IRIS

LINE OF BUSINESS AUDIO SYSTEMS

SERVICE NEWSLETTER

09.01 TYPENUMBER(S): **CD713, CD723, CD753**

INFORMATION : Correction to the Service Manual, Service Test Program – chapter 5-2
The buttons for entering the Service Test Program are stated wrong.

The correct procedure is as follows:
Hold PLAY & STOP depressed while plugging in the mains cord.

REMARKS :

09.02 TYPENUMBER(S): **FW332**

SYMPTOM : IRIS CODE 3 1 3 X
The clock runs too fast, approx. 1-2 minutes per month.

CURE : Although the above clock accuracy is within the product specification, the deviation might not be accepted by all customers.

In order to adjust the clock frequency proceed as follows:
• Add a trimmer 4822 126 10508 in parallel to capacitor 2406 (Front Board)
• Enter Service Test Program, "Quartz Test" (see page 3-5 of Service Manual)
• Align frequency at pin 80 of IC7401 to 2047.9776Hz - 2048.0234Hz (= 488.287µs - 488.276µs)

REMARKS : Measurement must be carried out with a high resolution frequency counter, i.e. PM6675 or equivalent.

09.03 TYPENUMBER(S): **FW72C, FW346C, FW356C, FW358C, FW359C, FW388V, FW530C, FW535C, FW538, FW550C, FW570C, FW575C, FW765P, FW775P, FW795W, FW850C, FW855C, FW860P, FW880P, FW880W**

SYMPTOM : IRIS CODE 1 6 1 5
The cassette doors (especially the left door) do not close properly.

CURE : The problem is most probably caused by:
- Tolerance in dimensions of door catches
- Deformation of plastic brackets of catches

In course of production the catch & plastic brackets have been modified. The service codenumbers for the new parts read as follows:

FW72C, FW530C, FW535C, FW538, FW550C, FW570C, FW575C, FW765P, FW775P and FW795W
───
Pos 244 - 4822 402 10621 Push Catch
Pos 246 - 4822 402 11246 Bracket, Right
Pos 247 - 4822 402 11245 Bracket, Left

FW346C, FW356C, FW358C, FW359C and FW388V
───
Pos 275 - 4822 402 10621 Push Catch
Pos 276 - 4822 402 11246 Bracket, Right
Pos 277 - 4822 402 11245 Bracket, Left

FW850C, FW855C, FW860P, FW880P and FW880W
───
Pos 248 - 4822 402 10621 Push Catch
Pos 249 - 4822 402 11245 Bracket, Left
Pos 250 - 4822 402 11246 Bracket, Right

REMARKS : Modified parts have been implemented in production from week 9835 onwards.

09.04 TYPENUMBER(S): **FW392C, FW395C**

INFORMATION : Correction to the Service Manual, Power Board – chapter 11-2
The item number for the Mains Transformer should read 5011 instead of 5001.

REMARKS :

09.05 TYPENUMBER(S): **FW538, FW850C, FW855C, FW860P, FW880P, FW880W**

SYMPTOM : IRIS CODE 2 7 2 8
During digital optical recordings from the above mentioned Mini Systems to a CD-Recorder (i.e. FW538 to CDR538), "DIG" flashes on the CDR, indicating a communication error.
The problem usually occurs when recordings are started immediately after switching to an analog source (i.e. Tuner or Tape).

CURE : **Customer is advised to follow the instructions for CD-Recordings, given in Service Newsletter AS98.08.04.**

REMARKS : When switching to an analog source, the Mini System will reset the CD-part and mute the digital output signal for about 130ms.
This mute is interpreted as communication error and causes a stop of the CD-Recording.

09.06 TYPENUMBER(S): **FW670P**

SYMPTOM : IRIS CODE 1 5 5 3
In CD-mode the beginning part of each track is muted.
The time constant for releasing the mute signal is too long.

CURE : Replace capacitor 2550 (2,2µF) on the Combi AF-part by a capacitor of 1µF (4822 124 40242).

REMARKS :

09.07 TYPENUMBER(S): **FW730C, FW750C, FW770P, FW780P, FW790P**

INFORMATION : The set does not read a specific CD:
"Ready to Go, Women of the 90's" (74321 568712 BMG Ariola).

This happens on versions with the CDC3-DH module only.
The problem can be solved by changing capacitor 2820 from 180pF to 330pF or adding a capacitor of 150pF in parallel to resistor 2820.

REMARKS : The CDC3-DH module can be identified by the printed board codenumber "3104 113 3109", located on both sides of the CDC3-board.

09.08 TYPENUMBER(S): **MC135**

SYMPTOM :   IRIS CODE 1 5 1 0
The set does not work at all.

CURE : One possibility of error is that leads of components on the Pre-amp board are too long. When the PCB is bent due to mechanical tensions, the leads might touch the metal bracket and short-circuit certain parts of the electronics.

Take care to cut the leads of replaced components as short as possible.

REMARKS : In course of production the lead cutting machine has been adjusted for mininum lead-length, and a piece of rubber has been added between the Pre-amp board and the metal bracket.

SYMPTOM :   IRIS CODE 1 5 1 0
The set does not work at all.

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07.01 TYPENUMBER(S): **AZ1020**

INFORMATION : In course of production, following modifications have been
implemented:
1. Prevent residual images on LCD in tape mode
   Resistor 3863 changed to 470Ω (4822 116 83883)
2. Improved muting function in tuner search mode
   Resistor 3400 changed to 4.7kΩ (4822 116 52283)
3. Improved sound quality
   Capacitors 2301 and 2302 changed to 22nF (4822 121 70619)
   Resistors 3303 and 3304 changed to 820Ω (4822 116 52231)

REMARKS :

07.02 TYPENUMBER(S): **AZ1200, AZ1202**

INFORMATION : In order to reduce the distortion of CD-recordings, following
modification has been implemented in production:
1. Resistors 3529 and 3530 changed to 22kΩ (4822 116 52257)
2. Resistors 3578 and 3579 changed to 22kΩ (4822 116 52257)

REMARKS :

07.03 TYPENUMBER(S): **AZ2000**

INFORMATION : Correction to the mechanical partslist (Exploded View diagram):
The service codenumber of item 444 should read:
4822 442 01499 Cabinet-Top (not for /17)
4822 442 01689 Cabinet-Top (for /17 only)

REMARKS :

07.04 TYPENUMBER(S): **AZ7381, AZ7382, AZ7383, AZ7384, AZ7385, AZ7386, AZ7387, AZ7388, AZ7481, AZ7482, AZ7483**

    INFORMATION : Due to delivery problems of the 4Mbit DRAM IC, the printed board of the above mentioned sets had to be changed from "PB2" to "PB2+".

             The major difference between these two boards is the number and size of the DRAMs used: While PB2 is designed for two DRAMs (2x4Mbit max.), PB2+ can only handle one DRAM (1x16Mbit max.).

             As a result the ESA buffer of sets with PB2+ will now store 43.2s of music (technical value). The commercial values of 12s for AZ738x resp. 25s for AZ748x remain untouched.

             PB2+ is alrady known from Mable Platform 5A – AZ7582, AZ7583. For servicing please refer to the following Service Manuals:

Board	12-digit PB-code	DRAM	Service Manual
PB2	3103 303 3394.x	7810 + 7811	4822 725 26021
PB2+	3103 303 3406.x	7811	4822 725 26022

    REMARKS : The 12-digit PB-code is located on the component side of the board.

07.05 TYPENUMBER(S): **AZ7381, AZ7382, AZ7383, AZ7384, AZ7385, AZ7386, AZ7387, AZ7388, AZ7481, AZ7482, AZ7483, AZ7582, AZ7583**

    SYMPTOM : **IRIS CODE 2 1 2 1**
             Ni-Cd battery pack cannot be recharged.

    CURE : The ACTUATING PIN-CHARGE (item 431) does not connect properly. The pin has to be replaced by a modified one – 4822 535 10522.

    REMARKS : New part has been used in production from week 9809 onwards.

07.06 TYPENUMBER(S): **AZ9898**

SYMPTOM : `IRIS CODE` `D` `1` `1` `7`
Short battery lifetime (less than 40 min. with some Alkaline batteries).

CURE : Short battery lifetime is caused by high internal impedance of some
Alkaline batteries. It can be improved by the following modification:
1. Replace LD09 by a 10Ω resistor (4822 051 30109)
2. Replace MPU IC QM03 by the updated version (4822 209 17367)
3. Remove filter LP21
4. Add 2 SMD jumpers (4822 051 10008) at posistion LP21
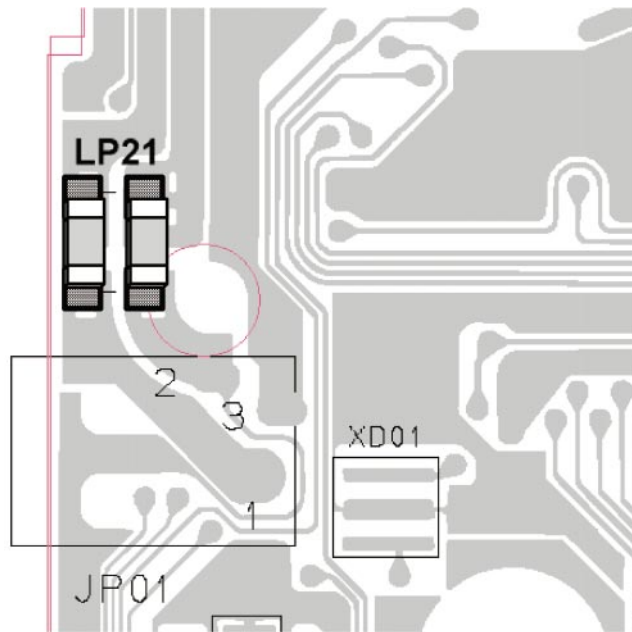
REMARKS : Above modification is implemented in production with production LOT
number "21", production code "MZ01 xxxx21xxxx" onwards.

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08.01 TYPENUMBER(S): **AS660C, AS665C, AS760C, AS765C**

INFORMATION	:	The play button of the tape mechanism can be activated even in standby mode. If the button is pressed the tape will move, but no sound is audible via the Loudspeakers. This problem can be solved by changing resistor 3510 on Front board from 4,7kΩ to 1kΩ (4822 050 11002).
REMARKS	:	Above modification has been implemented in production from week 9832 onwards.

08.02 TYPENUMBER(S): **CDR538, CDR560, CDR760**

SYMPTOM	:	**IRIS CODE** **F 5 6 1** Stops recording when connected to CD713, CD723 or CD753 via digital in/out.
CURE	:	On manual recordings the digital output signal of the above mentioned CD players is muted for a short time during start-up. The mute causes a stop of the CDR recorder. The problem can only be solved by a software upgrade for IC7322. Service codenumber reads 4822 900 11306.
REMARKS	:	The problem does not occur when using the CD-sync function. New software has been implemented in production from week 9841 onwards. Software program version reads V2.1 (4822 900 11306) and can be applied in CDR538, CDR560 and CDR760 recorders.

08.03 TYPENUMBER(S): **CDR538, CDR560, CDR760, CDR765, FW538**

SYMPTOM   : `IRIS CODE` `F` `5` `5` `6`
Howling occurs during analog recording from FW538 to one of the above mentioned CDRs when the user has accidentally switched the source of FW538 to AUX.

CURE   : The problem is caused by a "closed loop" which is formed via CDR line-out → FW538 AUX-IN → FW538 line out → CDR line-in. When the REC-level is adjusted to above a certain level howling occurs. This is the same phenomenon as known from recordings via microphone.

There is no other solution available as to advise the customer:
Do not select the AUX-mode on the FW538 during analog recording!

REMARKS   : An addendum sheet will be added to the Instruction For Use.

08.04 TYPENUMBER(S): **CDR538, CDR560, CDR760, CDR765**

INFORMATION   : Recording from FW538 (CD-Changer)
Customer is advised to apply the following instructions:

To duplicate a CD via [CD SYNCRO] or [CD SYNC] function

Make sure that the digital connection has been completed. Using the CD SYNCRO button on the CD Recorder it will allow to make a duplicate of the desired CD.

1 Make sure the CDR- or CDRW-disc is absolutely free of scratches and dust particles.
2 Load the blank CD Recordable (Digital Audio) disc into the CD Recorder and the original CD into the mini system FW538.
3 Press SOURCE on the CD Recorder to select DIG OPTICAL mode.
4 Press CD SYNCRO on the CD Recorder.
   • CD SYNC, SYNC appears on the display.
   • RECORD starts flashing.
   • If now DIG starts flashing, the digital connection is incorrect. If DIG remains flashing check if there is an input signal or STOP the CDR-recorder and press OPEN/CLOSE on the CD-changer and start again at step 3.
5 Press PLAY on the mini system to start recording.
   • RECORD stops flashing.

!! Do not change source on the CD Recorder or mini system during CD Synchro recording.
!! Do not press PAUSE, PREVIOUS, NEXT or SEARCH button during CD Synchro recording.

When recording is completed, the display will show UPDATE.

Customer needs to finalise the recorded disc before he can play it on a regular (no recording) CD player.

To record CD tracks one by one

Make sure that the digital connection has been completed.

1 Make sure the CDR- or CDRW-disc is absolutely free of scratches and dust particles.
2 Load a blank CD Recordable (Digital Audio) disc into the CD Recorder and the original CD into the mini system.
3 Press SOURCE on the CD Recorder to select DIG OPTICAL mode.
4 Press AUTO/MANUAL on the CD Recorder to select AUTO.
   • The track numbers are increased automatically.
5 Press PLAY on the mini system FW538.
   • This is to verify whether the disc and track are correct.
6 Press PREVIOUS on the mini system FW538.
   • It will jump to the beginning of the current track.
7 Press PAUSE on the mini system FW538.
   • Playing of the track is temporary interrupted.
8 Press RECORD on the CD Recorder
   • WAIT appears on the display
   • RECORD starts flashing.
9 Press PLAY on the CD Recorder and the mini system simultaneously to start recording
   • RECORD stops flashing.
10 Press STOP on the CD Recorder and the mini system to stop recording.
   • When recording is completed, the display will show UPDATE.
11 Repeat steps 5 to 10 for new tracks.

You need to finalise the recorded disc before you can play it on a regular (no recording) CD player.

!! *Customer can program the track sequence he desires from a particular disc. Programming of tracks from more than one disc is not advisable.*

REMARKS   :

08.05 TYPENUMBER(S): **CDR538, CDR560, CDR760, CDR765**

INFORMATION : When an external CD player or CD changer is in PAUSE function and NEXT or PREVIOUS keys are pressed the CDR recorder can get in a recording function which records many tracks on a disc with a muted signal and all tracks are about 3 or 4 seconds long.

In case of recording from CD-changers:
To avoid long pauses or a full recorded disc with silence the CD-recorders CDR765, CDR760, CDR560 and CDR538 have a 3 seconds auto stop mode built in. As CD changers most often need more than 3 seconds to start or switch over from one disc to another the muted input signal is recorded and automatically stopped.

To prevent this fault condition the recording has to be executed in the following way:

Recording one disc:
Start recording with the CD-sync function, digitally connected.

Recording a program over more than one disc:
Select the analog input with SOURCE and start recording manually by pushing RECORD & PLAY sequential on the CD-recorder. After that Start playing the CD-changer.

REMARKS :

08.06 TYPENUMBER(S): **CDR765**

SYMPTOM : IRIS CODE 7 5 5 3
Shocksensitivity CD Player part

CURE : Under certain conditions it may occur that the CD-Player module is very sensitive to shocks. This is very annoying in case of recording discs, because this hick-up will be recorded on the new disc.
By using several separates composed to a tower it is advised to place the recorder on top of it.
If this does not solve the problem the damping grommets of the CDM12.4 (items 42, 43, 44, 45 in the exploded view on page 5-3 of the Service Manual) have to be replaced by 4822 404 10987.

REMARKS : New damping gromments have been implemented in production from week 9842 onwards.

08.07 TYPENUMBER(S): **FW306, FW325, FW326, FW52C, FW62C, FW316C, FW318C, FW338C, FW339C, FW346C, FW356C, FW358C, FW359C**

SYMPTOM : IRIS CODE 2 5 1 X
When during High Speed Dubbing (HSD) the volume is adjusted to "MIN", the set may become muted permanently.
In this case the volume control will not operate anymore until the set is unplugged and reconnected to the mains supply.

CURE : The problem can only be solved by a software upgrade of microprocessor 7401.
The service codenumbers for the new processors are as follows:
a) 4822 900 11282 for FW52C, FW62C, FW316C, FW318C, FW338C, FW339C
b) 4822 900 11283 for FW306, FW325 and FW326
c) 4822 900 11284 for FW346C, FW356C, FW358C, FW359C

REMARKS :

08.08 TYPENUMBER(S): **FW388V**

INFORMATION : To solve the problem "No Disc" displayed when a disc is loaded, following components on the Servo board have to be changed:
a) change 3867 from 22kΩ to 470kΩ (4822 116 52285)
b) replace jumper 9022 with resistor 3880 470Ω (4822 116 83883)

REMARKS : Above modification has been implemented in production from week 9837 onwards.

