

Compact disc player

CD751/00/01/06

Service
Service
Service



Service Manual

TABLE OF CONTENTS

PAGE

1. Technical specifications	2
2. Instructions for use	3
3. Warnings	9
4. Servicing hints	10
5. Dismantling instructions	11
6. Service test programme	12
7. CDM12 start up diagram	13
8. Faultfinding diagram CDM12	14
9. Faultfinding diagram decoder part	20
10. Specifications measurement	21
11. Abbreviations	22
12. Block diagram	23
13. Wiring diagram	24
14. Circuit diagram and printed boards	
14.1. Power supply	25
14.2. Servo circuit diagram	26
14.3. Decoder circuit diagram	27
14.4. Dac circuit diagram	28
14.5. Main panel component side	29
14.6. Main panel solder side	30
14.7. Control & Display & Headphone	31
15. Exploded view Loader & Parts list	32
16. Exploded view Cabinet & mechanical parts list	33
17. Electrical parts list	34



PHILIPS

TECHNICAL SPECIFICATIONS

General

1.Mains voltage	/00	: 220-230V($\pm 10\%$) 50Hz
	/01	: 120/230V($\pm 15\%$) 50/60Hz
	/06	: 100V($\pm 10\%$) 50/60Hz
2.Mains frequency		: 50-60 Hz
3.Mains voltage selection	/00	: no
	/01	: 2 position selector(110/230V), preset is 230V
	/06	: no
4.Power consumption mains,standby		: < 3W

Line output

1.Number of channels		: 2
2.Output voltage		: 2 Vrms $\pm$ 2 dB
3.Unbalance left-right		: max. 1 dB
4.Output resistance		: 1 k Ω
5.Amplitude linearity	from 20 Hz to 20 kHz	: typ. $\pm$ 0.1 dB
		: max. $\pm$ 0.3 dB
6.Phase non-linearity	from 20 Hz to 16 kHz	: max. 7.0°
		: typ. 3.2°
7.Signal to noise ratio	from 20 Hz to 20 kHz	: min. 95 dB(typ. 100 dB)
	with digital silence kill	: min. 100 dB(from 20 Hz to 20 kHz)
8.Dynamic range (-60 dB)	1 kHz	: min. -90 dB
	from 20 Hz to 20 kHz	: min. -85 dB
9.Total harmonic distortion + noise	1 kHz	: 85 dB
	from 20 Hz to 20 kHz	: min. 80 dB(typ. 88 dB)
10.Intermodulation distortion	from 20 Hz to 20 kHz	: min. 70 dB(typ. 80dB)
11.Out-band attenuation		: min. 35 dB above 40 kHz
12.Channel separation	1 kHz	: min. 88 dB(typ. 90 dB)
	from 20 Hz to 20 kHz	: min. 80 dB
13Automatic switched deemphasis with time constant 15/50 μ s		
14.Non-linearity at -90 dB		: $\pm$ 1 dB(typ. 0 dB)

Variable headphone

1.Output voltage		: max. 5 Vrms $\pm$ 2 dB
2.Unbalance left-right		: max. $\pm$ 1.2 dB
3.Output resistance		: 120 Ω
4.Load impedance range		: 32 Ω to 600 Ω load
5.Output power		: 0 to 34 mW into 32 Ω load
		: 0 to 52 mW into 120 Ω load
		: 0 to 29 mW into 600 Ω load

Audio specs in case of 600 Ω load at 4Vrms voltage output:

1.Signal to noise ratio		: typ. 80 dB (1 kHz)
2.Dynamic range		: min. 75 dB (20 Hz -20 kHz)
3.Total harmonic distortion		: min. 70 dB (20 Hz - 20 kHz)
4. Intermodulation distortion		: min 67 dB(20 Hz - 20 kHz)
5.Channel separation		: min. 70 dB (1 kHz)
		: min. 65 dB (31.5 Hz - 16 kHz)

Dimensions and weight

1.Apparatus tray closed		: WxDxH 435 x 302 x 90/106 mm
2.Apparatus tray open		: WxDxH 435 x 445 x 90/106 mm
3.Weight	in packaging	: ca. 4.0 kg
	without packaging	: ca 4.5 kg

Optical read-out system

1.Laser type		: Semiconductor AlGaAs
2.Wavelength		: 780 nm $\pm$ 20 nm
3.Light output (c.w.)		: max. 0.5 mW

CONTENTS

English

	PAGE
INSTALLATION	5
Accessories	5
Power supply setting.....	5
Connections.....	5
Fitting a mains plug (U.K. only).....	5
FUNCTIONAL OVERVIEW	6-7
Front of player	6
Remote control.....	7
Display	7
PLAYBACK	8-10
Normal playback	8
Selecting another track during play.....	9
Searching for a passage during play.....	9
Starting with a particular track.....	9
Scanning a CD	9
Playing the CD in random order	9
Repeating play	9
Calling up other time information.....	9
Adjusting the sound level.....	10
Setting the fade-in and fade-out time.....	10
Inserting an extra pause	10
Searching the loudest passage	10
Listening with headphones	10
PROGRAMMING	11
Storing a programme.....	11
Checking the programme.....	11
Playing the programme	11
Erasing a programme	11
Erasing a track from a programme.....	11
EDIT	12
Recording in the EDIT mode.....	12
ADDITIONAL INFORMATION	13
Maintenance.....	13
Recycling	13
TROUBLESHOOTING	14
TECHNICAL DATA	15

INSTALLATION

INSTRUCTION FOR USE

English

ACCESSORIES

With this player are supplied:

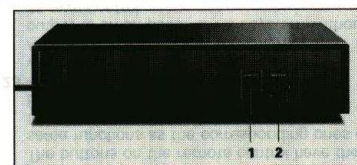
- a connection cable;
- a remote control;
- batteries for the remote control.

POWER SUPPLY SETTING

- Check that the type plate on the rear of your player indicates the correct supply voltage.
- If your mains supply voltage is different, consult your dealer or our Service Organisation.
- *Certain versions of this player are equipped with a voltage selector at the bottom of the player which enables you to set the player to the correct mains voltage yourself:*
 position 120 V – for all mains voltages between 110V and 127 V;
 position 230 V – for all mains voltages between 220V and 240 V.



CONNECTIONS



1 DIGITAL OUT

This output supplies a digital signal and can therefore only be connected to an input which is suitable for this signal.
Use here a lead with one cinch plug on either end.



Never connect this socket to a non-digital input of an amplifier, such as AUX, CD, TAPE, PHONO, etc!

2 ANALOG OUT

For the connecting cable to the amplifier.



- Insert a red plug into the 'R' socket and the other plug into the 'L' socket.
- Insert the two other plugs into the corresponding sockets of the CD or AUX input of your amplifier.
You can also use the TUNER or TAPE IN-connection, but **never** the PHONO input!

FITTING A MAINS PLUG (U.K. ONLY)

This apparatus is fitted with an approved 13 Amp plug. To change a fuse in this type of plug proceed as follows:

- Remove fuse cover and fuse.
- Fix new fuse which should be a BS1362 5A, A.S.T.A. or BSI approved type.
- Refit the fuse cover.

If the fitted plug is not suitable for your socket outlets, it should be cut off and an appropriate plug fitted in its place.

If the mains plug contains a fuse, this should have a value of 5A. If a plug without a fuse is used, the fuse at the distribution board should not be greater than 5A.

NOTE

The severed plug must be disposed to avoid a possible shock hazard should it be inserted into a 13A socket elsewhere.

HOW TO CONNECT A PLUG

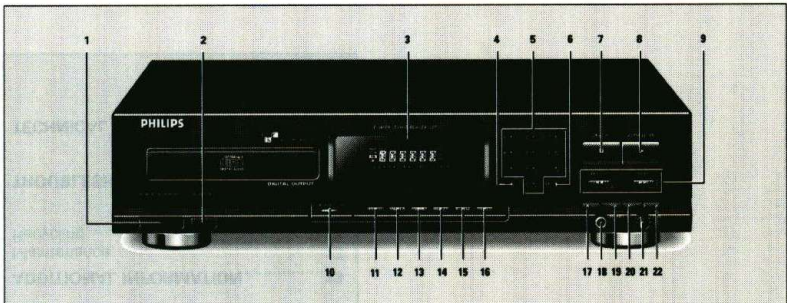
The wires in the mains lead are coloured in accordance with the following code: BLUE – "NEUTRAL" ("N") and BROWN – "LIVE" ("L"). As these colours may not correspond with the colour markings identifying the terminals in your plug, proceed as follows:

- The BLUE wire must be connected to the terminal which is marked with the letter "N" or coloured BLACK.
- The BROWN wire must be connected to the terminal which is marked with the letter "L" or coloured RED.
- Do **not** connect either wires to the earth terminal in the plug which is marked by the letter "E" or by the safety earth symbol or coloured green or green-and-yellow.

Before replacing the plug cover, make certain that the cordgrip is clamped over the sheath of the lead – not simply over the two wires.

FUNCTIONAL OVERVIEW

English



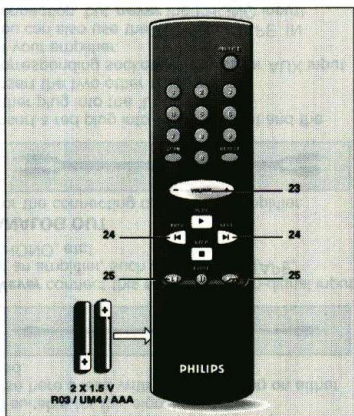
FRONT OF PLAYER

- 1 POWER ON/STANDBY** – Switching on and off.
- 2 (Infra) R(ed) SENSOR** – Receives the signals from the remote control.
- 3 Display** – Informs you about the functioning of the player.
- 4 PRG (programme)** – Opening and closing the memory when compiling a programme.
- 5 1-0 digit keys**
 - Selecting another track during play.
 - Selecting a track to start play with.
 - Selecting tracks when compiling a programme.
 - Entering the recording time when making a tape recording.
- 6 CLR (clear)**
 - Erasing a programme.
 - Erasing track numbers from a programme.
- 7 STOP/CP**
 - Stopping play.
 - Erasing a programme (CP = Clear Programme).
- 8 PLAY/REPLAY**
 - Starting play.
 - Returning to the beginning of a track.
- 9 << and >>**
 - Selecting another track during play.
 - Selecting a track to start play with.
 - Fast search to a particular passage during play.
 - Selecting the recording mode when making a tape recording.
 - Selecting the recording time when making a tape recording.
- 10 OPEN/CLOSE** – Opening and closing the CD compartment. The compartment also closes when the front is pressed briefly.
- 11 REVIEW** – Checking a programme.
- 12 EDIT** – Activating the EDIT function when making a tape recording.
- 13 SCAN** – Automatically playing the beginning of each track.
- 14 REPEAT** – Repeating play.
- 15 SHUFFLE** – Playing in random order.
- 16 TIME** – Selecting the time information you want to see.
- 17 PEAK SEARCH** – Searching the loudest passage (peak) on a CD or in a programme when making a tape recording.
- 18 PHONES** – Connecting headphones.
- 19 FADER** – Fading in and out during play.
- 20 AUTO SPACE** – Automatic insertion of an extra pause between tracks.
- 21 LEVEL** – Adjusting the volume when listening with headphones.
- 22 PAUSE** – Interrupting play.

FUNCTIONAL OVERVIEW

English

REMOTE CONTROL



- The life of the batteries of the remote control is around one year. For replacement only use batteries of the type RO3, UM4 or AAA.
- The buttons on the remote control have the same functions as the corresponding ones on the player.
- Extra buttons:
 - 23 – VOLUME +** – Adjusting the sound level when the player is connected via the ANALOG OUT output or the DIGITAL OUT output to an amplifier or HiFi system without its own control.
 - 24 << TRACK >>**
 - Selecting another track during play.
 - Selecting a track to start play with.
 - Selecting tracks when compiling a programme.
 - Selecting the tape length when making a tape recording.
 - 25 << SEARCH >>**
 - Fast search for a passage.
 - Selecting the tape length when making a tape recording.

DISPLAY



- SPACE** – Lights up when an extra pause is inserted between the various tracks.
- PAUSE** – Lights up when play is interrupted.
- ⏏** – Lights up when the player receives a command from the remote control.

- TRACK** – Indicates:
 - what track is being played;
 - the number of tracks on the CD or in a programme.
- PEAK**
 - Flashes when the loudest passage (peak) on a CD or in a programme is being searched.
 - Lights up when the loudest passage (peak) has been found.
- TRACK TIME** – Indicates the elapsed playing time of the track being played.
- REM(aining) TRACK TIME** – Indicates the remaining playing time of the track being played.
- TOTAL REM(aining) TIME** – Indicates the remaining playing time of the CD or a programme.
- TOTAL TIME** – Indicates the total playing time of the CD or a programme.
- REPEAT** – Lights up when you repeat a CD or a programme.
- REPEAT 1** – Lights up when you repeat a track.
- SHUFFLE** – Lights up when the tracks are played in random order.
- ⏏ – Flashes when a programme is being compiled.
- 1-15 track number indicator** – Shows the number of tracks on the CD.
- ⬆ – Lights up when there are more than 15 tracks on the CD.

- Display messages:**
 - Lights up when the CD's contents list is being scanned.
 - no DISC** – Lights up when there is no CD in the CD compartment.
 - no AUDIO DISC** – Lights up when inserting or playing a non audio CD (CD-ROM, CD-I or CDV).
 - WRONG TRACK** – Lights up if you select a non-existent track number.
 - GO TO PLAY** – Lights up if you try to activate a function for which you must first start play.
 - GO TO STOP** – Lights up if you try to activate a function for which you must first stop play.

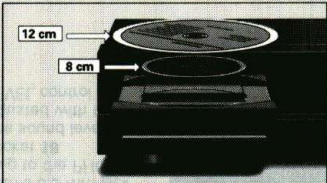
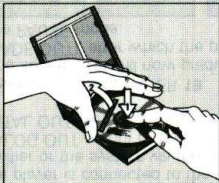
PLAYBACK

English

NORMAL PLAYBACK (PLAY/REPLAY)

NOTE! Use only audio CDs; no CD-ROM, CD-I or CDV.

- Press POWER ON/STANDBY **1** to switch the player on.
- Open the CD compartment by pressing OPEN/CLOSE **10**.
- OPEN lights up.
- Insert an audio CD, **printed side up**, and close the compartment.



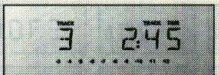
- CLOSE lights up, followed by READ. The number of tracks and the playing time of the CD are shown on the display.



- Press PLAY/REPLAY **8** to start play. You can also press PLAY/REPLAY immediately after inserting the CD; the compartment then closes automatically. You can also close the CD compartment by pressing its front; playback will then start automatically.
- The number indicator shows how many tracks are on the CD; when a track has been played its number disappears.



- The track being played is always shown under TRACK and its elapsed playing time is shown under TRACK TIME.



- Play will stop after the last track.
- Press POWER ON/STANDBY **1** to switch the player off.

You can interrupt playback by pressing PAUSE **22**; PAUSE then lights up. Press PLAY/REPLAY **8** to restart; if you first press PAUSE again and then PLAY/REPLAY, the current track starts again from the beginning. You can also restart play by pressing SCAN **13**, SHUFFLE **15** or the 1-0 digit keys **5**. If you press PLAY/REPLAY during play, the current track starts again from the beginning. You can stop playback by pressing STOP/CP **7** or OPEN/CLOSE **10**.

PLAYBACK

English

SELECTING ANOTHER TRACK DURING PLAY (1-0)

- Key in the desired number (numbers consisting of two figures must be keyed in within 2 seconds).
- The music stops and a moment later the selected track begins to play.

You can also select the number by pressing >>>1 or <<<9 (less than 0.5 seconds).

SEARCHING FOR A PASSAGE DURING PLAY (<<< >>>)

- Hold <<< **9** down to search backwards to the beginning.
- Hold >>> **9** down to search forwards to the end.

The searching speed is determined by how long a key is pressed:

- the first 2 seconds fairly slowly, with sound;
 - then at the maximum speed, with no sound.
- If you reach the end of the last track and release >>>1, play will resume a few seconds before the end of the CD.

STARTING WITH A PARTICULAR TRACK (1-0)

- Key in the desired number (numbers consisting of two figures must be keyed in within 2 seconds).
- Play starts from the selected track.

You can also select the number by pressing >>>1 or <<<9 (less than 0.5 seconds) and then pressing PLAY/REPLAY **8**.

SCANNING A CD (SCAN)

- Press SCAN **13** before or during play.
- If the CD compartment was open, it will now close.
- SCAN lights up for 2 seconds and the first 10 seconds of each track are played in turn; 10 seconds are counted down each time under REM TRACK TIME.
- When the player reaches a track which you wish to hear in full, press SCAN again or PLAY/REPLAY **8**.



PLAYING THE CD IN RANDOM ORDER (SHUFFLE)

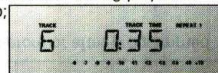
- Press SHUFFLE **15** before or during play.
- If the CD compartment was open, it will now close.
- SHUFFLE lights up and all the tracks are now played in a random order.
- Press SHUFFLE again if you wish to return to normal play.



If you press <<< **9**, you will return to a track which has already been played. If you press >>> **9**, you will select any one of the following tracks. If you press REPEAT **14**, twice the tracks will be repeated in a different order each time, although the first track played will always be the same.

REPEATING PLAY (REPEAT)

- Press REPEAT **14** before or during playback.
- REPEAT **1** lights up; the track will now be repeated continuously.
- Press REPEAT twice to stop the track being repeated.



Repeating the CD:

- Press REPEAT **14** twice before or during playback.
- REPEAT lights up; the CD will now be repeated continuously.
- Press REPEAT again to stop the CD being repeated.



CALLING UP OTHER TIME INFORMATION (TIME)

- Press TIME **16** whenever you want to know the remaining playing time of the track being played (REM TRACK TIME).
- Press TIME again if you wish to know the remaining playing time of the entire CD (TOTAL REM TIME).
- Press TIME again if you wish to return to the elapsed playing time indication of the current track (TRACK TIME).



PLAYBACK

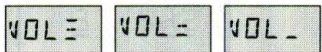
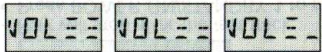
ADJUSTING THE SOUND LEVEL (– VOLUME +)

NOTE!

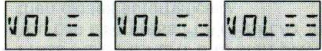
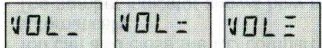
- Use the – VOLUME + keys (on the remote control) only if the player is connected via the ANALOG OUT output or the DIGITAL OUT output to an amplifier or HiFi system without its own control.
- The setting chosen with – VOLUME + will be cancelled when the player is switched off.



- Hold – VOLUME 23 pressed down.
- VOLUME lights up; the output signal from the player will now decrease gradually.
- The successive steps are shown on the display.



- Release the key as soon as the required sound level is obtained.
- Hold VOLUME + 23 pressed down.
- VOLUME lights up; the output signal will now increase again gradually to the maximum level.
- The successive steps are shown on the display.



- Release the key as soon as the required sound level is obtained.

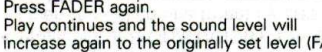
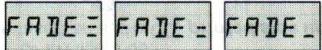
SETTING THE FADE- IN AND FADE-OUT TIME (FADER)

NOTE!

