please refer to Service Information A01-553 (3140 785 22790).

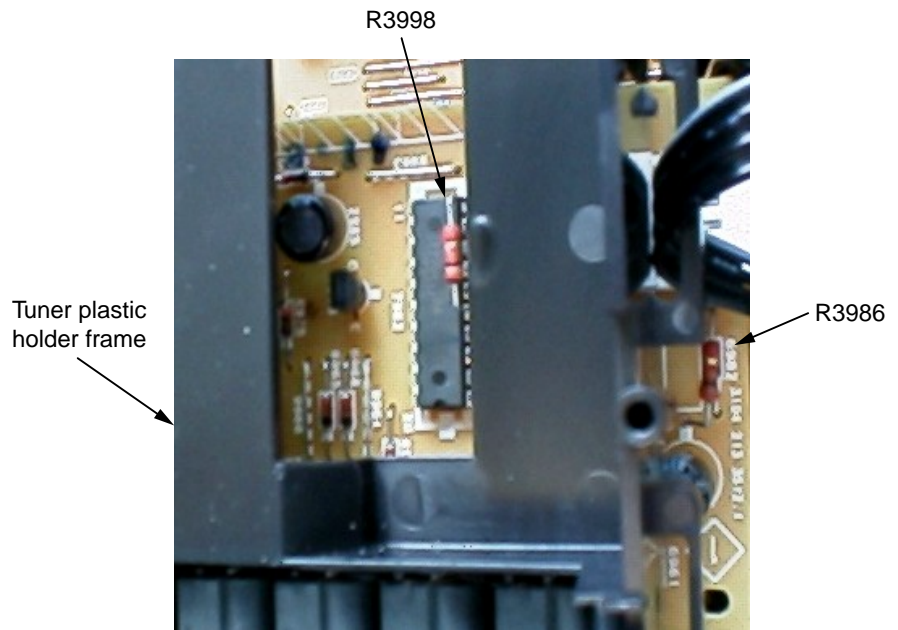
REMARKS :

04.08 TYPENUMBER(S): **AZ1570, AZ1574, AZ1575**

- SYMPTOM** : **IRIS CODE 2 5 2 X**
Sometimes the volume cannot be changed with the JOG volume control.
- CURE** : When the voltage on pins 11 & 13 of connector 1504 reads 1,9 V instead of 4,8V, the capacitors 2556 and 2557 on the Feature Board are defective.
Exchange capacitors 2556 and 2557, 100nF 4822 126 13838.
- REMARKS** :

04.09 TYPENUMBER(S): **FR968, FR975, FR976**

- SYMPTOM** : **IRIS CODE 1 1 6 F**
The set gives a burning smell.
- CURE** : Safety resistors 3986 and 3998 on the S-VHS Video Selector Board are mounted too close to the Tuner plastic holder frame.
In order to solve the problem, bend resistor 3986 approx. 40° towards diode 6982 and bend resistor 3998 approx. 40° towards IC7962.



IMPORTANT: It is essential to check all sets brought in for repair and to carry out above modification if required !!

- REMARKS** : The modification has been implemented in production from week 0131 onwards.

04.10 TYPENUMBER(S): FW-C55, FW-C58, FW-C71, FW-C72, FW-C380, FW-M55, FW-V28, FW-V55

SYMPTOM : **IRIS CODE 1 1 5 X**
The set reacts on other Philips TV remote controls triggering unwanted response.

CURE : The problem can be resolved by upgrading the Front Board microprocessor software version.
The new microprocessors are available as follows:

pos.	codenumber	version	typenumber(s)
7401	9965 000 06155	11	FW-V28
7400	9965 000 10408	18	FW-C380
7400	9965 000 08007	18	FW-V55, FW-M55
7400	9965 000 10560	15	FW-C55, FW-C58, FW-C71, FW-C72

REMARKS : For solution of similar problems on other typenumbers see Service Newsletter SNL2001.01.30 resp. SNL2001.03.14.

04.11 TYPENUMBER(S): FW-C550, FW-C780

SYMPTOM : **IRIS CODE 2 5 4 0**
1. Intermittent headphone noise.
2. Noise is audible in the AUX or RADIO channel from Volume Level 1 to Maximum. The noise level varies with the Display illumination (option NORMAL, MODE 1, MODE 2, MODE 3). An oscilloscope connected to the speakers shows a frequency of 187Hz.

CURE : The problem is caused by glitches on the LPC line and can be resolved by the following modification:
• Change 2570 from 47µF to 220µF (4822 124 12052) on the Front Display Board.
• Change 3279 from 10kΩ to 47kΩ (4822 116 83884) on the L/R Amplifier & Supply Board (MMPWR 100W Module).

REMARKS :

04.12 TYPENUMBER(S): FW-C83, FW-C85, FW-C90, FW-P88

INFORMATION : 1) To improve Reverse Record on tape 2, resistor 3379 on the Front Board has been changed to 33Ω 5% 0,5W (4822 116 52191).
2) To improve CD sound distortion (for FW-C85/21/21M/30/37 and FW-P88/37 only), the following resistors have been changed on the AF8 Board:
• 3513 changed to 10kΩ 1% 0,1W (4822 117 10833)
• 3514 changed to 10kΩ 1% 0,1W (4822 117 10833)
• 3515 changed to 4,7kΩ 5% 0,1W (4822 051 20472)
• 3516 changed to 4,7kΩ 5% 0,1W (4822 051 20472)

REMARKS :

04.13 TYPENUMBER(S): **MZ7/22, MZ7/34**

INFORMATION : Correction to the Service Manual, schematic diagram and partslist Front Board. The codenumber of the RDS demodulator IC 7403 should read:

7403 9352 679 67118 SAA6579T/V1/M4

REMARKS :

04.14 TYPENUMBER(S): **SA100, SA101, SA107, SA125, SA126**

INFORMATION : If the CD-ROM with the RealJukebox software has been lost or if customers are using the operating system Windows ME, they can download the most recent version of the free RealJukebox 2 Basic software from RealNetworks at the following URL:

http://proforma.real.com/real/jukebox/jukebox.html?src=010709realhome_1,010320rjbchoice_1&dc=816815814

REMARKS : The filesize of the full suite is about 8.7MB and the download will take about 40 minutes with a 56k modem.

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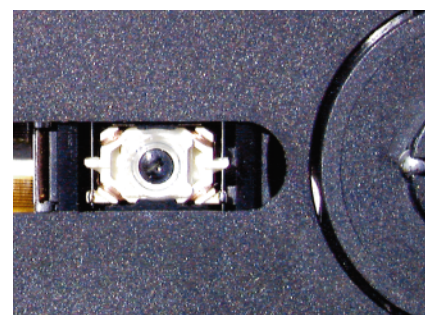
03.01 TYPENUMBER(S): AX2000, AX2001, AX2002, AX2003, AX2011, AX5000, AX5001, AX5002, AX5003, AX5004, AX5006, AX5011, AX5012, AX5013, AX5014, AX5015, AX5016, AX5017, AX5018, AX5019

INFORMATION : Above mentioned typenumbers are produced with different CD-drives: DA23LPH and DA23LNPH. The drives can be identified by the color of the lens holder:

DA23LPH – black lens holder



DA23LNPH – white lens holder

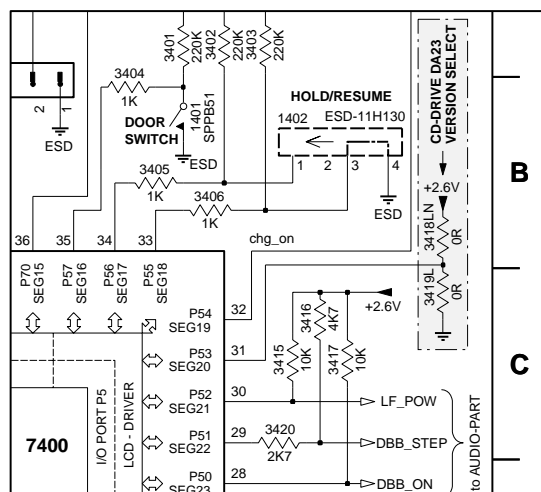


DA23LPH is no longer available as service sparepart and has been standardized to the newer DA23LNPH – 3103 309 05320.

Attention when replacing DA23LPH by DA23LNPH !

The new drive requires different software parameters and will not work properly without the following hardware modification:

1. Remove pull-down resistor 3419L
2. Add pull-up resistor 3418LN



REMARKS :

03.02 TYPENUMBER(S): AZ1008, AZ1011, AZ1012

INFORMATION : In course of production, following changes have been implemented in order to speed-up reading of TOC for some critical discs.

3832 changed from 6.8kΩ to 18kΩ (4822 117 10965)
2826 changed from 680pF to 1.5nF (4822 126 14247)
2864 changed from 27pF to 15pF (4822 126 13486)

REMARKS : The modification has been implemented in production from week 0122 onwards.

03.03 TYPENUMBER(S): AZ1008, AZ1011, AZ1012

SYMPTOM : **IRIS CODE 2 7 1 1**
Cannot read CD.