08.09 TYPENUMBER(S): **FW388V**

INFORMATION : The solve the problem "CD interrupted due to mains failure", change elcap 2232 on the Combi board (Power supply part) to 6800µF 20% 25V (4822 124 11581).

REMARKS : Above modification has been implemented in production from week 9838 onwards.

08.10 TYPENUMBER(S) : **FW570C, FW775P**

INFORMATION : The 2 tweeters at the upper part of the 4-way Loudspeaker Box are dummies and for ornamental reasons only.
The piezo tweeters are mounted behind the Front cabinet (see fig. 1) instead of the top part. There is no acoustical difference between mounting piezo tweeters on top or on front.
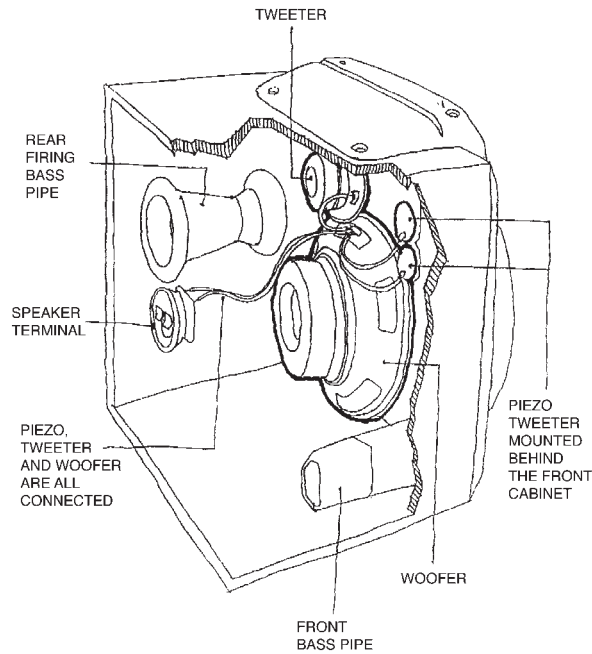
FIG. 1 CUT-OUT VIEW OF SPEAKER BOX-E

REMARKS :

08.11 TYPENUMBER(S) : **FW754P, FW765P, FW775P, FW795W**

INFORMATION : Following modification on the Front Display board will increase the brightness of the DPL LEDs (NORMAL, PHANTOM, 3 STEREO):
Change 3545 from 390Ω to 220Ω (4822 117 11503)
Change 3546 from 390Ω to 220Ω (4822 117 11503)
Change 3591 from 390Ω to 220Ω (4822 117 11503)

REMARKS : Above modification has been implemented in production from week 9844 onwards.

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06.01 TYPENUMBER(S): **AJ3930**

SYMPTOM	:	**IRIS CODE** **C** **5** **4** **1** Noise is audible when microprocessor IC 7400 has been replaced.
CURE	:	When IC 7400 has been replaced by the latest software version (4822 209 32849), the following 2 parts should be added: 2253 4822 121 51387 10nF/16V 20% 6251 4822 130 34173 Zener diode 5.6V
REMARKS	:	Above mentioned components are located on the CD board. For details see Service Information A93-584 (4822 725 24559).

06.02 TYPENUMBER(S): **AJ3940**

SYMPTOM	:	**IRIS CODE** **A** **1** **6** **X** Disc clamper is loosen out of CD door.
CURE	:	The latch which fixes the clamper on the CD Door is out of specification. Service solution is to add glue onto the latch.
REMARKS	:	Mould of CD Door has been modified and has been implemented in production from week 9838 onwards.

06.03 TYPENUMBER(S): **AQ6688**

INFORMATION	:	Additional information to Service Manual: The Cassette Door Assembly 4822 443 11087 includes the following items: 4, 6, 7, 9, 10, 15, 18, 19, 30, 31, 32, E3
REMARKS	:	

06.04 TYPENUMBER(S): **AW7720, AW7730, AW7820**

    INFORMATION   : If the telescopic aerial 4822 303 30423 is not available, it can be replaced by 4822 303 14065.
Mount the new aerial with an M3 hexagonal nut.

    REMARKS   :

06.05 TYPENUMBER(S): **AZ1000, AZ1001, AZ1002**

    INFORMATION   : Correction to Service Information A98-560 (4822 725 26175):
The service codenumber of the CD-Mechanism "CD94V5" should read 4822 691 10776.

    REMARKS   :

06.06 TYPENUMBER(S): **AZ1200, AZ1202, AZ1205**

    SYMPTOM   : `IRIS CODE` `A` `1` `6` `X`
Tuning cord loose because one pulley is loose from its axle.

    CURE   : The diameter of the centre hole of pulley is 0.2mm larger than the specification. As a service solution, we suggest to add a fibre washer on the top of pulley and melt the axle with a soldering iron in order to secure the pulley.

    REMARKS   : The mould of the pulley is modified and implemented in production from week 9839 onwards.

06.07 TYPENUMBER(S): **AZ1208, AZ1209**

    SYMPTOM   : `IRIS CODE` `2` `1` `5` `4`
Remote control does not work when battery voltage is low.

    CURE   : Change resistor 3452 on front board from 220Ω to 33Ω (4822 116 52191).

    REMARKS   : Modification is implemented in production from week 9836 onwards.

06.08 TYPENUMBER(S): **AZ2407**

    INFORMATION   : In course of production, resistor 3452 has been changed from 220Ω to 33Ω (4822 116 52191).
Reason: Improve sensitivity of remote control at battery low condition.

    REMARKS   :

06.09 TYPENUMBER(S): **AZ726x, AZ727x, AZ736x, AZ737x, AZ746x, AZ747x, AZ756x, AZ757x**

INFORMATION : A survey of available service codenumbers for "Battery Door" and "Door Hinge" is given below:

BATTERY DOOR	DOOR HINGE	COLOUR	MODELS
assembly 4822 443 10197		DARK GREY SR03	AZ7366, AZ7463, AZ7466, AZ7467
assembly 4822 443 10236		PHILIPS BLACK	AZ7260, AZ7261, AZ7263, AZ7265, AZ7266, AZ7268, AZ7360, AZ7361, AZ7363, AZ7460, AZ7461, AZ7462, AZ7464
4822 443 10195	4822 417 11347	GREY SR02	AZ7362, AZ7365, AZ7465
assembly 4822 443 10307		PHILIPS BROWN 003	AZ7262, AZ7264, AZ7267
4822 443 10579	4822 417 11348	DARK RED GREY	AZ7565
4822 443 10581	4822 417 11347	PEARL BLACK	AZ7271, AZ7272, AZ7274, AZ7275, AZ7278, AZ7333, AZ7337, AZ7368, AZ7372, AZ7453, AZ7474, AZ7562, AZ7566, AZ7576
4822 443 10651	4822 417 11343	DARK BLUE GREY	AZ7376, AZ7457, AZ7476
assembly 4833 443 10508		SILVER	AZ7433, AZ7562/..S, AZ7465/..S
4822 443 10731	4822 417 11356	SILVER (SP570)	CD15
4822 443 10667	4822 417 11354	BLUE	AZ7443, AZ7466/..B
4822 443 10685	4822 443 10689	GREEN	AZ7466/..G
assembly 4822 443 10807		SILVER	AZ7466/..S
4822 443 10691	4822 443 10694	PEARL YELLOW	AZ7466/..L
assembly 4822 443 10892		PEARL WHITE	AZ7331

REMARKS :

06.10 TYPENUMBER(S): **AZ7381, AZ7382, AZ7383, AZ7481, AZ7482, AZ7483**

INFORMATION : Two different printed boards have been used in these models.
"PB3": Assembled with combined headphone/RC-socket
"PB2": Assembled with standard headphone-socket
As the headphone sockets differ in diameter (6.6mm vs. 6mm), different cabinet/bottom parts are in use.
The spare parts are delivered with 6mm hole only.
For older sets the hole has to be enlarged manually.

REMARKS : PB2 is used in sets with factory change code KT02 onwards.

06.11 TYPENUMBER(S): **AZ8262, AZ8267**

INFORMATION : Correction to Newsletter PA97.05.06:
4822 459 04783 is not the Front Cabinet of AZ8262 and AZ8267.
There is no Front Cabinet available for AZ8262 and AZ8267.

REMARKS:

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07.01 TYPENUMBER(S): **GENERAL**

SYMPTOM : **IRIS CODE 2 1 3 X**
Various failures disappear when the set is opened or when connectors are reconnected – see Service Newsletter AS97.03.02.

CURE : Replacement of connector wires as given in Service Newsletter AS97.03.02.

REMARKS : Reliability of EH-type connector was bad due to wrong material used in the connector.
3 main actions were taken at the production centers from production week 9830 onwards:
1. Material Phosphor Bronze is used for the connector
2. Split length of the wires has been increased from 20mm to 35mm in order to improve the flexibility of the wire
3. Training of operators on proper insertion and removal of connectors

07.02 TYPENUMBER(S): **AS440/xxG, AS445/xxG, AS540/xxG**

INFORMATION : Correction to Service Manuals 4822 725 24929 and 4822 725 24936. On page 74 the service codenumbers for the button sets of the tape decks are mixed up. Correct is:

pos.	codenumber	description
426	4822 410 62619	Button set deck B
431	4822 410 62621	Button set deck A

REMARKS :

07.03 TYPENUMBER(S): **AS785C/41**

INFORMATION : From production week 9836 onwards, the Instruction For Use has been changed to 4822 736 16482.

REMARKS :

07.04 TYPENUMBER(S): **CDC751/17B**

INFORMATION : From production week 9840 onwards, the mains cord has been changed from 4822 321 10849 to 4822 321 11464.
Reason: Meet the new UL requirement for USA/Canada, valid from December 1998 onwards.

REMARKS :

07.05 TYPENUMBER(S): **FW48/37, FW340C/37, FW315/37, FW345/37, FB209W/17**

INFORMATION : From production week 9840 onwards, the mains cord has been changed from 4822 321 10882 to 4822 321 11466.
Reason: Meet the new UL requirement for USA/Canada, valid from December 1998 onwards.

REMARKS :

07.06 TYPENUMBER(S): **FW52C, FW62C, FW72C, FW316C, FW318C, FW338C, FW339C, FW346C, FW356C, FW358C, FW359C, FW510C, FW520C, FW530C, FW535C, FW538, FW550C, FW560C, FW570C, FW575C, FW710C, FW725C, FW730C, FW745C, FW750C, FW754P, FW755P, FW765P, FW770P, FW775P, FW780P, FW790P, FW795W, FW850C, FW855C, FW860P, FW880P, FW880W**

INFORMATION : During production (around July 1998), elcap 2891 on the CD main board has been changed from 10µF to 22µF (4822 124 81152).
Reason: Avoid distorted sound during the initial 200 - 300 milliseconds after starting the disc.

Service Test Program – Service Play Test
Due to the changed delay time, error codes like E1003 & E1011 might also be displayed on some good sets. This is caused by the test software which checks the status of the inner switch after certain milliseconds.

REMARKS : The Service Test Program will be adapted in the next software mask.

07.07 TYPENUMBER(S): **FW355C**

INFORMATION : **IRIS CODE 3 5 7 5**
CD stops playing after some time due to a defective laser diode.
The failure is most probably caused by ESD damage.

As preventive action additional ESD measures (storage, handling and packaging) have been implemented on the production floor in weeks 9813 to 9827.

REMARKS :

07.08 TYPENUMBER(S): **FW375P/37, FW385P/37**

   INFORMATION : Correction to the Service Manual, Power 4 Module
           The service codenumber for the Rucksack for 4 Loudspeaker
           terminals (Matrix Surround) reads 4822 426 10608.

   REMARKS :

07.09 TYPENUMBER(S): **FW725C, FW730C**

   SYMPTOM :   IRIS CODE 1 5 4 1
           Transformer hum is too high.

   CURE   : Hum is due to high exciting current of about 95mA.
           Improved mains transformer (item 1008) of less than 85mA exciting
           current has been introduced from week 9810 onwards. It can be
           recognized by the week code on the top of the mains transformer
           body.

   REMARKS :

07.10 TYPENUMBER(S): **FW725C, FW730C**

   SYMPTOM :   IRIS CODE 1 1 1 X
           Mains transformer 38V coil is defective.

   CURE   : Unintentional bending of pin 9 and 10 causes the wire to break
           because the wires are wound too tight around the pins.

           Process improvement has been introduced by the supplier from week
           9810 onwards. Improved transformer can be recognized by the week
           code on the top of the transformer body.

   REMARKS :

07.11 TYPENUMBER(S): **FW730V**

   INFORMATION : Correction to the Mechanical partslist:
           The service codenumber for pos 239 should read 4822 442 00845.

   REMARKS :

IRIS

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05.01 TYPENUMBER(S): **AJ3940**

INFORMATION	:	Correction to the Electrical Partslist: The Service codenumber of the Voltage Selector for /01 version should read 4822 272 10366.
REMARKS	:	

05.02 TYPENUMBER(S): **AZ1412, AZ1518**

SYMPTOM : **IRIS CODE 6 5 7 5**
After switching the set ON, the "POP" indicator is activated, but there is no "POP" sound effect.

CURE : The problem is caused by a software bug.
There are two solutions available:

Short term (service) solution:
Add a transistor BC557C (4822 130 42231) and a resistor 4.7kΩ (4822 116 52283). Connect the collector (C) of BC557B to the junction of 3512 and 3475, the emitter (E) to +M and the base (B) via a 4.7kΩ resistor to junction of 3464 and 3465.
For details on this rework, see circuit and layout diagram below.

Long term solution:
Replace microprocessor IC 7400 by 4822 209 17228.

REMARKS : Short term solution has been implemented in production from week 9830 onwards. New microprocessors will be used from week 9842 onwards.

+M

3421 33k

TUNER-ON 3422 2k2   0/0,7V

jumpers red
5,4/0V
7404 BC848B

CD-ON 3423 100k   0/1,3V
7405 BC848B
5,4/0,7V
0,6V

+M
3418 10k   2423 100n   3426 330R

MUTE 3419 2k2

SC0 3475 2k2   0V

SC1 3479 2k2   3,4V

PWM 3478 1k   3499 2k2

INCR   0/3,3V

2475 10n   3510 47k   3511 47k   3512 47k

to:
3450 6400
3466 6401
      6416

1422 1424

T400	1	GND
T402	2	+B
T403	3	TUNER ON
	4	CD ON
T405	5	MUTE
T406	6	SC0
T407	7	SC1
T408	8	PWM
T409	9	INCR.SOUND

+B   5,4V
5,4/0V
5,4/0,7V
0,7/3,5V

to/from
AUDIO BOARD
1259,1263

PWM
Vol.min=high
3V
Vol.max=low   TB=2ms

+M
BC557B
POP   4,7k
from junction
3464/3465

TMP87CM20AF/
Z33-V83790

Front board, Copperside view

3482   3483

3432
3433

2465
2467

STOP
3486
6401
6402
3484
3485

3505 3504 3503 3502

1419 SHUFF

1423
1

TRAY-
TRAY+
TRAY SW
RESET

B

3423 3463 3422
3418
3464 3460 3462
3478
2475
3438 3431
7411

DBB 6461
4,7k
BC557B
rework
9412

3421
2403

1412 PLAY

1417 REPEAT

2466

DATA
SILD
GND
SICL

C

4401 3510
3499
7405
3511
3512
7404
3426
2423
4403
3400
3487

9404

1406
contour
black
OPEN

1422   1424   1

1408 NEXT

1407 PREV

6473 6472 6471 6470

I.S.
PWM
SC1
SC0
MUTE
CD ON
TUNER ON
+B
GND

Display Backlight

Front board z33.2, 160698

3   2   SMDs
1

05.03 TYPENUMBER(S): **AZ2000**

INFORMATION : Correction to the Electrical Partslist:
Item 2304 (22nF) on the Combi Board should be a polyester film
capacitor. Service codenumber is 4822 121 70619.

REMARKS :

05.04 TYPENUMBER(S) **AZ2700, AZ2710, AZ2725**

INFORMATION : Strong pressure applied on the edges can loosen the Cassette Door.
To improve this behaviour two metal brackets have been added to
protect the hinges. For details see diagram below.