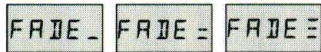
The FADER function can be used if the player is connected to the amplifier or the system via the ANALOG OUT output or the DIGITAL OUT output.



- During play press FADER 19.
- The sound level will now gradually decrease (FADE OUT), after which the player will go into the PAUSE mode.

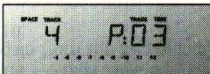


- Press FADER again.
- Play continues and the sound level will increase again to the originally set level (FADE IN).



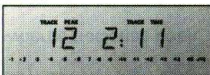
INSERTING AN EXTRA PAUSE (AUTO SPACE)

- Press AUTO SPACE 20.
- SPACE lights up; during play an extra pause of 4 seconds will be inserted between the various tracks.
- Press AUTO SPACE again to delete the extra pause.



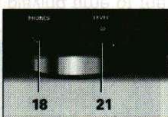
SEARCHING THE LOUDEST PASSAGE (PEAK SEARCH)

- In STOP mode, press PEAK SEARCH 17.
- PEAK starts flashing and the CD or the programme will now be scanned for the loudest passage (the peak).
- The display shows the track being scanned and its elapsed playing time.
- When the loudest passage has been found it will be repeated continuously (from 2 seconds before the peak until 2 seconds after the peak).
- You can now adjust your recording device.
- You can stop the scan by pressing STOP/CP 7 or OPEN/CLOSE 10; if you press PLAY/REPLAY 8, the CD or the programme will be played from the beginning.



LISTENING WITH HEADPHONES (PHONES)

- Connect headphones with a 6.3 mm jack plug to the PHONES socket 18.
- The sound level is adjusted with the LEVEL control 21.

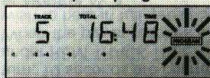


PROGRAMMING

STORING A PROGRAMME (PRG AND 1-0)

You can store 30 tracks from each CD in any required sequence in a programme. FULL lights up if you exceed the maximum of 30 tracks.

- In STOP mode, press PRG (programme) 4 to open the memory.
- PROGR lights up and starts flashing.
- Key in the required numbers; every number you key in will be directly included in the programme.
- Each time you key in (= store) a track number, the number of tracks and the playing time of your programme will be shown under TRACK and TOTAL TIME.



- The track number indicator always shows which numbers have been stored.
- Press PRG (programme) to quit the PROGRAMME mode.
- Press PLAY/REPLAY 8 to play the programme.

USE 0 - 9 lights up if you press ◀◀ or ▶▶ 9 while programming.

CHECKING THE PROGRAMME (REVIEW)

- Press REVIEW 11 prior to, during or after programmed play.
- REVIEW lights up.
- All the numbers appear in the programmed sequence under TRACK.
- Under TRACK TIME you will see the playing time of each track.



NO PROGRAM lights up if no track numbers have yet been stored.

With REVIEW you can proceed more rapidly to the next block of information.

PLAYING THE PROGRAMME (PLAY/REPLAY)

- Press PLAY/REPLAY 8.
- Playback starts with the first number of the programme.

All keys (except EDIT 12, PRG(programme) 4, CLR(clear) 6 and PEAK SEARCH 17) can be used during programmed play. Search for a particular passage is only possible within the track being played.

ERASING A PROGRAMME (STOP/CP, CLR OR OPEN/CLOSE)

- In PLAY mode:
- Press OPEN/CLOSE 10 or STOP/CP 7 (twice).

In STOP mode:

- Press OPEN/CLOSE 10, CLR(clear) 6 or STOP/CP 7.

- The programme has now been erased.

ERASING A TRACK FROM THE PROGRAMME (CLR)

- Press REVIEW 11 before or after programmed play (STOP mode).
- REVIEW lights up.
- All the numbers appear in the programmed sequence under TRACK.
- Press CLR(clear) 6 as soon as the number you wish to erase appears.
- The number disappears from the number indicator; it has now been erased.
- The display shows the remaining tracks and programme time for a few seconds.



NO PROGRAM lights up if no track numbers have yet been stored.

EDIT

The EDIT function has two recording modes in which you can store the recording time of the tape in the player memory.

EDIT NORMAL – The player will determine which tracks fit on each side of the tape and will stop after the last track. The tracks will be recorded in the order in which they appear on the CD or in the programme.

EDIT OPTIMAL – The player now calculates the combination of tracks that will optimize the use of available recording time.

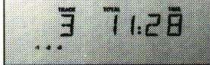
NOTE!

- The EDIT function cannot be used for CDs containing more than 30 tracks.
- The – VOLUME + keys (on the remote control) may not be used during recording as they affect the strength of the signal from the player.

RECORDING IN THE EDIT MODE

- If required you can first search the loudest passage on the CD or in the programme and adjust your recording device. This can also be done after selecting the recording mode and the recording time.
- In STOP mode, press EDIT 12 to activate the EDIT mode.
- The display shows NORMAL (default setting).
- If required you can insert an extra pause between the various tracks by pressing AUTO SPACE 20.
- SPACE then lights up.
- With ◀◀ ▶▶ 9 you can now select OPT(imal), CANCEL or NORMAL again.
- The display shows OPT(imal), CANCEL, or NORMAL again.
- Press EDIT 12 to store the required recording mode (NORMAL or OPTimal).
- If you select CANCEL, the EDIT mode will be cancelled and the player will go back to STOP mode.
- As soon as you have stored the recording mode the display shows C90 (default setting).
- With ◀◀ ▶▶ 9 you can now select the required recording time: C100, C105, C120, C30, C45, C60, C75 or C90. Other recording times can be selected using the 1-0 digit keys 5.
- In EDIT NORMAL mode the recording time must be at least equal to the playing time of the first track on the CD or in the programme. In EDIT OPT(imal) mode the recording time must be at least equal to the playing time of the shortest track on the CD or in the programme.
- WRONG TIME lights up if you select a 'wrong' time.
- Press EDIT 12 to store the required recording time.
- The CD player will now go back to STOP mode.

- The track number indicator shows which tracks fit onto side A of the tape. The number of tracks and their playing time will be shown under TRACK and TOTAL TIME.



- You can now record the entire CD or a programme from it.
- Press PLAY/REPLAY 8.
- The numbers for side A of the tape will be played one after the other. If AUTO SPACE has been selected, after each track an extra pause of 4 seconds (AUTOSPACE) will be inserted.
- After the last track that fits on side A of the tape, the CD player will go into PAUSE mode; PAUSE lights up.
- The track number indicator shows which tracks fit onto side B of the tape. Under TRACK you will see the number of the first track to be recorded.
- Turn the tape over or select the tape travel direction for side B.
- Press PLAY/REPLAY 8.
- The remaining tracks will now be played.
- After the last track play will stop; EDIT CANCELLED lights up.



NOTE!

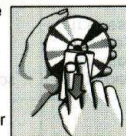
- As soon as you press PLAY/REPLAY 8 the other player functions will temporarily be switched off to prevent the recording being interfered with; EDIT ACTIVE lights up if you press one of the other buttons during recording.
- You can quit the EDIT mode by pressing STOP/CP 7 or OPEN/CLOSE 10; EDIT CANCELLED then lights up.
- EDIT NOT POSSIBLE lights up if you try to record a CD containing more than 30 tracks.

ADDITIONAL INFORMATION

MAINTENANCE

The CDs

- Never write on the printed side of a CD.
- Do not attach any stickers to the CD.
- Keep the shiny surface of the disc clean. Use a soft lint-free cloth and always wipe the disc in a straight line from centre to edge.
- Never use cleaning agents for conventional records.
- Detergents or abrasive cleaning agents should not be used either.



The player

- A chamois leather slightly moistened with water is sufficient for cleaning the player.
- Do not use cleaning agents containing alcohol, spirits, ammonia or abrasives.

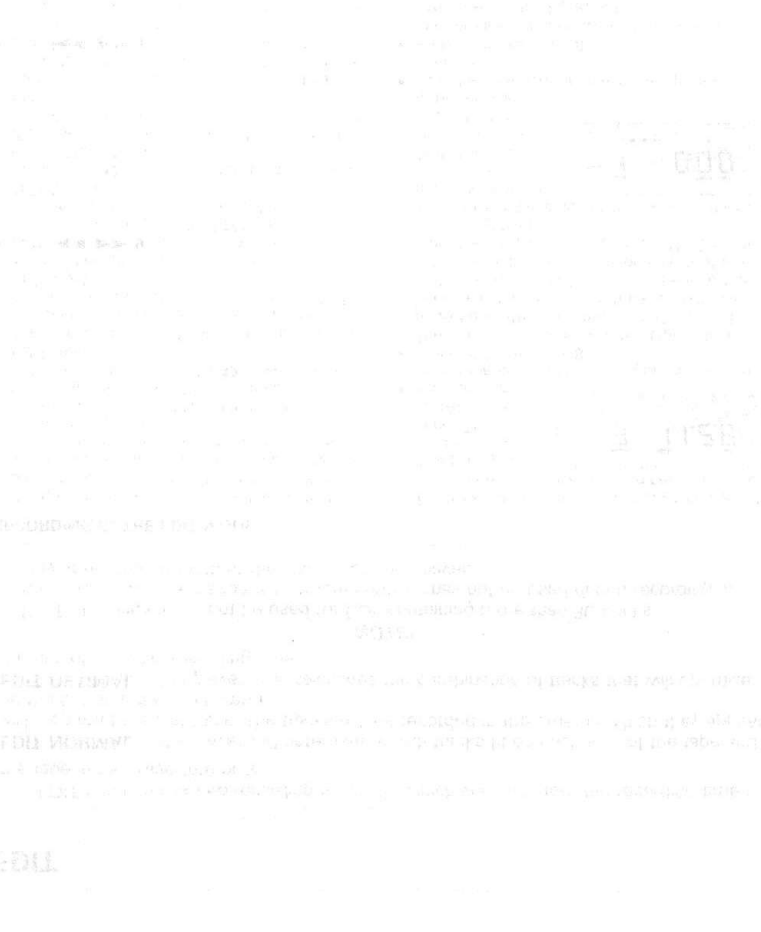
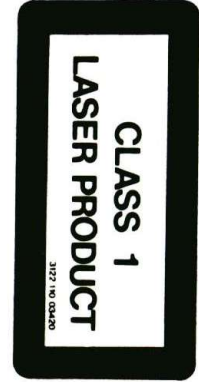
RECYCLING

Please observe the local regulations regarding the disposal of packaging materials, exhausted batteries and old equipment.

- All redundant packaging material has been omitted. We have done our utmost to make the packaging easy separable into three mono-materials:
 - Cardboard (box)
 - expandable polystyrene (buffer)
 - polyethylene (bags, protective foam sheet)

- Your set consists of materials which can be recycled if disassembled by a specialized company.

- Do not dispose of exhausted batteries with your household waste.



TROUBLESHOOTING		
If a fault occurs, run through the points listed below before taking your player for repair. If the fault remains, try to clear it by switching the player off and on again . If this also fails to help, consult your dealer. Under no circumstances should you repair the player yourself as this will invalidate the guarantee!		
English		
SYMPTOM	POSSIBLE CAUSE	REMEDY
- Playback of the CD does not start or interruption of playback.	- The CD has been loaded upside down. - No CD inserted. - The CD is badly scratched or dirty. - Moisture condensation on the lens.	• Reload the CD, label side up. • Insert a CD, label side up. • Clean the CD with a soft, lint-free cloth. • Leave the CD player in a warm environment until the moisture evaporates.
- Sound skips (at the same part).	- The CD is dirty.	• Clean the CD with a soft, lint-free cloth.
- The CD skips tracks.	- The CD is damaged or dirty.	• Replace or clean the CD.
- Playback does not start from the first track.	- PRG (programme) or SHUFFLE activated.	• Switch off REPEAT or clear programme.
- No sound or bad sound.	- Loose or wrong connections. - Strong magnetic fields near the CD player.	• Check connections. • Find another place for the unit or change connections.
- Volume is too low.	- Sound level has been adjusted too low with the – VOLUME + keys on the remote control.	• Adjust sound level.
- No sound or bad sound on headphones.	- Level control set to – position. - Headphones plug is dirty.	• Set level control • Clean plug.
- Remote control does not function.	- Batteries are empty.	• Replace the batteries.
- Remote control commands are not properly received.	- The distance between remote control and CD player is larger than 10 metres.	• Use remote control receiver EM 2200/2201. • Reduce the distance between remote control and CD player.

GB WARNING

All ICs and many other semi-conductors are susceptible to electrostatic discharges (ESD). Careless handling during repair can reduce life drastically.
When repairing, make sure that you are connected with the same potential as the mass of the set via a wrist wrap with resistance. Keep components and tools also at this potential.

ESD



F ATTENTION

Tous les IC et beaucoup d'autres semi-conducteurs sont sensibles aux décharges statiques (ESD). Leur longévité pourrait être considérablement écourtée par le fait qu'aucune précaution n'est prise à leur manipulation.
Lors de réparations, s'assurer de bien être relié au même potentiel que la masse de l'appareil et enlever le bracelet servi d'une résistance de sécurité.
Veiller à ce que les composants ainsi que les outils que l'on utilise soient également à ce potentiel.

D WARNUNG

Alle ICs und viele andere Halbleiter sind empfindlich gegen elektrostatische Entladungen (ESD).
Unvorsichtige Behandlung bei der Reparatur kann die Lebensdauer drastisch vermindern. Sorgen sie dafür, dass Sie im Reparaturfall über ein Pulsarmband mit Widerstand mit dem Massepotential des Gerätes verbunden sind, halten Sie Bauteile und Hilfsmittel ebenfalls auf diesem Potential.

NL WAARSCHUWING

Alle IC's en vele andere halfgeleiders zijn gevoelig voor electrostatische ontladingen (ESD).
Onzorgvuldig behandelen tijdens reparatie kan de levensduur drastisch doen verminderen. Zorg ervoor dat u tijdens reparatie via een polsband met weerstand verbonden bent met hetzelfde potentiaal als de massa van het apparaat.
Houd componenten en hulpmiddelen ook op ditzeide potentiaal.

I AVVERTIMENTO

Tutti IC e parecchi semi-conduttori sono sensibili alle scariche statiche (ESD).
La loro longevità potrebbe essere fortemente ridatta in caso di non osservazione della più grande cauzione alla loro manipolazione.
Durante le riparazioni occorre quindi essere collegato allo stesso potenziale che quello della massa dell'apparecchio tramite un braccialeto a resistenza.
Assicurarsi che i componenti e anche gli utensili con quali si lavora siano anche a questo potenziale.

GB

Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified be used.

D

Bei jeder Reparatur sind die geltenden Sicherheitsvorschriften zu beachten. Der Originalzustand des Geräts darf nicht verändert werden für Reparaturen sind Original-Ersatzteile zu verwenden.

NL

Veiligheidsbepalingen vereisen, dat het apparaat in zijn oorspronkelijke toestand wordt teruggebracht en dat onderdelen, identiek aan de gespecificeerde worden toegepast.

I

Le norme di sicurezza esigono che l'apparecchio venga rimesso nelle condizioni originali e che siano utilizzati pezzi di ricambio identici a quelli specificati.

F

Les normes de sécurité exigent que l'appareil soit remis à l'état d'origine et que soient utilisées les pièces de rechange identiques à celles spécifiées.

CAUTION

VAROI

VARNING

ADVERSEL

ANGER

DANGER

VORSICHT



INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM.

AVATTAESSA OLET ALTTIINA NÄKYMÄTTÖMÄLLE LASER SÄTEILYLLE ÄLÄ KATSO SÄTEESSEN.

ÖSTYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD BETRÄKTA EJ STRÅLEN.

USYNLIG LASERSTRÅLNING VED ÅBNING. UNDGA UNSÆTTELSE FOR STRÅLING.

INVISIBLE LASER RADIATION WHEN OPEN. AVOID DIRECT EXPOSURE TO BEAM.

UNSICHTBARE LASERSTRALUNG WENN ABDECKUNG GEÖFFNET. NICHT DEM STRAHL AUSSETZEN.

SHOCK, FIRE HAZARD SERVICE TEST:

CAUTION: After servicing this appliance and prior to returning to customer, measure the resistance between either primary AC cord connector pins(with unit NOT connected to AC mains and its Power switch ON), and the face or Front Panel of product and controls and chassis bottom.

Any resistance measurement less than 1 Megohms should cause unit to be repaired or corrected before AC power is applied, and verified before return to user/customer.

Ref. UL Standard NO.1492.

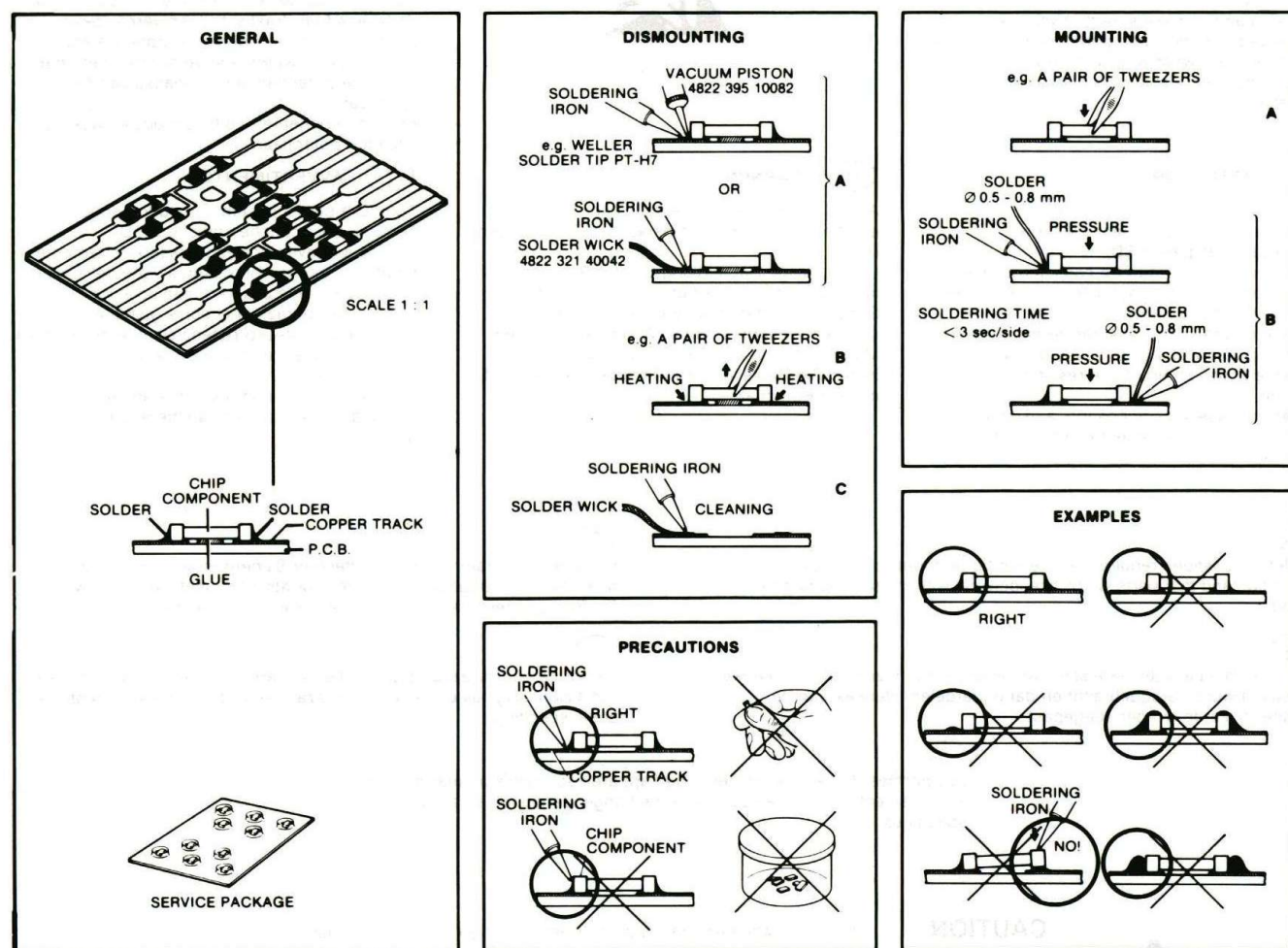
NOTE ON SAFETY:

Symbol **⚡** Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol **⚡**. Any other component substitution(other than original type), may increase risk of fire or electrical shock hazard.