CURE : The CD Door Switch (item 101) is not mounted properly. It cannot be activated by the gear arm of CD Door (item 48).
Following countermeasures have been initiated:

1. Fixture in soldering process to ensure Door Switch is mounted properly on the printed board.
2. Thickness of gear arm on CD Door increased to ensure enough surface to activate the switch.

REMARKS : The modified parts have been implemented in production from week 0109 onwards.

03.04 TYPENUMBER(S): AZ1018

INFORMATION : In course of production, following changes have been implemented in order to improve the problem "low recording level".

3363 and 3364 changed from 10kΩ to 18kΩ (4822 117 10965)

REMARKS : The modification has been implemented in production from week 0114 onwards.

03.05 TYPENUMBER(S): AZ1018

INFORMATION : The procedure how to change the tuning grid is not mentioned in the Instruction Manual. Please refer to below description:

- Switch off the set (mode switch in TAPE/OFF position).
- To select 9kHz: Hold PLAY-PAUSE and SEARCH ◀◀ depressed while switching to Tuner mode.
- To select 10kHz: Hold PLAY-PAUSE and SEARCH ▶▶ depressed while switching to Tuner mode.

Note: This procedure will clear all preset stations.

REMARKS : From week 0122 onwards, an addendum sheet has been added to the sets.

03.06 TYPENUMBER(S): AZ2760, AZ2765, AZ2785

INFORMATION : The procedure how to change the tuning grid is not mentioned in the Instruction Manual. Please refer to below description:

- Select Tuner mode and switch off the set.
- To select 9kHz: Hold BAND and SEARCH ◀ depressed while switching Power On.
- To select 10kHz: Hold BAND and SEARCH ▶ depressed while switching Power On.

Note: This procedure will clear all preset stations.

REMARKS : From week 0122 onwards, an addendum sheet has been added to the sets.

03.07 TYPENUMBER(S): CDR570, CDR770, CDR771, CDR775, CDR776, CDR778

INFORMATION : In course of production, the Power Supply Unit "PSU CDR3 ECO" has been modified:

6230 changed to BYV28-400 (4822 130 11415)

3113 changed to 1kΩ (4822 051 10102)

2253 added 4.7nF (2020 558 90449)

For reference see Service Information A00-254.

Above changes have been implemented in course of production.

Manually adapted PSU's are stamped "OP02".

New modified produced PSU's are stamped "OP03".

Adapted PSU's and new PSU's will carry the following 12NC:

EURO : 3122 427 2200.5

USA : 3122 427 2201.5

WR : 3122 427 2202.5

Change code and 12NC are printed on a sticker which is placed on capacitor 2121.

REMARKS : It is recommended to check respectively exchange above mentioned components in all sets brought in for repair.

03.08 TYPENUMBER(S): **CDR570, CDR770, CDR771, CDR775, CDR776, CDR778**

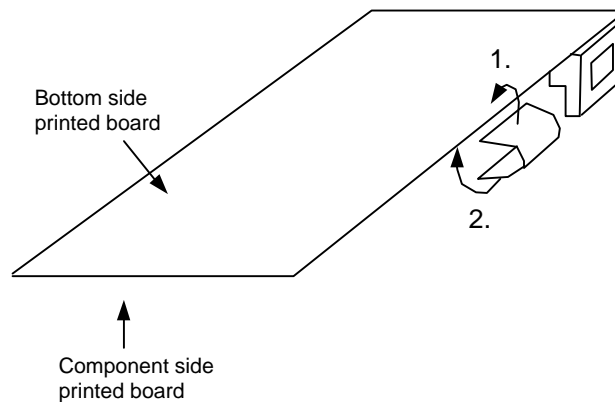
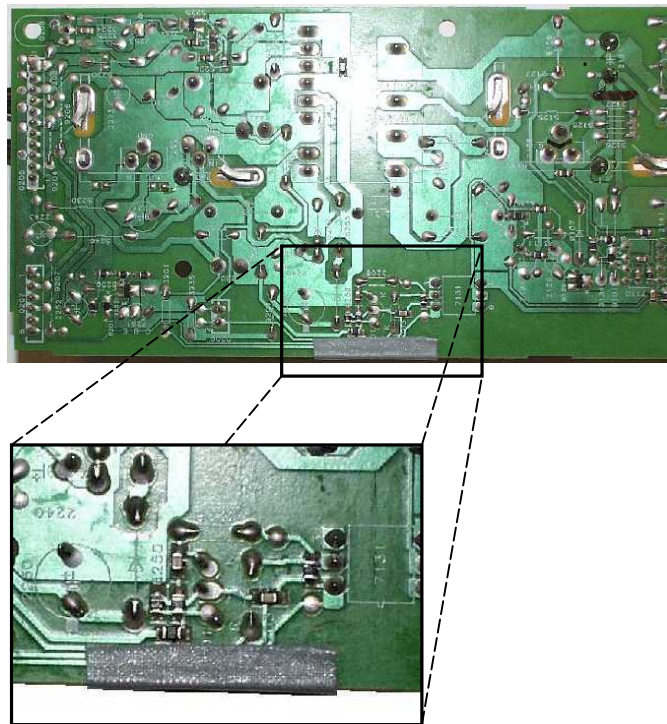
SYMPTOM : **IRIS CODE 2 1 1 0**

- a) Set switches off when the mains cord is moved
- b) No function
- c) Set switches off intermittently

CURE : The copper tracks on the soldering side of the Power Supply Unit “PSU CDR3 ECO” run too close to the edge of the printed circuit board. This may cause

- a mechanical disruption of the copper tracks or
- a short-circuit to the metal backplate which in turn damages resistor 3201.

To solve this problem it is advised to fix a 2.5 cm piece of insulating tape (i.e. TESA 4657, width = 1 cm) to the edge of the printed circuit board as shown in pictures below.



REMARKS : The insulating tape has been implemented in production from week 0105 onwards. It is recommended to check all sets brought in for repair.

The modification is mandatory for all PSU's produced between week 0031 till 0105 with the following 12NC:

EURO : 3122 427 2200.1, .2, .3, .5

USA : 3122 427 2201.1, .2, .3, .5

WR : 3122 427 2202.1, .2, .3, .5

Change code and 12NC are printed on a sticker which is placed on capacitor 2121.

03.09 TYPENUMBER(S): CDR570, CDR770, CDR771, CDR775, CDR776, CDR778

SYMPTOM : **IRIS CODE 2 1 5 1**
Remote Control does not work properly or works intermittently.

CURE : Add a 100µF capacitor (4822 124 41584) on position 2213 of the Power Supply Unit "PSU CDR3 ECO".
For reference see Service Information A00-254.

REMARKS : 2213 has been implemented in course of production.
Manually adapted PSU's are stamped "OP02".
Modified new produced PSU's are stamped "OP03".
Adapted PSU's and new PSU's will carry the following 12NC:
EURO : 3122 427 2200.5
USA : 3122 427 2201.5
WR : 3122 427 2202.5

Change code and 12NC are printed on a sticker which is placed on capacitor 2121.

03.10 TYPENUMBER(S): CDR785, CDR786

INFORMATION : Correction to the Service Manual, Electrical Partslist
The codenumber for the NTC resistor 3399 is missing:
3399 4822 117 12063 10kΩ NTC

REMARKS :

03.11 TYPENUMBER(S): ECO5, ECO6 Tuner Board

SYMPTOM : **IRIS CODE 1 2 6 2**
Auto Search Mode does not function. Tuner does not stop at any station. When the tuner is tuned manually to a strong transmitter it does not switch to STEREO (DC voltage on pin 24 of the Radio IC 7101 is 4.8V instead of 2V).

CURE : Exchange capacitor 2141 100nF 10% 50V (4822 126 13838).

REMARKS :

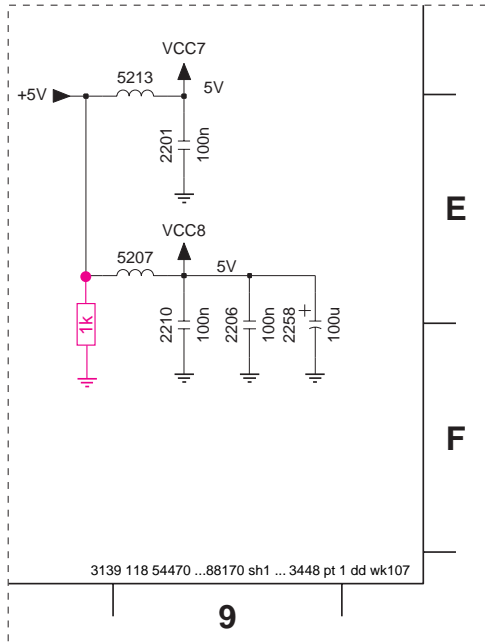
03.12 TYPENUMBER(S): FW-R7, FW-R8, FW-R88

- SYMPTOM** : **IRIS CODE 1 1 8 1**
The CDR Module does not work correctly with ComPair.
Known problems:
1. Download of a new software version does not function
2. "Dead module" after replacement
- CURE** : 1. When the CDR Module is supplied by the Power Supply Unit of the set, always make sure that
• the set is switched to CDR-mode and
• the Front-, AF-, Power L/R- and Supply CDr/w Boards are connected properly.
This is necessary because the +5V supply for the CDR Module is controlled by the Front- μ P. Via IIC-Bus and IIC-shift register (located on AF-Board) the CDR_ON signal is generated and via Power L/R Board connected to Supply CDr/w Board.
2. Check solder connections of DASP IC.
- Past experience has shown that most communication errors are caused by weak solder connections of the DASP IC (item 7701).
- REMARKS** : After download of a new software version also look to the final message that download was done successfully!