REMARKS : The modification has been implemented in production from week
9836 onwards.
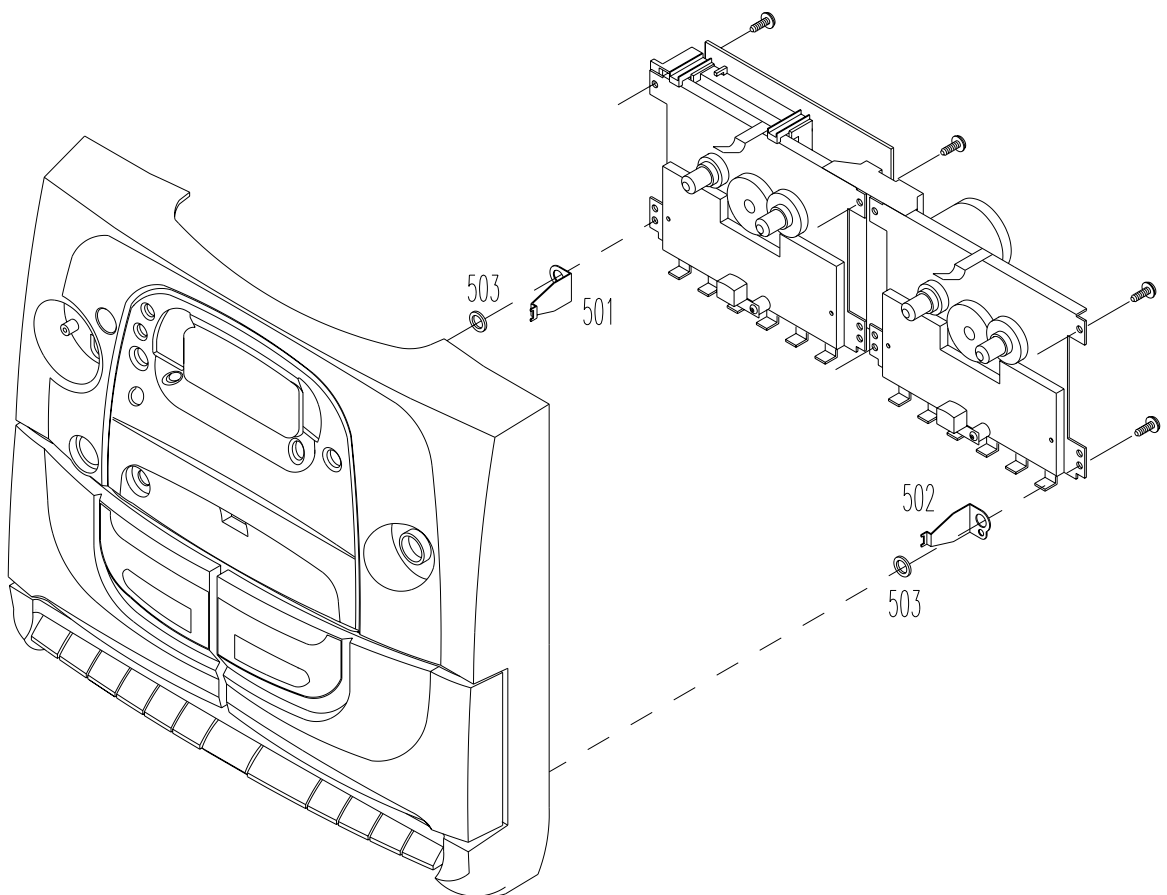
05.05 TYPENUMBER(S): **AZ8310, ND7500, RD7050**

INFORMATION : The Handle Bracket Left (pos. 34, 4822 498 10501) is no longer available as service spare part. We suggest to use Handle Bracket Right (pos. 36, 4822 498 10502) as a substitute.
The stopper end has to be cut as shown in the diagram below.

REMARKS :
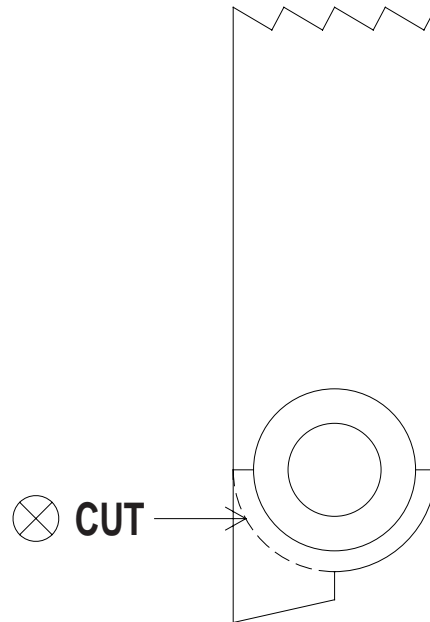
⊗ **CUT**

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06.01 TYPENUMBER(S): **70FW2019**

    INFORMATION   : Correction to the Service Manual, Accessories page 4.
Below mentioned codenumbers refer to the "flat cables for the system connectors" and not to the "connectors" itself, as stated in the maual.

Service code	Description
4822 267 31371	flat cable for system connector 1
4822 267 31372	flat cable for system connector 2
4822 267 31373	flat cable for system connector 3

    REMARKS   :

06.02 TYPENUMBER(S): **AS660C, AS665C, AS670C, AS675C, AS760C, AS765C, AS780C, AS785C, FW48, FW58, FW315C, FW322C, FW332, FW335, FW340C, FW342C, FW345C, FW352C, FW355C, FW361C, FW365C, FW375P, FW385P, FW391C**

    INFORMATION   : Following spare parts for the tape mechanism have been added:

pos.	Service code	Description
61	4822 528 11275	Flywheel assembly
62	4822 532 13047	Washer

    REMARKS   :

06.03 TYPENUMBER(S): **AS670C, AS675C, AS780C, AS785C**

    INFORMATION   : In order to deactivate the DBB LED in OFF mode, change resistor 3525 from 33kΩ to 10kΩ 5% 0,5W 4822 116 83864.

    REMARKS   :

06.04 TYPENUMBER(S): **CD887V**

INFORMATION : Correction to the parts list:

Servo Board:
Cap 2843 should be 4822 122 33848 47pF 5% 50V instead of 22pF
Cap 2845 4822 122 33195 100pF 10% 50V is added (missing)
Cap 2856 and 2857 are deleted (not required)

MPEG Board:
The service codenumber for the complete MPEG Board is
4822 214 12851.

REMARKS :

06.05 TYPENUMBER(S): **CDR870**

INFORMATION : Correction to the Service Manual, Service tools page 10.
The service codenumber for the maximum diameter disc (58.0mm)
should read 4822 397 60141 instead of 4822 397 30144.

REMARKS :

06.06 TYPENUMBER(S): **FW316C/21/21M**

INFORMATION : The service codenumber for the Instruction For Use should read
4822 736 16179 instead of 3139 116 18140.

REMARKS :

06.07 TYPENUMBER(S): **FW332**

SYMPTOM : IRIS CODE 1 1 5 2
When using the remote control, the set sometimes switches to tuner
mode (i.e. pressing NEXT in CD mode).

CURE : The problem is caused by the controller inside the remote control and
occurs whenever 2 buttons are pressed simultaneously.
The only solution is to replace the original remote control by another
type, i.e. RC07801 (4822 219 10181).

REMARKS :

06.08 TYPENUMBER(S): **FW392C**

SYMPTOM : `IRIS CODE` `2` `6` `7` `X`
The CD tray opens at any of the undermentioned conditions:
• switching on the set
• starting the FM radio
• changing of input selection

CURE : The problem is caused by a software bug and can be solved by a software upgrade. New microprocessors are available under service codenumber 4822 900 11254.

REMARKS :

06.09 TYPENUMBER(S): **FR732, FR752**

SYMPTOM : `IRIS CODE` `1` `1` `5` `2`
The set reacts on remote control of other equipment.

CURE : The problem is caused by a software bug and can be solved by a software upgrade. New microprocessors (OTP) are available under service codenumber 4822 209 16956.

REMARKS : Above service solution will not be implemented in production.

06.10 TYPENUMBER(S): **FW780P, FW783P, FW788P**

INFORMATION : Correction to the Service Manual, Specification chapter 1-3.
The power consumption for above mentioned sets is given as follows:
< 2W at power off for /22
< 16W at standby, FTD on (other versions)
< 80W at 1/8 rated power out

REMARKS :

06.11 TYPENUMBER(S): **FW790P/22**

SYMPTOM : IRIS CODE 2 1 1 X
The set switches to DEMO Mode intermittently, when
• changing from CD to Tuner mode by remote control
• switching to Standby and then back to Tuner mode

CURE : The problem is caused by mains supply interruptions, which can lead
to a system reset. It can be solved by adding a 1000µF 6,3V elcap on
the copper side across wire jumper 9509 (+H) and 9577 (GND).
For details see drawing below.

REMARKS :

06.12 TYPENUMBER(S): **MX900**

SYMPTOM : IRIS CODE 1 5 1 0
Audio Output IC TDA7262 gets damaged frequently due to
over-voltage of the mains (higher than 240V) at some places.

CURE : Besides the replacement of IC TDA7262 with service codenumber
4822 209 15422, it is recommended to replace also the power
transformer with new service codenumber 4822 146 11034.

REMARKS : The new power transformer 4822 146 11034 is for service purpose
only, as production of the set has already been stopped.

For internal use only

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04.01 TYPENUMBER(S): **AJ3925**

INFORMATION : Following parts are changed from production start onwards to improve distortion and amplification reserve:

Capacitor 2210 and 2213 are changed to 4.7nF (4822 126 11714)
Resistor 3201 and 3204 are changed to 6.8kΩ (4822 116 83961)
3202 and 3205 are changed to 27kΩ (4822 116 52264)
3221 and 3222 are changed to 18kΩ (4822 116 52251)

REMARKS : Changes are applied to sets of new generation with production code "KT-02" only.

04.02 TYPENUMBER(S): **AJ3940**

INFORMATION : **Correction to the Instruction Fof Use:**

To set **WEEKEND SLEEPER**, only following steps are necesary:

1. Select the alarm you wish to deactivate by pressing the **ALM 1** or **2** button. Within 5 seconds the display shows the set alarm time. Briefly press the **WEEKEND SLEEPER** once.

   $\rightarrow$ If the weekend sleeper is activated, **zz** will appear in the display for **ALARM 1** or **2**.

2. To cancel the weekend sleeper function, repeat step 1 until **zz** no longer appears in the display.

REMARKS : Errata sheet will be inserted from week 9831 onwards. The IFU will also be updated.

**04.03** TYPENUMBER(S): **AQ6485, AQ6581, AQ6585, AQ6681**

SYMPTOM   :   **IRIS CODE** **2 1 6 X**
The Belt Clip is broken.

CURE   :   The belt clip will be broken if it is not properly pressed into the
mounting hole on the rear cabinet before turning to LOCK position.
The Belt Clip is available via service codenumber 4822 401 11734.

REMARKS   :   An addendum sheet with diagrams showing how to fix the Belt Clip
was added to the set from week 9815 onwards. The belt Clip has also
been modified (dimple added and letter "PUSH" engraved).

1. Align clip with hole

2. Press down....
3. and turn clip
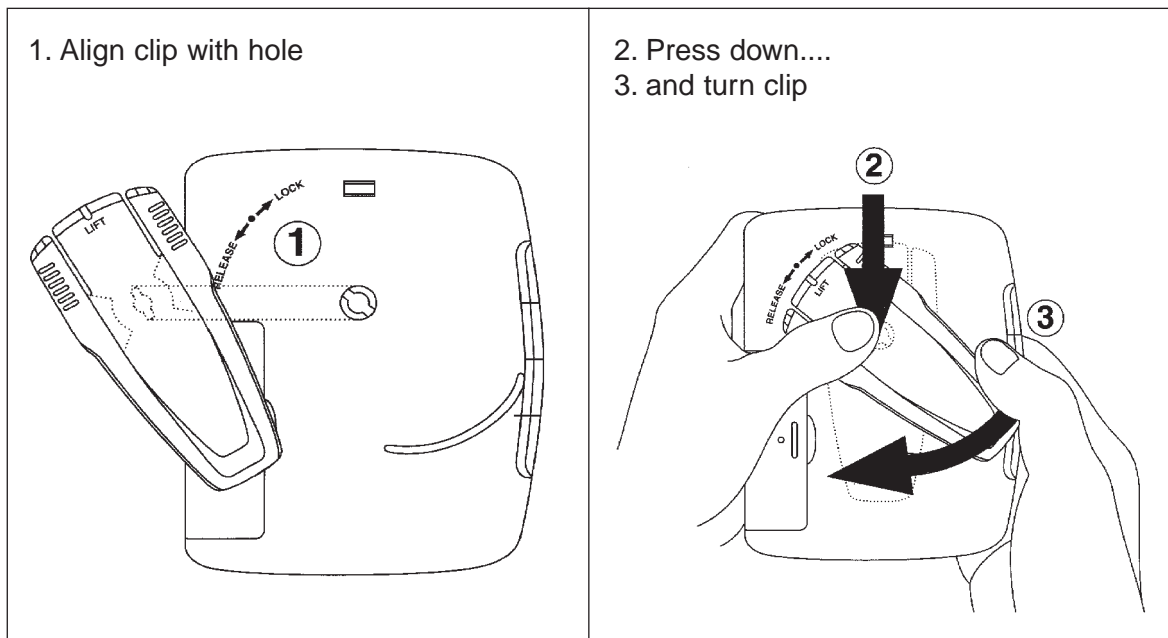
04.04 TYPENUMBER(S): **AZ2000**

SYMPTOM   :   **IRIS CODE** **2 5 4 4**
Pop noise is audible when Cassette buttons are pressed.

CURE   :   The problem can be solved by the following modification:
Change 3302 from 4.7kΩ to 5.6kΩ (4822 116 52289)
Change 3312 from 1kΩ to 8.2kΩ (4822 116 52303)
Add Cap. 100µF/10V (4822 124 42446) connected (+) from base of
7263 and (-) to ground.

REMARKS   :   Modification is implemented in production from week 9828 onwards.

04.05 TYPENUMBER(S): **AZ2000**

    INFORMATION   : Resistor 3575 is replaced by a jumper

    REMARKS   : Change is implemented from production start onwards.

04.06 TYPENUMBER(S): **AZ2402, AZ2407**

    INFORMATION   : The Electrical partslist of ECO5 Tuner board is missing.
It is given in following Service Informations:
A98-562 4822 725 26185 for AZ2407
A98-563 4822 725 26186 for AZ2402

Following service codenumber is also missing in the Electrical partslist: IC 7400 4822 209 16661 TMP87C22-AZ2402

    REMARKS   :

04.07 TYPENUMBER(S): **CD6660, D6560**

    INFORMATION   : Correction to the Mechanical partslist:
The service codenumber of item 74 (Eject Hook on the Tape Deck) should read 4822 403 30792.

    REMARKS   :

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03.01 TYPENUMBER(S): **AJ3920, AJ3925**

SYMPTOM	:	**IRIS CODE** **H** **5** **4** **0**
		Noise is audible in stand-by mode.
CURE	:	Additional to newsletter issue PA98.01.01: In order to improve the distortion at maximum volume, capacitors items 2210 and 2213 are changed to 4.7nF (4822 126 11714).
REMARKS	:	

03.02 TYPENUMBER(S): **AJ3925**

INFORMATION	:	From May 1998 onwards, the new CD board "CD97 MK2" and new CD-drive "CD94V5" are used. For the new generation a new Service Manual 4822 725 26193 will be published.
REMARKS	:	The production change code of the new generation is "KT02".

03.03 TYPENUMBER(S): **AZ1111**

INFORMATION	:	Correction to mechanical partslist: The service codenumber of the Tuning Knob (pos. 407) should read 4822 410 11843.
REMARKS	:	

03.04 TYPENUMBER(S): **AZ1202, AZ1207, AZ1209**

SYMPTOM	:	**IRIS CODE** **1** **5** **1** **X**
		CD does not function.
CURE	:	The copper track at capacitor item 2836 peels off.
REMARKS	:	Capacitor 2836 is fixed by glue from production week 9819 onwards.

03.05 TYPENUMBER(S): **AZ1203, AZ1208, AZ1209**

INFORMATION : Correction to electrical partslist:
On the Front board, the service codenumber of IC 7400 was changed to 4822 209 16811. 4822 209 15839 can still be used except for /14 versions.

REMARKS :

03.06 TYPENUMBER(S): **AZ1205**

INFORMATION : Correction to mechanical partslist:
The service codenumber of the Tray-CD (pos. 437) should read 4822 418 10352.

REMARKS :

03.07 TYPENUMBER(S): **AZ1302, AZ1307, AZ1308, AZ1402, AZ1407, AZ1508**

INFORMATION : Correction to mechanical partslist:
In the Exploded view diagram of the tape transport, the service codenumber of the Eject Hook (pos. 74) should read 4822 403 70968.

REMARKS :

03.08 TYPENUMBER(S): **AZ2415**

INFORMATION : Correction to mechanical partslist:
The service codenumber of the Battery Spring (pos. 443) should read 4822 492 11566.

REMARKS :

03.09 TYPENUMBER(S): **AZ8051**

INFORMATION : Correction to mechanical partslist:
The service codenumber of the Ornamental Foils of blue versions are wrongly stated. They should read:
4822 466 10744   FOIL ORNAMENTAL, LEFT
4822 466 10743   FOIL ORNAMENTAL, RIGHT

REMARKS :

03.10 TYPENUMBER(S): **AZ8055, AZ8056, AZ8057, AZ8068, AZ8075**

INFORMATION : The following mechanical part is now available.
pos. 522   4822 410 11912   Volume Up/Down Button

REMARKS :

03.11 TYPENUMBER(S) : **AZ8262, AZ8267, AZ8289**

INFORMATION : The following mechanical parts are now available.
pos. 522   4822 410 11912   Volume Up/Down Button
pos. 523   4822 410 11913   Tuning Up/Down Button

REMARKS :

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In this special edition of the Service Newsletter Audio, instructions for lens cleaning and lubrication of various CD-drives are given. The drives have been spitted-up into two groups:

GROUP A : 4822 691 30278   CDM12.1
4822 691 30359   CDM12.3BL
4822 691 10487   CDM12.3BLC
4822 691 10615   VAM1201
4822 691 10665   VAM2103

GROUP B : 4822 691 30319   CD90V1Q
4822 691 10535   CD93V4
4822 691 10654   CD94V5T1

WARNING !
PRINCIPLE: AVOID CLEANING THE LENS !