"Pour votre sécurité, ces documents doivent être utilisés par des spécialistes agréés, seuls habilités à réparer votre appareil en panne"

SERVICING HINTS

In the set chip components have been applied. For disassembly and assembly of chip components see the figure below.

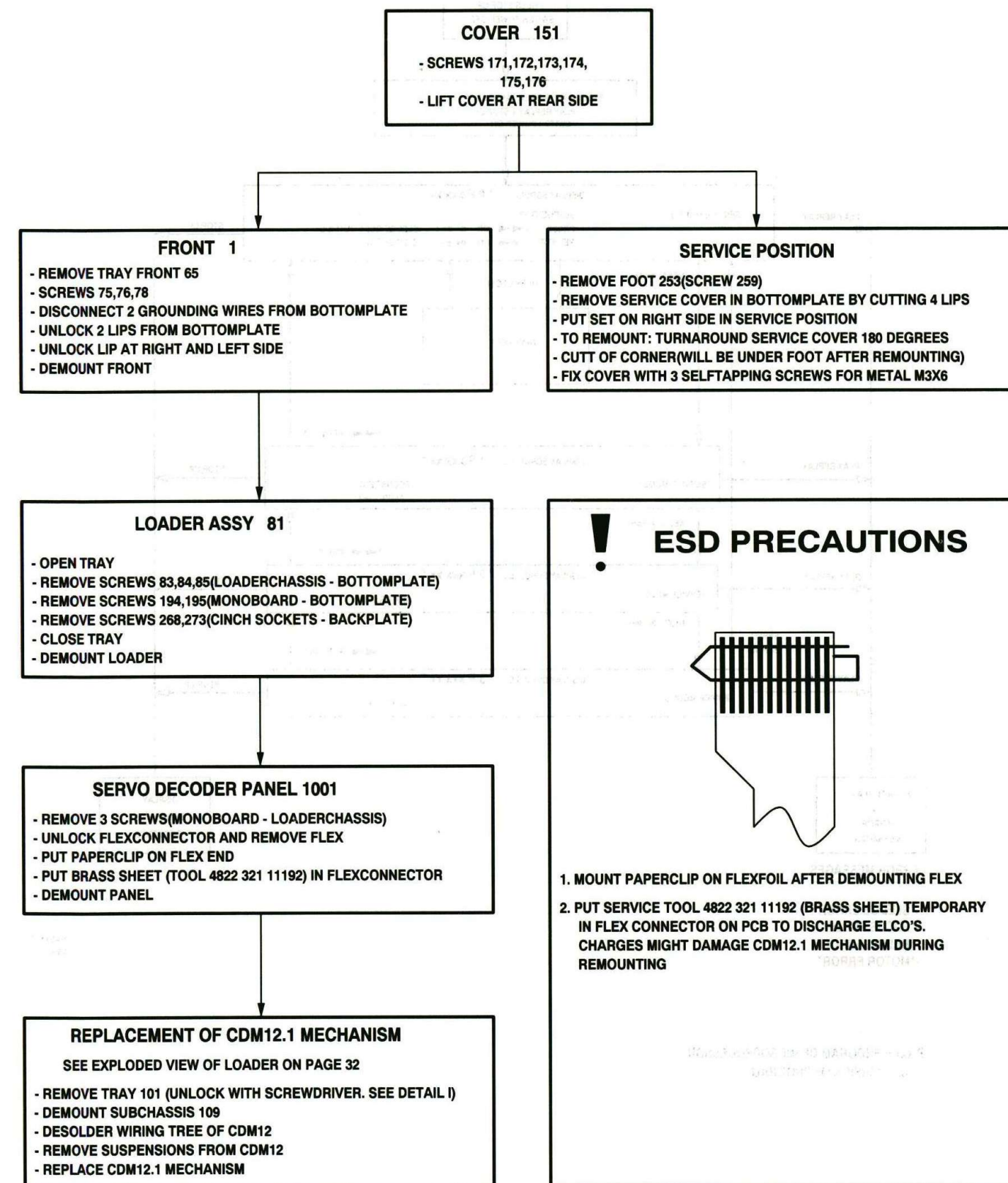


SERVICE TOOLS

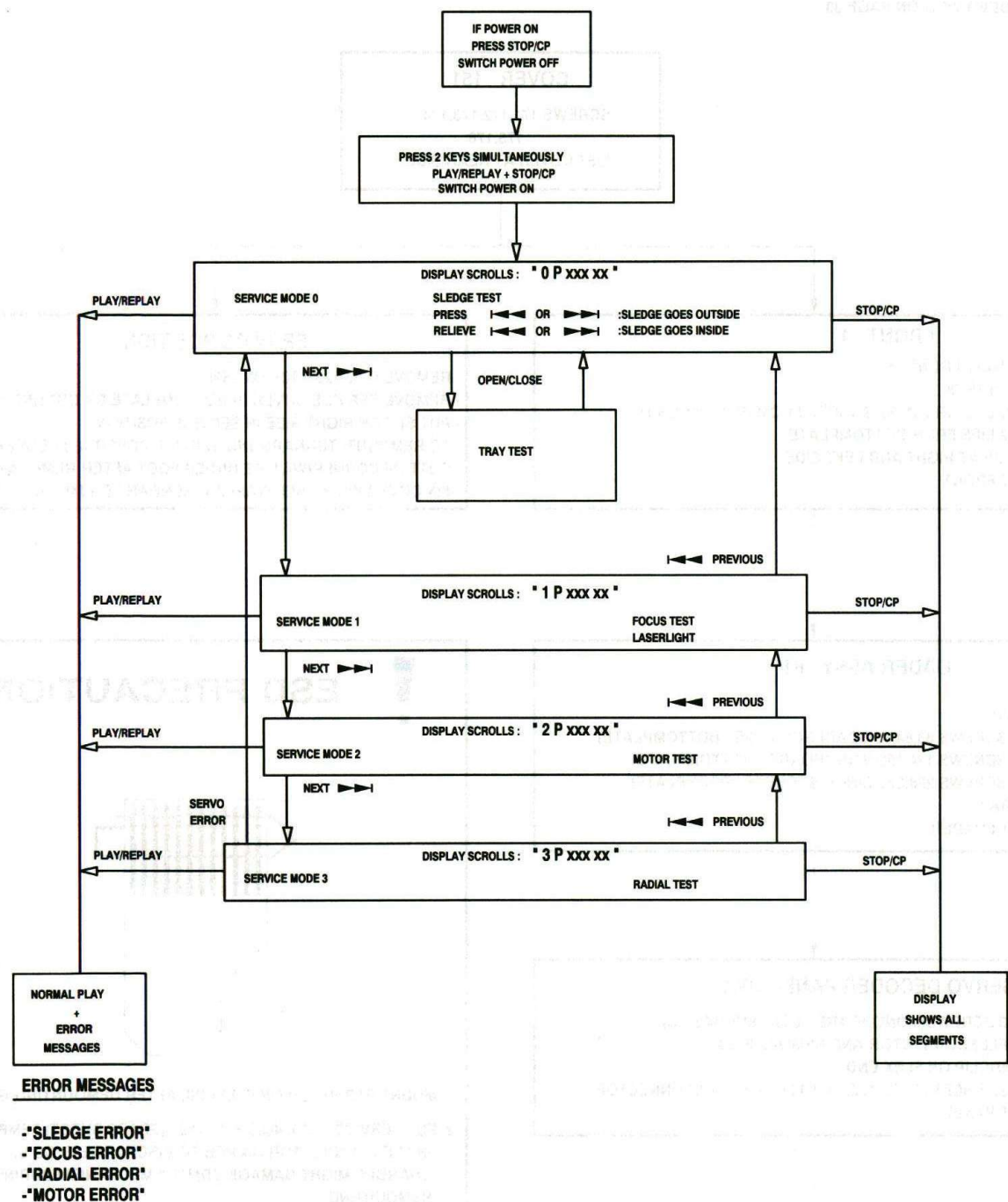
Audio signals disc	4822 397 30184
Disc without errors(SBC444) +	
disc with DO errors,black spots and fingerprints(SBC444A)	4822 397 30245
Disc(65 min 1 kHz) without no pause	4822 397 30155
Max. diameter disc(58.0 mm)	4822 397 60141
Torx screwdrivers	
Set(straight)	4822 395 50145
Set(square)	4822 395 50132
13th order filter	4822 395 30204

DISMANTLING INSTRUCTIONS

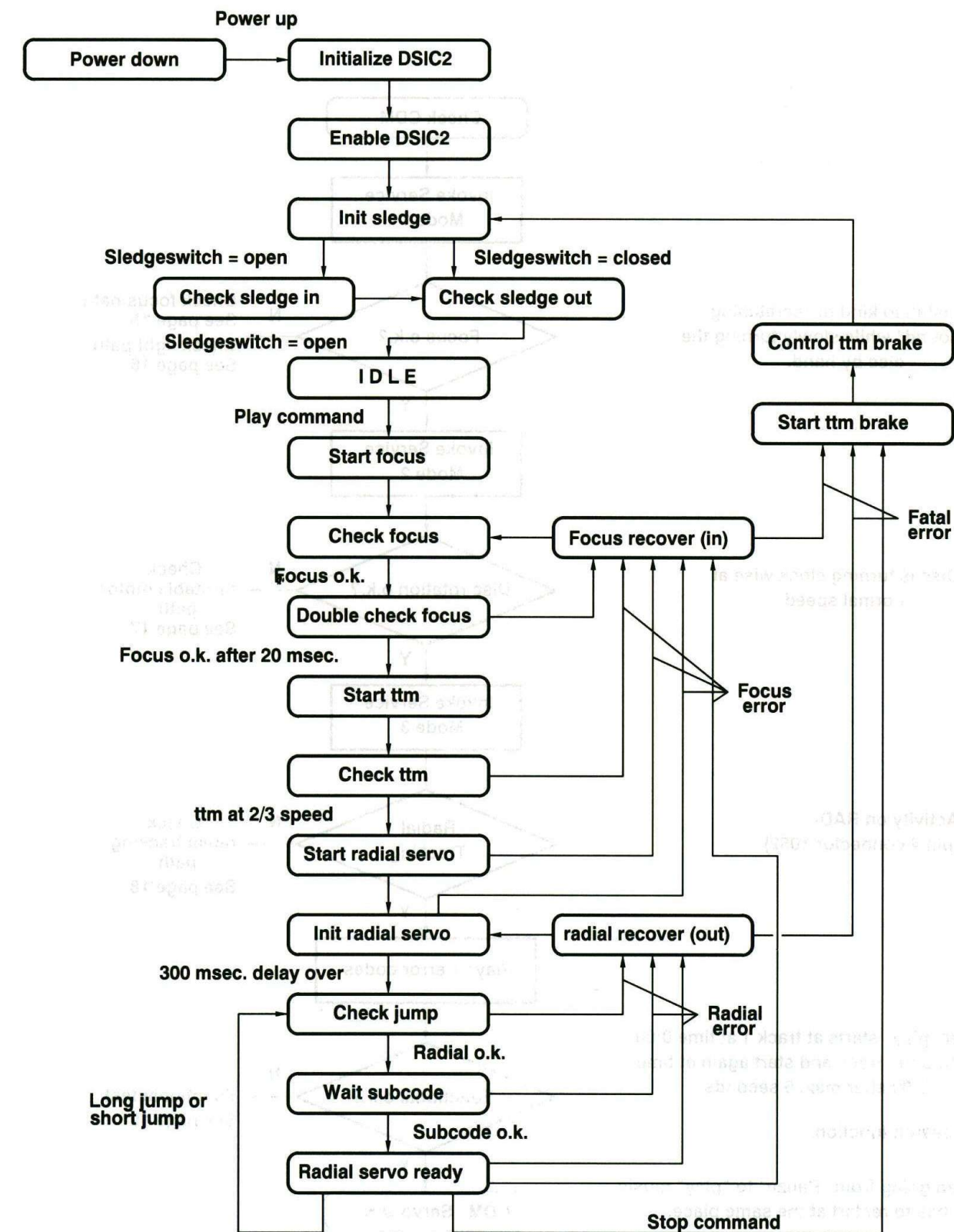
OPEN EXPLODED VIEW ON PAGE 33



SERVICE TEST PROGRAM

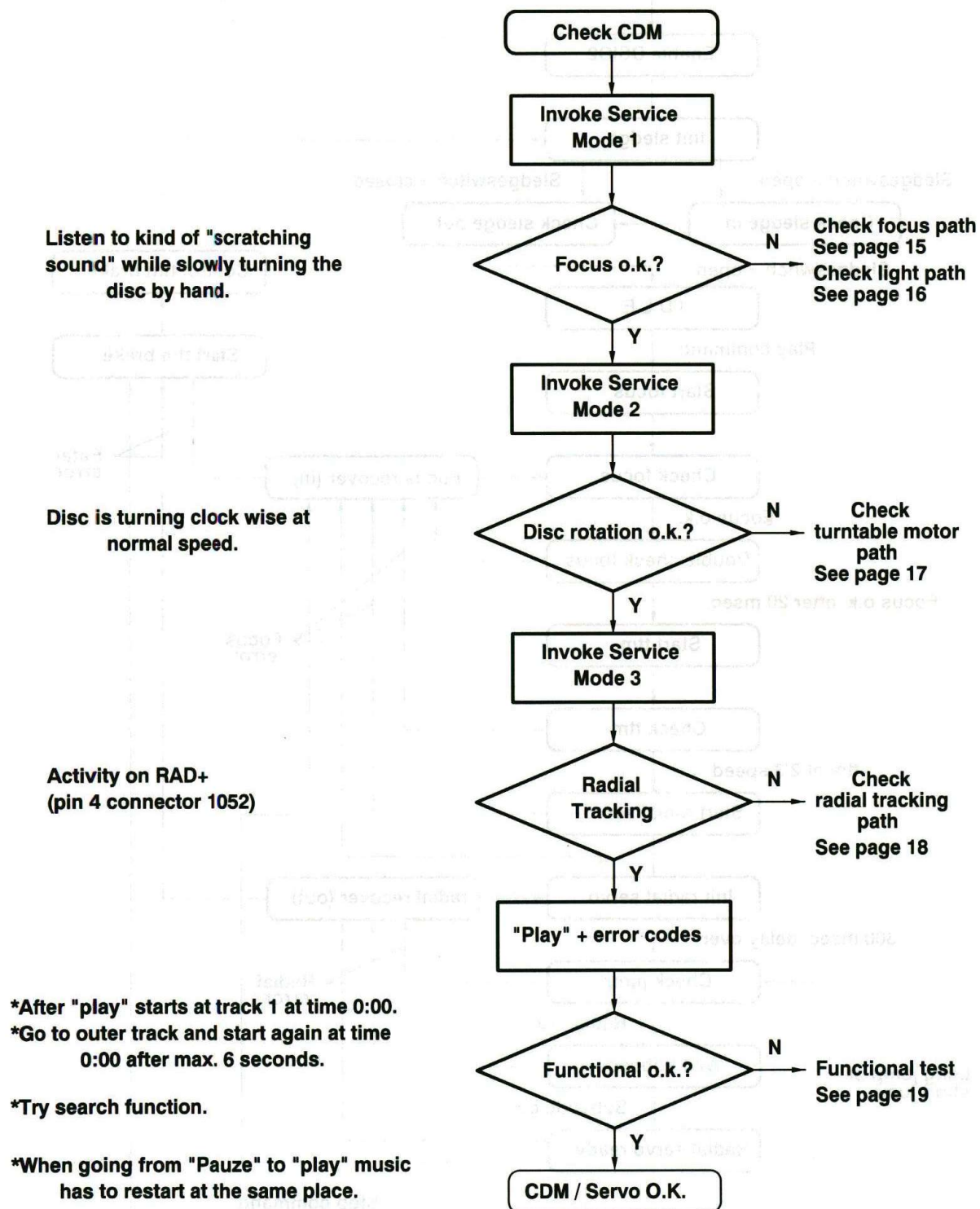


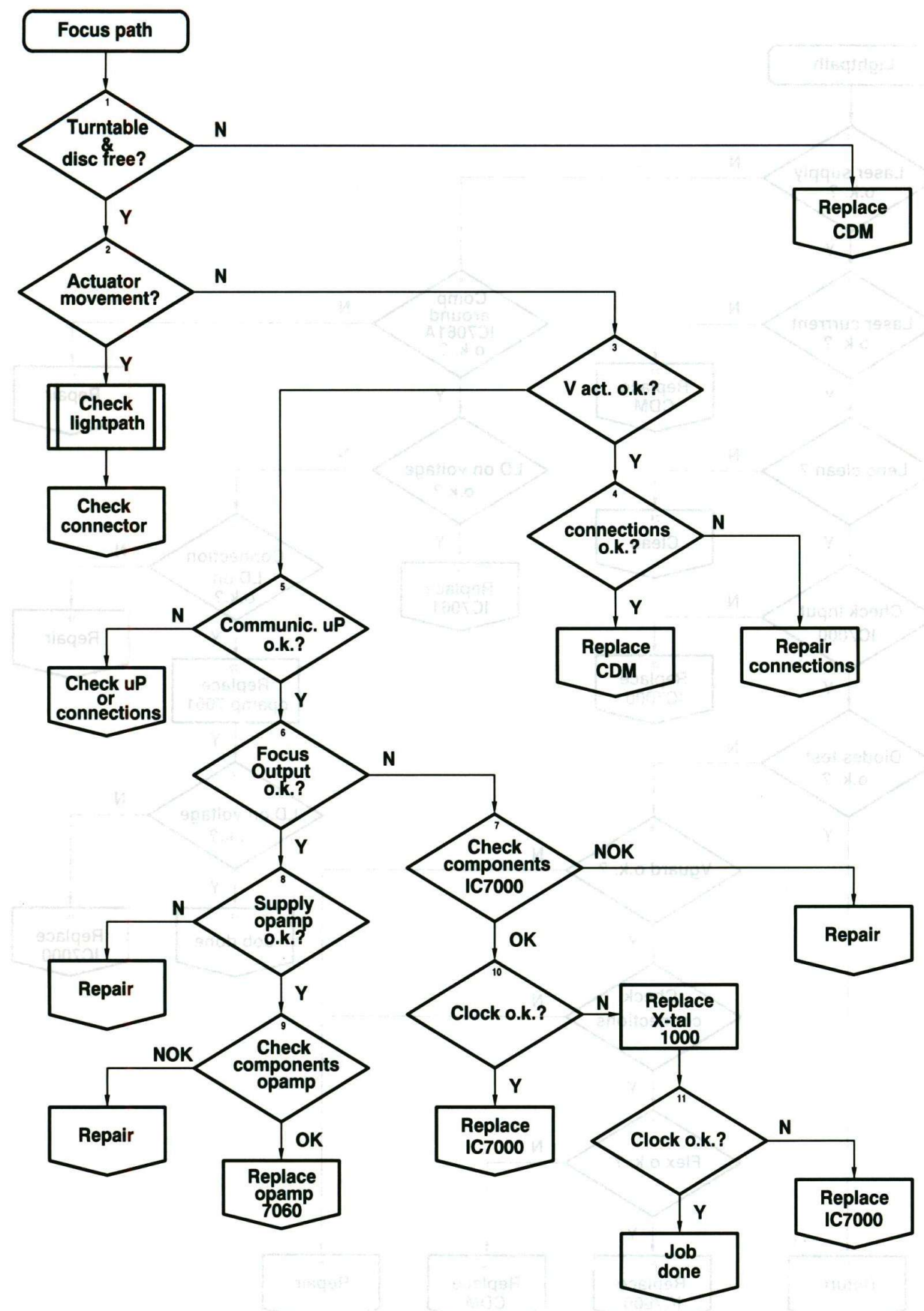
CDM 12.1 start up diagram.