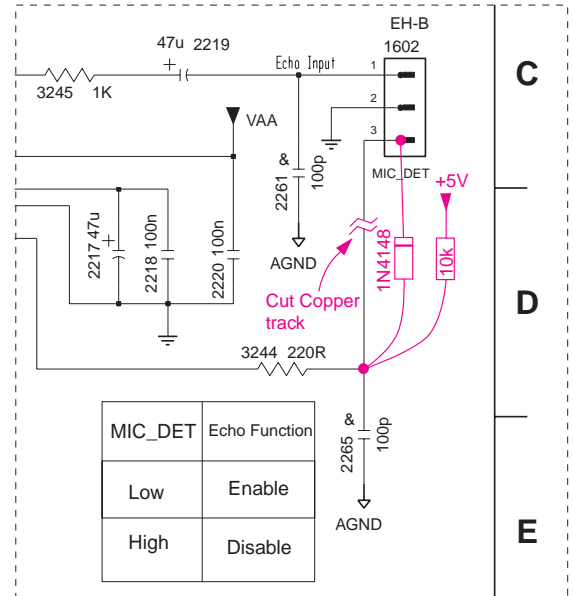
03.13 TYPENUMBER(S): FW-V220, FW-V320 and FW-V720

- SYMPTOM** : **IRIS CODE 1 5 4 2**
No music, only noise is audible during MP3 playback.
- CURE** : Due to residual voltage, the MPEG board does not get a proper reset.
- The problem can be resolved by the following rework (see drawings on next page):
1. Cut a copper track
 2. Add a resistor 1k Ω (4822 050 21002) across +5V and ground
 3. Add a resistor 10k Ω (4822 050 21003)
 4. Add diode 1N4148 (4822 130 30621)

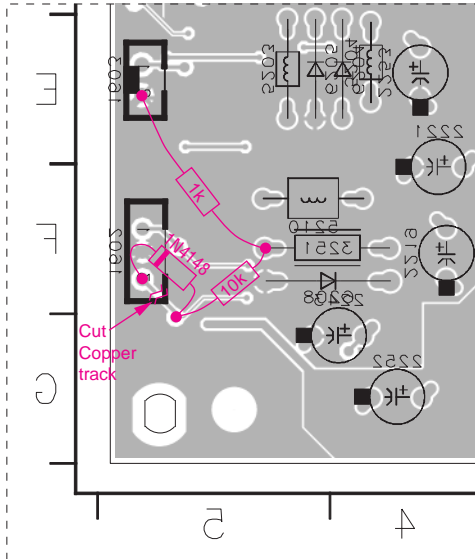
Portion of Circuit on page 8-7



Portion of Circuit on page 8-8



Portion of Layout on page 8-6, Copper Shielding side



REMARKS :

03.14 TYPENUMBER(S): MC-50, MC-70

- SYMPTOM** : **IRIS CODE 1 1 5 X**
The set reacts on Philips TV remote controls.
In worst case it switches to Service Test mode.
- CURE** : The problem is solved with new microprocessor software version 20.
The new microprocessor (item 7102 on Front Display Board) is available with codenumber 9965 000 09493.
- REMARKS** : Check the microprocessor software version before replacement.
If the existing software is version 18, additional hardware adaptations are required. See below 03.15, step 3a for details.

03.15 TYPENUMBER(S): MC-50, MC-70

- SYMPTOM** : **IRIS CODE 1 6 1 X**
The 3-Disc Tray Changer "3DTC" is jammed and cannot be released by a reset (disconnect/reconnect mains).
- CURE** : 1) Check and repair the 3DTC mechanism as necessary
2) Check the software version of the existing microprocessor 7102
3a) For software version 18 do the following:
Front Display Board
- replace 7102 with new microprocessor (9965 000 09493)
- change resistors 3209, 3210, 3211 to 220Ω (4822 051 30221)
CD Board
- change resistor 3783 to 2.7kΩ (4822 051 30272)
- change resistor 3790 and 3791 to 3.3kΩ (4822 051 30332)
3b) For software version 19 do the following:
Front Display Board
- replace 7102 with new microprocessor (9965 000 09493)
- REMARKS** :

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02.01 TYPENUMBER(S): **ACT7585**

INFORMATION : Correction to Service Manual
CD-drive DA23LN (3103 309 05320) has been used instead of
DA23L (3103 309 05340). The new CD-drive requires the following
modification for proper detection of the drive version:
Add 3418 4822 051 30008 Chip Jumper 0603
Delete 3419

REMARKS :

02.02 TYPENUMBER(S): **ACT7585**

INFORMATION : Correction to the Service Manual, Partslist
Resistor 3869 should be 47 Ω (4822 051 30479).

REMARKS :

02.03 TYPENUMBER(S): **AZ1018**

INFORMATION : In course of production, resistor 3452 has been changed from 2.7k Ω
to 4.7k Ω (4822 051 30472) to improve "LCD leakage".

REMARKS :

02.04 TYPENUMBER(S): **AZ1110, AZ1111, AZ1112, AZ1113, AZ1114, AZ1116, AZ1117,
AZ1118, AZ1119, AZ8084, AZ8085, AZ8086, AZ8087**

SYMPTOM : **IRIS CODE 2 1 1 X**
Set doesn't work with some specific batteries due to improper battery
contact.

CURE : The guiding rib in the battery compartment has been modified.

REMARKS : Modified parts are used in production with production code
KZ010049136XXX from week 0049 onwards.

02.05 TYPENUMBER(S): **AZ2020, AZ2025**

INFORMATION : Correction to Service Manual, Mechanical Partslist
The codenumber of the Contact Plate (item 449) should read
3140 111 21320.

REMARKS :

02.06 TYPENUMBER(S): **AZ2785**

INFORMATION : Correction to Service Manual, Mechanical Partslist
Items 443 (Cass Keys A) and 444 (Cass Keys B) will be delivered
together as a service kit. The codenumber reads 9965 000 09156.

REMARKS :

02.07 TYPENUMBER(S): **CD6660**

INFORMATION : Correction to Service Manual, Wiring Diagram and Electrical Partslist
The item number of the Flexible Foil 8800 is incorrect. It should read
8000 4822 320 12178 Flexible Foil

REMARKS :

02.08 TYPENUMBER(S): **CDR570, CDR600, CDR602, CDR770, CDR771, CDR775, CDR776,
CDR778, CDR785, CDR786, CDR930, CDR950, CDR951, FW-R7,
FW-R8, FW-R88**

INFORMATION : In case the Optical Pickup Unit "OPU" (item ②) has to be replaced, it
is absolutely necessary to replace the axle (item ④) at the same
time. For reference see Exploded View CDM3800 on next page resp.
chapter 4.4 of 2nd line Service Manual CDR570,... 3104 125 40110.
Also gear rack (item ⑬) has to be investigated for damages of its
teeth. As follows the instruction how to replace these parts.

1. Demounting

- 1.1. First demount loader CDL4009 and CDR-MainBoard as given in
Mechanical Instructions, chapter 4.1.
- 1.2. Now the OPU can be de-mounted. See chapter 4.4 (Exploded
View CDM3800)
- 1.3. Loosen 2 screws (⑥ and ⑧)
- 1.4. Take away the old OPU ② with its axle ④ and gear rack assy ⑬
by lifting it up at that released side and then shift it from it's other
axle ③.
- 1.5. Take care of spring ②. It can be reused for the new OPU.
- 1.6. Remove gear rack ⑬ from the OPU by removing axle ④. If the
gear rack is not damaged it can be reused for the new OPU.

2. Mounting

- 2.1. Mount the new axle ④ through new OPU and gear rack ⑬
- 2.2. Mount spring ②
- 2.3. Position the OPU under axle ③. Take care of spring ②.
- 2.4. Press the gear rack ⑬ in such a way that both rackteeth are in
line with each other. Interlock gear rack ⑬ with gear wheel ⑫.