Cleaning the lens is not completely harmless. Only if the lens is obviously polluted with fingerprints or soild, it can be cleaned with a cleaning solvent.

The objective lens of the CD-mechanism is an optical component that is exposed to the environment. It is clear that the environment of a Juke-Box application is not comparable with normal home use. Permanent dust, steam or nicotine from cigarette smoke will (sooner or later) soil the lens and influence the playability of the system –
Cleaning of the lens becomes necessary.

Analysis of exchanged CD-drives has shown, that in a considerable quantity of drives the malfunctions were caused by dirty lens. Before replacing a CD-drive it is therefore recommended to clean the lens and check the functionality of the system again.
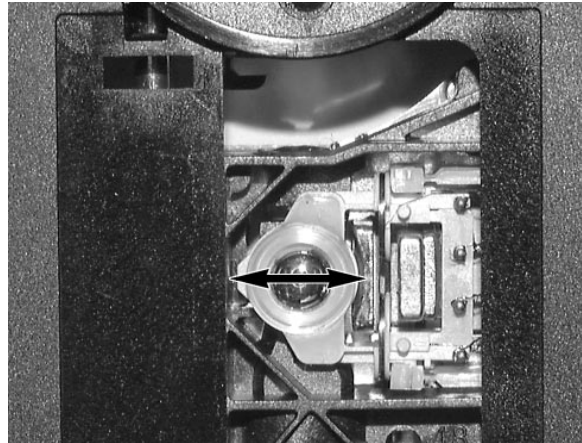
02.01 TYPENUMBER(S): **GROUP A**

INFORMATION : **Cleaning the objective lens**

Before touching the lens it is advised to clean the surface of the lens by blowing clean air over it in order to avoid that little particles make scratches on the lens.

Because the material of the lens is synthetic and coated with a special anti-reflectivity layer, cleaning must be done with a non-aggressive cleaning fluid. It is advised to use lens cleaner "**KODAK LENS CLEANER CAT 176 71 36**", available in normal photo shops.

The actuator is a very precise mechanical component and may not be damaged in order to guarantee its full function. It is advised to clean the lens gently (don't press too hard) with a soft and clean cotton swab moistened with the special lens cleaner.
The direction of cleaning must be in the way as indicated in the picture below.

REMARKS : See also newsletter issues 58.01 and 96.09.01.

02.02 TYPENUMBER(S): **GROUP B**

INFORMATION : **Cleaning the Objective lens**

Cover a padstick with a piece of lens cleaning paper, i.e. "**KODAK CAT 154 2067**" or "**DUSTER TK-3**".
Put 2 to 3 drops of alcohol (99% or above) to the padstick.
Rotate it slowly and gently on the surface of the lens. The solvent will dissolve fingerprints, grease etc...
Finally the lens will be filled with the dirty cleaning solvent. Suck up the solvent with the edge of a piece of absorbing paper until the fluid has been removed. The remnants of the solvent will evaporate.

REMARKS : **Never use cleaning solvents containing isopropanol!**

INFORMATION : **Cleaning and lubricating instructions**

Lubrication of the CD-drive is needed in case of symptom "skipping tracks". The reason can be dirt which sticks to the grease or the grease is getting aged.

Use grease "**Tribol 9890-2**" or equivalent.

Before greasing the mechanism first remove the old grease from the mechanism. Use a cotton swab dipped in alcohol to clean the mechanism.
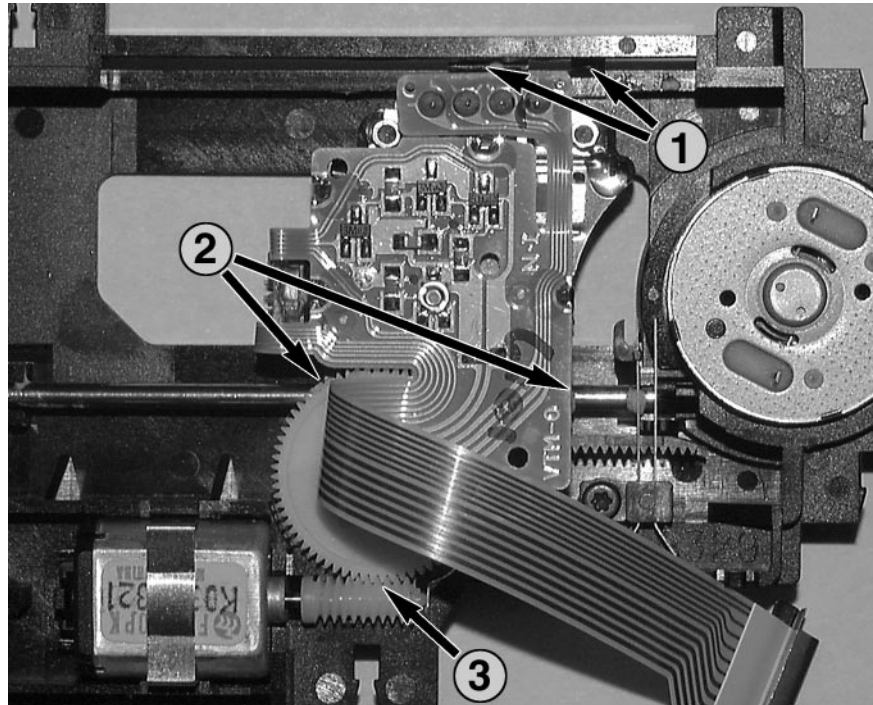
Cleaning the mechanism
1. Clean the lower and upper sledge guidance plane (optical pick-up).
2. Clean the spindle shaft.
3. Clean the area between the worm gear, idler wheel and clamping spring.

Lubricating the mechanism
1. Put onto the upper sledge guidance plane one dot of grease on each side of the sledge. Move the sledge to the inner and outer position to spread the grease.
   Put onto the lower sledge guidance plane one dot of grease on each side of the sledge. Move the sledge to the inner and outer position to spread the grease.
2. Put onto the spindle shaft one dot of grease on both sides of the sledge. Move the sledge to the inner and outer position to spread the grease.
3. Put one dot of grease between the worm gear and the clamping spring.

REMARKS :

INFORMATION   : **Cleaning and lubricating instructions**

Lubrication of the CD-drive is needed in case of symptom "skipping tracks". The reason can be the dirt which sticks to the grease or the grease is getting aged.

Use grease "**Dow Corning PG-671**" or equivalent.

Before greasing the mechanism first remove the old grease from the mechanism. Use a cotton swab dipped in alcohol to clean the mechanism.
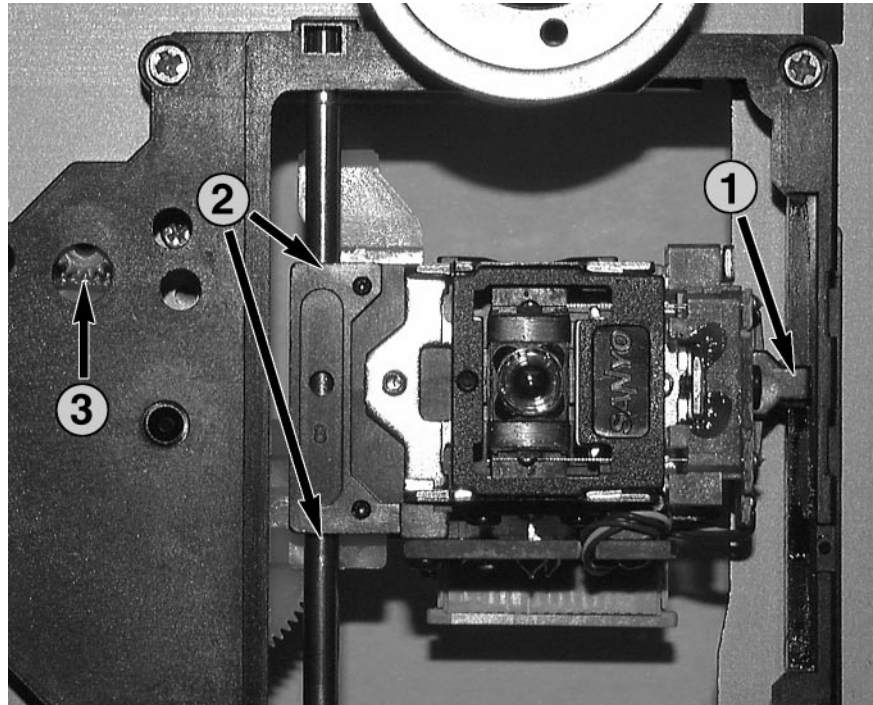
Cleaning the mechanism
1. Clean the lower and upper sledge (optical pick-up) guidance plane.
2. Clean the spindle shaft.
3. Clean the area between the toothed bar and idler wheels.

Lubricating the mechanism
1. Put onto the upper sledge guidance plane one dot of grease on each side of the sledge. Move the sledge to the inner and outer position to spread the grease.
   Put onto the lower sledge guidance plane one dot of grease on each side of the sledge. Move the sledge to the inner and outer position to spread the grease.
2. Put onto the spindle shaft one dot of grease on both sides of the sledge. Move the sledge to the inner and outer position to spread the grease.
3. Put one dot of grease between the toothed bar and the idler wheels.

REMARKS   :

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05.01 TYPENUMBER(S): **AS785C, FW610, FW620C, FW630, FW650C, FW680V, FW750C**

SYMPTOM : IRIS CODE 1 1 6 H
Tweeter in Loudspeaker Box blown.

CURE : The paper coil former cannot withstand the heat generated by the voice coil and get burnt and torn.
Replace the tweeter with an aluminium coil former tweeter, service codenumber 4822 240 10257.

REMARKS :

05.02 TYPENUMBER(S): **CDR870, CDR880**

INFORMATION : Analogue input sensitivity has been changed to 500mV.
The following parts have been changed on the level board:
R3350 changed from 15kΩ into 10kΩ (4822 117 10833)
R3351 changed from 15kΩ into 10kΩ (4822 117 10833)
R3352 changed from 5,6kΩ into 10kΩ (4822 117 10833)
R3353 changed from 5,6kΩ into 10kΩ (4822 117 10833)

REMARKS :

05.03 TYPENUMBER(S): **CS1600, SC1060**

INFORMATION : Correction to Electrical partslist:
The service codenumber of the Volume Control VR204 is
4822 101 11905.

REMARKS :

05.04 TYPENUMBER(S)：**FW18**

SYMPTOM　　　：　IRIS CODE C 5 3 2
1. Distortion is audible during playback of certain pre-recorded cassettes.
2. Continuous crackling (or clipping) sound is audible during playback of certain CDs (i.e. CDV – Spice Girls/Spiceworld, no. CDV 2850 7243 8 45111 2 8, track 10).

CURE　　　　　：　The pre-recorded cassettes or CDs contain over-modulated signals, which are too large to be handled by the multiplex IC 7612, HEF4052B.

The problem can be solved by the following hardware modification on the Combi board:
1. Remove chip jumper 4603.
2. Connect VSS of IC 7612 to -5V DC by wire from pin 7 of IC7612 to pin 5 of connector 1504.
For details on this rework, see circuit diagram below.
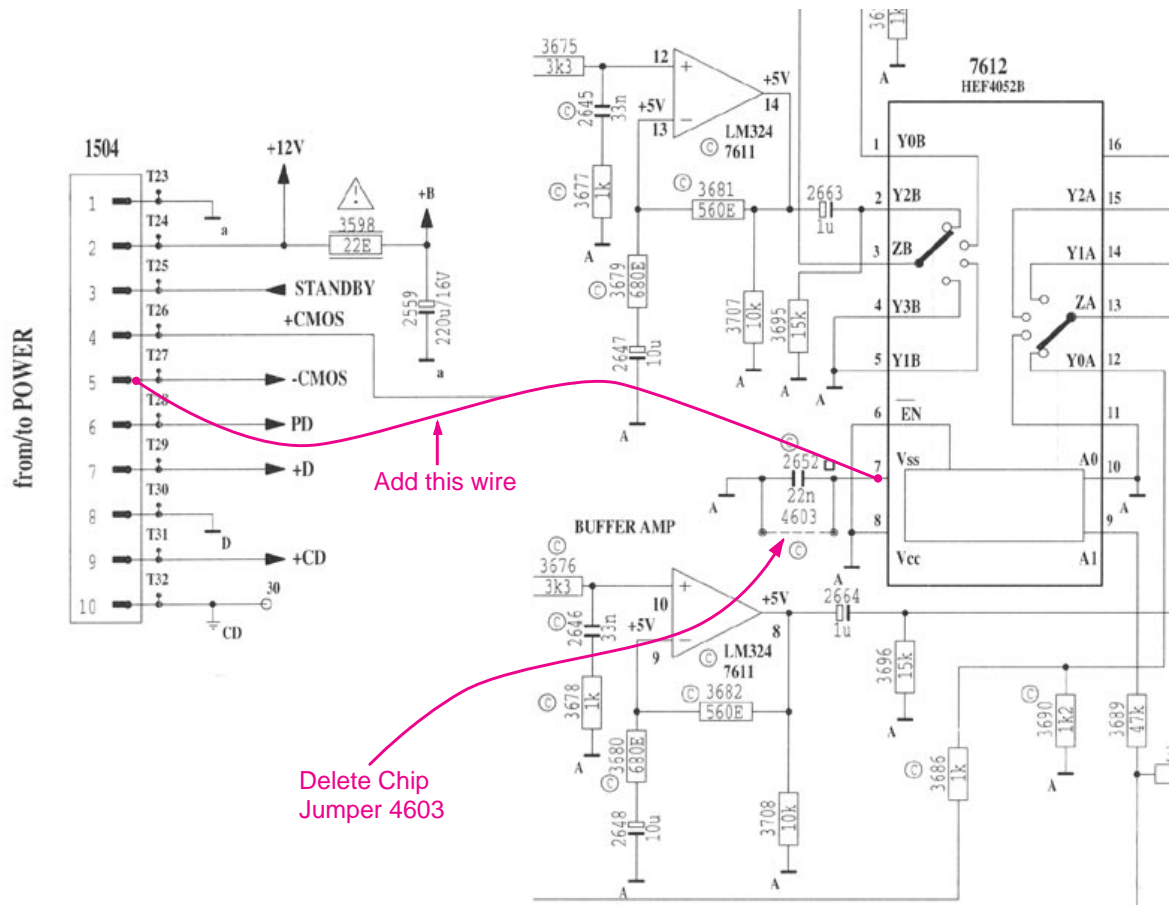
05.05 TYPENUMBER(S)：**FW315C/22**

INFORMATION　：　Correction to Electrical partslist:
The service codenumber for microprocessor IC 7401 should read 4822 209 15959 with printing mark "322S51471" instead of 4822 209 15436.

REMARKS　　　：

05.06 TYPENUMBER(S): **FW316C/21/21M**

INFORMATION   : Correction to Service Manual:
                 In the Version Variation Table on page 1-2, FW316C/21/21M should
                 be stated without Karaoke feature.

05.07 TYPENUMBER(S): **FW316C/37**

INFORMATION   : Correction to Mechanical partslist:
                 On commercial request the color (and thus the codenumbers) of
                 below mentioned parts have been changed:

205	4822 442 01358	Cover Tray CDC1
209	4822 459 04973	Cabinet Front
211	4822 410 11796	Button Set DSC/DBB
217	4822 410 11797	Button Set HSD/Power
221	4822 410 11798	Knob Volume
225	4822 410 11799	Button Set Controls
245	4822 442 01355	Cover Door Cassette Left
246	4822 442 01356	Cover Door Cassette Right

REMARKS   : New parts are used from production start onwards.

05.08 TYPENUMBER(S): **FW372C, FW395C**

SYMPTOM   : IRIS CODE 2 6 7 X
                 The CD tray opens at any of the undermentioned conditions:
                 • switching on the set
                 • starting the FM radio
                 • changing of input selection

CURE   : The problem is caused by a software bug and can only be solved by
                 a software upgrade. New microprocessors are available under service
                 codenumber 4822 900 11235.

REMARKS   :

05.09 TYPENUMBER(S): **FW730V, FW780V**

INFORMATION   : Missing in partslist of Power Board:
                 The service code for the Cinch Socket - Audio/Video is
                 4822 267 11342.