FAULT FINDING GUIDE CDM 12.1

Main Fault Finding Guide CDM 12.1
System





1)-Turntable and disc free?
Audible and visible control.

2)-Actuator movement?
Visual control.

3)-Signals on actuator o.k.?
Triangle wave without disc.
See fig 1.

4)-Connections to actuator o.k.?
Check flex connector pin 2 and 3.

5)-Communication uP <-> IC7000.
SIDA activity (pin 27 of IC7000).

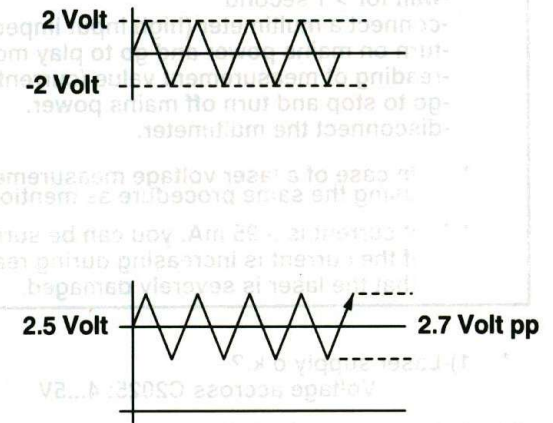
6)-Focus output o.k.?
See fig 2.
Measure with an 10k/3n3 low-pass filter.

7)-Components o.k.?
Check components R3010,R3011
C2012,C2013
X-tal 1000

8)-Power supply for opamp o.k.?
Check components R3006,R3007
C2008,C2009,C2071,C2074

9)-Check components o.k.?
Check components R3074,R3075,R3076,R3077
R3078,R3079
C2075,C2076

10) & 11)-Pin 17 of IC7000: a frequency of 8.46MHz?



WARNING !!! LASER DAMAGE !!!

For measurements on the laser (flexconnector pin 1052-6), certain conditions are absolutely necessary for precaution of laser damage.

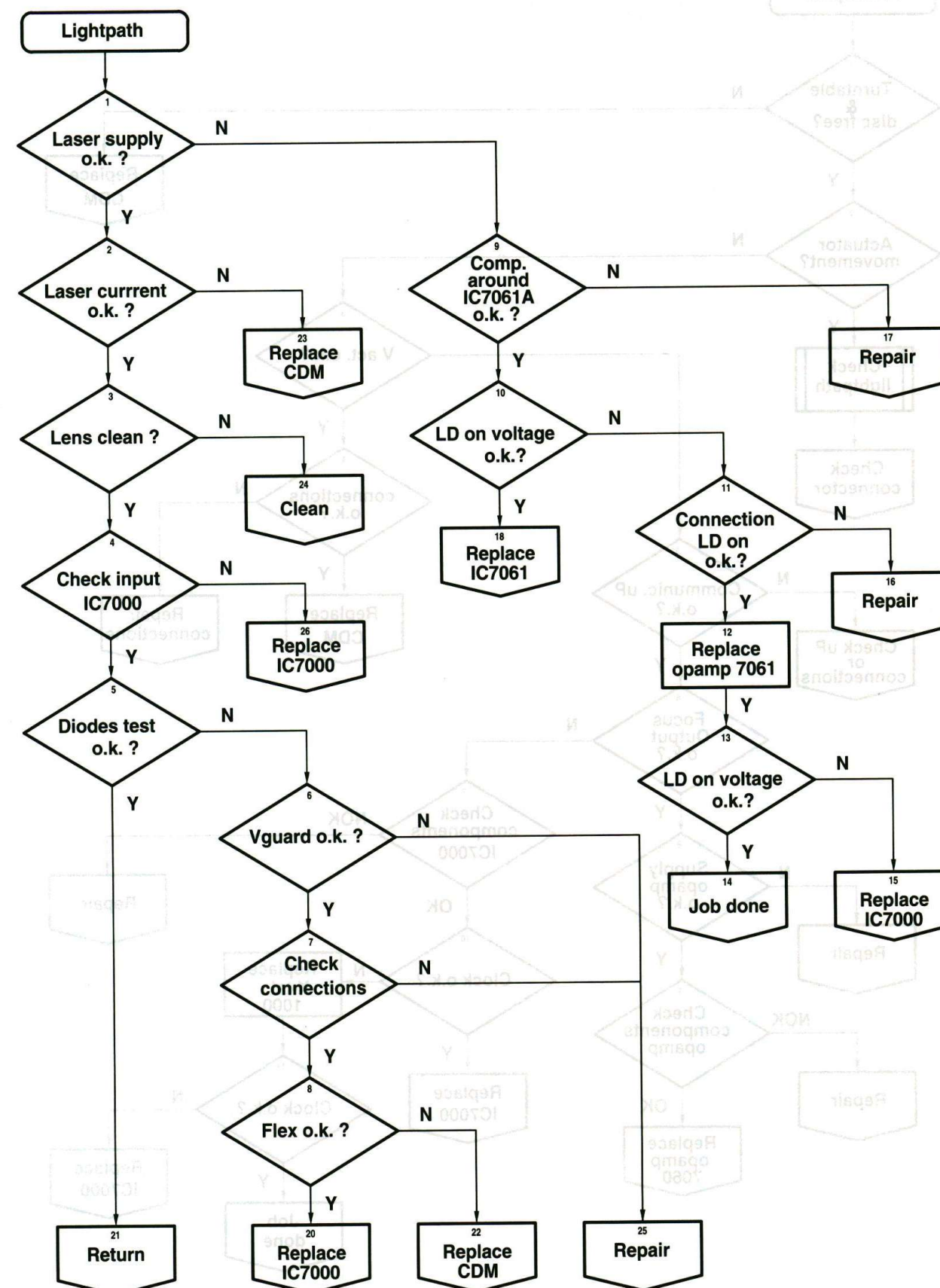
The instruction and sequence for measuring laser current is as follows:

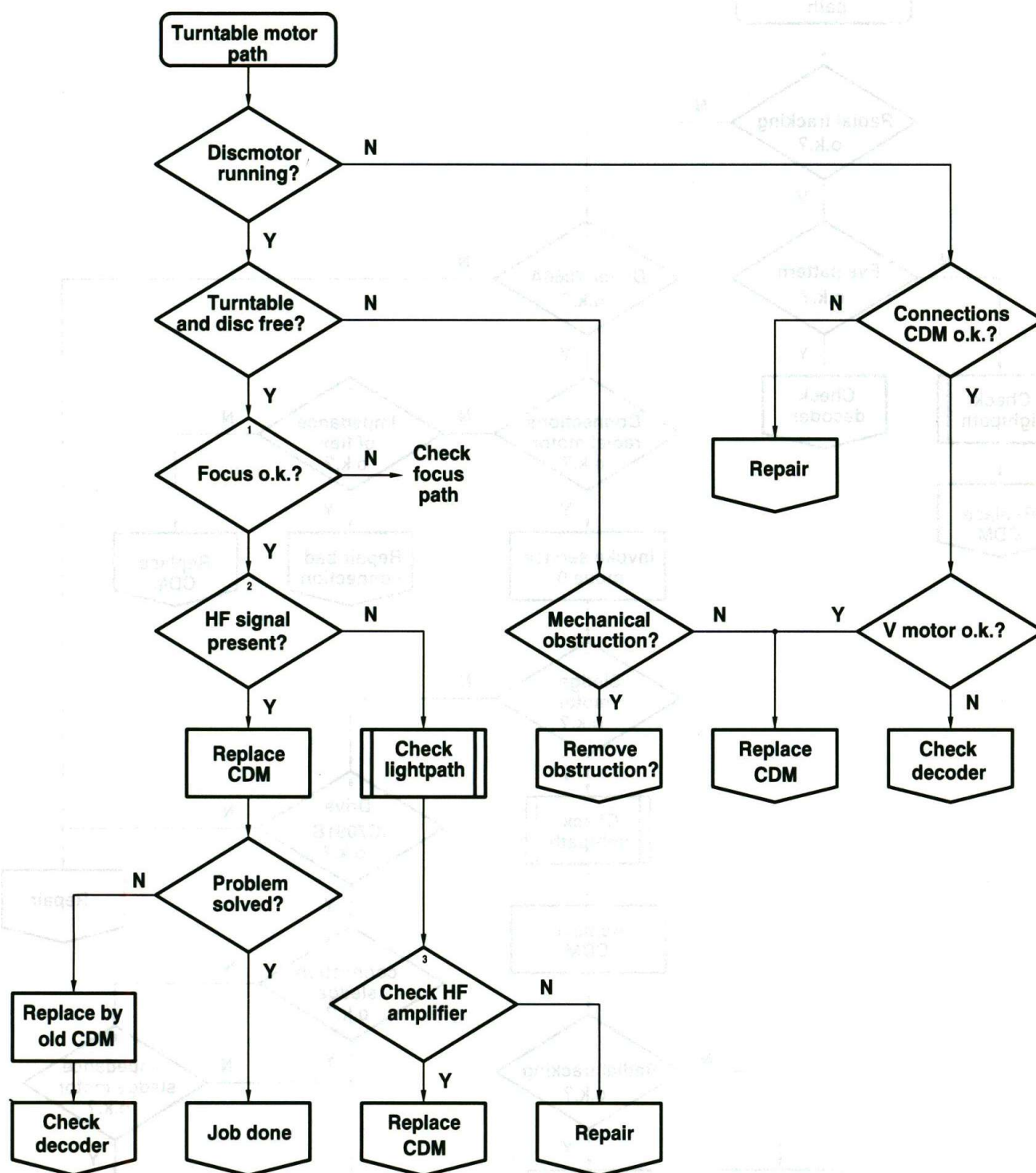
- turn off mains power.
- wait for > 1 second
- connect a multimeter (high input impedance, not grounded accross resistor 3022. (*))
- turn on mains power and go to play mode.
- reading of measurement value (current = reading/4R7) (**)
- go to stop and turn off mains power.
- disconnect the multimeter.

* In case of a laser voltage measurement, connect the multimeter accross elcap 2025, using the same procedure as mentioned above.

** If current is > 95 mA, you can be sure that the laser is defect;
If the current is increasing during reading (within +/- 10 seconds), you can be sure that the laser is severely damaged.

- * 1)-Laser supply o.k.?
Voltage accross C2025: 4...5V
- ** 2)-Laser current o.k.?
Voltage accross R3022: 150...450mV
- 3)-Lens clean?
Visual control. Check for dust,grease.
Take attention for the blue coating.
- 4)-Check inputs.
Switch back to service mode 0.
Connect a 2.4 MOhm resistor from
1052 - 9 to 5V: Voltage on pin 5 of IC7000 < 50mV.
1052 - 10 to 5V: Voltage on pin 6 of IC7000 < 50mV.
1052 - 12 to 5V: Voltage on pin 7 of IC7000 < 50mV.
1052 - 11 to 5V: Voltage on pin 10 of IC7000 < 50mV.
1052 - 8 to 5V: Voltage on pin 11 of IC7000 < 50mV.
- 5)-Diodes o.k.?
Use IR LED of remote control.
A half sine wave must be measured on the diodes (on pin 8,9,10,11,12 of conn. 1052) in the 10mV range.
- * 6)-V guard o.k.?
Voltage accross C2025: 4...5V
- 7)-Check connections between main PCB and CDM
- 8)-Flex o.k.?
Measure diode functions on CDM-flex
- 9)-Check components around IC7061
R3022,R3021,R3020
C2025,C2060,C2064
- 10)-LD ON voltage o.k.?
Measure on pin 2 of IC7000:4...5V.





1)-Still in focus (focus o.k.?).
Voltage at pin 9 of connector 1052 > 15mV.

2)-HF-signal present.
VHFI (R3048) > 900mV pp. (testpoint 65).

3)-Check HF-amplifier.

- * Supply 5V?
- * Testpoint 17=1.4...1.9V DC?
- * VHFI DC =2.9...3.6V?

4)-V motor o.k.?

V motor < 2V: replace CDM.
V motor > 2V: check decoder part.

1)-Radial tracking o.k.?
No OTD (testpoint 67) activity.

2)-Check driver 7060A.
Supply: C2071,C2074.
Components: C2067,C2068,C2069,R3068,R3069,R3070,R3071,R3072,R3073.

3)-Check connections radial actuator.
Switch power off.
Measure impedance of 18 Ohm(+/-20%) between pin 1 and pin 4 of connector 1052.

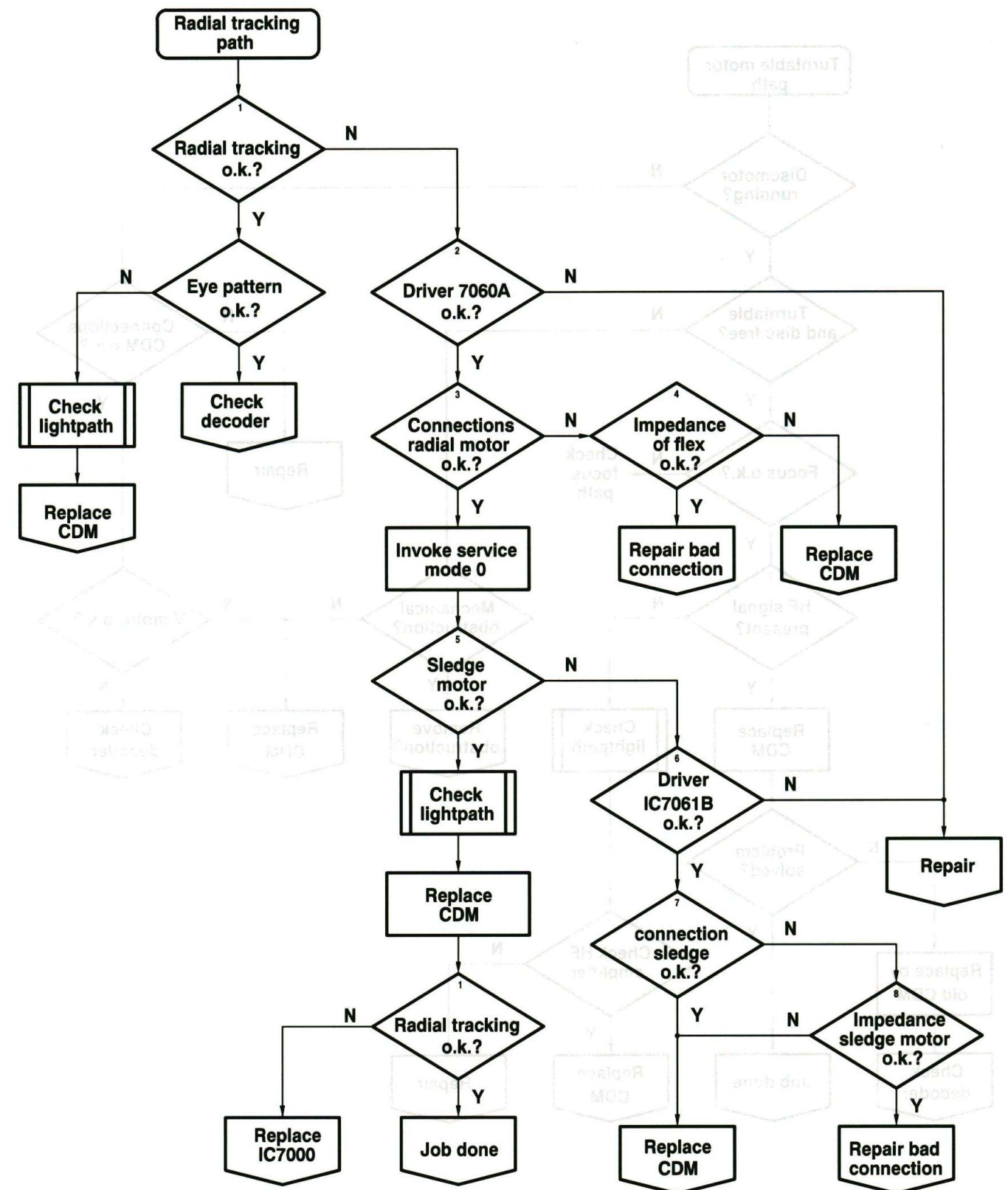
4)-Check impedance on flex.
Power off.
Disconnect CDM-flex.
Measure impedance of 18 Ohm(+/-20%) between pin 1 and pin 4 of connector 1052.

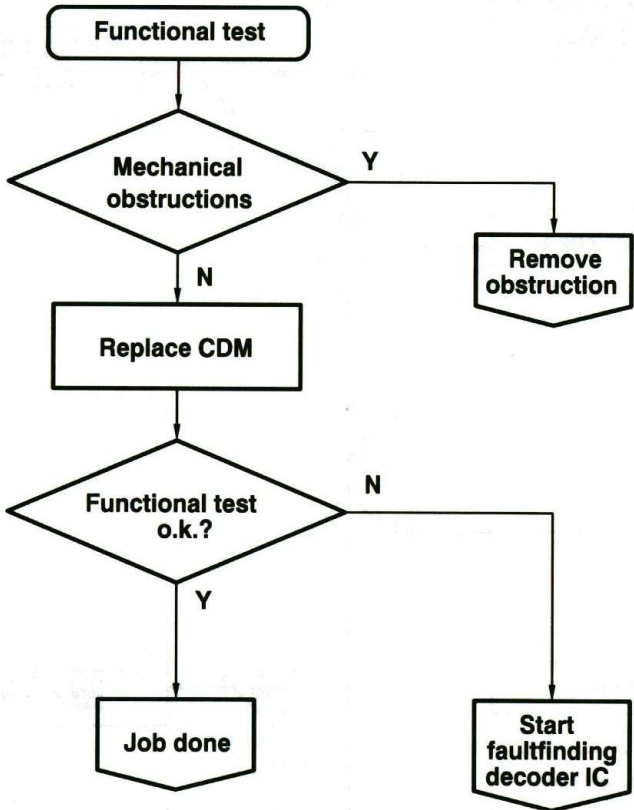
5)-Test sledge.
Power on.
Invoke service mode 0.
Move sledge out (with search forward key).
Sledge moves to init position after releasing key.
Not o.k. if sledge doesn't move,doesn't reach the outer position or makes a rattling noise at the inner side.