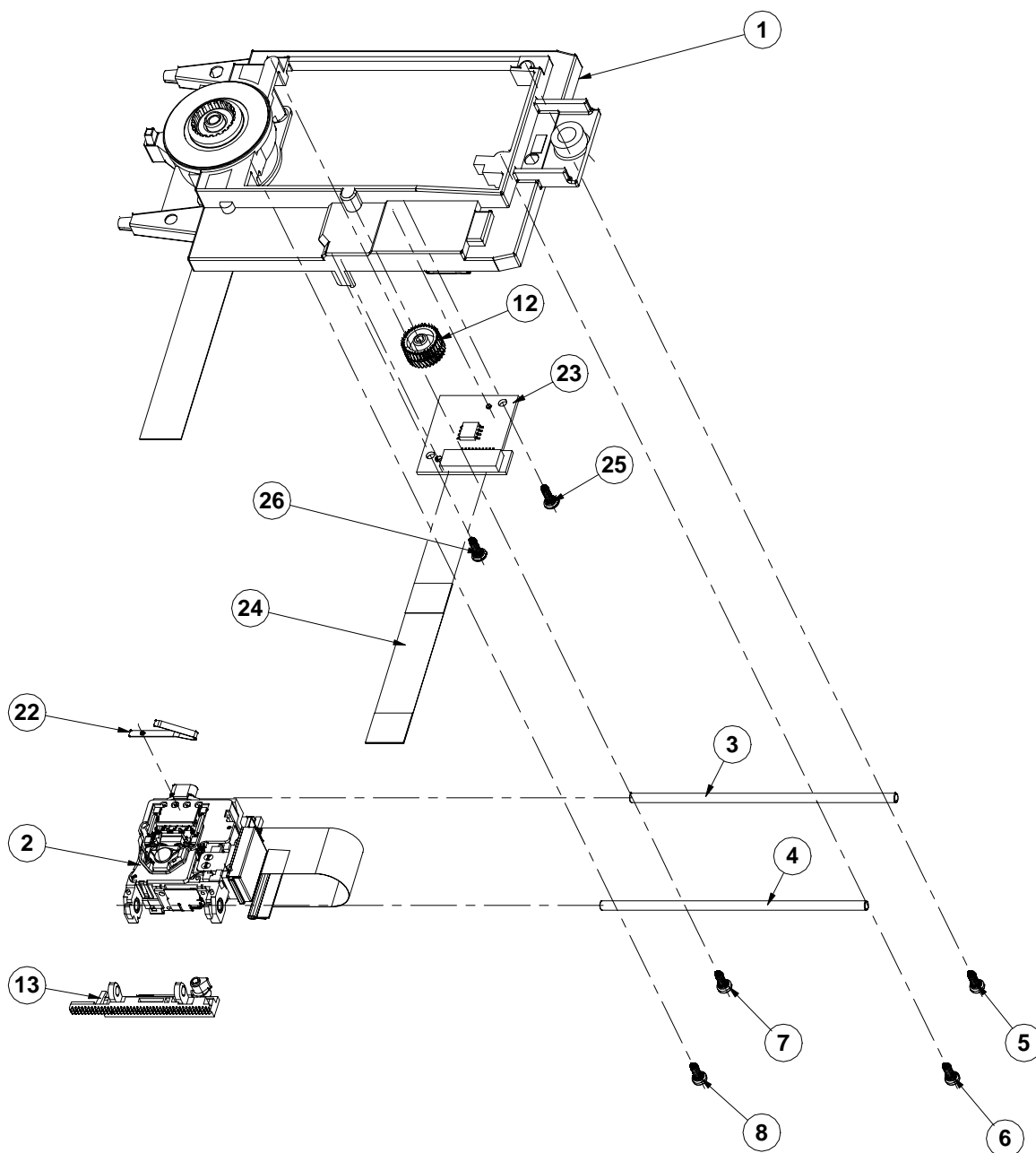
The tension on the gear-rack will reduce the offset of the mechanical movement drastically.

- 2.5. Fasten axle (4) with 2 screws (6) and (8)
- 2.6. Now the OPU is mounted in the CDM. Write down the parameters of the OPU for later adjustments. The parameters represent the last five digits of the 12 NC, the 0.7mW value and the 20mW value (i.e. 13981;00735;02098).
- 2.7. Remount and reconnect the CDR-main-board and do not forget to execute the adjustment procedure via ComPair in order to match the CDR-main-board with the new OPU.

3. Adjustment

- 3.1. After replacement of the OPU it is absolutely necessary to start ComPair Adjustment procedure immediately. Follow the instructions as given by ComPair.

EXPLODED VIEW CDM3800



REMARKS :

02.09 TYPENUMBER(S): ECO5, ECO6 Tuner Board

SYMPTOM : **IRIS CODE 3 2 1 0**
After a few minutes of operation there is no sound audible although the display shows still the correct tuning frequency.
When the tuner is switched off for some time the displayed frequency will be completely wrong after switching on again.

CURE : The most probable reason is a leaky ceramic capacitor 2165 (resistance of a few hundred Ohm can be measured).
The defective capacitor causes a drop of Vref (1.5V instead of 2V at pin 1 of IC7101) along with a drop of the internal stabilized voltages VstabA and VstabB (0.8V instead of 1.4V at pins 34 and 38).
As a result IC7101 will not work anymore.

The problem can be solved by replacing capacitor 2165.

REMARKS : Check also ceramic capacitors 2139 and 2152.

02.10 TYPENUMBER(S): FW-R7, FW-R8, FW-R88

INFORMATION : Correction to the Service Manual, Mechanical Partslist chapter 12-3
The codenumber for Rubber Foot pos. 271 should read
3104 217 72032.

REMARKS :

02.11 TYPENUMBER(S): FW-V220, FW-V320

INFORMATION : Correction to the Service Manual, Circuit diagram and Partslist

Combi Board
2405 Deleted
3456 Deleted
3681 4822 116 52276 3.3kΩ 5% 0,5W
3682 4822 116 52276 3.3kΩ 5% 0,5W

REMARKS :

02.12 TYPENUMBER(S): MC-10, MC118

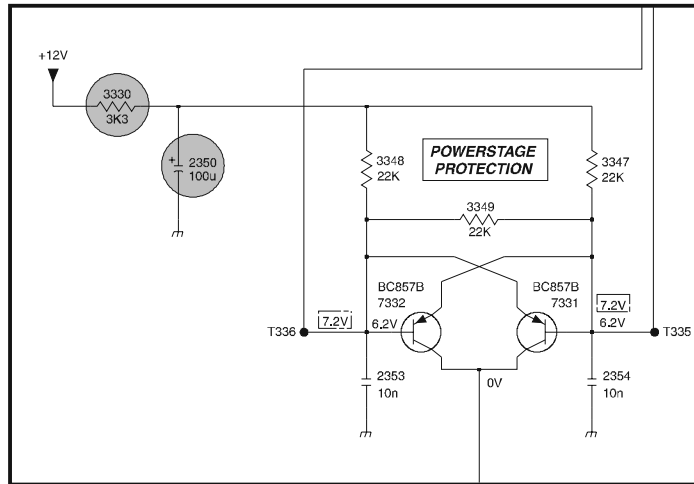
SYMPTOM : **IRIS CODE 1 5 4 2**
Sharp voice is audible on recording.

CURE : Change resistor 3732 from 10Ω to 15Ω (4822 116 82182).

REMARKS : Modification has been implemented in production from week 0101 onwards.

02.13 TYPENUMBER(S): MC-10, MC-20, MC-30, MC118, MC148

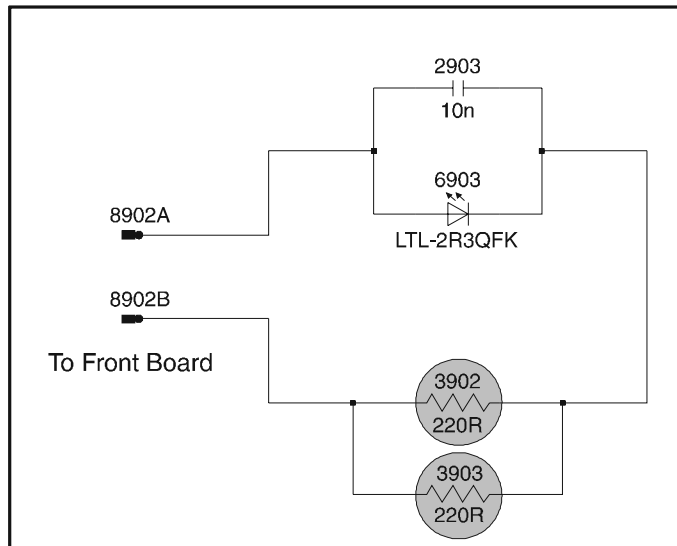
INFORMATION : In course of production, the following components have been added on the Combi Board to improve power muting:
 2350 4822 124 40207 100µF
 3330 4822 116 52269 3.3kΩ



REMARKS :

02.14 TYPENUMBER(S): MC-30

INFORMATION : Backlight board: In course of production, resistor 3903 has been added in parallel to resistor 3902 to prevent overheating. The value for both resistors is 220Ω, available with codenumber 4822 117 11503.



REMARKS :

02.15 TYPENUMBER(S): MC-30/37

INFORMATION : Correction to Service Manual, Mechanical Partslist
The codenumber of the Mains Cord Relief for /37 (item 439) should read 3140 113 22100.