REMARKS   :

05.10 TYPENUMBER(S): **FW850C**

SYMPTOM : `IRIS CODE` `C` `2` `8` `5`
Wrong RDS message is displayed for 1-2 seconds
(i.e. "RADIELL IMMEO AKTUR" iso. "RADIO-N IMMER AKTUELL").

CURE : There is no solution available, the phenomenon has been
commercially accepted.

REMARKS : This problem is not always present when the set is tuned from
another station to the problem station via the presets.

05.11 TYPENUMBER(S): **FW850C/34**

INFORMATION : Correction to Service Manual:
In the Version Variation Table on page 1-2, FW850C/34 should refer
to "ECO5 Sys" tuner instead of "Tuner 95".

REMARKS :

05.12 TYPENUMBER(S): **FW860P**

INFORMATION : Correction to Mechanical partslist:

Pos	Service code	Description
349	4822 445 10768	Center Loudspeaker Box
349	4822 445 10769	Surround Loudspeaker Box
386	4822 736 15978	Portuguese IFU (for /21 only)

REMARKS :

05.13 TYPENUMBER(S): **MC135, MC155**

INFORMATION : Correction to Electrical partslist:
Correct type number of IC200 and IC501 is BA4558N.
Service codenumber is 4822 209 16265.

REMARKS :

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IRIS

LINE OF BUSINESS PORTABLE AUDIO

SERVICE NEWSLETTER

01.01 TYPENUMBER(S): **AJ3920, AJ3925**

SYMPTOM : 　IRIS CODE　H 5 4 0
Noise is audible in stand-by mode.

CURE : The noise level can be reduced by following modification:
1. Change 3214 and 3216 from 10kΩ to 1kΩ (4822 050 21002)
2. Change 2209 and 2212 from 1µF to 10µF (4822 124 40248)
3. Relocate 3217. Solder it to the -ve pole of 2214 and the ground pin of 3215.

REMARKS : Above mentioned modification will be implemented in production from week 9818 onwards.

01.02 TYPENUMBER(S): **AZ1000, AZ1001, AZ1002**

INFORMATION : From April 1998 onwards, with factory code starting from KZ019814.., CD-drive CD94V5 (4822 691 10654) is used in production to supersede the original CD90V1Q. For servicing please refer to Service Information A98-560 (4822 725 26175).

REMARKS :

01.03 TYPENUMBER(S): **AZ1100, AZ1101, AZ1102, AZ1103, AZ1104**

INFORMATION : During production, the motor on the tape deck has been changed. The type of the new motor is EG-530AD-2B with service codenumber 4822 361 21599.

REMARKS : Both motors EG-530AD-2B and M9T12U24-1 are interchangeable.

01.04 TYPENUMBER(S): **AZ1202, AZ1207, AZ1209, AZ1602**

INFORMATION : The flex foil cable (15-pins), connecting the CD light-pen to CD97 board, is now available via following service codenumber:
pos 1800　　4822 320 12178　　FFC/15P/65mm

REMARKS :

01.05 TYPENUMBER(S): **AZ1207, AZ1209**

INFORMATION   : Correction to electrical partslist, Audio Board:

2264	4822 126 13581	0.22µF	20%	50V
2265	4822 126 13581	0.22µF	20%	50V
2596	4822 121 51387	10nF	20%	50V
3666	4822 116 52175	100Ω	5%	0.5W
3667	4822 116 52175	100Ω	5%	0.5W

REMARKS   :

IRIS

LINE OF BUSINESS AUDIO SYSTEMS

SERVICE NEWSLETTER

04.01 TYPENUMBER(S): **AS660C, AS665C, AS670C, AS675C, AS760C, AS765C, AS785C, FW315C, FW340C, FW352C, FW355C, FW365C, FW372C, FW373C, FW375P, FW392C, FW395C, FW710C, FW725C, FW730C, FW745C, FW750C, FW770P, Fw780P, FW790P**

INFORMATION : In above mentioned sets the 3CD Carousel Changer module "3CDC DH" has been replaced by the "3CDC MG" module.
This has been published with following Service Informations:
A97-164 for FW725C, FW730C
A97-165 for FW745C, FW750C
A97-166 for FW770P
A97-167 for FW780P
A97-168 for FW790P
A97-169 for FW710C
A97-170 for FW365C
A97-172 for FW355C
A97-173 for FW375P
A97-174 for AS660C, AS665C
A97-175 for AS760C, AS765C
A97-180 for FW352C
A97-182 for FW372C
A97-183 for FW392C
A97-184 for FW395C
A97-185 for FW373C
A97-187 for AS670C, AS675C
A97-188 for AS785C
A97-189 for FW315C
A97-190 for FW340C

In all Service Informations the service codenumber for the flex-foil, pos. 8002, is missing:
8002   4822 320 11974   flex-foil 15pole (length=190mm)

Attention: Above mentioned flex-foil is not compatible to the flex-foil used in the old 3CDC DH module!

REMARKS :

04.02 TYPENUMBER(S)： **CDR870**

INFORMATION　　： The Recording Test disc
Problems concerning the recording facilities of the CDR870 can be
checked by using a blank Digital Audio CD-ReWritable disc. This disc
can be re-used afterwards and the CD-RW recording strategy does
not deviate strong from the CD-R writing process. To define whether
the set is working proper this disc can be read after recording and
even after finalising.
To ERASE complete disc use the service test program and actuate
simultaneously <ERASE> and <RECORD> keys together with
<POWER ON>. This will take about 37 minutes because erasing is
done at double disc speed.

REMARKS　　　　：

04.03 TYPENUMBER(S)： **CDR870**

INFORMATION　　： CDR870 is not able to play CD R/W discs, recorded and finalised via
a computer. The CDR870 display shows "No Audio".

Explanation:
The audio bit, standing in the ATIP pregrove, is checked before
starting up. In case of a final finalised CDR disc, the ATIP (Engine) is
switched off. So the application can not reach this information
anymore.
In case of CD R/W, ATIP must always be active (to allow Erase
DISC). So the audio bit will be detected by the application when
starting up this disc.
Because the audio bit is not detected in this case, the display shows
the message "NO AUDIO".
This is not an error but a too strong implementation of the law. In fact
you may not record audio on a general purpose disc with a CDR870.

REMARKS　　　　： In the future reading audio from a general purpose disc will be
allowed. (CDR760 ....)

04.04 TYPENUMBER(S): **CDR870**

SYMPTOM : **IRIS CODE** **2** **5** **6** **6**
Bad recording when using optical input of set

CURE : This problem is caused by the optical input device PLR102
(item 1520 on the connector PCB). In case the risetime specification
is worse than 50ns, the optical input signal may result in a bad
recording. There are 2 solutions possible:
1. Replace PLR102 by TORX174 (Toshiba) with service codenumber
4822 130 91224. C2508 has to be replaced by a short circuit to
ground. The risetime specifications of this device are <30ns.
2. Use one of the free inverter ports of device 74HCU04N (item 7500)
to improve the optical in signal. This can be done as follows:
• Connect output 4 of optical device to pin 9 of IC7500.
This pin must be lifted from the PCB.
• Connect pin 8 of IC7500 to pin 14 of connector 1500.
• Interrupt copper track between pin 14 of connector 1500 to pin 4
of switch 1522 (not mounted).
With this solution, steep flanks will be created on the signal.
Note that inverting is no problem for a biphase signal.
See also picture of the modified PCB below.
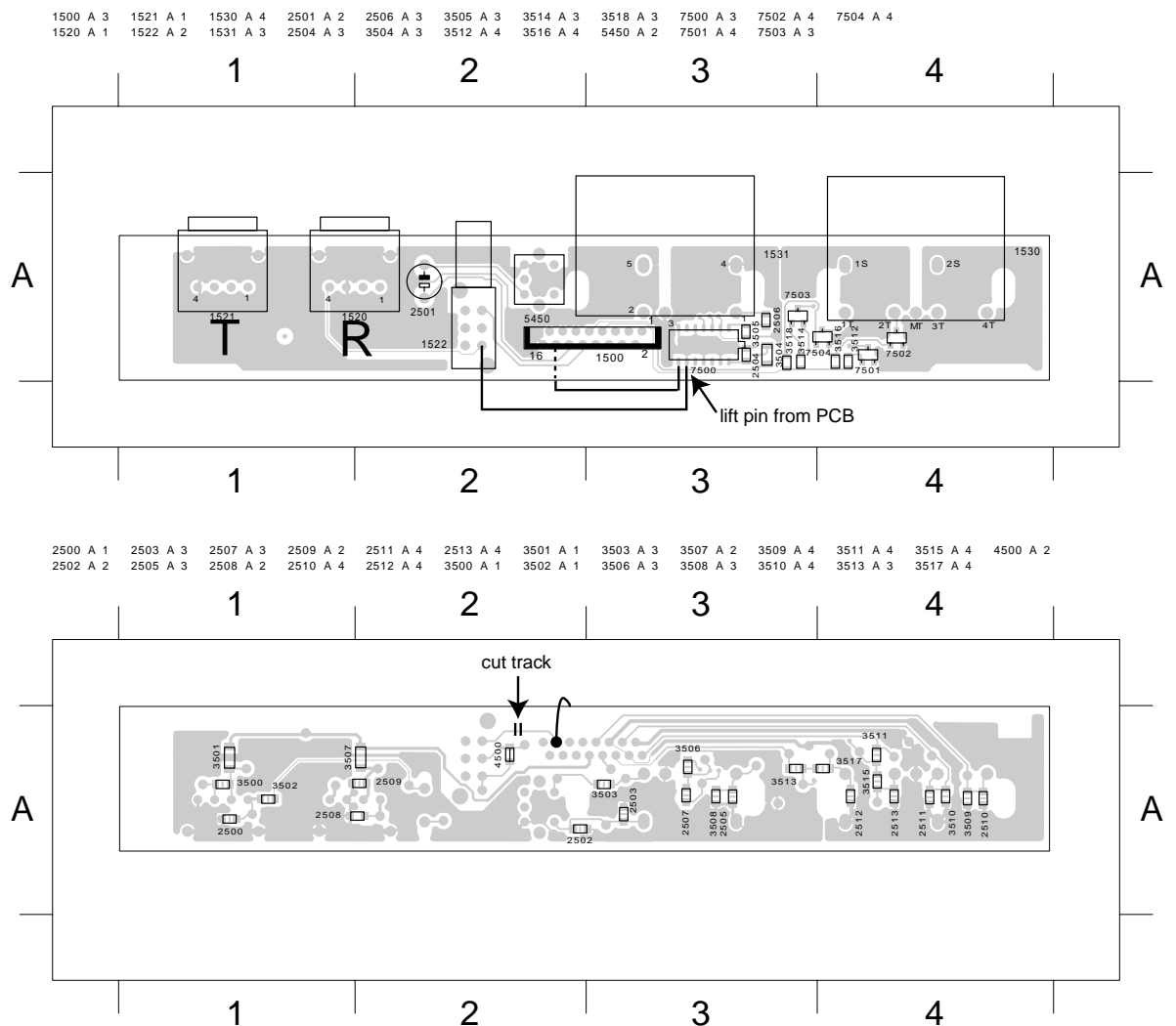
REMARKS : An improved connector PCB will be introduced in course of
production. See Service Information A98-250 (4822 725 25244).

04.05 TYPENUMBER(S): **MC135, MC155**

SYMPTOM : `IRIS CODE` `1` `1` `3` `B`
Display backlight lamps are defective.

CURE : The problem is caused by overvoltage.

Following modification on the MAIN BOARD limit the supply voltage:
Replace jumper JP626 by a diode 1N4002 (5322 130 30684) in series with a resistor 3,3Ω 5% 0,33W (4822 052 10338).
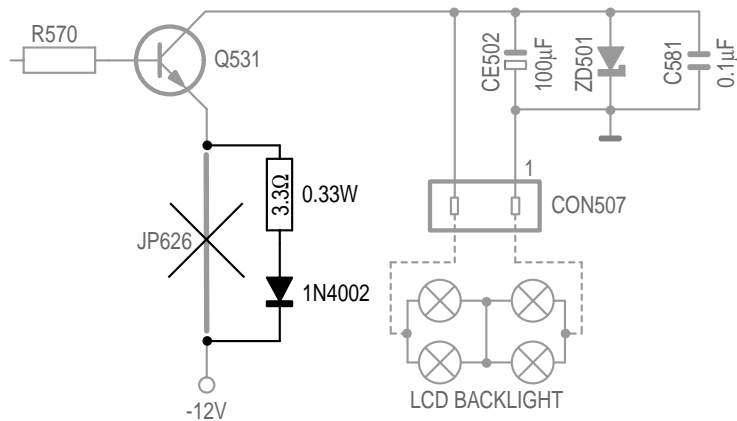
———————————— IMPORTANT INFORMATION ————————————
As preventive action above modification must be implemented in all sets brought in for repair!!

REMARKS :

04.06 TYPENUMBER(S): **MC135, MC155**

SYMPTOM : `IRIS CODE` `C` `2` `8` `5`
RDS information is displayed in fragments of letters and words.

CURE : Solution is to shift the VCO frequency of IC505 by changing the value of the following capacitors:
C527 : changed from 82pF to 33pF (5322 122 32072)
C528 : changed from 47pF to 22pF (5322 122 32143)
Measure the frequency at pin 14 of IC505 to be within
4.33204MHz ±200Hz.

REMARKS : This is a correction to Service Newsletter AS98.02.02 (symptom description and tolerance of frequency changed).
Modification has been implemented in production from week 9749 onwards.

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Service Department Audio Systems

IRIS

EACEM IRIS CODING

EACEM IRIS is an **INTERNATIONAL REPAIR INFORMATION SYSTEM** of the **EUROPEAN ASSOCIATION OF CONSUMER ELECTRONICS MANUFACTURERS**.

The system was developed by several companies and had been evolving for many years in different countries in different variations before it was finally standardized by the EACEM IRIS committee in May 1995. EACEM IRIS is kept up to date and reviewed periodically.
New innovations and new product categories lead to the current revision 02, finalized in September 1997.

EACEM IRIS CODING

The "heart" of EACEM IRIS is a standardized coding structure.
The full IRIS coding system consists of a set of five codes:
• The **CONDITION CODE** (under which condition does the defect occur)
• The **SYMPTOM CODE** (what was the symptom perceived by the user)
• The **SECTION CODE** (where was the defect located)
• The **DEFECT CODE** (which part and type of defect).
• The **REPAIR CODE** (what action was taken to correct the problem).

Example of use:

FLAG	CONDITION	SYMPTOM	SECTION	PCB	PART REF. NO.	PART CODE NO.	DEF.CODE	QTY	REP.CODE

SECTION CODE
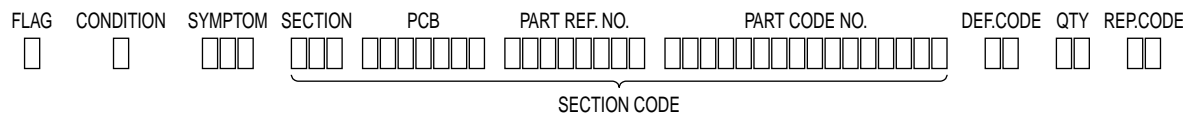
Tables on next pages give a survey of available codes in EACEM IRIS.

Note that IRIS codes, published in Service Newsletters, are only related to the Condition/Symptom codeset.