6)-Check driver 7061B.
Supply: C2060,C2064.
Components: C2062,C2063,C2066,R3060,R3062,R3064,R3065,R3066,R3067.

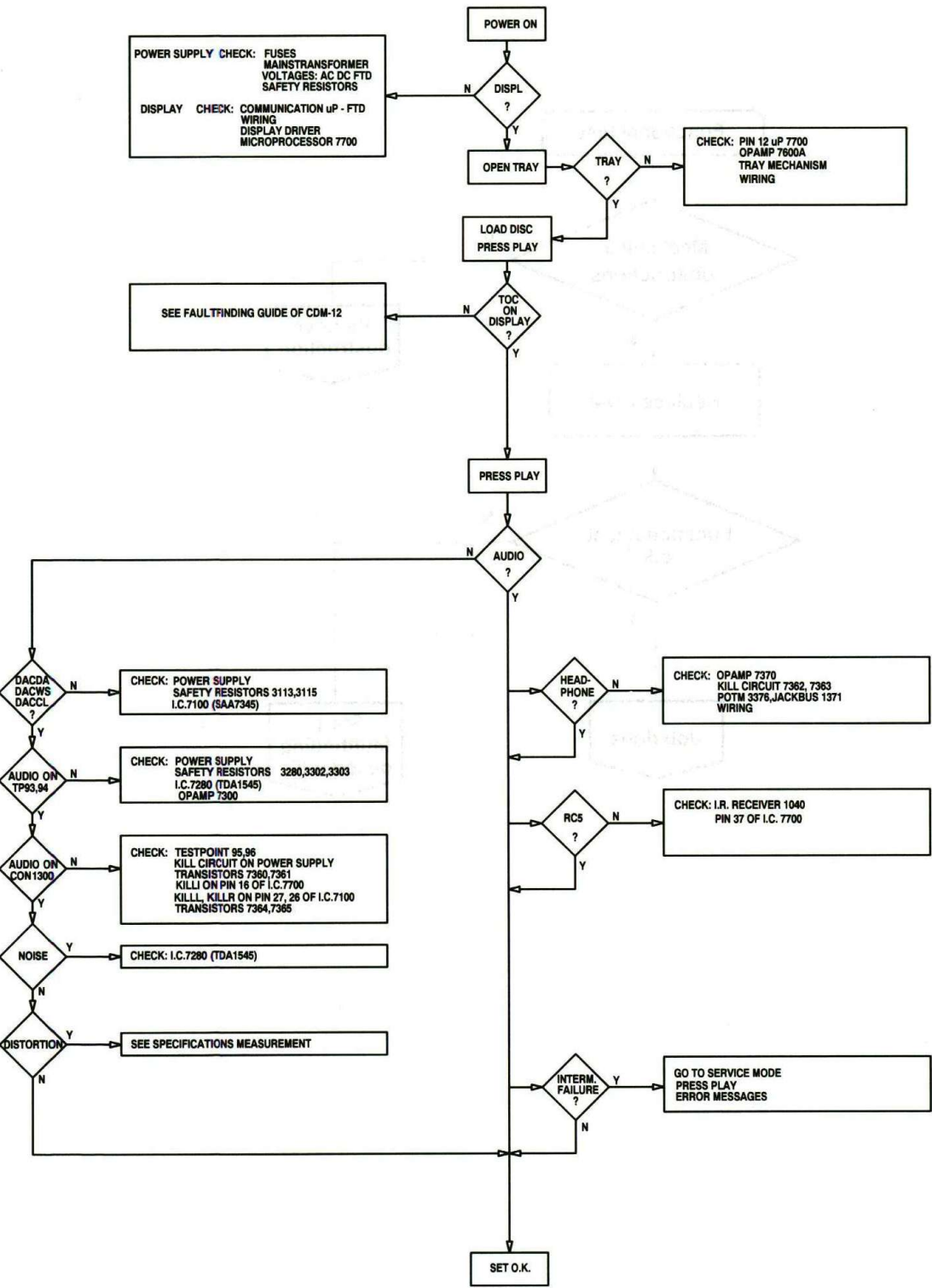
7)-Check connections of sledge drive.
Power off.
Measure impedance of 11 Ohm(+/-20%) between pin 5 and pin 6 of connector 1070.

8)-Check sledge motor.
Remove CDM.
Measure impedance of 11 Ohm(+/-20%) between motor terminals.





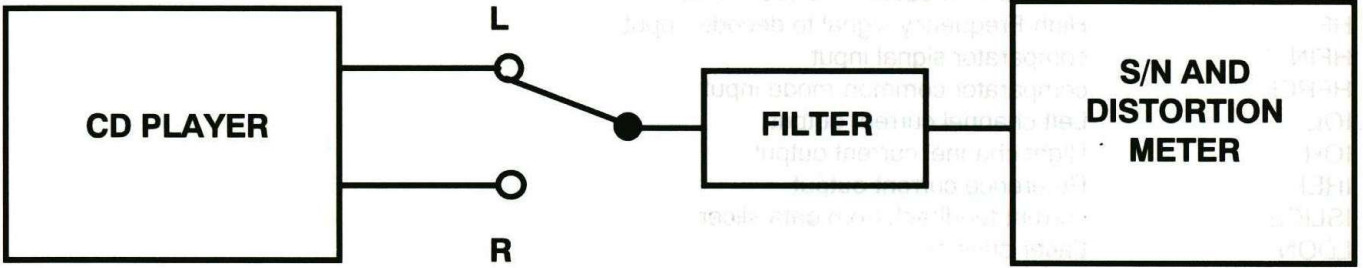
FAULTFINDING GUIDE



SPECIFICATION MEASUREMENT

SIGNAL	AUDIO SIGNALS DISC 1	TESTPOINT	REMARKS
ANALOG OUT LEFT	TOTAL HARMONIC DISTORTION	FILTER OUTPUT	SEE TECHNICAL DATA
ANALOG OUT RIGHT			SEE DRAWING
ANALOG OUT LEFT	SIGNAL TO NOISE RATIO TRACK 1 REFERENCE LEVEL	FILTER OUTPUT	SEE TECHNICAL DATA
ANALOG OUT RIGHT			SEE DRAWING

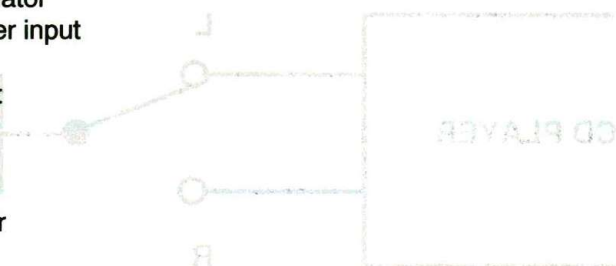
FILTER = 13TH ORDER FILTER 4822 395 30204

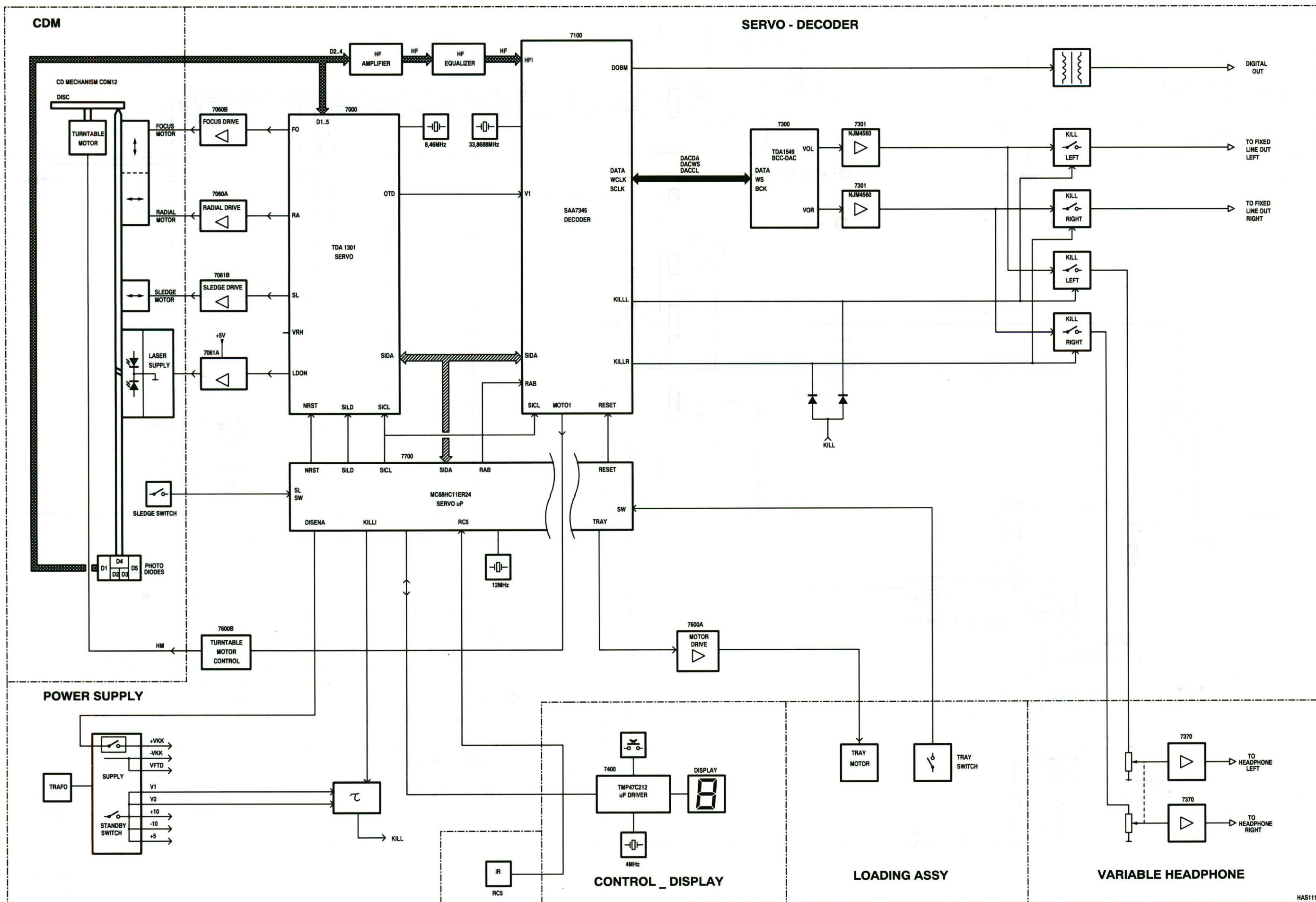


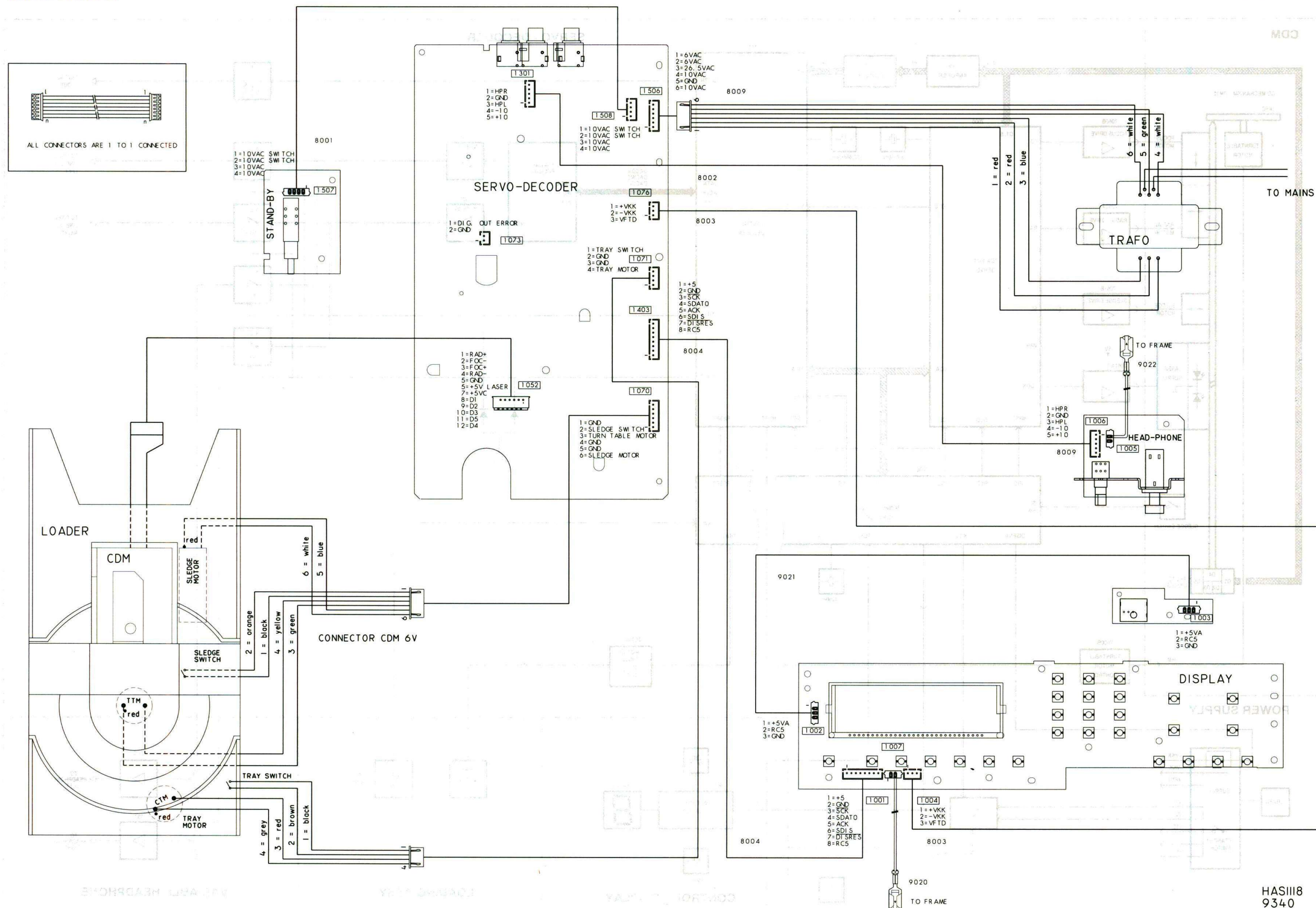
e.g.SOUND TECHNOLOGIE
ST1700B

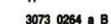
ABBREVIATIONS

BCK	Bit clock input of BCC-DAC TDA1549
CFLG	correction flag output
CL	interface clock input line
CL11	11.2896 MHz clock output
CL16	16.9344 MHz system clock output
CLA	4.2336 MHz microprocessor clock out
CLO	Clock output
CRIN	crystal/resonator input
CROUT	crystal/resonator output
D1-D4	Central diode input of TDA1301
D1-D5	Photodiode signals from CDM12 mechanism
DA	interface data I/O line
DACCL	Bit clock output of CD6 decoder SAA7345
DACDA	Data output of CD6 decoder SAA7345
DACWS	Word select output of CD6 decoder SAA7345
DATA	serial data output/Data input of BCC-DAC TDA1549
DOBM	biphase mark output
FO	Focus actuator output
FOC+	+Connection of focus actuator
FOC-	Ground connection of focus actuator
HF	High-Frequency signal to decoder input
HFIN	comparator signal input
HFREF	comparator common-mode input
IOL	Left channel current output
IOR	Right channel current output
IREF	Reference current output
ISLICE	current feedback from data slicer
LDON	Laser drive on
MISC	general purpose DAC output
MOTO1	motor output 1
MOTO2	motor output 2
NRST	Reset input
OTD	Off track detector
PORE	power-on reset enable input(active low)
R1-R2	Satellite diode signal input
RA	Radial actuator output
RAB	interface R/W and acknowledge input
RAD+	+Connection of radial actuator
RAD-	Ground connection of radial actuator
SCLK	serial bit clock output
SICL	Serial interface clock
SIDA	Serial interface data
SILD	Serial interface load
SL OUT	+Connection of sledge motor
SL	Sledge output
TEST1	test input
TEST2	test input
TS1-TS2	Test inputs
V1-5	Versatile input pins
VOL	Left channel output
VOR	Right channel output
WCLK	Word clock output
WS	Word select input of BCC-DAC TDA1549
XTLI	Oscillator input
XTLO	Oscillator output
XTLR	Oscillator reference









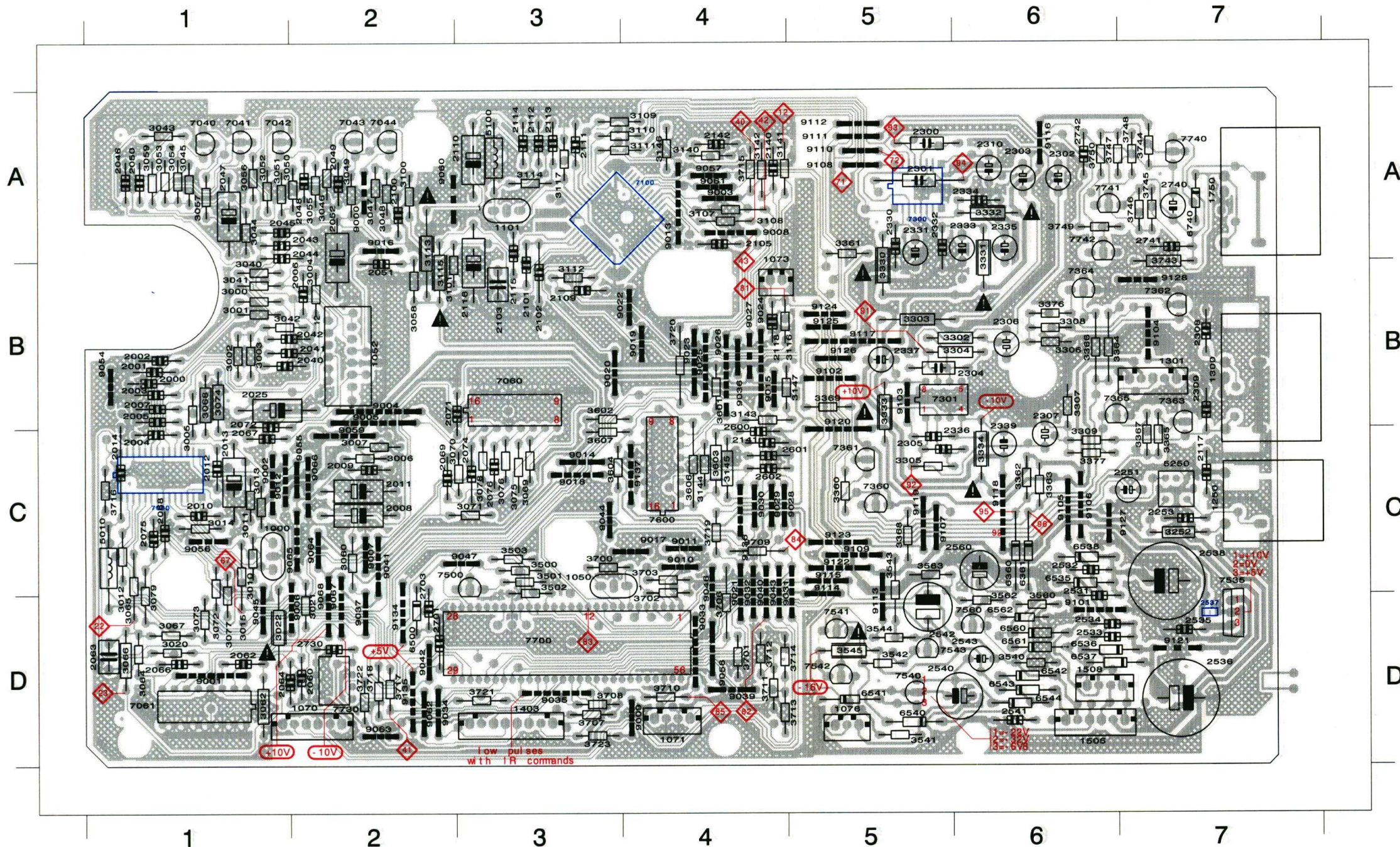


A	1250	K15
	1301	H16
	1301	H16
	1301	E16
	1301	E16
B	2251	L13
	2253	K14
	2300	F7
	2301	F9
	2303	F9
C	2306	F11
	2306	F12
	2307	H12
	2308	G14
	2310	G14
D	2330	F3
	2331	F3
	2332	F3
	2333	F5
	2334	F5
E	2335	F5
	2336	H11
	2337	H11
	2352	L10
	2352	L10
F	3304	F11
	3305	J11
	3306	G12
	3307	G12
	3308	F13
G	3309	F13
	3310	E4
	3311	E4
	3332	E5
	3333	G10
H	3334	H10
	3335	H9
	3361	J8
	3362	E10
	3363	H10
I	3364	H10
	3365	I13
	3366	F13
	3367	H13
	3369	J9
J	3376	F13
	3377	H13
	3378	H13
	6360	D10
	6361	J10
K	7300	F6
	7301	H11
	7302	H11
	7360	D9
	7361	J9
L	7362	I13
	7363	I13
	7364	F13
	7365	I13
	7365	H13