REMARKS :

02.16 TYPENUMBER(S): MC-45, MC-50

INFORMATION : Correction to the Service Manual, Circuit diagram and Partslist

Front Control Board

6300	4822	130	11589	LTL-1CHAE
6301	4822	130	11589	LTL-1CHAE
6302	4822	130	11589	LTL-1CHAE
6303	4822	130	11589	LTL-1CHAE
6400	9322	167	73676	LTL-4221NLC-KA

REMARKS :

02.17 TYPENUMBER(S): MC-70

INFORMATION : Correction to the Service Manual, Circuit diagram and Partslist

Front Control Board

6400	9322	167	73676	LTL-4221NLC-KA
------	------	-----	-------	----------------

Front Display Board

3201	4822	052	10228	2.2Ω	5%	0,33W
3202	4822	052	10228	2.2Ω	5%	0,33W

Mechanical & Accessories – Main Unit

141	3139	113	27010	Cut Sheet Display Blue
1131	3139	110	35560	Flex Cable 19pin 18cm AD folded
1133	3139	110	35570	Flex Cable 9pin 10cm AD
1138	3139	110	35520	Flex Cable 19pin 10cm AD

REMARKS :

02.18 TYPENUMBER(S): MC118, MC148

INFORMATION : It might happen that sets are returned with broken CD Door (item 442) and CD Tray (item 434). The broken area is around the holder for CD Door Spring. From production week 0112 onwards the parts have been strengthened by increasing the wall thickness of the spring holder and adding supporting ribs.

REMARKS : Modified parts are used in production from week 0112 onwards.

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01.01 TYPENUMBER(S): **ACT7583**

SYMPTOM : **IRIS CODE 2 6 2 X**
CD does not stop when door is opened.

CURE : Change capacitor 2962 from 470pF to 1nF (5322 126 11578).

REMARKS : The modification has been implemented in production from week 0048 onwards.

01.02 TYPENUMBER(S): **AQ4150**

INFORMATION : Additional information to Service Newsletter SNL2000.03.01.
The problem of poor recording from FM can further be improved by adding a capacitor of 0,47µF between R2 and pin 13 of IC1 (TDA5710).

REMARKS :

01.03 TYPENUMBER(S): **AS680C, AS681C, FW72C, FW346C, FW350C, FW356C, FW358C, FW359C, FW388V, FW390C,FW391C, FW396C, FW399V, FW530C, FW535C, FW538, FW545C/21/22/37, FW548C/21, FW548V, FW550C, FW555C, FW570C, FW575C, FW585C, FW595C/21/21M/30, FW765P, FW768P, FW775P, FW795W, FW798W, FW830C/21/37, FW870C/21, FW878C/21/21M, FW890P/21/30/37, FW898W/21, FW910**

INFORMATION : Service Manual, Partslist
The Cam Gear (pos 25) of the Tape mechanism has been added as service spare part. The codenumbers read:
9965 000 06443 for Mechanism B (Record/Playback)
9965 000 08069 for Mechanism A (Play only)

REMARKS :

01.04 TYPENUMBER(S): AZ1030

INFORMATION : Correction to Service Information A00-558 (3140 785 22460):
Actually, IC LA6531 (4822 209 32636) is used instead of LA6530.
LA6531 is functionally identical to LA6530.

REMARKS :

01.05 TYPENUMBER(S): AZ1040, AZ1045

INFORMATION : Correction to the Service Manual, Mechanical Partslist:
The CD Door of AZ1045 is different to AZ1040.
The correct code numbers are:
3140 114 32950 CD Door (AZ1040)
3140 114 32930 CD Door (AZ1045)

REMARKS :

01.06 TYPENUMBER(S): AZ1550, AZ1560, AZ1564, AZ1565

INFORMATION : It might happen that sets are returned with broken Front Cabinet. The broken area is around the holder for Cassette Door Spring. From production week 0108 onwards the part has been strengthened by increasing the wall thickness of the holder from 1mm to 2.5mm. The improved Front Cabinet assembly can be ordered at LO-PCS with following code numbers:
AZ1550 : item 414 3140 117 58840
AZ1560 : item 417 3140 117 58580
AZ1564 : item 417 3140 117 58580
AZ1565 : item 417 3140 117 58580

REMARKS : The modified parts are used in production with production code KT010108085xxx from week 0108 onwards.

01.07 TYPENUMBER(S): AZ1602, AZ1605

SYMPTOM : **IRIS CODE 1 5 4 2**
Hiss is audible on recordings.

CURE : Change resistor 3787 from 33Ω to 100Ω (4822 116 52175).

REMARKS : The modification has been implemented in production from week 0102 onwards.

01.08 TYPENUMBER(S): AZ2020, AZ2025

INFORMATION : It might happen that sets are returned with broken CD Door (item 441) and Top Cabinet (item 503). The broken area is around the holder for CD Door Spring. From production week 0106 onwards the parts have been strengthened by adding ribs and increasing the wall thickness of the holder. The improved parts can be ordered at LO-PCS with following code numbers.

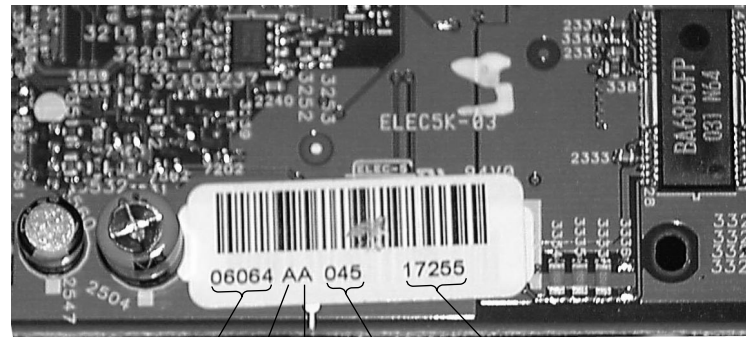
AZ2020 : item 441	3140 117 59050	CD Door Assembly
AZ2020 : item 503	3140 117 59150	Top Cabinet Assembly
AZ2025 : item 441	3140 117 59130	CD Door Assembly
AZ2025 : item 503	3140 117 59150	Top Cabinet Assembly

REMARKS : The modified parts are used in production with production code KT010106020xxx from week 0106 onwards.

01.09 TYPENUMBER(S): CDR570, CDR770, CDR775, CDR776, CDR785, CDR786, CDR930, CDR950, CDR951, FW-R7, FW-R8

INFORMATION : **Summary of hardware and software modifications to the CDR Main Board.**

In the following tables there is given reference to “main board labelled with change code”. This label can be found on top at the front side of the main board.



last 5 digits of code number
change code
production line
serial number
production week

When “AA” is printed (as shown in picture above) this means that the main board has once been upgraded before assembling in the set. In this case the status has to be determined by reading out the software versions via service testprogram - the procedure is described in the service manual of the relevant set - or can be found on a sticker on Flash ROM 7208.

Note: A clear determination of the status can best be given by reading out the software versions!

“Y” means that software has to be/can be upgraded or mentioned hardware change has to be done. Empty fields mean that changes are already implemented in boards with corresponding label.

SUMMARY OF CHANGES on CDR MODULE

TYPENUMBER	CDR570, CDR930											code number main board: 3104 128 0584x	
software version DASP MACE	1.04 & 91.48	1.23 & 91.63			1.34 & 91.80	1.43 & 91.91	1.47 & 91.96	1.51 & 92.01	1.54 & 92.08		1.56 & 92.11		
NAM-File		24sept '99					03apr '00		28sept '00				Already published with
Print layout A2 or A3 to be replaced by a new main board 3104 128 05840	Y												SNL 2000.07.08
mainboard labelled with change code		<F	G	H	I	J	K	L	M	N	O	S	
update SW to 1.56 & 92.11 possible? --> adjust via COMPAIR 1.6		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		SNL 2000.07.08
change 2335 from 10nF to 47nF & 3337 from 68kOhm to 56kOhm		Y											SNL 2000.03.09
add resistor 3535, 270hm		Y	Y	Y	Y	Y	Y	Y					SNL 2000.07.13
replace 2725, 2726, 2727 by 100n 50V		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		SNL 2000.07.10 see also SNL 2000.07.09
change 3411 and 3439 from 4.7Ohm to coil 50µH		Y	Y	Y	Y	Y	Y	Y	Y				SNL 2000.04.02
change 2322 from 3.3nF to 1.5nF		Y	Y	Y	Y	Y	Y	Y					SNL 2000.07.12

SUMMARY OF CHANGES on CDR MODULE

TYPENUMBER	CDR770											code number main board: 3104 128 0585x	
software version DASP MACE	1.04 & 91.48	1.23 & 91.63			1.34 & 91.80	1.43 & 91.91	1.47 & 91.96	1.51 & 92.01	1.54 & 92.08		1.56 & 92.11		
NAM-File		24sept '99					03apr '00		28sept '00				Already published with
Print layout A2 or A3 to be replaced by a new main board 3104 128 05850	Y												SNL 2000.07.08
mainboard labelled with change code		<F	G	H	I	J	K	L	M	N	O	S	
update SW to 1.56 & 92.11 possible? --> adjust via COMPAIR 1.6		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		SNL 2000.07.08
change 2335 from 10nF to 47nF & 3337 from 68kOhm to 56kOhm		Y											SNL 2000.03.09
add resistor 3535, 270hm		Y	Y	Y	Y	Y	Y	Y					SNL 2000.07.13
replace 2725, 2726, 2727 by 100n 50V		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		SNL 2000.07.10 see also SNL 2000.07.09
change 3411 and 3439 from 4.7Ohm to coil 50µH		Y	Y	Y	Y	Y	Y	Y	Y				SNL 2000.04.02
change 2322 from 3.3nF to 1.5nF		Y	Y	Y	Y	Y	Y	Y					SNL 2000.07.12