IRIS CODE 1 1 3 B

symptom code
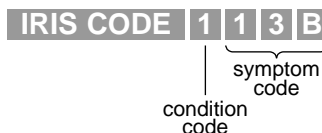
condition code

EACEM - IRIS REPAIR CODING SYSTEM
SYMPTOM CODE TABLE
'BROWN' GOODS

IRIS

□ | □ — □ → EXTENDED SYMPTOM CODE (*1)

CONDITION CODE | MAIN SYMPTOM CODE

CONDITION CODE

1	CONSTANTLY
2	INTERMITTENTLY
3	AFTER A WHILE
4	IN A HOT ENVIRONMENT
5	IN A COLD ENVIRONMENT
6	WHEN SWITCHING
7	UNDER VIBRATION
8	IN A DAMP/WET ENVIRONMENT
9	IN A DRY ENVIRONMENT
A	AFTER BEING DROPPED
B	AFTER LIGHTNING STRIKE
C	ONLY CERTAIN STATIONS/SOFTWARE/MODE/CHANNELS/FREQUENCY BAND
D	ONLY ON CERTAIN STANDARDS
E	ONLY ON ONE CHANNEL
F	ONLY WITH CERTAIN INPUT(S)
G	ONLY ON CERTAIN OUTPUT(S)
H	IN STANDBY/OFF MODE
J	AT EDIT POINT
K	WHEN INTERCONNECTED
L	LIQUID CONTAMINATION
M	FOR A SHORT WHILE AFTER SWITCH-ON
N	AFTER MAKING A COPY

(*1)

CAUTION

THE 'X' EXTENDED SYMPTOM CODES (*-**X) SHOULD ONLY BE USED TO INDICATE THAT A SUITABLE SYMPTOM DESCRIPTION IS NOT AVAILABLE IN THE CONCERNED SYMPTOM GROUP

REV 02 - JUNE 1997

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1 GENERAL

1 - NO ACTION — 110 POWER PROBLEM
- 111 NO POWER ON AC
- 112 NO POWER WHEN USING AC-ADAPTER
- 113 NO POWER WHEN USING DRY BATTERIES
- 114 NO POWER WHEN USING RECHARGEABLE BATTERIES
- 115 NO POWER FROM SOLAR CELL
- 116 NO POWER WHEN USING A CAR BATTERY
- 117 SHORT OPERATION TIME/SHORT BATTERY LIFE
- 118 POWER-OFF FUNCTION NOT WORKING
- 119 NO SWITCH-ON FROM STANDBY
- 11A POWERS UP, BUT NO OPERATION
- 11B CYCLIC POWER ON/OFF
- 11C BLOWING EXTERNAL FUSE
- 11D SET SWITCHES OFF BY ITSELF
- 11X OTHER 'POWER' PROBLEM

2 - LEVEL — 120 CHARGING PROBLEM
- 121 NO BATTERY CHARGING
- 122 INCOMPLETE BATTERY CHARGE
- 123 CHARGING TIME TOO LONG
- 12X OTHER 'CHARGING' PROBLEM

3 - QUALITY — 130 DISPLAY FUNCTION PROBLEM
- 131 FAULTY TIMER/COUNTER DISPLAY
- 132 FAULTY LAMP/LED OPERATION
- 133 FAULTY LEVEL METER OPERATION
- 134 FAULTY ON-SCREEN DISPLAY OPERATION
- 135 ELECTRONIC TUNING DISPLAY FAULT
- 136 MECHANICAL TUNING DISPLAY FAULT
- 137 FAULTY TIME CODE DISPLAY
- 138 FAULTY ALARM/ERROR DISPLAY
- 139 DISPLAY DIM/TOO DARK
- 13A UNUSUAL OR INCORRECT MESSAGE IN DISPLAY
- 13B NO BACKLIGHT
- 13X OTHER 'DISPLAY FUNCTION' PROBLEM

4 - NOISE — 140 ABNORMAL NOISE
- 141 CRT DISCHARGING NOISE
- 142 EHT DISCHARGING NOISE
- 143 NOISY CABINET
- 144 NOISY TRANSFORMER
- 145 NOISY COMPONENT(S)
- 146 RATTLE
- 14X OTHER 'ABNORMAL' NOISE

5 - UNSTABLE — 150 REMOTE CONTROL PROBLEM
- 151 NO REMOTE CONTROL OPERATION
- 152 INCORRECT REMOTE CONTROL OPERATION
- 153 REMOTE CONTROL PROGRAMMING/LEARNING MODE PROBLEM
- 154 POOR REMOTE CONTROL SENSITIVITY
- 15X OTHER 'REMOTE CONTROL' PROBLEM

6 - RECORDING & PHYSICAL PROBLEMS — 160 PHYSICAL DAMAGE
- 161 DAMAGED CABINET
- 162 DAMAGED HANDLE/CLIP
- 163 DAMAGED CONTROL KNOB(S)/BUTTON(S)
- 164 DAMAGED DOOR/COVER
- 165 DAMAGED SEAL
- 166 DAMAGED PLUG/SOCKET/TERMINAL
- 167 DAMAGED LENS
- 168 DAMAGED CARTRIDGE OR STYLUS
- 169 DAMAGED ANTENNA
- 16A DAMAGED CRT OR VIEWFINDER
- 16B MISSING COMPONENT(S) OR ORNAMENTAL PARTS
- 16C PRINTED MARKINGS ERASED/PEELED OFF
- 16D SET BURNING/EMITS SMOKE
- 16E BUBBLING/PEELING/RUSTING
- 16F SMELL
- 16G WEAK/DAMAGED STAND
- 16H DAMAGED SPEAKER
- 16J SET GETS VERY HOT
- 16X OTHER PHYSICAL DAMAGE

7 - SPECIAL FUNCTIONS — 170 GENERAL FUNCTION PROBLEM
- 171 FAULTY CLOCK FUNCTION
- 172 FAULTY SLEEP FUNCTION
- 173 FAULTY TIMER PROGRAMMING
- 174 FAULTY TIMER RECORDING
- 175 SOFTWARE PROGRAMMING/USER ADJUSTMENT PROBLEM
- 176 FAULTY RECORD MUTE OPERATION
- 177 FAULTY PROGRAMMED PLAYBACK OPERATION
- 178 FAULTY MEMORY FUNCTION
- 179 FAULTY INPUT SWITCHING
- 17A FAULTY OUTPUT SWITCHING
- 17B ELECTRIC SHOCK
- 17C FAULTY INDEX SEARCH
- 17D WRONG LANGUAGE/CHARACTER SET
- 17E ERROR CODE APPEARS
- 17X OTHER 'GENERAL FUNCTION' PROBLEM

8 - OTHER CONDITIONS — 180 SPECIAL REQUIREMENTS
- 181 TEST AND CHECK
- 182 GENERAL OVERHAUL
- 183 SYSTEM/FREQUENCY CONVERSION
- 184 INITIAL SETUP REQUESTED
- 185 MODIFICATION/CIRCUIT CHANGE
- 186 WRONG SET IN CARTON
- 187 ACCESSORY MISSING
- 18X OTHER SPECIAL REQUIREMENTS
- 18Z SYMPTOM NOT AVAILABLE

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2 COMMUNICATION

1 — 210 NO RECEPTION
- 211 NO AM RECEPTION
- 212 NO FM RECEPTION
- 213 NO SW RECEPTION
- 214 NO VHF RECEPTION
- 215 NO UHF RECEPTION
- 216 NO BS RECEPTION
- 217 NO CS RECEPTION
- 218 NO HDTV RECEPTION
- 219 NO GPS RECEPTION
- 21X OTHER 'NO RECEPTION' PROBLEM

2 — 220 POOR RECEPTION
- 221 POOR AM RECEPTION
- 222 POOR FM RECEPTION
- 223 POOR SW RECEPTION
- 224 POOR VHF RECEPTION
- 225 POOR UHF RECEPTION
- 226 POOR BS RECEPTION
- 227 POOR CS RECEPTION
- 228 POOR HDTV RECEPTION
- 229 POOR GPS RECEPTION
- 22X OTHER 'POOR RECEPTION' PROBLEM

3 — 230 TRANSMISSION PROBLEM
- 231 NO TRANSMISSION
- 232 POOR TRANSMISSION
- 233 TRANSMISSION LEVEL TOO HIGH
- 234 NO TRANSMISSION BETWEEN BASE UNIT (OR NETWORK) AND HANDSET
- 235 POOR TRANSMISSION BETWEEN BASE UNIT (OR NETWORK) AND HANDSET
- 23X OTHER 'TRANSMISSION' PROBLEM

4 — 240 NOISY RECEPTION/TRANSMISSION
- 241 LINE NOISE
- 242 OSCILLATION
- 243 INTERSTATION INTERFERENCE
- 24X OTHER 'NOISY RECEPTION/TRANSMISSION' PROBLEM

5 — 250 UNSTABLE RECEPTION/TRANSMISSION
- 251 TUNING DRIFT
- 252 FADING
- 253 INTERMITTENT LINE
- 25X OTHER 'UNSTABLE RECEPTION/TRANSMISSION' PROBLEM

6 — 260 TUNING PROBLEM
- 261 MANUAL TUNING PROBLEM
- 262 AUTOMATIC TUNING PROBLEM
- 263 INCORRECT TUNING
- 264 TUNING MEMORY PROBLEM
- 26X OTHER 'TUNING' PROBLEM

7 — 270 SPECIAL COMMUNICATION PROBLEM
- 271 FAULTY DIALLING
- 272 FAULTY CHANNEL SELECTION
- 273 FAULTY AUTO-ANSWER OPERATION
- 274 FAULTY MESSAGE READ-OUT FUNCTION
- 275 FAULTY AUTODIAL/REDIAL MEMORY
- 276 FAULTY SPEECH PROCESSING
- 277 NO RINGING TONE
- 278 LOUD/WEAK RINGING TONE
- 27X OTHER 'SPECIAL COMMUNICATION' PROBLEM

8 — 280 SPECIAL RECEPTION PROBLEM
- 281 FAULTY STEREO RECEPTION
- 282 FAULTY MAIN CHANNEL (A) FUNCTION
- 283 FAULTY SUB-CHANNEL (B) FUNCTION
- 284 FAULTY SSB RECEPTION
- 285 FAULTY RDS/VPS/PDC OPERATION
- 286 FAULTY TELETEXT RECEPTION
- 287 FAULTY SATELLITE/RTTY RECEPTION
- 288 FAULTY FAX OPERATION
- 28X OTHER 'SPECIAL RECEPTION' PROBLEM

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3 PICTURE

1 — 310 NO PICTURE
- 311 NO PICTURE IN E TO E MODE
- 312 NO PICTURE IN PLAYBACK MODE
- 313 NO PICTURE IN VIEWFINDER
- 314 NO PICTURE, ONLY RASTER
- 315 NO RASTER, BLACK PICTURE
- 316 ONLY HORIZONTAL LINE
- 317 ONLY VERTICAL LINE
- 318 NO PICTURE IN LCD
- 31X OTHER 'NO PICTURE' PROBLEM

2 — 320 PICTURE LEVEL PROBLEM
- 321 PICTURE TOO DARK
- 322 PICTURE TOO BRIGHT
- 323 CONTRAST TOO LOW
- 324 CONTRAST TOO HIGH
- 325 SATURATED WHITE OR BLACK LEVEL
- 326 SHADING ON PICTURE
- 327 ONLY PARTIAL PICTURE
- 32X OTHER 'PICTURE LEVEL' PROBLEM

3 — 330 PICTURE QUALITY PROBLEM
- 331 POOR PICTURE RESOLUTION
- 332 POOR FOCUS
- 333 RINGING ON PICTURE
- 334 EXCESSIVE SMEAR/LAG
- 335 POOR LINEARITY OR GEOMETRY
- 336 PICTURE SIZE INCORRECT
- 337 INCORRECT CENTRING OF PICTURE
- 338 PICTURE SLANTED
- 339 V-SIZE INCORRECT
- 33A H-SIZE INCORRECT
- 33X OTHER 'PICTURE QUALITY' PROBLEM

4 — 340 PICTURE NOISE
- 341 SNOWY PICTURE
- 342 DOT NOISE OR DROPOUT ON PICTURE
- 343 NOISE BARS ON PICTURE
- 344 BLANKING LINES ON PICTURE
- 345 BEATING ON PICTURE
- 346 GHOSTING ON PICTURE
- 347 VCR HEAD SWITCHING NOISE ON PICTURE
- 348 OVERMODULATION NOISE
- 349 MOIRE
- 34A MOSAIC NOISE
- 34X OTHER 'PICTURE NOISE' PROBLEM

5 — 350 UNSTABLE PICTURE
- 351 SYNC PROBLEM
- 352 PICTURE PUMPING
- 353 PICTURE JITTER
- 354 PICTURE SHAKING (HORIZONTAL OR VERTICAL)
- 355 FLICKERING PICTURE
- 356 FLASHING PICTURE
- 357 CYCLIC PICTURE MUTING
- 358 HEAD IMPACT ERROR CAUSING UNSTABLE PICTURE
- 359 VCR SKEW/H-SHIFT ERROR
- 35A FROZEN PICTURE
- 35B JUMPING/REPEATING PICTURE
- 35X OTHER 'UNSTABLE PICTURE' PROBLEM

6 — 360 POOR PICTURE RECORDING
- 361 NO PICTURE RECORDING
- 362 NO ERASURE PROTECTION FOR VIDEO
- 363 PREVIOUS VIDEO RECORDING NOT BEING ERASED
- 364 UNWANTED ERASURE OF PICTURE
- 365 NO CAMERA RECORDING
- 366 ONLY ONE FIELD PER FRAME BEING RECORDED
- 36X OTHER 'PICTURE RECORDING' PROBLEM

7 — 370 SPECIAL PICTURE FUNCTION PROBLEM
- 371 EDITING PROBLEM
- 372 FAULTY FADING/WIPER OPERATION
- 373 FAULTY NEGATIVE/POSITIVE SWITCHING FUNCTION
- 374 FAULTY SUPERIMPOSE/TELOP OPERATION
- 375 FAULTY PICTURE IN PICTURE/DIGITAL PICTURE OPERATION
- 376 FAULTY PICTURE TRANSMISSION
- 377 FAULTY DIGITAL SHUTTER FUNCTION
- 378 FAULTY GENLOCK FUNCTION
- 379 FAULTY FLASH/STROBE FUNCTION
- 37A FAULTY DIGITAL PICTURE FUNCTION
- 37B FAULTY AUTO-EDIT FUNCTION
- 37C FAULTY PICTURE STABILIZER FUNCTION
- 37X OTHER 'SPECIAL PICTURE FUNCTION' PROBLEM

8 — 380 PICTURE DISPLAY/PICKUP PROBLEM
- 381 BURN MARK ON DISPLAY/PICKUP
- 382 SCRATCH ON DISPLAY/PICKUP
- 383 DUST/DIRT ON DISPLAY/PICKUP
- 384 PHOSPHOR/PIXEL MISSING ON DISPLAY/PICKUP
- 385 BRIGHT POINT(S) IN PHOSPHOR/PIXEL
- 386 LINES ACROSS/DOWN IMAGE
- 38X OTHER 'PICTURE DISPLAY/PICKUP' PROBLEM

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4 COLOUR

1 — 410 NO COLOUR
- 411 NO COLOUR IN E TO E MODE
- 412 NO COLOUR IN PLAYBACK MODE
- 413 NO COLOUR IN VIEWFINDER
- 414 NO COLOUR IN PART OF PICTURE
- 41X OTHER 'NO COLOUR' PROBLEM

2 — 420 COLOUR LEVEL PROBLEM
- 421 WEAK COLOUR
- 422 EXCESSIVE COLOUR
- 42X OTHER 'COLOUR LEVEL' PROBLEM

3 — 430 POOR COLOUR QUALITY
- 431 SOME OR ALL COLOURS MISSING
- 432 POOR WHITE BALANCE
- 433 HUE PROBLEM
- 434 PURITY ERROR
- 435 LANDING ERROR/WHITE UNIFORMITY
- 436 CONVERGENCE ERROR
- 437 REGISTRATION ERROR
- 438 PITCH MOIRE
- 439 COLOUR SHIFT
- 43X OTHER 'COLOUR QUALITY' PROBLEM

4 — 440 NOISY COLOUR
- 441 COLOUR NOISE ON A BLACK & WHITE PICTURE
- 442 COLOUR STREAKING
- 44X OTHER 'COLOUR NOISE' PROBLEM

5 — 450 UNSTABLE COLOUR
- 451 COLOUR FLASHING
- 452 HUE CONSTANTLY CHANGING
- 453 FLICKERING COLOUR
- 454 COLOUR NOT LOCKED
- 45X OTHER 'UNSTABLE COLOUR' PROBLEM

6 — 460 POOR COLOUR RECORDING
- 461 NO COLOUR RECORDING
- 462 NOISY COLOUR RECORDING
- 46X OTHER 'COLOUR RECORDING' PROBLEM

7 — 470 SPECIAL COLOUR FUNCTION PROBLEM
- 471 FAULTY AUTOMATIC WHITE BALANCE
- 472 FAULTY COLOUR EFFECTS FUNCTION
- 47X OTHER 'SPECIAL COLOUR FUNCTION' PROBLEM

8 — 480

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5 AUDIO

1 — 510 NO AUDIO
- 511 NO SOUND IN E TO E MODE
- 512 NO PLAYBACK OF OUTGOING MESSAGE(S)
- 513 NO PLAYBACK OF INCOMING MESSAGE(S)
- 514 NO AUDIO PLAYBACK
- 515 NO SOUND FROM HANDSET
- 516 NO SOUND FROM SPEAKER
- 517 NO SOUND FROM EARPHONE/HEADPHONE
- 518 NO MICROPHONE SOUND
- 51X OTHER 'NO AUDIO' PROBLEM

2 — 520 AUDIO LEVEL PROBLEM
- 521 LOW AUDIO LEVEL
- 522 EXCESSIVE AUDIO LEVEL
- 523 BALANCE PROBLEM
- 524 FADER PROBLEM
- 525 AUDIO LEVEL REMAINING
- 52X OTHER 'AUDIO LEVEL' PROBLEM

3 — 530 AUDIO QUALITY
- 531 POOR FREQUENCY RESPONSE
- 532 DISTORTED AUDIO
- 533 NO OR POOR TREBLE
- 534 NO OR POOR BASS
- 535 EARPHONE/HEADPHONE AUDIO POOR
- 53X OTHER 'AUDIO QUALITY' PROBLEM

4 — 540 NOISY AUDIO
- 541 HUM
- 542 HISS
- 543 CROSSTALK
- 544 STATIC, POP OR CLICK NOISE
- 545 BUZZ
- 546 SCRATCHING NOISE
- 547 IGNITION NOISE
- 548 WHISTLING NOISE
- 549 DATA/DIGITAL NOISE
- 54X OTHER 'AUDIO NOISE' PROBLEM