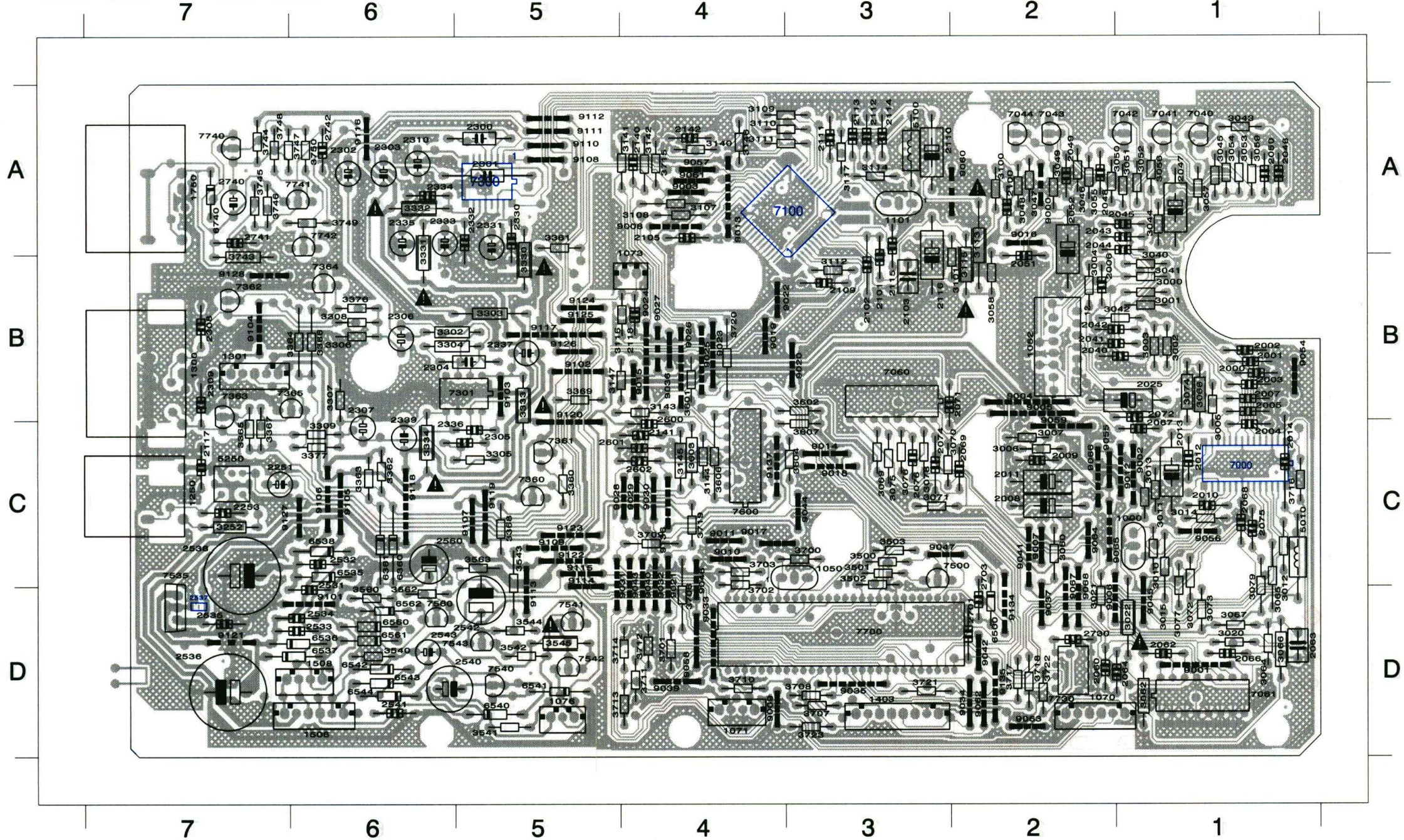
MAIN PANEL COMPONENT SIDE

1076 D 5	2308 B 7	2538 C 7	3330 B 5	3541 D 5	6361 C 6	7363 B 7	9107 C 5	9125 B 5	2005 B 1	2047 A 1	2076 C 3	2600 C 4	3014 C 1	3053 A 1	3073 D 1	3116 B 4	3606 C 4	3718 D 2	7700 D 3	9016 A 2	9034 D 2	9059 C 2
1250 C 7	2309 B 7	2540 D 6	3331 A 6	3542 D 5	6355 C 6	7364 B 6	9108 A 5	9126 B 5	2006 B 2	2048 A 2	2100 A 2	2601 C 4	3015 C 1	3054 A 1	3074 B 1	3117 A 3	3607 C 3	3719 C 4	7730 D 2	9017 C 4	9035 D 3	9060 A 2
1300 B 7	2310 A 6	2541 D 6	3332 A 6	3543 C 5	6356 D 6	7365 B 6	9109 C 5	9127 C 6	2007 B 1	2049 A 2	2101 B 3	2602 C 4	3020 D 1	3055 A 2	3075 C 3	3140 A 4	3700 C 3	3720 B 4	9000 A 2	9018 C 3	9036 B 4	9061 A 4
1301 B 7	2330 A 5	2542 D 5	3333 B 5	3544 D 5	6537 D 6	7535 D 7	9110 A 5	9128 B 7	2008 C 2	2050 A 1	2102 B 3	2701 D 2	3021 D 2	3056 A 1	3076 C 3	3141 A 4	3701 D 4	3721 D 3	9001 D 1	9019 B 4	9037 D 2	9062 D 2
1506 D 6	2331 A 5	2543 D 6	3334 C 6	3545 D 5	6538 C 6	7540 D 5	9111 A 5	-----	2009 C 2	2051 B 2	2103 B 3	2703 D 2	3022 D 1	3057 A 1	3077 C 1	3142 A 4	3702 C 4	3722 D 2	9002 C 1	9020 B 3	9039 D 4	9063 D 2
1508 D 6	2332 A 5	2560 C 6	3360 C 5	3560 D 6	6540 D 5	7541 D 5	9112 A 5	1000 C 1	2010 C 1	2052 A 2	2105 A 4	2730 D 2	3040 B 1	3058 B 2	3078 C 3	3143 B 4	3703 C 4	3723 D 3	9003 A 4	9021 C 4	9040 C 4	9064 C 2
1750 A 7	2333 A 6	2740 A 7	3361 A 5	3562 D 6	6541 D 5	7542 D 5	9113 D 5	1050 C 3	2011 C 2	2060 D 2	2109 B 3	3000 B 1	3041 B 1	3059 A 1	3079 D 1	3144 C 4	3706 D 4	5010 C 1	9004 B 2	9022 B 4	9041 C 2	9065 C 2
2117 C 7	2334 A 6	2741 A 7	3362 C 6	3563 C 5	6542 D 6	7543 D 5	9114 C 5	1052 B 2	2012 C 1	2062 D 1	2110 A 3	3001 B 1	3042 B 1	3060 C 2	3100 A 2	3145 C 4	3707 D 3	5100 A 3	9005 B 2	9023 B 4	9042 D 2	9066 C 2
2251 C 7	2335 A 6	2742 A 6	3363 C 6	3563 B 7	6543 D 6	7560 D 6	9115 C 5	1070 D 2	2013 C 1	2063 D 1	2111 A 3	3002 B 1	3043 A 1	3062 D 1	3101 B 2	3146 A 4	3708 D 3	6500 D 2	9006 D 2	9024 B 4	9043 C 4	9067 D 2
2253 C 7	2336 C 5	3252 C 7	3364 B 6	3744 A 7	6544 D 6	7740 A 7	9116 A 6	1071 D 4	2014 C 1	2064 D 1	2112 A 3	3003 B 1	3044 A 1	3064 D 1	3107 A 4	3147 B 4	3709 C 4	7040 A 1	9007 C 2	9025 B 4	9044 C 3	9068 D 2
2300 A 5	2337 B 5	3302 B 6	3365 C 7	3745 A 7	6560 D 6	7741 A 6	9117 B 5	1073 B 4	2025 B 1	2066 D 1	2113 A 3	3004 B 2	3045 A 1	3065 C 1	3108 A 4	3500 C 3	3710 D 4	7041 A 1	9008 A 4	9026 B 4	9045 D 1	9134 D 2
2301 A 5	2339 C 6	3303 B 5	3366 B 6	3746 A 7	6561 D 6	7742 A 6	9118 C 6	1101 A 3	2040 B 1	2067 C 1	2114 A 3	3005 B 1	3046 A 2	3066 D 1	3109 A 3	3501 C 3	3711 D 4	7042 A 1	9009 D 4	9027 B 4	9046 C 4	9135 D 2
2302 A 6	2531 D 6	3304 B 6	3367 C 7	3747 A 7	6562 D 6	9101 D 6	9119 C 5	1403 D 3	2041 B 1	2068 C 1	2115 A 3	3006 C 2	3047 A 2	3067 D 1	3110 A 3	3502 C 3	3712 D 4	7043 A 2	9010 C 4	9028 C 4	9047 C 3	9136 C 4
2303 A 6	2532 C 6	3305 C 5	3368 C 5	3748 A 7	6740 A 7	9102 B 5	9120 C 5	2000 B 1	2042 B 1	2069 C 2	2116 B 3	3007 C 2	3048 A 2	3068 B 1	3111 A 3	3503 C 3	3713 D 4	7044 A 2	9011 C 4	9029 C 4	9054 B 1	9137 C 4
2304 B 5	2533 D 6	3306 B 6	3369 B 5	3749 A 6	7301 B 5	9103 B 5	9121 D 7	2001 B 1	2043 A 1	2071 B 3	2118 B 4	3010 C 1	3049 A 2	3069 C 3	3112 B 3	3601 B 4	3714 D 4	7060 B 3	9012 C 1	9030 C 4	9055 C 2	
2305 C 5	2534 D 6	3307 B 6	3376 B 6	3750 A 6	7360 C 5	9104 B 7	9122 C 5	2002 B 1	2044 A 1	2072 B 1	2140 A 4	3011 C 1	3050 A 2	3070 C 3	3113 A 2	3602 B 3	3715 A 4	7061 D 1	9013 A 4	9031 C 5	9056 C 1	
2306 B 6	2535 D 7	3308 B 6	3377 C 6	5250 C 7	7361 C 5	9105 C 6	9123 C 5	2003 B 1	2045 A 1	2074 C 3	2141 C 4	3012 C 1	3051 A 1	3071 C 3	3114 A 3	3603 C 4	3716 C 1	7500 C 3	9014 C 3	9032 C 4	9057 A 4	
2307 C 6	2536 D 7	3309 C 6	3540 D 6	6360 C 6	7362 B 7	9106 C 6	9124 B 5	2004 C 1	2046 A 1	2075 C 1	2142 A 4	3013 C 1	3052 A 1	3072 C 1	3115 B 2	3604 C 3	3717 D 2	7600 C 4	9015 B 4	9033 D 4	9058 D 4	