SUMMARY OF CHANGES on CDR MODULE

TYPENUMBER	CDR775												code number main board: 3104 128 0586x	
software version DASP MACE	1.04 & 91.48	1.23 & 91.63			1.34 & 91.80	1.43 & 91.91	1.47 & 91.96	1.51 & 92.01	1.54 & 92.08		1.55 & 92.11	1.56 & 92.11		
NAM-File		24sept '99					03apr '00		28sept '00					Already published with
Print layout A2 or A3 to be replaced by a new main board 3104 128 05860	Y													SNL 2000.07.08
mainboard labelled with change code		<F	G	H	I	J	K	L	M	N	O	P	T	
update SW to 1.56 & 92.11 possible? --> adjust via COMPAIR 1.6		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		SNL 2000.07.08
change 2335 from 10nF to 47nF & 3337 from 68kOhm to 56kOhm		Y												SNL 2000.03.09
add resistor 3535, 270hm		Y	Y	Y	Y	Y	Y	Y	Y					SNL 2000.07.13
replace 2725, 2726, 2727 by 100n 50V		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		SNL 2000.07.10 see also SNL 2000.07.09
change 3411 and 3439 from 4.7Ohm to coil 50µH		Y	Y	Y	Y	Y	Y	Y	Y	Y				SNL 2000.04.02
change 2322 from 3.3nF to 1.5nF		Y	Y	Y	Y	Y	Y	Y	Y					SNL 2000.07.12

SUMMARY OF CHANGES on CDR MODULE

TYPENUMBER	CDR785, CDR786, FW-R7, FW-R8											code number main board: CDR Mini 3104 128 0659x CDR78x 3104 128 0606x
	software version	DASP MACE	0.23 & 91.80	0.24 & 91.91	0.25 & 91.96	0.26 & 92.01	0.29 & 92.08	0.30 & 92.11	0.31 & 92.11			
NAM-File			24sept '99			03apr '00			28sept '00			Already published with
mainboard labelled with change code	<C	D	E	F	G	H	I	J	K	L	M	
update SW to 0.31 & 92.11 possible? --> adjust via COMPAIR 1.6	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		Newsletter 2000.07.08
change 2335 from 10nF to 47nF & 3337 from 68kOhm to 56kOhm	Y											Newsletter 2000.03.09
add resistor 3535, 270Ohm	Y	Y	Y	Y	Y							Newsletter 2000.08.09
replace 2725, 2726, 2727 by 100n 50V	Y	Y	Y	Y	Y	Y	Y	Y				Newsletter 2000.07.10 see also Newsletter 2000.07.09
change 3411 and 3439 from 4.7Ohm to coil 50µH	Y	Y	Y	Y	Y	Y						Newsletter 2000.04.02
add item 2721, 6.8kOhm	Y	Y	Y	Y	Y	Y	Y	Y				
change 2322 from 3.3nF to 1.5nF	Y	Y	Y	Y	Y							Newsletter 2000.07.12

SUMMARY OF CHANGES on CDR MODULE

TYPENUMBER	CDR950, CDR951											code number main board: 3104 128 0587x
	software version	DASP MACE	1.23 & 91.63	1.34 & 91.80	1.43 & 91.91	1.47 & 91.96	1.51 & 92.01	1.54 & 92.09	1.56 & 92.11			
NAM-File			24sept '00			03apr '00			28sept '00			Already published with
mainboard labelled with change code	A	B	C	D	E	F	G	H	K			
update SW to 1.56 & 92.11 possible? --> adjust via COMPAIR 1.6	Y	Y	Y	Y	Y	Y	Y	Y	Y		SNL 2000.07.08	
change 2335 from 10nF to 47nF & 3337 from 68kOhm to 56kOhm	Y										SNL 2000.03.09	
add resistor 3535, 270Ohm	Y	Y	Y	Y	Y						SNL 2000.07.13	
replace 2725, 2726, 2727 by 100n 50V	Y	Y	Y	Y	Y	Y	Y				SNL 2000.07.10 see also SNL 2000.07.09	
change 3411 and 3439 from 4.7Ohm to coil 50µH	Y	Y	Y	Y	Y						SNL 2000.04.02	
change 2322 from 3.3nF to 1.5nF	Y	Y	Y	Y	Y						SNL 2000.07.12	

Solved phenomena with the following software versions:

Version 1.23

- improvement and shortening startup procedure
- CD-sync start procedure improved

Version 1.34 (0.23 for CDR785 and Mini sets)

- further improving and shortening startup procedure

Version 1.43 (0.24 for CDR785 and Mini sets)

- does not start : display shows insert disc
- does not start : display shows OPC error
- does not start finalising / unfinalising
- extra track increments during analog and digital recording
- does not start erase
- does not start analog recording
- bad audio
- player in standby during recording or finalising

Version 1.47 (0.25 for CDR785 and Mini sets)

- does not start: set in hangup
- in hangup after finalising / unfinalising

Version 1.51 (0.26 for CDR785 and Mini sets)
• does not recognize the Philips HR100 CDR disc

Version 1.54 (0.29 for CDR785 and Mini sets)
• does not recognize Philips Megalife Audio 100 CDR disc (produced by MITSUI) and other brand CDR discs

Version 1.56 (0.31 for CDR785 and Mini sets)
• adaption for 2Mbit flash EPROM AM29LV160BB (used to cover supply shortfall of original 1MBit type)
• communication with internal CD player improved (only valid for double deck sets) → uniform software for all applications

REMARKS :

01.10 TYPENUMBER(S): **CDR570, CDR770, CDR775, CDR930, CDR950**

SYMPTOM : **IRIS CODE C 5 6 1**
Not reading/recording of Non-Philips branded CDR-discs respectively Philips Megalife disc produced by Mitsui.
(for details concerning the MITSUI-discs see information in SNL2000.07.14 respectively point 01.14 in this Service Newsletter)

CURE : The problem can be solved by applying the modifications as mentioned in SNL2000.07.08 and with an update to the latest software versions. The hardware modification which has to be executed depends on the original SW version. Details are also given in the *Summary of hardware and software modifications to the CDR Main Board*, published with point 01.09 in this Service Newsletter.

- The Flash ROM software version of item 7208 (MACE) on the top side (in socket) has been changed into version 92.11. Programmed Flash ROM with SW-version 92.11 or higher can be ordered with codenumber 3104 123 94850.
- The Flash ROM software version of item 7703 (DASP) on the top side has been changed into version 1.56. Programmed Flash ROM with SW-version 1.56 or higher can be ordered with codenumber 3104 123 85760.

REMARKS : After the update of both Flash ROMs, **the module has to be re-aligned with the improved COMPAIR-tool (release 1.6 or higher)**. The CDR-alignment includes now beta adjustment via Test Disc 99 (TD99). After this modification and alignment all Digital Audio CDR-discs can be applied (no longer restricted to only Philips brand). Test Disc 99 is available with codenumber 7104 099 93132.

01.11 TYPENUMBER(S): CDR570, CDR770, CDR775, CDR930, CDR950, CDR951

SYMPTOM : **IRIS CODE 2 1 1 A**
After switching on the set, the standby-LED will start blinking and the display does not light up.

CURE : Delete item 2546 (Elcap 47µF 6,3V) on the mainboard.

REMARKS : The modification has been implemented in production from week 0048 onwards.

01.12 TYPENUMBER(S): CDR570, CDR770, CDR930

INFORMATION : When customers complain that the Remote Control does not work this does not necessarily mean that it is defective. More often the customer has simply selected the wrong source on the RC. Especially sets with single CDR loader will not react at all when "CD" has been pressed on the RC. Therefore the customer has to be advised as follows:
1) Select the right source first → Press <CDR> button and try again.
2) Point the Remote Control directly to the CD recorder.
3) Check the batteries and replace if necessary.

REMARKS :

01.13 TYPENUMBER(S): CDR770, CDR771, CDR775

INFORMATION : Item 251-252 (foot) with codenumber 4822 462 42159 has been changed from "MATT SILVER" into "GLOSSY SILVER". The new codenumber for the GLOSSY SILVER foot reads 4822 462 11174.

REMARKS : The modification has been implemented in production from week 0047 onwards.

01.14 TYPENUMBER(S): CDR785, CDR786, FW-R7, FW-R8

SYMPTOM : **IRIS CODE C 5 6 1**
Not reading/recording of Non-Philips branded CDR-discs respectively Philips Megalife disc produced by Mitsui.

All returned discs, causing complaints on the CDR sets of the 3rd generation have been investigated. This results in the following conclusion:

The Philips Megalife disc has been produced by Ricoh and Mitsui. Most of the problems have been found with discs produced by Mitsui.

How to recognize the production centre?
Ricoh : Made in USA printed on the jewel box.
Mitsui : Made in Europe printed on the jewel box.

Please note: Discs packed in a carton box(5pcs/carton) are marked with made in USA.