5 — 550 UNSTABLE AUDIO
- 551 JUMPING OR REPEATING AUDIO
- 552 AUDIO PUMPING OR BREATHING
- 553 AUDIO DROPOUTS
- 554 CYCLIC AUDIO MUTING
- 555 WOW AND FLUTTER
- 556 HOWLING/ACOUSTIC FEEDBACK
- 55X OTHER 'UNSTABLE AUDIO' PROBLEM

6 — 560 POOR AUDIO RECORDING
- 561 AUDIO NOT BEING RECORDED
- 562 NO ERASURE PROTECTION FOR AUDIO
- 563 PREVIOUS AUDIO RECORDING NOT BEING ERASED
- 564 UNWANTED ERASURE OF AUDIO
- 565 MESSAGE NOT BEING RECORDED
- 566 DISTORTED AUDIO RECORDING
- 56X OTHER 'AUDIO RECORDING' PROBLEM

7 — 570 POOR SPECIAL AUDIO FUNCTION
- 571 FAULTY FADE OPERATION
- 572 FAULTY ECHO OPERATION
- 573 FAULTY MIXING OPERATION
- 574 FAULTY REPEAT MODE OPERATION
- 575 FAULTY AUDIO PROCESSING
- 576 FAULTY SYNC RECORDING OPERATION
- 577 FAULTY DBB/DOL OPERATION
- 578 FAULTY NOISE REDUCTION OPERATION
- 579 FAULTY AUDIO DUB FUNCTION
- 57X OTHER 'SPECIAL AUDIO FUNCTION' PROBLEM

8 — 580 STEREO/MULTI MODE OPERATION PROBLEM
- 581 NO STEREO OPERATION
- 582 POOR CHANNEL SEPARATION
- 583 DIFFERENCE IN PHASE BETWEEN CHANNELS
- 584 PROBLEM WITH SURROUND SOUND MODE
- 585 PROBLEM WITH PCM AUDIO MODE
- 58X OTHER 'STEREO/MULTI MODE' PROBLEM

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6 MECHANISM

1 — 610 NO MECHANICAL OPERATION
- 611 NO DISC ROTATION
- 612 NO FORWARD OPERATION
- 613 NO REVERSE OPERATION
- 614 NO FAST FORWARD OR REWIND FUNCTION
- 615 NO LOADING
- 616 NO UNLOADING OR EJECTING OF TAPE
- 617 NO AUTO SHUT-OFF OPERATION
- 618 TONEARM DOES NOT MOVE
- 619 DISC NOT BEING EJECTED
- 61A MAGAZINE OR MODULE LOADING/UNLOADING
- 61X OTHER 'NO MECHANICAL OERATION' PROBLEM

2 — 620 IRREGULAR MECHANICAL OPERATION
- 621 IRREGULAR ROTATION
- 622 IRREGULAR FORWARD MODE
- 623 IRREGULAR REVERSE OPERATION
- 624 IRREGULAR FAST FORWARD OR REWIND FUNCTION
- 625 IRREGULAR LOADING
- 626 IRREGULAR UNLOADING OR EJECTING OF TAPE
- 627 IRREGULAR AUTO SHUT-OFF OPERATION
- 628 IRREGULAR TONEARM MOVEMENT
- 629 IRREGULAR EJECTION OF DISC
- 62A IRREGULAR DIRECTION CHANGE
- 62X OTHER 'IRREGULAR MECHANICAL OPERATION' PROBLEM

3 — 630 SPEED PROBLEM
- 631 SPEED TOO FAST
- 632 SPEED TOO SLOW
- 63X OTHER 'SPEED' PROBLEM

4 — 640 MECHANICAL NOISE
- 641 ROTATION NOISE
- 642 MOTOR NOISE
- 643 WIND NOISE
- 644 TAPE SQUEALING
- 645 FAN NOISE
- 646 DISC SCRAPING
- 647 NOISY TAPE LOADING
- 648 GEAR NOISE
- 64X OTHER 'MECHANICAL NOISE' PROBLEM

5 — 650 MECHANICALLY UNSTABLE
- 651 UNEVEN FEET
- 652 FAULTY HINGE
- 65X OTHER 'MECHANICAL INSTABILITY' PROBLEM

6 — 660 DAMAGE TO SOFTWARE
- 661 TAPE GETS SCRATCHED
- 662 DISC GETS SCRATCHED
- 663 TAPE GETS CHEWED/WRINKLED
- 664 TAPE JAMMED OR BROKEN
- 665 TAPE GETS CURLED
- 666 SLACK TAPE
- 667 TAPE STICKING
- 66X OTHER 'SOFTWARE DAMAGE' PROBLEM

7 — 670 MECHANICAL OPERATION PROBLEM
- 671 FAULTY START/STOP OPERATION
- 672 FAULTY PAUSE OPERATION
- 673 FAULTY AUTOMATIC PROGRAM SEARCH
- 674 FAULTY CUE/REVIEW MODE
- 675 FAULTY SLOW MOTION OPERATION
- 676 FAULTY HIGH-SPEED SCANNING MODE
- 677 FAULTY SPEED COPY FUNCTION
- 678 FAULTY REPEAT OPERATION
- 679 FAULTY RECORD REVIEW MODE
- 67A FAULTY AMS OPERATION
- 67B AUTO-REVERSE MALFUNCTION
- 67C FAULTY END DETECTION
- 67X OTHER 'MECHANICAL OPERATION' PROBLEM

8 — 680 LENS PROBLEM
- 681 FOCUS PROBLEM
- 682 ZOOM PROBLEM
- 683 IRIS PROBLEM
- 684 MACRO PROBLEM
- 68X OTHER 'LENS' PROBLEM

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7 DATA PROCESSING

1 — 710 NO DATA PROCESSING OPERATION
- 711 NO INITIAL SCREEN
- 712 SYSTEM DOES NOT RESET
- 713 SYSTEM DOES NOT BOOT UP
- 714 NO OPERATION FROM PLUG-IN MODULE
- 715 NO KEYBOARD OPERATION
- 716 NO OPERATION FROM OTHER INPUT/OUTPUT DEVICE
- 717 NO DATA STORAGE OPERATION
- 718 NO DATA COMMUNICATION
- 71X OTHER 'NO DATA PROCESSING' PROBLEM

2 — 720 FAULTY DATA PROCESSING OPERATION
- 721 INCORRECT DATA
- 722 SYSTEM RESET WHILE BEING USED
- 723 SYSTEM LOCKS OUT/CRASHES
- 724 FAULTY OPERATION OF PLUG-IN MODULE
- 725 FAULTY KEYBOARD OPERATION
- 726 FAULTY OPERATION OF OTHER INPUT/OUTPUT DEVICE
- 727 FAULTY DATA STORAGE OPERATION
- 728 FAULTY DATA COMMUNICATION
- 72X OTHER 'FAULTY DATA PROCESSING' PROBLEM

3 — 730 DATA DISPLAY PROBLEM
- 731 INCORRECT CHARACTER DISPLAY
- 732 MISSING DISPLAY CHARACTERS
- 733 FAULTY GRAPHIC DISPLAY
- 734 FAULTY SWITCHING BETWEEN GRAPHIC/CHARACTER MODE
- 735 FAULTY PROMPT/CURSOR OPERATION
- 736 DATA DISPLAY COLOUR INCORRECT
- 737 NO PAGING OR SCROLL MODE
- 73X OTHER 'DATA DISPLAY' PROBLEM

4 — 740

5 — 750

6 — 760 DATA READ/WRITE PROBLEM
- 761 FORMATTING PROBLEM
- 762 DATA ON STORAGE MEDIUM BEING LOST
- 763 FRAME MEMORY PROBLEM
- 76X OTHER 'DATA READ/WRITE' PROBLEM

7 — 770 SPECIAL DATA PROCESSING FUNCTION PROBLEM
- 771 FAULTY SELF-DIAGNOSTIC MODE
- 772 FAULTY WORD PROCESSING FUNCTION
- 773 FAULTY GRAPHIC EDIT FUNCTION
- 77X OTHER 'SPECIAL DATA FUNCTION' PROBLEM

8 — 780

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8 PRINTING

1 — 810 NO PRINTER OPERATION
- 811 NOT PRINTING
- 812 NO COMMUNICATION WITH PRINTER
- 813 PAPER NOT LOADING
- 814 NO PAPER FEED
- 815 NO IMAGE FIXATION
- 81X OTHER 'NO PRINTER OPERATION' PROBLEM

2 — 820 ERRONEOUS PRINTER OPERATION
- 821 PRINT IMAGE REVERSED (NEGATIVE/POSITIVE)
- 822 IRREGULAR PAPER FEED
- 823 ERRONEOUS PRINT MODE SWITCHING
- 82X OTHER 'PRINTER OPERATION' PROBLEM

3 — 830 POOR PRINT QUALITY
- 831 INCORRECT PRINTING POSITION
- 832 LOW PRINT CONTRAST
- 833 EXCESSIVE PRINT CONTRAST
- 834 BLURRED PRINT IMAGE
- 835 PRINT IMAGE NOT SHARP
- 836 DOTS MISSING IN PRINT IMAGE
- 83X OTHER 'PRINT QUALITY' PROBLEM

4 — 840 NOISY PRINTING
- 841 PRINTING NOISE LINES
- 842 DIRTY PRINTING
- 84X OTHER 'NOISY PRINTING' PROBLEM

5 — 850 UNSTABLE PRINTER OPERATION
- 851 UNSTABLE PAPER LOADING
- 852 UNSTABLE MULTI-PAPER LOADING
- 853 INCORRECT LINE-UP OF CHARACTERS
- 85X OTHER 'UNSTABLE PRINTER OPERATION' PROBLEM

6 — 860 RIBBON/PAPER PROBLEMS
- 861 RIBBON BROKEN
- 862 RIBBON STUCK/STICKING
- 863 RIBBON DERAILED
- 864 PAPER STUCK/STICKING TO MECHANISM
- 865 PAPER JAM
- 86X OTHER 'RIBBON/PAPER' PROBLEM

7 — 870

8 — 880 FAULTY FONT/CHARACTER FUNCTIONS
- 881 INCORRECT CHARACTERS OR IMAGE
- 882 INCORRECT CHARACTER SIZE
- 883 FONT LOADING PROBLEM
- 88X OTHER 'FAULTY FONT/CHARACTER FUNCTION' PROBLEM

EACEM - SECTION CODES

Code	Description	Code	Description	Code	Description
ANT	ANTENNA SECTION	HDD	HARD DISC DRIVE	RFU	BOOSTER,RF UNIT
APA	AUDIO PROCESSING/ANALOG	HFS	HIGH FREQUENCY SECTION (RF)	RHD	ROTARY HEAD(S)
APD	AUDIO PROCESSING/DIGITAL	HOL	CASSETTE HOLDER	SFT	SOFTWARE (TAPE, DISC, ETC.)
APR	SIGNAL PROCESSING (ANALOG)	IDS	INFORMATION DISPLAY SECTION	SHD	STATIONARY HEAD(S)
ARM	ARM MECHANISM	IFC	IF-CIRCUIT	SLD	SLED MECHANISM
BCH	BATTERY CHARGE	IMG	IMAGE DISPLAY UNIT	SNS	SENSOR UNIT
BZL	BEZEL	INC	INTERNAL CONNECTOR	SPK	SPEAKER
CBT	CABINET	INP	SIGNAL INPUT SECTION	SRS	SUPPLY REEL SECTION
CHA	CHASSIS	KBD	KEYBOARD (SEPARATE)	STA	STATIC BLOCK
CLK	CLOCK/TIMER SECTION	LDG	LOADING MECHANISM	SVO	SERVO SECTION
CPA	COLOUR PROCESSING/ANALOG	LNM	LENS MECHANISM	SYS	SYSTEM CONTROL SECTION
CPD	COLOUR PROCESSING/DIGITAL	MEM	MEMORY CIRCUIT	TDM	TAPE DRIVE MECHANISM
CRT	PICTURE TUBE	MIC	MICROPHONE SECTION	THR	THREADING MECHANISM
CTR	CONTROL PANEL	OUT	SIGNAL OUTPUT SECTION	TNR	TENSION REGULATOR
DDM	DISC DRIVE MECHANISM	PFM	PAPER FEED MECHANISM	TPT	TAPE PATH
DFL	DEFLECTION CIRCUIT	PIN	PINCH ROLLER/LEVER	TRS	TAKE-UP REEL SECTION
DPR	SIGNAL PROCESSING (DIGITAL)	PRG	PROGRAMMING SECTION	TUN	TUNING SECTION
ERA	ERASE CIRCUIT	PRI	PRINT BLOCK	TXT	TEXT PROCESSING
EXC	EXTERNAL CONNECTOR	PRT	PROTECTION CIRCUIT	VPA	VIDEO PROCESSING/ANALOG
FDD	FLOPPY DISC DRIVE	PSU	POWER SUPPLY	VPD	VIDEO PROCESSING/DIGITAL
FLX	FLEXIBLE PRINTED CIRCUIT BOARD	PUD	PICK-UP DEVICE	VWF	VIEWFINDER
FMW	FIRMWARE	PWA	POWER AMP SECTION	WIR	LEAD WIRE
FPK	FOCUS PACK	REM	REMOTE CONTROL SECTION	XXX	CABINET/COSMETIC PARTS
HCM	HEAD CARRIAGE MECHANISM	RFM	RIBBON FEED MECHANISM		

DEFECT CODES

	MECHANICAL		ELECTRICAL
A	WORN OUT	N	DEFECTIVE ELECTRICAL COMPONENT/MODULE
B	DIRTY, CLOGGED	O	BURNT, ARCING, MISSING PIXELS
C	MISALIGNED	P	MISALIGNED
D	CUT, BROKEN	Q	SHORT
E	DEFORMED	R	OPEN
F	SNAPPED	S	LEAKING
G	SCRATCHED	T	BAD CONTACT, CONNECTION
H	CRACKED, PEELED, CORRODED	U	OPEN PATTERN
I	LOOSE	V	CRACKED PRINTED CIRCUIT BOARD
J	SHAKY, UNSTABLE	W	COLD OR NO SOLDERING
K	LEAKING	X	BRIDGED SOLDERING
L	DRY (NO LUBRICANT)	Y	WRONG COMPONENT
M	FOREIGN OBJECT	Z	MISSING COMPONENT
		1	SOFTWARE PROBLEM
		2	EXHAUSTED, LOW EMISSION
		3	NO PROBLEM FOUND (SET WITHIN SPEC)
		4	NO PROBLEM FOUND - CUSTOMER MISUNDERSTANDING
		5	NO PROBLEM FOUND - LOCAL CONDITIONS

REPAIR CODES

Code	Description	Code	Description
A	REPLACEMENT	N	MAINTENANCE
B	MECHANICAL ALIGNMENT	O	REFURBISHING
C	ELECTRICAL ALIGNMENT	P	PREVENTIVE PARTS REPLACEMENT
D	RESOLDERING	Q	PREVENTIVE ACTION WITHOUT PARTS REPLACEMENT
E	CLEANING	U	EXPLANATION FOR CUSTOMER
F	LUBRICATION	V	ESTIMATION REFUSED
G	REPAIRED ELECTRICAL PARTS	W	ESTIMATION WITH PARTS
H	REPAIRED MECHANICAL PARTS	X	ESTIMATION WITHOUT PARTS
I	S/B MODIFICATION	Y	RETURN WITHOUT REPAIR
J	REMOVED COMPONENT(S)	Z	SET EXCHANGE
K	ADDED COMPONENTS	1	SOFTWARE CORRECTION
L	FUNCTIONAL CHECK	2	SOFTWARE UPGRADE
M	SPECIFICATION MEASUREMENT	3	PRODUCT UPGRADE (ON REQUEST)

EXAMPLE OF USE:

FLAG	SYMPTOM CODE	PART NO.	REF. NO.	SECTION/PCB	DEFECT CODE	REPAIR CODE	QTY
1.	1 4 1 2 / 3 6 4 1	1 1 1 1 1 1 1 1 1 / 3 4 5 6 7 8 9 X X	R 1 2 3 . / 1 1 1 . .	Y A 2 2 . / T D M . .	R C	A B	1 0

FLAG: INDICATES THE ONE MAJOR SYMPTOM/PART COMBINATION BY '1'

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SERVICE NEWSLETTER

03.01 TYPENUMBER(S): **ALL TYPENUMBERS**

SYMPTOM	:	POS stickers on cassette doors & loudspeaker boxes cannot be removed.
CURE	:	The stain-mark left behind from POS stickers can be removed by any cleaning fluid that does not attack plastic surfaces. One effective remover is the "Contact Cleaner Spray", available in most service workshops. The spray can be ordered with service codenumber 4822 389 50091.
REMARKS	:	

03.02 TYPENUMBER(S): **AS660C, AS665C, FW332, FW335, FW340C, FW342C, FW345C, FW352C, FW362, FW363, FW372C, FW373C, FW710C, MC130, MC150**

INFORMATION	:	**Correction Service Manual, partslist:** The service codenumber for the loudspeaker socket (pos. 1290) on the Power Board is missing. The socket can be ordered with 4822 265 10967.
REMARKS	:	

03.03 TYPENUMBER(S): **FW36, FW56, FW360C, FW650C**

|		
SYMPTOM	:	The 7-disc changer is jamming.
CURE	:	The problem is caused by poor engagement between the worm gear of motor (pos. 30) and gear H (pos. 33) due to alignment between the 2 parts. The alignment is improved by modifying the metal bracket (pos. 31) for the motor. The improved metal bracket is now available with service codenumber 4822 466 11893.
REMARKS	:	See also Service Newsletter AS98.01.04.