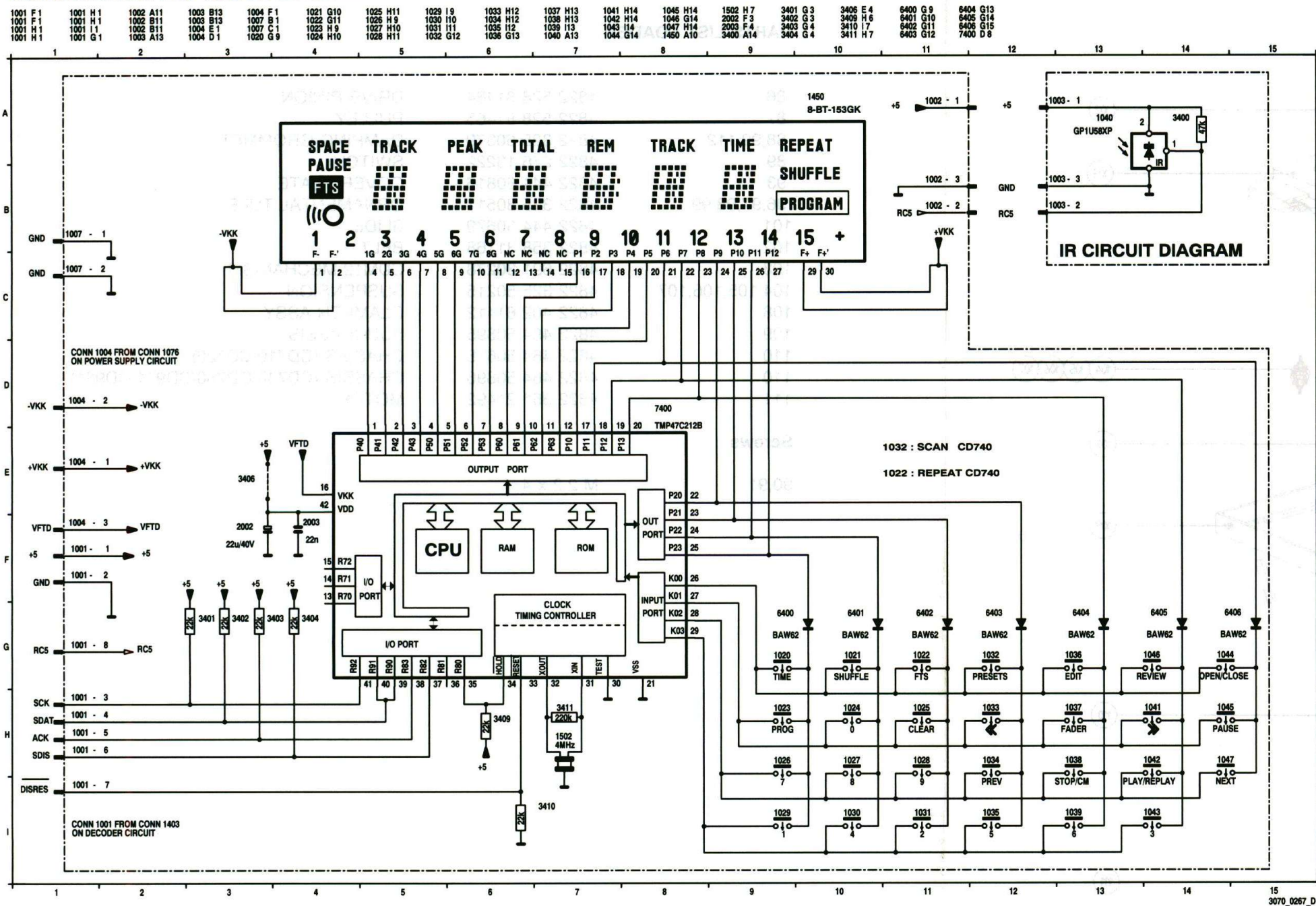


MAIN PANEL SOLDER SIDE

1076 D 5	2308 B 7	2538 C 7	3330 B 5	3541 D 5	6361 C 6	7363 B 7	9107 C 5	9125 B 5	2005 B 1	2047 A 1	2076 C 3	2600 C 4	3014 C 1	3053 A 1	3073 D 1	3116 B 4	3606 C 4	3718 D 2	7700 D 3	9016 A 2	9034 D 2	9059 C 2
1250 C 7	2309 B 7	2540 D 6	3331 A 6	3542 D 5	6535 C 6	7364 B 6	9108 A 5	9126 B 5	2006 B 2	2048 A 2	2100 A 2	2601 C 4	3015 C 1	3054 A 1	3074 B 1	3117 A 3	3607 C 3	3719 C 4	7730 D 2	9017 C 4	9035 D 3	9060 A 2
1300 B 7	2310 A 6	2541 D 6	3332 A 6	3543 C 5	6536 D 6	7365 B 6	9109 C 5	9127 C 6	2007 B 1	2049 A 2	2101 B 3	2602 C 4	3020 D 1	3055 A 2	3075 C 3	3140 A 4	3700 C 3	3720 B 4	9000 A 4	9018 C 3	9036 B 4	9061 A 4
1301 B 7	2330 A 5	2542 D 5	3333 B 5	3544 D 5	6537 D 6	7535 D 7	9110 A 5	9128 B 7	2008 C 2	2050 A 1	2102 B 3	2701 D 2	3021 D 2	3056 A 1	3076 C 3	3141 A 4	3701 D 4	3721 D 3	9001 D 1	9019 B 4	9037 D 2	9062 D 2
1506 D 6	2331 A 5	2543 D 6	3334 C 6	3545 D 5	6538 C 6	7540 D 5	9111 A 5	-----	2009 C 2	2051 B 2	2103 B 3	2703 D 2	3022 D 1	3057 A 1	3077 C 1	3142 A 4	3702 C 4	3722 D 2	9002 C 1	9020 B 3	9039 D 4	9063 D 2
1508 D 6	2332 A 5	2560 C 6	3360 C 5	3560 D 6	6540 D 5	7541 D 5	9112 A 5	1000 C 1	2010 C 1	2052 A 2	2105 A 4	2730 D 2	3040 B 1	3058 B 2	3078 C 3	3143 B 4	3703 C 4	3723 D 3	9003 A 4	9021 C 4	9040 C 4	9064 C 2
1750 A 7	2333 A 6	2740 A 7	3361 A 5	3562 D 6	6541 D 5	7542 D 5	9113 D 5	1050 C 3	2011 C 2	2060 D 2	2109 B 3	3000 B 1	3041 B 1	3059 A 1	3079 D 1	3144 C 4	3706 D 4	5010 C 1	9004 B 2	9022 B 4	9041 C 2	9065 C 2
2117 C 7	2334 A 6	2741 A 7	3362 C 6	3563 C 5	6542 D 6	7543 D 5	9114 C 5	1052 B 2	2012 C 1	2062 D 1	2110 A 3	3001 B 1	3042 B 1	3060 C 2	3100 A 2	3145 C 4	3707 D 3	5100 A 3	9005 B 2	9023 B 4	9042 D 2	9066 C 2
2251 C 7	2335 A 6	2742 A 6	3363 C 6	3743 B 7	6543 D 6	7560 D 6	9115 C 5	1070 D 2	2013 C 1	2063 D 1	2111 A 3	3002 B 1	3043 A 1	3062 D 1	3101 B 2	3146 A 4	3708 D 3	6500 D 2	9006 D 2	9024 B 4	9043 C 4	9067 D 2
2253 C 7	2336 C 5	3252 C 7	3364 B 6	3744 A 7	6544 D 6	7740 A 7	9116 A 6	1071 D 4	2014 C 1	2064 D 1	2112 A 3	3003 B 1	3044 A 1	3064 D 1	3107 A 4	3147 B 4	3709 C 4	7040 A 1	9007 C 2	9025 B 4	9044 C 3	9068 D 2
2300 A 5	2337 B 5	3302 B 6	3365 C 7	3745 A 7	6560 D 6	7741 A 6	9117 B 5	1073 B 4	2025 B 1	2066 D 1	2113 A 3	3004 B 2	3045 A 1	3065 C 1	3108 A 4	3500 C 3	3710 D 4	7041 A 1	9008 A 4	9026 B 4	9045 D 1	9134 D 2
2301 A 5	2339 C 6	3303 B 5	3366 B 6	3746 A 7	6561 D 6	7742 A 6	9118 C 6	1101 A 3	2040 B 1	2067 C 1	2114 A 3	3005 B 1	3046 A 2	3066 D 1	3109 A 3	3501 C 3	3711 D 4	7042 A 1	9009 D 4	9027 B 4	9046 C 4	9135 D 2
2302 A 6	2531 D 6	3304 B 6	3367 C 7	3747 A 7	6562 D 6	9101 D 6	9119 C 5	1403 D 3	2041 B 1	2068 C 1	2115 A 3	3006 C 2	3047 A 2	3067 D 1	3110 A 3	3502 C 3	3712 D 4	7043 A 2	9010 C 4	9028 C 4	9047 C 3	9136 C 4
2303 A 6	2532 C 6	3305 C 5	3368 C 5	3748 A 7	6740 A 7	9102 B 5	9120 C 5	2000 B 1	2042 B 1	2069 C 2	2116 B 3	3007 C 2	3048 A 2	3068 B 1	3111 A 3	3503 C 3	3713 D 4	7044 A 2	9011 C 4	9029 C 4	9054 B 1	9137 C 4
2304 B 5	2533 D 6	3306 B 6	3369 B 5	3749 A 6	7301 B 5	9103 B 5	9121 D 7	2001 B 1	2043 A 1	2071 B 3	2118 B 4	3010 C 1	3049 A 2	3069 C 3	3112 B 3	3601 B 4	3714 D 4	7060 B 3	9012 C 1	9030 C 4	9055 C 2	
2305 C 5	2534 D 6	3307 B 6	3376 B 6	3750 A 6	7360 C 5	9104 B 7	9122 C 5	2002 B 1	2044 A 1	2072 B 1	2140 A 4	3011 C 1	3050 A 2	3070 C 3	3113 A 2	3602 B 3	3715 A 4	7061 D 1	9013 A 4	9031 C 5	9056 C 1	
2306 B 6	2535 D 7	3308 B 6	3377 C 6	5250 C 7	7361 C 5	9105 C 6	9123 C 5	2003 B 1	2045 A 1	2074 C 3	2141 C 4	3012 C 1	3051 A 1	3071 C 3	3114 A 3	3603 C 4	3716 C 1	7500 C 3	9014 C 3	9032 C 4	9057 A 4	
2307 C 6	2536 D 7	3309 C 6	3540 D 6	6360 C 6	7362 B 7	9106 C 6	9124 B 5	2004 C 1	2046 A 1	2075 C 1	2142 A 4	3013 C 1	3052 A 1	3072 C 1	3115 B 2	3604 C 3	3717 D 2	7600 C 4	9015 B 4	9033 D 4	9058 D 4	
2537 D 7	7300 A 5	-----	7000 C 1	7100 A 3																		

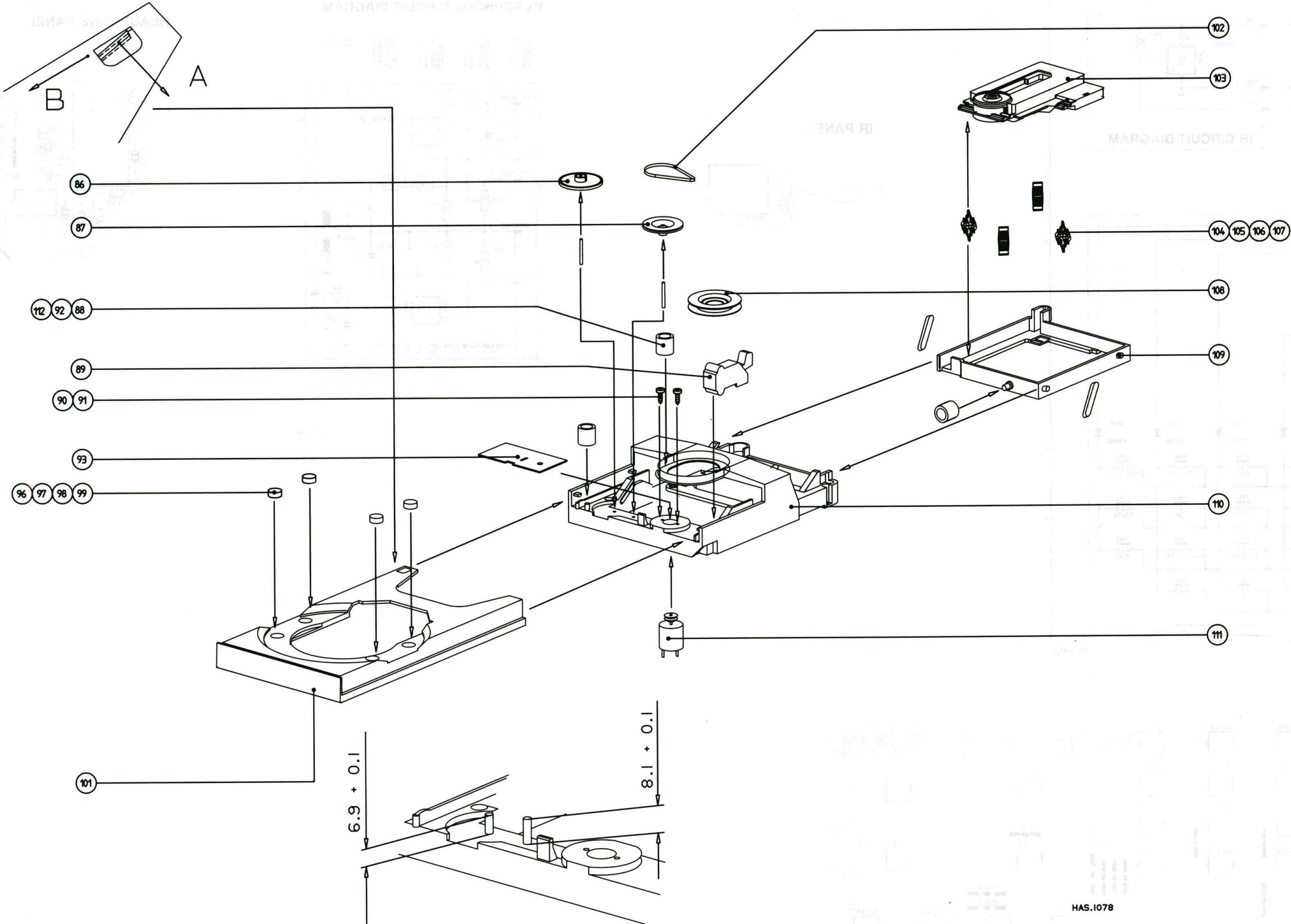


CONTROL & DISPLAY CIRCUIT DIAGRAM



LOADER

DETAIL I



PARTS LIST LOADER

86	4822 528 81464	DRIVE PINION
87	4822 528 81465	PULLEY
88,92,112	4822 325 60379	DAMPING GROMMET
89	4822 276 13222	SWITCH
93	4822 444 60816	COVER PLATE
96,97,98,99	4822 325 80511	ORNAMENTAL TULE
101	4822 444 50679	SLIDE
102	4822 358 31168	BELT
103	4822 691 30278	CDM12 MECHANISM
104,105,106,107	4822 325 50215	SUSPENSION
108	4822 402 61412	CLAMPER ASSY
109	4822 464 50895	SUBCHASSIS
110	4822 464 50678	CHASSIS (CD710/CD720)
110	4822 464 50896	CHASSIS (CD740/CD750/CD911/CD921)
111	4822 361 21492	MOTOR

Screws

90,91 M 2.2 x 4

MECHANICAL PARTS LIST

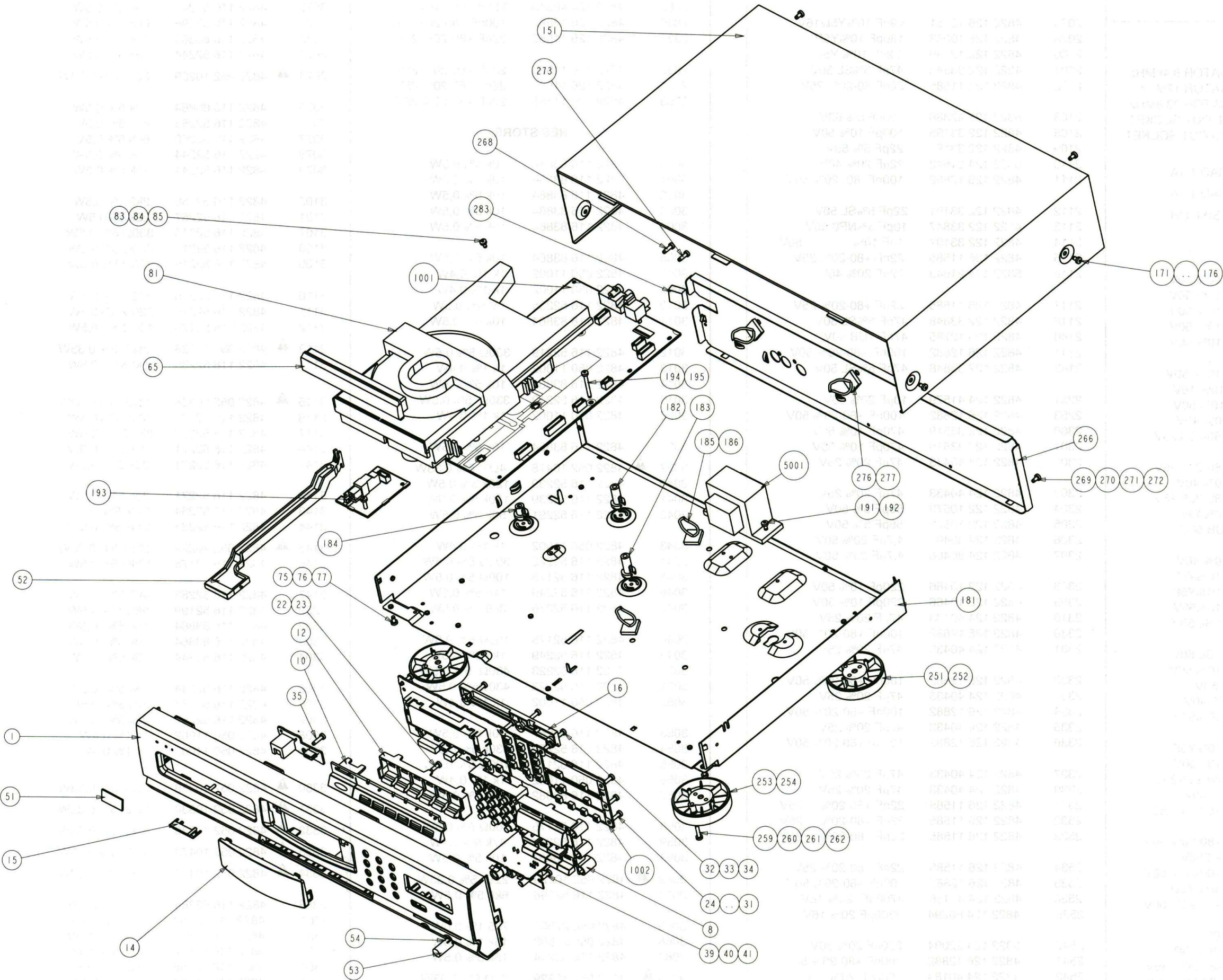
1	4822 459 04095	FRONT
8	4822 410 10281	BUTTON UNIT(TEN KEY)
10	4822 410 10282	BUTTON UNIT(OPEN/CLOSE)
12	4822 410 10283	BUTTON UNIT(NOSE)
14	4822 381 11688	WINDOW
15	4822 381 11689	IR WINDOW
16	4822 402 10147	MOUNTING PIECE
51	4822 459 11055	WORD MARK
52	4822 535 10242	POWER ROD
53	4822 410 10284	VOLUME KNOB
54	4822 492 51374	SPRING
65	4822 444 10177	TRAY FRONT
151	4822 444 83843	COVER
251→252	4822 462 10667	FOOT SILVER
253→254	4822 462 10668	FOOT BLACK
255→258	4822 532 12419	FELT
283 ▲	4822 532 83948	BUSHING
308	4822 321 22832	CINCH CABLE SBC1072
365	4822 218 10664	REMOTE CONTROL RH8808/01

Not mentioned parts are only available during production period on special request.

SCREWS

DESCRIPTION	MEASURE	ITEM NUMBER(S)	FIXATION
selftapper for plastic	3x10	22, 23	knob units - front
		39, 40, 41	headphone PCB - front
		196, 197, 198	monoboard - loading
	3x12	268	analogue cinch - backplate
		273	digital cinch - backplate
		24,25,26,27,28,29,30,31	display PCB - front
selftapper for metal	3x6 with washer	32, 33, 34	mounting piece - front
		35	IR PCB - front
		75, 76, 77	front - frame
	M3x6	171,172,173,174,175,176	cover - frame
		191,192	trafo - frame
		269,270,271,272	backplate - frame
	M3x15	83,84,85	loading - frame
	3x16 with washer	259,283,261,262	foot - frame
	M3x28	193	switch PCB - frame
		194,195	monoboard - frame

EXPLODED VIEW



ELECTRICAL PARTS LIST

MAIN PANEL			
MISCELLANEOUS			
1000	4822 242 73557	RESONATOR 8.46MHz	
1050	5322 242 73686	RESONATOR 12MHz	
1101	4822 242 81705	RESONATOR 33.8MHz	
1250	4822 267 31729	DIGITAL OUT SOCKET	
1300	4822 267 31731	ANALOG OUT SOCKET	
1510 ▲	4822 071 51002	FUSE RAD T 1A	
1511 ▲	4822 071 51002	FUSE RAD T 1A	
1530 ▲	4822 276 13489	MAINS SWITCH	
CAPACITORS			
2000	4822 122 10466	220pF 10% 50V	
2001	4822 122 10466	220pF 10% 50V	
2002	4822 122 10466	220pF 10% 50V	
2003	4822 122 10466	220pF 10% 50V	
2004	4822 122 10466	220pF 10% 50V	
2005	4822 122 10466	220pF 10% 50V	
2006	4822 126 12878	1,5nF 10% 16V	
2007	4822 122 10459	583pF10% 50V	
2008	5322 124 21643	22µF 20% 40V	
2009	4822 126 11585	22nF +80-20%25V	
2010	4822 126 11585	22nF +80-20%25V	
2011	5322 124 21643	22µF 20% 40V	
2012	4822 126 11585	22nF +80-20%25V	
2013	5322 124 21643	22µF 20%40V	
2014	4822 126 12785	47nF TUB 50V	
2025	5322 124 21643	22µF 20% 40V	
2040	4822 126 10053	180pF 10%Y5P	
2041	4822 126 10053	180pF 10%Y5P	
2042	4822 126 12787	330pF 10%50V	
2043	4822 122 33848	47pF 5%SL 50V	
2044	4822 122 33848	47pF 5%SL 50V	
2045	4822 122 33195	100pF 10% 50V	
2046	4822 126 12573	18pF5%50V	
2047	5322 124 21643	22µF20%40V	
2048	4822 126 12787	330pF 10%50V	
2049	4822 126 10053	180pF 10%Y5P	
2050	4822 122 10466	220pF 10%50V	
2051	4822 126 11585	22nF +80-20%25V	
2052	5322 124 21643	22µF20%40V	
2083	4822 126 12882	100nF +80-20% 50V	
2062	4822 126 12882	100nF +80-20% 50V	
2063	5322 121 42489	33nF 5% 250V	
2064	4822 126 12882	100nF +80-20% 50V	
2066	4822 126 12339	2,2nF 10% Y5Ω	
2067	4822 126 12882	100nF +80-20% 50V	
2068	4822 126 12148	2,7nF 10%	
2069	4822 126 10053	180pF 10%Y5P	
2071	4822 126 12882	100nF +80-20% 50V	
2072	4822 126 12882	100nF +80-20% 50V	
2074	4822 126 12882	100nF +80-20% 50V	
2075	4822 126 13151	3,9nF 10%Y5Ω16V	
2076	4822 126 10053	180pF 10%Y5P	
2100	4822 126 12339	2,2nF 10% Y5Ω	
2101	4822 122 33848	47pF 5%SL 50V	
2102	4822 126 11585	22nF 80-20% 25V	
2103	5322 121 42386	100nF 5% 63V	
2105	4822 122 33195	100pF 10% 50V	
2109	4822 122 33191	22pF 5% 50V	
2110	5322 124 21643	22µF 20% 40V	
2111	4822 126 12882	100nF 80 -20% 50V	
2112	4822 122 33191	22pF 5%SL 50V	
2113	4822 122 33847	10pF 5%NP0 50V	
2114	4822 122 33197	1nF 10% 50V	
2115	4822 126 11585	22nF +80-20% 25V	
2116	5322 124 21643	22µF 20% 40V	
2117	4822 126 11585	22nF +80-20% 25V	
2118	4822 122 33848	47pF 5%SL 50V	
2140	4822 126 12785	47nF TUB 50V	
2141	4822 126 12882	100nF +80-20% 50V	
2142	4822 122 33848	47pF 5%SL 50V	
2251	4822 124 41579	10µF 20% 50V	
2253	4822 126 12882	100nF +80-20% 50V	
2300	4822 122 33519	470pF 10% 50V	
2301	4822 122 33519	470pF 10% 50V	
2302	4822 124 40433	47µF 20% 25V	
2303	4822 124 40433	47µF 20% 25V	
2304	4822 122 10573	56pF 5% 50V	
2305	4822 122 10573	56pF 5% 50V	
2306	4822 124 80408	4,7µF 20% 50V	
2307	4822 124 80408	4,7µF 20% 50V	
2308	4822 122 10466	220pF 10% 50V	
2309	4822 122 10466	220pF 10% 50V	
2310	4822 124 40433	47µF 20% 25V	
2330	4822 126 12882	100nF +80-20% 50V	
2331	4822 124 40433	47µF 20% 25V	
2332	4822 126 12882	100nF +80-20% 50V	
2333	4822 124 40433	47µF 20% 25V	
2334	4822 126 12882	100nF +80-20% 50V	
2335	4822 124 40433	47µF 20% 25V	
2336	4822 126 12882	100nF +80-20% 50V	
2337	4822 124 40433	47µF 20% 25V	
2339	4822 124 40433	47µF 20% 25V	
2531	4822 126 11585	22nF +80-20% 25V	
2532	4822 126 11585	22nF +80-20% 25V	
2533	4822 126 11585	22nF +80-20% 25V	
2534	4822 126 11585	22nF +80-20% 25V	
2535	4822 126 12882	100nF +80-20% 50V	
2536	4822 124 41458	4700µF 20% 16V	
2538	4822 124 80294	3300µF 20% 16V	
2540	5322 124 22094	220µF 20% 50V	
2541	4822 126 12882	100nF +80-20% 50V	
2542	4822 124 40184	1000µF 20% 10V	