Ricoh : Marked Audio HR100

Mitsui : Marked Audio 100

Ricoh : Serial number on inner circle consists of 4 character + 12 digits (e.g. ALXH 061099022143)

Mitsui : Serial number on inner circle consists of 12 digits (e.g. 9287 2217 4953)

Note: It is not advised to apply the Mitsui disc in 3rd generation CDR recorders up to software version 0.26.

CURE : This problem can be solved by applying hardware modifications and with an update to the latest software version. The hardware modification which has to be executed depends on the original SW version. Details are given in the *Summary of hardware and software modifications to the CDR Main Board*, published with point 01.09 in this Service Newsletter.

- The Flash ROM software version of item 7208 (MACE) on the top side (in socket) has been changed into version 92.11. Programmed Flash ROM with SW-version 92.11 or higher can be ordered with codenumber 3104 123 94850.

- The Flash ROM software version of item 7703 (DASP) on the top side has been changed into version 0.31. Programmed Flash ROM with SW-version 0.31 or higher can be ordered with codenumber 3104 123 85810.

REMARKS : After the update of both Flash ROMs, **the module has to be re-aligned with the improved COMPAIR-tool (release 1.6 or higher)**. The CDR-alignment includes now beta adjustment via Test Disc 99 (TD99). After this modification and alignment all Digital Audio CDR-discs can be applied (no longer restricted to Philips brand only). Test Disc 99 is available with codenumber 7104 099 93132.

01.15 TYPENUMBER(S): **EXP101, EXP103**

SYMPTOM : **IRIS CODE 1 5 4 2**
Abnormal Noise is audible during playback.

CURE : Replace diode 6251 by a jumper (4822 051 20008).

REMARKS : The modification has been implemented in production from week 0049 onwards.

01.16 TYPENUMBER(S): **FW-C1, FW-C99, FW-C100**

INFORMATION : To solve CD lens knocking problem adapt the following:
a) change 2342 from 100µF to 47µF 25V (4822 124 40433)
b) replace 5501 2,2µH by a bare wire

REMARKS :

01.17 TYPENUMBER(S): FW-C1/21, FW-C10/21, FW-C100/21/21M/19

SYMPTOM : IRIS CODE 1 1 6 X

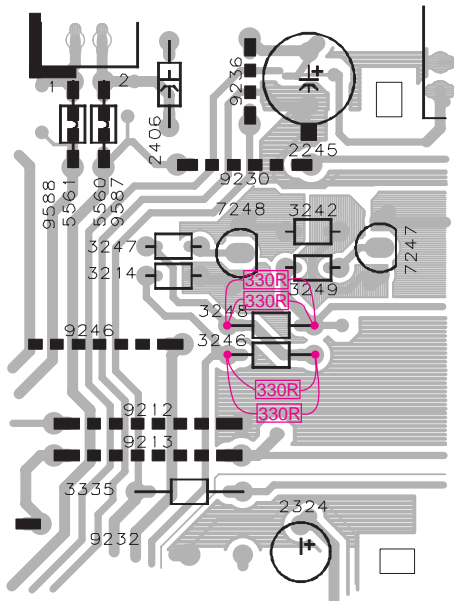
The set functions normally with the following observation on the Combi Board:

- Elcap 2225 4700µF / 16V becomes bloated.
- PC Board area below resistors 3246 and 3248 becomes blacken with overheating sign.

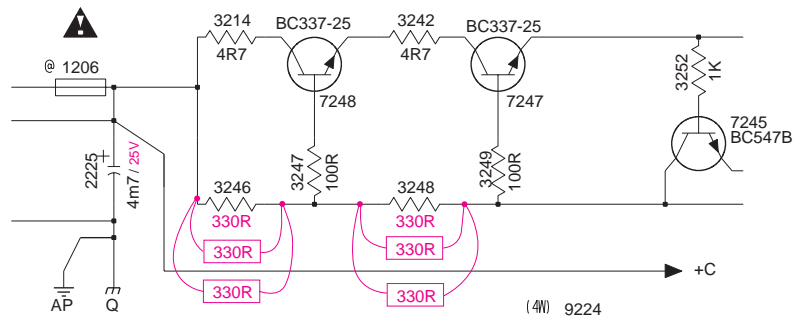
CURE : The voltage across Elcap 2225 is close/higher than its rated voltage and resistors 3246 and 3248 are overstressed.

The problem is resolved by the following modification:

1. Replace Elcap 2225 with 4700µF / 25V (4822 124 12012).
2. Replace resistors 3246 and 3248 by 3 pieces of 330Ω 1/6W (4822 116 52219) each as follows:
 - replace 3246 and 3248 by 330Ω 1/6W
 - solder 4 resistors 330Ω 1/6W across 3246 and 3248 on the copper side as shown.



Portion of Combi Board, component side view



Portion of Power Supply Circuit

REMARKS :

01.18 TYPENUMBER(S): FW-C3/37, FW-C30/37, FW-C35/37, FW-C38/37

INFORMATION : To reduce failures of Power Amplifier IC 7391 (AN7125): change capacitor 2355 from 2,2nF to 560pF 50V (5322 116 80853).

REMARKS : The modification has been implemented in production from week 0045 onwards.

01.19 TYPENUMBER(S): FW-C80, FW-C83, FW-C85, FW-P88

INFORMATION : Additional service parts
The loudspeaker cord (3 meter length) is now available with service code 4399 294 04131.

REMARKS :

01.20 TYPENUMBER(S): FW-C80, FW-C83, FW-C85, FW-P88, FW-C870, FW-P880

INFORMATION : wOOx Demo mode
When a wOOx Demo Disc is placed on the tray - CD pos.1, the wOOx Demo mode is activated as soon as the TOC is read. In this mode the tray is locked and the Open/Close button cannot be activated anymore.

To exit the wOOx Demo mode, do the following:

- 1) Press the Standby button
- 2) Hold the wOOx button depressed until the CD tray opens.

REMARKS : On tray - CD pos.2 and 3 the disc will play normally without going into locked mode.

01.21 TYPENUMBER(S): FW-C100/37

INFORMATION : On commercial request the loudspeaker box has been changed to FWB100W/17.
The new code number (pos.350) reads 3139 118 78690.
The adapted Instruction for Use (pos.387) is available with code number 3139 115 20880.

REMARKS :

01.22 TYPENUMBER(S): FW-C100, FW-C200, FW-C250, FW-C290

INFORMATION : For ESD improvement SMD jumper 4549 (4822 051 20008) has been added on Front board.

REMARKS : The modification has been implemented in production from week 0042 onwards.

01.23 TYPENUMBER(S): FW-C150/37

INFORMATION : Correction to the Service Manual

Combi Board:
Delete 6266, 6245 and 6263-6266

REMARKS :

01.24 TYPENUMBER(S): FW-C200

INFORMATION : Correction to the Service Manual

Front Board

Delete: 3465, 3528-3530, 3614-3615, 6410-6411, 6428 and 7403.

Add: 4413 4822 051 20008 Jumper 0805

Change: 3417 to 4822 117 11454 820Ω 1% 0,1W
3419 to 4822 116 52231 820Ω 5% 0,5W
3433 to 4822 117 11454 820Ω 1% 0,1W
3448 to 4822 117 11454 820Ω 1% 0,1W
3449 to 4822 116 52231 820Ω 5% 0,5W
3451 to 4822 116 52231 820Ω 5% 0,5W
3452 to 4822 117 11454 820Ω 1% 0,1W
3475 to 4822 116 52231 820Ω 5% 0,5W

Combi Board:

Delete 4591

REMARKS :

01.25 TYPENUMBER(S): FW-C250

INFORMATION : Correction to the Service Manual

Front Board:

Delete: 3465, 3528-3530, 3614-3615, 6410-6411, 6428 and 7403

Add: 4413 4822 051 20008 Jumper 0805

REMARKS :

01.26 TYPENUMBER(S): FW-C290

INFORMATION : Correction to the Service Manual

The service code for pos. 251 Rear Cabinet reads
3139 114 72860 instead of 3139 114 73000.

REMARKS :

01.27 TYPENUMBER(S): FW-C290/21

INFORMATION : To reduce noise during Karaoke mode (generated by surround
passive components) change resistors 3634 and 3635 to 8,2kΩ 0,1W
(4822 051 20822).

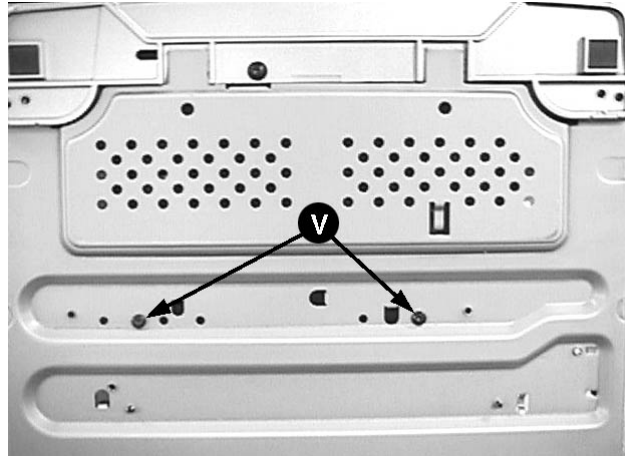
REMARKS : The modification has been implemented in production from week
0048 onwards.