03.04 TYPENUMBER(S): **FW332**

SYMPTOM : Cassette door jams with cassette inside during eject

CURE : The problem is caused by deformation of the cassette door's plastic springs.

For repair the cassette door must be replaced by an improved cassette door. Improved cassette doors can be recognized by a step at the bottom edge of the door (see picture).

REMARKS : Improved cassette doors have been implemented in production from week 9802 onwards (sets with serial no. MA....).
See also Service Newsletter AS97.01.17.

Step on each side
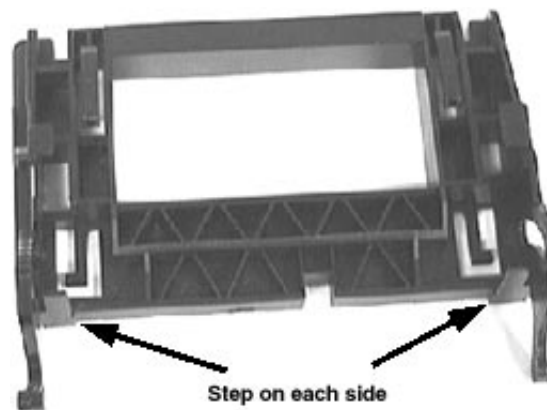
03.05 TYPENUMBER(S): **FW332/25**

SYMPTOM : The CD is still spinning when the CD door is opened and thus the CD gets damaged.

CURE : The problem is caused by software design.
Repair on the old CD module is not feasible because of complicated re-work (exchange of CD board).
New improved CD modules (with new CD board) have been implemented in production from week 9729 onwards.

REMARKS : Inproved CD module information is published in Service Information A97-179.

03.06 TYPENUMBER(S): **FW362, FW363, FW372C, FW373C, FW382V, FW383V, FW395C, FW710C, FW725C, FW730C, FW745C, FW750C, FW770P, FW780P, FW790P, M7C, M17C, M18C, M27C, M28C, M37DC, M38C, M48DC, MX545, MX555**

SYMPTOM : Cassette door jams because the R/P-head is fully retracted after "STOP".

CURE : The likely cause is that the cam gear screw-hole is cracked.
The problem can only be solved by replacing the complete deck.
Improved tape mechanisms have been implemented in production from week 9743 onwards.

REMARKS : See also Service Newsletters AS97.03.08 and AS97.04.07.

03.07 TYPENUMBER(S): **FW372C**

INFORMATION : High failure rate of power amplifier AN7164 when used continuously on high volume setting.
For service repair AN7164N (4822 209 16327) should be used because of its higher supply voltage working range
(Vcc=8.3V to 30.0V).

REMARKS :


03.08 TYPENUMBER(S): **FW391C**

SYMPTOM : When the set is tuned to an FM-station and power is switched off and on again after 3 seconds, the display shows the last tuned FM-frequency, but actually an AM-station is audible.

CURE : The phenomenon is caused by mismatch of software and hardware timing. The problem can be solved by the following hardware modification on the front board:
1. Cut a copper track between resistor 3459 (10kΩ) and ground D.
2. Connect a short wire between resistor 3459 to +F supply (+5V).
For details on this rework, see circuit and layout diagram below.

REMARKS :
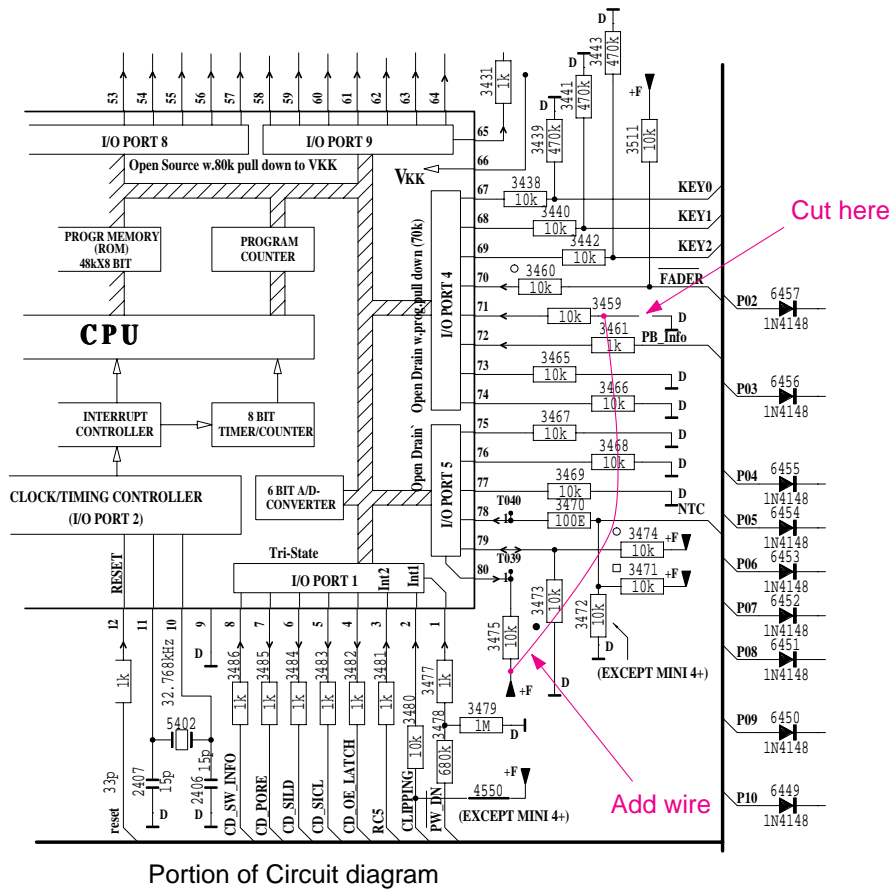
Portion of Circuit diagram
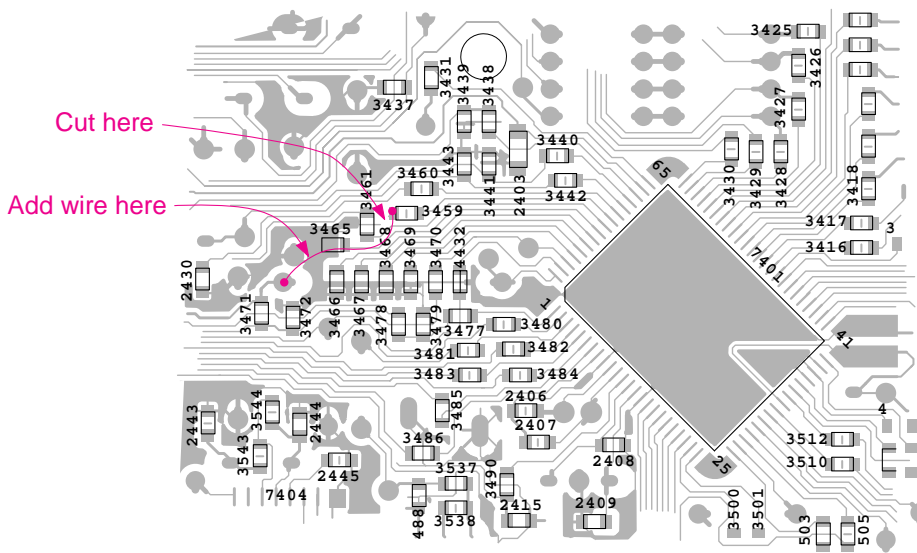
Portion of Layout diagram

03.09 TYPENUMBER(S): **FW750C**

SYMPTOM : Set switches automatically to DEMO mode, and the clock is reset to 00.00hr

CURE : The problem occurs most likely due to a bad connection between connectors CN1401 to CN1501 (contaminated contact pins).
Solution: Remove and plug back the connectors.

REMARKS :

03.10 TYPENUMBER(S): **FW780P**

SYMPTOM : Set does not read the particular CD
"Indian Sound – ANUBHAVAM PUDUMAI".

CURE : The 3-CDC module in the set was unable to read the CD because it does not fulfil the generic CD standards according to the Optical Recording Lab at Philips Eindhoven.
However, sets with the 3-CDC MG module can read the CD.
3-CDC MG modules have been introduced in production from week 9738 onwards (see Service Information A97-167).

REMARKS :

03.11 TYPENUMBER(S): **FW790P**

SYMPTOM : Power transistor 7302 (BD242BF1) and
Dolby Pro-logic decoder 7501 (M69032) are defective.

CURE : The metal bracket, clamping transistor 7302 onto the heatsink for proper heat dissipation, is missing. This causes the C-E-line of the transistor to short circuit. As a result the supply voltage of the Dolby Pro-logic decoder becomes 18V, which damages the device.

Working procedure for mounting of metal bracket:
1. Dismantle the set and take out the Power 1 Module.
2. Insert one end of the metal bracket (4822 402 10969) into the slot provided in the heatsink (see picture below).
Use a self-tapping screw D2.9x13 to mount the other end of the bracket onto the heatsink. The bracket will press transistor and bridge rectifier onto the heatsink for max. heat dissipation.
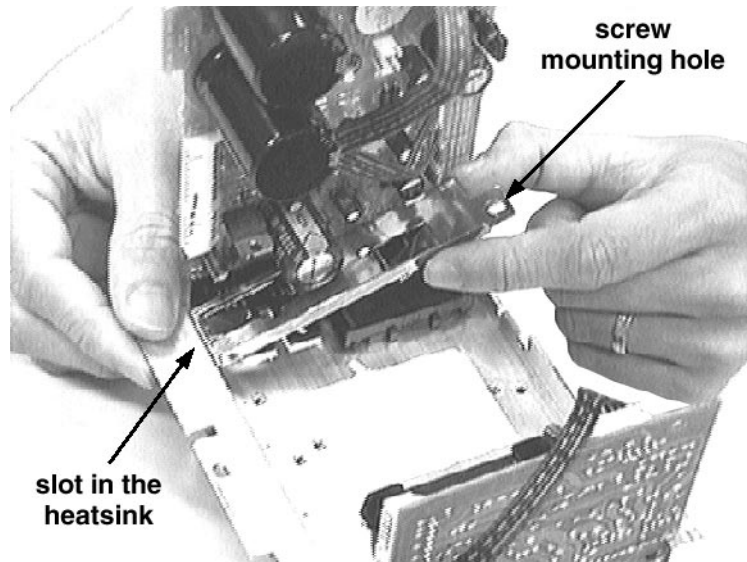
Note: In the picture one pc board and the fan/bracket is removed for photographing purpose only. This is not necessary for mounting of metal bracket.

————————— IMPORTANT INFORMATION —————————
All sets brought in for repair must be checked if the metal bracket is assembled !!

REMARKS :

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SERVICE NEWSLETTER

02.01 TYPENUMBER(S) : **MC135**

SYMPTOM : Hum is audible in standby mode

CURE : In Addition to Service Newsletter AS98.01.09, mechanical noise from power transformer might also be audible. To solve this problem, following actions have been taken in production:

1) The construction of the power transformer has been modified. The code number of the improved transformer remains unchanged. It can be recognized by the metal band which is grey in colour.

2) 4 fibre washers between the power transformer and the bottom chassis have been added. The size (id x od x t) of the fibre washer is 4 x 8 x 1mm. It is also available from PCS via service code 4822 532 12975

REMARKS : Modification has been implemented in production from week 9801 onwards.

02.02 TYPENUMBER(S) : **MC135, MC155**

SYMPTOM : RDS information cannot be displayed in area with crowded stations.

CURE : Solution is to shift the VCO frequency of IC505 by changing the value of the following capacitors:
C527 : changed from 82pF to 33pF (5322 122 32072)
C528 : changed from 47pF to 22pF (5322 122 32143)
Measure the frequency at pin 14 of IC505 to be within 4.33204MHz ±200kHz.

REMARKS : Modification has been implemented in production from week 9749 onwards.

02.03 TYPENUMBER(S): **FR732, FR752**

SYMPTOM : Sound is too loud at first volume step.

CURE : Problem occurs only when Dolby Prologic Surround is activated.
It cannot be solved by an ordinary repair procedure. We suggest to
advise customer to switch the Dolby Prologic Surround OFF when
enjoying quiet programmes. Dolby Prologic Surround is intended to
be used for home theatre entertainment.

REMARKS :

LINE OF BUSINESS AUDIO SYSTEMS

SERVICE NEWSLETTER

01.01 TYPENUMBER(S): **AS670C, AS675C, AS785C, FW315C, FW340C, FW355C, FW365C, FW373C, FW375P, FW385P, FW710C, FW725C, FW730C, FW745C, FW750C, FW770P, FW780P, FW790P**

INFORMATION : **Error in parts list for (old) CDC-3 changer module**
On page 10-12 of the Service Manual the service codenumber for flexfoil 17p is published. This cable is not used in the module.
The correct flexfoil (15 pins instead of 17 pins) is published on page 10-14 as item 8002, service codenumber 4822 320 11313.

REMARKS : This correction is only valid for old CDC-3 changer modules with pc board printing 3104 113 3109.

01.02 TYPENUMBER(S): **AS670C, FW355C, FW375P, FW385P, FW725C, FW730C, FW780P**

INFORMATION : **Power4 module**
Following changes have been introduced in course of production:

1. Capacitor 2251 has been changed from 470µF to 100µF (4822 124 40225). The capacitor has been rotated by 90° from layout change stage .5 to .6.

2. To reduce risk of destroying power amplifier in worst case, diodes 6301 and 6351 (4-channel set only) have been changed from 24V type to 22V (4822 130 34441).

3. Layout stage has been changed from .6 to .7 to include possiblility to stuff a fuse instead of resistor 3204 (3,3Ω NFR).

4. Elcaps 2205 and 2214 for 4-channel set have been deleted because they are no longer required.

REMARKS :

01.03 TYPENUMBER(S): **FR931**

SYMPTOM : Fluorescent display blinks at 75% power output level.
The problem arises when the set is loaded with 2 loudspeaker boxes FB850 but it does not happen when loaded with 4 same loudspeaker boxes. No fault is found on the set.

CURE : The problem can be resolved by changing Zener diode D305 from 39V to 30V (4822 130 34328).

REMARKS :

01.04 TYPENUMBER(S): **FW36, FW56, FW360C, FW650C**

SYMPTOM : The 7-disc changer is jamming.

CURE : The cause of jamming is unclear but the changer works again when the mechanism is re-adjusted.
When the problem re-occurs it is recommended to replace the entire mechanism. The service codenumber for the mechanism is 4822 691 10684.

REMARKS :

01.05 TYPENUMBER(S): **FW315, FW340C**

INFORMATION : **Missing service codenumber in Mechanical partslist**
pos 216   4822 462 40683   Plate (Foot)

REMARKS :

01.06 TYPENUMBER(S): **FW352C**

INFORMATION : The following service codenumbers for the mains transformer are missing in the Service Manual.

Service code	Description
4822 146 10443	Mains transformer /21/30
4822 146 10712	Mains transformer /37
4822 146 10465	Mains transformer /22/25

REMARKS :

01.07 TYPENUMBER(S): **FW383V**

INFORMATION : **Correction to the parts list**
Pos 224 should be
4822 492 11086   Spring Compression instead of
4822 492 11046   Cassette door spring.

REMARKS :

01.08 TYPENUMBER(S): **FW670P**

      SYMPTOM   : Distortion when playing back a recording made on this set.

      CURE   : ALC feedback capacitors 2737 and 2738 on combi board are missing.
                                 2737   4822 126 10002   100nF 20% 25V
                                 2738   4822 126 10002   100nF 20% 25V

      REMARKS   :

01.09 TYPENUMBER(S): **MC135**

      SYMPTOM   : Hum is audible in standby mode.

      CURE   : Cut the copper track which passes through the pins of CE556.
                                 Connect the grounding point of C523 to JP560 with a wire.
                                 For details see Service Information A97-588 (4822 725 25646).

      REMARKS   : Modification has been implemented in production from week 9742 onwards.

01.10 TYPENUMBER(S): **MC172/30**

      INFORMATION   : **Correction to the partslist**
                                 The service codenumber for the microprocessor should be
                               4822 209 15766 with marking "170S51551" instead of
                               4822 209 15767 published on page 6-6 in the Service Manual.

      REMARKS   :

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DCC

01.11 TYPENUMBER(S): **DCC730, DCC951**

INFORMATION : A small quantity of complete Digital Deck Units is available with
service codenumber 4822 691 10666.

REMARKS :