2583	4822 124 40849	330µF 20% 16V	
2830	4822 126 12882	100nF +80-20% 50V	
2831	4822 126 11585	22nF +80-20% 25V	
2832	4822 126 11585	22nF +80-20% 25V	
2701	4822 126 11585	22nF +80-20% 25V	
2703	4822 126 11585	22nF +80-20% 25V	
RESISTORS			
3000	4822 116 83864	10k 5% 0,5W	
3001	4822 116 83864	10k 5% 0,5W	
3002	4822 116 83864	10k 5% 0,5W	
3003	4822 116 83864	10k 5% 0,5W	
3004	4822 116 83864	10k 5% 0,5W	
3005	4822 116 83864	10k 5% 0,5W	
3006	4822 050 11002	1k 1% 0,4W	
3007	4822 050 11002	1k 1% 0,4W	
3010	4822 116 52235	1M 5% 0,5W	
3011	4822 116 83864	10k 5% 0,5W	
3012	4822 116 52219	330Ω 5% 0,5W	
3013	4822 050 11002	1k 1% 0,4W	
3014	4822 116 83864	10k 5% 0,5W	
3015	4822 116 52219	330Ω 5% 0,5W	
3020	4822 050 11002	1k 1% 0,4W	
3021	4822 116 83864	10k 5% 0,5W	
3022 ▲	4822 052 10478	4Ω7 5% 0,33W	
3040	4822 116 52239	120k 5% 0,5W	
3041	4822 116 52239	120k 5% 0,5W	
3042	4822 116 52291	56k 5% 0,5W	
3043	4822 050 11002	1k 1% 0,4W	
3044	4822 116 52222	390Ω 5% 0,5W	
3045	4822 116 52175	100Ω 5% 0,5W	
3046	4822 116 52249	1k8 5% 0,5W	
3047	4822 116 52276	3k9 5% 0,5W	
3048	4822 116 52175	100Ω 5% 0,5W	
3049	4822 116 52249	1k8 5% 0,5W	
3050	4822 116 52223	430Ω 5% 0,5W	
3051	4822 116 52223	430Ω5% 0,5W	
3052	4822 050 11002	1k 1% 0,4W	
3053	4822 116 52267	30k 5% 0,5W	
3054	4822 116 52272	330k 5% 0,5W	
3055	4822 116 52175	100Ω 5% 0,5W	
3056	4822 050 11002	1k 1% 0,4W	
3057	4822 116 83882	39k 5% 0,5W	
3058	4822 116 52175	100Ω 5% 0,5W	
3059	4822 116 52284	47k 5% 0,5W	
3083	4822 116 83864	10k 5% 0,5W	
3062 ▲	4822 052 10229	22Ω 5% 0,33W	
3064	4822 116 52296	6k8 5% 0,5W	
3065	4822 050 27502	7k5 1% 0,6W	
3066	4822 050 21503	15k 1% 0,6W	
3067	4822 116 52244	15k 5% 0,5W	
3068 ▲	4822 052 10229	22Ω 5% 0,33W	
3069	4822 116 83864	10k 5% 0,5W	
3070	4822 116 52244	15k 5% 0,5W	
3071	4822 116 52296	6k8 5% 0,5W	
3072	4822 116 83864	10k 5% 0,5W	
3073	4822 116 52244	15k 5% 0,5W	
3074 ▲	4822 052 10229	22Ω 5% 0,33W	
3075	4822 116 83864	10k 5% 0,5W	
3076	4822 116 52283	4k7 5% 0,5W	
3077	4822 116 52296	6k8 5% 0,5W	
3078	4822 116 52244	15k 5% 0,5W	
3079	4822 116 52244	15k 5% 0,5W	
3100	4822 116 52256	2k2 5% 0,5W	
3101	4822 116 52257	22k 5%0,5W	
3107	4822 116 52219	330Ω 5% 0,5W	
3108	4822 116 52215	220Ω 5% 0,5W	
3109	4822 116 52215	220Ω 5% 0,5W	
3110	4822 116 52215	220Ω 5% 0,5W	
3111	4822 116 52215	220Ω 5% 0,5W	
3112	4822 116 52175	100Ω 5% 0,5W	
3113 ▲	4822 052 10338	3Ω3 5% 0,33W	
3114	4822 116 52235	1M 5% 0,5W	
3115 ▲	4822 052 10338	3Ω3 5% 0,33W	
3116	4822 116 52175	100Ω 5% 0,5W	
3117	4822 116 52256	2k2 5% 0,5W	
3140	4822 116 52271	33k 5% 0,5W	
3141	4822 116 52271	33k 5% 0,5W	
3142	4822 116 52271	33k 5% 0,5W	
3143	4822 116 52234	100k 5% 0,5W	
3144	4822 116 52234	100k 5% 0,5W	
3145 ▲	4822 052 10229	22Ω 5% 0,33W	
3146	4822 116 52175	100Ω 5% 0,5W	
3147	4822 116 52283	4k7 5% 0,5W	
3252	4822 116 52199	68Ω 5% 0,5W	
3302	4822 116 83864	10k 5% 0,5W	
3303	4822 116 83864	10k 5% 0,5W	
3304	4822 116 52244	15k 5% 0,5W	
3305	4822 116 52244	15k 5% 0,5W	
3306	4822 116 52257	22k 5% 0,5W	
3307	4822 116 52257	22k 5% 0,5W	
3308	4822 050 11002	1k 1% 0,4W	
3309	4822 050 11002	1k 1% 0,4W	
3330 ▲	4822 052 10338	3Ω3 5% 0,33W	
3331 ▲	4822 052 10338	3Ω3 5% 0,33W	
3332 ▲	4822 052 10338	3Ω3 5% 0,33W	
3333 ▲	4822 052 10478	4Ω7 5% 0,33W	
3334 ▲	4822 052 10478	4Ω7 5% 0,33W	
3383	4822 116 52284	47k 5% 0,5W	
3361	4822 116 52284	47k 5% 0,5W	
3362	4822 116 83874	220k 5% 0,5W	
3363	4822 116 83874	220k 5% 0,5W	
3364	4822 116 52256	2k2 5% 0,5W	
3365	4822 116 52256	2k2 5% 0,5W	

3366	4822 116 52256	2k2 5% 0,5W			
3367	4822 116 52256	2k2 5% 0,5W			
3368	4822 116 83864	10k 5% 0,5W			
3369	4822 116 83864	10k 5% 0,5W			
3376	4822 050 11002	1k 1% 0,4W			
3377	4822 050 11002	1k 1% 0,4W			
3500	4822 116 52211	150Ω 5% 0,5W			
3501	4822 050 11002	1k 1% 0,4W			
3502	4822 116 52257	22k 5% 0,5W			
3503	4822 116 52257	22k 5% 0,5W			
3540	4822 116 52284	47k 5% 0,5W			
3541	4822 116 52207	1k2 5% 0,5W			
3542	4822 116 52283	4k7 5% 0,5W			
3543	4822 116 52283	4k7 5% 0,5W			
3544	4822 116 52257	22k 5% 0,5W			
3545 ▲	4822 052 10478	4Ω7 5% 0,33W			
3583	4822 050 11002	1k 1% 0,4W			
3562	4822 116 52283	4k7 5% 0,5W			
3563	4822 116 52283	4k7 5% 0,5W			
3831	4822 116 52238	12k 5% 0,5W			
3832	4822 116 52238	12k 5% 0,5W			
3833 ▲	4822 052 10229	22Ω 5% 0,33W			
3834	4822 116 52303	8k2 5% 0,5W			
3836	4822 116 52238	12k 5% 0,5W			
3837	4822 116 52238	12k 5% 0,5W			
3700	4822 116 83874	220k 5% 0,5W			
3701	4822 116 52257	22k 5% 0,5W			
3703	4822 116 52257	22k 5% 0,5W			
3706	4822 116 52257	22k 5% 0,5W			
3707	4822 116 52257	22k 5% 0,5W			
3708	4822 116 52257	22k 5% 0,5W			
3709	4822 116 52257	22k 5% 0,5W			
3710	4822 116 52257	22k 5% 0,5W			
3711	4822 116 52257	22k 5% 0,5W			
3714	4822 116 52257	22k 5% 0,5W			
3715	4822 116 83864	10k 5% 0,5W			
3716	4822 050 11002	1k 1% 0,4W			
3717	4822 050 11002	1k 1% 0,4W			
3718	4822 050 11002	1k 1% 0,4W			
3719	4822 050 11002	1k 1% 0,4W			
3720	4822 050 11002	1k 1% 0,4W			
3723	4822 116 52257	22k 5% 0,5W			
COILS					
5010	4822 157 62552	2,2μH			
5100	4822 157 62552	2,2μH			
5250	4822 157 70831	DIG. OUT TRANSFO			
DIODES					
6383	4822 130 30621	1N4148			
6361	4822 130 30621	1N4148			
6500	4822 130 31981	BZX79-C3V9			
6535	5322 130 30684	1N4002GP			
6536	5322 130 30684	1N4002GP			
6537	5322 130 30684	1N4002GP			
6538	5322 130 30684	1N4002GP			
6540	4822 130 83362	1N4004GP			
6541	4822 130 34278	BZX79-C6V8			
6542	4822 130 30621	1N4148			
6543	5322 130 30684	1N4002GP			
6544	4822 130 30621	1N4148			
6583	5322 130 30684	1N4002GP			
6561	5322 130 30684	1N4002GP			
6562	4822 130 31981	BZX79-C3V9			
TRANSISTORS & IC'S					
7000	4822 209 31064	TDA1301T/N1			
7040	4822 130 40902	BF240			
7041	4822 130 40937	BC548B			
7042	4822 130 44197	BC558B			
7043	4822 130 40937	BC548B			
7044	4822 130 40937	BC548B			
7083	4822 209 72587	TCA0372			
7061	4822 209 72587	TCA0372			
7100	4822 209 33339	SAA7345GP/M5			
7300	4822 209 33252	TDA1549T/N1			
7301	4822 209 83274	NJM4583D			
7383	4822 130 44197	BC558B			
7361	4822 130 44197	BC558B			
7362	4822 130 41344	BC337-40			
7363	4822 130 41344	BC337-40			
7364	4822 130 41344	BC337-40			
7365	4822 130 41344	BC337-40			
7500	4822 130 44197	BC558B			
7535	4822 209 80817	L7805CV			
7540	5322 209 62115	MC79L15AC			
7541	4822 130 40937	BC548B			
7542	4822 130 41344	BC337-40			
7543	4822 130 44197	BC558B			
7583	4822 130 44197	BC558B			
7830	4822 209 72587	TCA0372			
7700	4822 900 10666	MC68HC11ER31/P158.08			

DISPLAY & HEADPHONE PANEL**MISCELLANEOUS**

	4822 256 92151	DISPLAY HOLDER
1020	4822 276 13114	TACT SWITCH
1021	4822 276 13114	TACT SWITCH
1022	4822 276 13114	TACT SWITCH
1023	4822 276 13114	TACT SWITCH
1024	4822 276 13114	TACT SWITCH
1025	4822 276 13114	TACT SWITCH
1026	4822 276 13114	TACT SWITCH
1027	4822 276 13114	TACT SWITCH
1028	4822 276 13114	TACT SWITCH
1029	4822 276 13114	TACT SWITCH
1030	4822 276 13114	TACT SWITCH
1031	4822 276 13114	TACT SWITCH
1032	4822 276 13114	TACT SWITCH
1033	4822 276 13114	TACT SWITCH
1034	4822 276 13114	TACT SWITCH
1035	4822 276 13114	TACT SWITCH
1036	4822 276 13114	TACT SWITCH
1037	4822 276 13114	TACT SWITCH
1038	4822 276 13114	TACT SWITCH
1039	4822 276 13114	TACT SWITCH
1040	4822 214 52009	IR RECEIVER GP1U58XP
1041	4822 276 13114	TACT SWITCH
1042	4822 276 13114	TACT SWITCH
1043	4822 276 13114	TACT SWITCH
1044	4822 276 13114	TACT SWITCH
1045	4822 276 13114	TACT SWITCH
1046	4822 276 13114	TACT SWITCH
1047	4822 276 13114	TACT SWITCH
1371	4822 267 31453	HEADPHONE SOCKET
1450	4822 130 91329	DISPLAY 8-BT-153GK
1502	4822 242 72527	RESONATOR 4MHz

CAPACITORS

2002	5322 124 21643	22µF 20% 40V
2003	4822 126 11585	22nF +80-20%25V
2370	4822 126 11585	22nF +80-20%25V
2371	4822 122 33197	1nF 10% 50V
2372	4822 122 33197	1nF 10% 50V
2373	4822 122 33197	1nF 10% 50V

RESISTORS

3370	4822 101 21199	10kX2 20% 0,025W
3371	4822 116 83864	10k 5% 0,5W
3372	4822 116 83864	10k 5% 0,5W
3373	4822 116 52244	15k 5% 0,5W
3374	4822 116 52244	15k 5% 0,5W
3375	4822 116 52206	120Ω 5% ,5W
3386	4822 116 52206	120Ω 5% 0,5W
3400	4822 116 52284	47k 5% 0,5W
3401	4822 116 52257	22k 5% 0,5W

3402	4822 116 52257	22k 5% 0,5W
3403	4822 116 52257	22k 5% 0,5W
3404	4822 116 52257	22k 5% 0,5W
3409	4822 116 52257	22k 5% 0,5W
3410	4822 116 52257	22k 5% 0,5W
3411	4822 116 83874	220k 5% 0,5W

DIODES, TRANSISTORS & I.C.'s

6400	4822 130 30613	BAW62
6401	4822 130 30613	BAW62
6402	4822 130 30613	BAW62
6403	4822 130 30613	BAW62
6404	4822 130 30613	BAW62
6405	4822 130 30613	BAW62
6406	4822 130 30613	BAW62
7370	4822 209 83274	NJM4583D
7400	4822 209 30249	TMP47C212AN

MAINS VOLTAGE

5001/00 ▲	4822 146 31337	MAINS TRANSFO /00
5001/01 ▲	4822 146 31338	MAINS TRANSFO /01
5001/06 ▲	4822 146 31345	MAINS TRANSFO /06

Service Service Service

A96-350

Product Service Group CE Audio

Service Information

This Service Information is valid for the following typenumbers:

AS440, AS445, AS450, AS455, AS540, AS545, AS550, AS640, AS641, AS642, AS645, AS650, AS655, AZ8040, CD60, CD70, CD80, CD91, CD163, CD165, CD410, CD690/2x, CD692/2x, CD710, CD720, CD730, CD732, CD733, CD740, CD750, CD910, CD911, CD920, CD921, CDC263, CDC265, CDC745, CDC751, CDC794, CDC796, CDC915, CDC916, CDC925, CDC926, CDC935, CDC936, CS1600, CS2600, FW14, FW15, FW20, FW21, FW30, FW31, FW36, FW40, FW41, FW54, FW56, FW70, FW80, and all future sets using the CDM12.1.

CHARGED CAPACITORS ON THE SERVO BOARD MAY DAMAGE THE CDM-ELECTRONICS WHEN CONNECTING A NEW CDM MECHANISM. THAT'S WHY, BESIDES THE SAFETY MEASURES LIKE

- **SWITCH OFF POWER SUPPLY**
- **ESD PROTECTION**

ADDITIONAL ACTIONS MUST BE TAKEN BY THE REPAIR TECHNICIAN.

The following steps have to be done when replacing the CDM mechanism:

1. Disconnect old CDM flexfoil from printed board
2. Connect paperclip to CDM flexfoil to short-circuit flexfoil (fig.1)
3. Short-circuit printed board with **brass-sheet (4822 321 11197)** plugged into the flexfoil connector (fig.2)
4. Remove old CDM mechanism
5. Position new CDM mechanism in its studs
6. Remove short-circuit from printed board connector
7. Remove short-circuit from flexfoil of new CDM
8. Connect new flexfoil to print connector (fig.3)

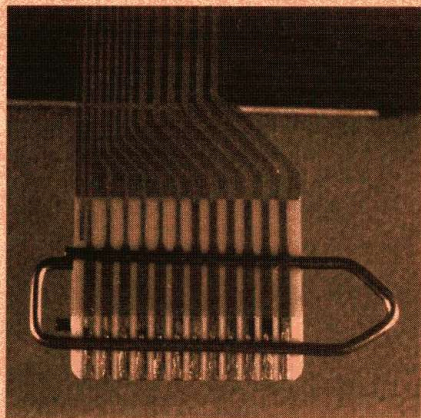


fig.1

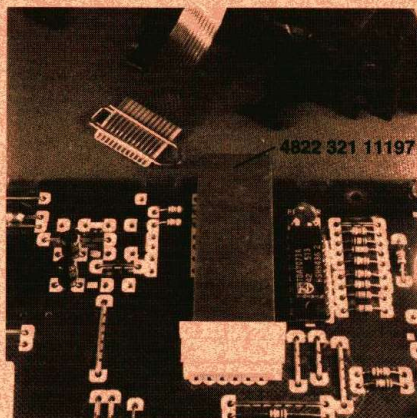


fig.2

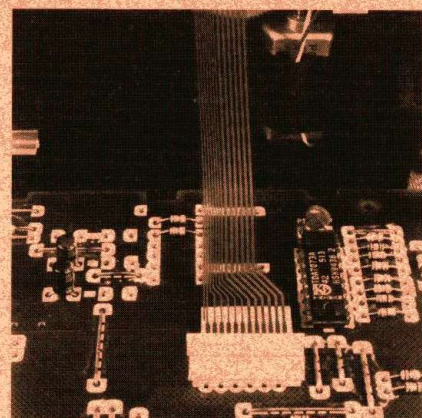


fig.3