01.28 TYPENUMBER(S): **FW-D1, FW-D5**

INFORMATION : During the introduction of ASD-1 DVD Module there is a problem with vibration noise during DVD play. This vibration noise is solved by the addition of 2 screws D3 x 12 to tighten the ASD-1 DVD Module to the Bottom plate (pos 236).

These additional screws have an impact on the dismantling steps given in the Service Manual. The picture below shows the screw location on the bottom plate (see screws V).

Take care when dismantling the DVD/DAC Module.



REMARKS :

01.29 TYPENUMBER(S): **FW-D5/22**

SYMPTOM : **IRIS CODE 1 3 3 X**
Poor picture quality when the set is connected to the TV with a standard SCART cable.

CURE : In the TV-set pin 19 and 20 are connected via an internal loop. Via the standard SCART cable also pin 19 and pin 20 of the AV Board are short-circuited. As pin 20 is grounded on the AV Board this results in poor picture quality on the TV-set.

Interrupt the ground connection for SCART socket pin 20 on the AV Board by cutting the copper track.

REMARKS :

01.30 TYPENUMBER(S): **FW-V39**

SYMPTOM : **IRIS CODE 1 1 5 X**
The set is responding to some TV remote control codes

CURE : Some TV RC codes will activate VCD and other functions. This problem is resolved by replacing the microprocessor IC 7401 on the Front board by one with software version 17. The new IC is available with othering code 9965 000 06154.

REMARKS :

01.31 TYPENUMBER(S): FW-V39

SYMPTOM : **IRIS CODE 1 1 6 D**
CD, Tape and Tuner not working, transistor 7233 (BD242BFP) blown.

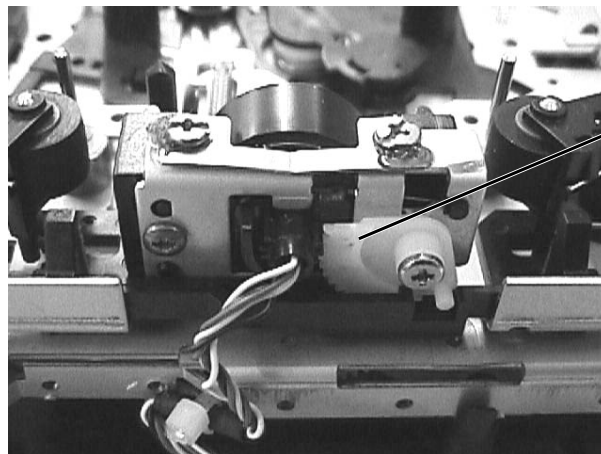
CURE : Due to high inrush current at excessive mains supply values transistor 7233 becomes defective (C-E shorted). This causes a sudden increase of supply voltages +PA, +LED, +12A and +12M (jumping from +12 volts to +30 volts) killing other components along the way.

SOLUTION: Reduce value of Elcap 2245 from 1000µF 16V to 220µF 16V (4822 124 40196).

REMARKS : Preventive action: In countries with high mains fluctuation it is recommended to exchange 2245 on every set brought in for repair.

01.32 TYPENUMBER(S): MC-50, MC-70

INFORMATION : Tape Deck Record/Playback head replacement tip.
After replacement of the Record/Playback head (pos 1) it is very important to align it to the Forward position as given in picture below. If this is not done, there is risk of damaging the gear.



Turn the Rec/Pb head until the white gear rack reaches this position

REMARKS :

01.33 TYPENUMBER(S): MZ-3, MZ-33

SYMPTOM : **IRIS CODE 1 5 4 1**
Hum noise picked up from transformer is audible.

CURE : Replace inductor 5553 by a jumper.

REMARKS : The modification has been implemented in production from week 0048 onwards.

01.34 TYPENUMBER(S): SA100, SA101, SA107, SA125, SA126

INFORMATION : The Instruction For Use is not available as service spare part. It can be viewed or downloaded as PDF-file from the Rush Customer Support internet site <http://www.rush.philips.com/support.html>

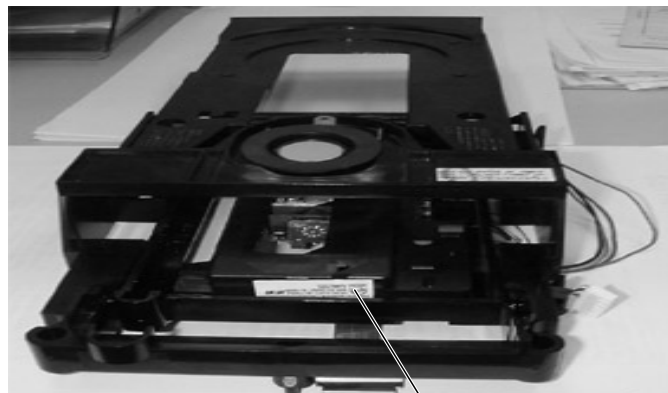
REMARKS :

01.35 TYPENUMBER(S): SD100

INFORMATION : The SD100 has been produced with different Loader/CD-drive combinations. When replacing the CD-drive it is essential to order the correct type of drive. Both, Loaders and CD-drives, can be identified by their type-labels (see pictures below). The corresponding codenumbers can be found in the attached cross-table.



Loader label



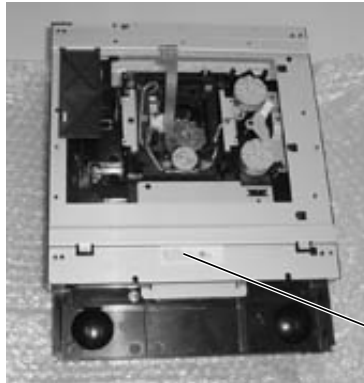
VAM label

Loader Unit	CD-Drive	Codenumber
L1210/61 (3104 147 02691) L1210/63 (3104 147 02701)	VAM1202	9305 022 20201
	VAM1202J	
	VAM1202/02	9305 022 20202
	VAM1202/02J	
L1210/65 (9305 023 20265) L1210/68 (9305 023 20268)	VAM1202	9305 022 20201
	VAM1202/12	9305 022 20212
L1210/41 (3104 147 02270) L1210/43 (3104 147 02610)	VAM1201	9305 022 20101
L1210/45 (9305 023 20145) L1210/48 (9305 023 20148)	VAM1201	9305 022 20101

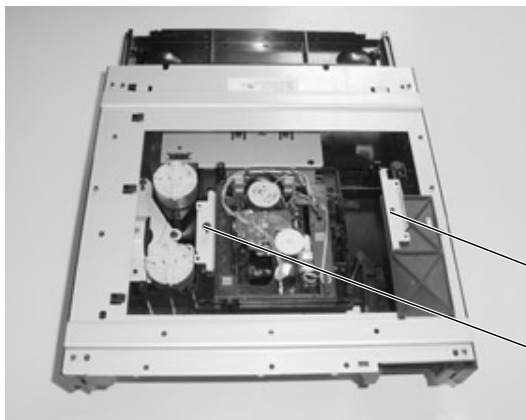
REMARKS :

01.36 TYPENUMBER(S): SD300

INFORMATION : The SD300 has been produced with different Loader/CD-drive combinations. When replacing the CD-drive it is essential to order the correct type of drive. Both, Loaders and CD-drives, can be identified by their type-labels (see pictures below). The corresponding codenumbers can be found in the attached cross-table.



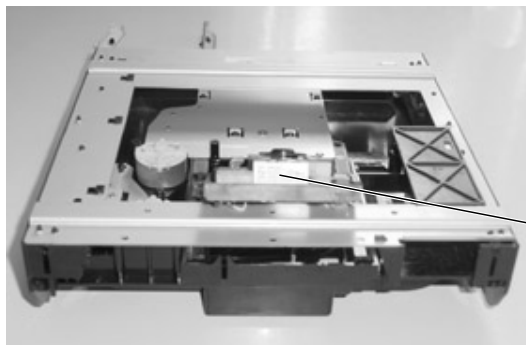
SD300 Unit label



To check the VAM label, the CD-drive must be dismantled as follows:

Remove the steel cover piece

Remove screw



Pull out CD-drive to see the VAM label

Loader Unit	CD-Drive	Codenumber
C1203/11 (3104 147 02591)	VAM1201/03	9305 022 20103
C1203/21 (3104 147 02641)	VAM1202	9305 022 20201
	VAM1202J	
	VAM1202/02	9305 022 20202
	VAM1202/02J	
C1203/28 (9305 024 20228)	VAM1202	9305 022 20201
	VAM1202/12	9305 022 20212

REMARKS :

01.37 TYPENUMBER(S): **SD300**

INFORMATION : Correction to the Service Manual, Partslist MPEG-board
The typenumber of the MPEG-2 A/V processor (item 7601) reads
"CL8830A" instead of "CL8860 QFP208".
The codenumber remains unchanged:
7601 3141 018 50470 CL8830A (C-CUBE)

REMARKS :