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Annex
  Service Manual Tape Transport RDN-11
  Service Manual Record Player DL-40

CLASS 1
LASER PRODUCT
SERVICE TEST PROGRAM

The service test programm can be left:
- at each step: by switching power off (disconnect mains)
- from service main menu:
  by pressing the Standby button twice the set is switched
to normal working mode except: * in TUNER mode still the service preset
  frequencies are available.
  * in CD mode the error codes will be displayed.

2) Preset frequencies of table 1 can be used
as in normal tuner mode.
If fieldstrength is high enough "PROGRAM" flag will light.
Preset frequencies stored by the customer are still
stored in the EEPROM and can be recalled by a reset
of the µP (switching power off by disconnecting mains cord).
3) The CD PLAY Test is intended to be used for continuously playing a disc in order to detect permanent or not reproducible failures. The error code indicates where the failure can be found.

4) Use this mode only in case of a µP "hang up" to clear the EEPROM.
   Attention: All preset frequencies stored by the customer will be cleared.
Dismantling hints CD Short Loader

Dismantling the tray

a) Press open/close button to open the tray. If the tray doesn't work, use a small screwdriver as shown in Fig. 1 point 1 to move the tray outside. After the first centimeter it is possible to pull the tray out by hand.

b) Release two snaps and remove tray.
**Assembly of gear**

a) Use a pin (e.g. a paperclip) to align the cam wheel (a) and the gear wheel (b) together. See Fig. 2.

b) Fix the wheels with the small plastic washers.
c) Mount idle wheel2 (c) and idle wheel1 (d) in any position.
   See Fig. 3.

d) Fix the idle wheel1 with the small plastic washer.
e) Mount the driving belt.

f) Mount the pinion guiding assy and the cover as shown in Fig. 4.

g) Turn the gear wheel (b) counter clockwise to endposition.

h) Mount the CD Mechanismn as shown in Fig. 5.

i) Mount the tray. (Align the tray to the chassis and push it inside)

**Check if tray mechanism works correct!**

1) Turn the gear wheel (b) clockwise to its endposition.
   (Use a small screwdriver as shown in Fig. 1 point 1)

   The tray has to move to inner position first and than the CD Mechanismn has to move to its upper position.

2) Turn the gear wheel (b) counter clockwise to its endposition.

   The CD Mechanismn has to move to its lower position first and than the tray has to move to outside.
BEGIN

Press Open/Close

Tray opened ?

N

Check: Supply voltages ±10V ±5V
Communication lines to main µP of apparatus.
Pin 12 of µP 7496
Motor driver 7855, pull-down resistor 3849
Tray mechanism, wiring, tray switch
Check oscillation of µP 7990

Y

Load disc press play

TOC on display ?

N

Enter Service Test Program
"CD Servo Test"
remove disc

Y

Slide motor ok ?

N

Check: Wiring of CDM (CD Mechanism)
Power supply of Signal processor (7866)
Reference voltage R0650 - GND
OPAMP 741
DSIC2 (7855) Power supply
Oscillator voltage Pin 19
Communication lines with µP 7990
Output pin 124

Y

Enter Step 1
Focus Search

Laser light ?

N

Check: DSIC2 (7855) Pin 2
TS 7629
CDM

Y

Load disc

Focus ok ?

N

Check: DSIC2 (7855) Pin 23
Power supply 7851
Motor driver 7851
CDM

Y

Enter Step 2
Disc Test

Disc turns ?

N

Check: Eye Pattern on MP1
Signal Processor 7460 Pin 22, 23, 28
Communication lines 7850 - 7860
Motor driver 7852
CDM

Y

Enter Step 3
Radial servo

Radial Servo ok ?

N

Check: DSIC2 (7855) Pin 22
Motor driver 7851
CDM

Y

Leave Service Test Program
press play

TOC on display ?

N

Enter Service Test program
"CD PLAY TEST"
See error table

Y