1. **Page 7, clause 14**
   **Box “IMPORTANT”**
   The cordset advised to be used for units set to 220/230V (Europe except UK) should comply with following specifications (instead of those mentioned in the IFU):
   Use a cordset consisting of a minimum 18 AWG H05VVF and grounding type attachment plug, rated 16 A, 250 V.

2. **Page 7, clause 14**
   **Subclause “replacing the mains fuse”**
   The rating of the fuse for the European setting shall read as:
   T315 mA (slow blow fuse) Wickman 19195 for 220/240V (Europe).

3. **Page 7, clause 14**
   **Box “NOTE!”**
   For CDR 610 this clause is not valid.
   CDR 610 has 2 versions with different delivery positions:
   - CDR 610/01: 220V / T315 mA Wickman 19195
   - CDR 610/06: 120V / T 600mA Wickman 19198

4. **Page 9**
   **“BEFORE RECORDING”**
   Because of the internal reaction time of the Compact Disc Recorder, there will always be a delay between receiving audio data and writing subcode data.
   In the case of an automatic track increment from a digital source, the delay is typically 160 msec, maximum 300 msec.
   In the case of an automatic track increment from an analog source, the delay is typically 60 msec, maximum 100 msec.
   **NOTE!**
   Automatic track increment in the digital recording mode is only possible with CD format data. When dubbing from DAT or other digital formats, start-ID information may not be recognized by Compact Disc Recorder.

4. **Page 10**
   **SYNCHRONIZED RECORDING (REC SYNC)**
   When current software, the Compact Disc Recorder does not transmit record-sync start data properly approximately 8 percent of the time.
   At this time, it is not advisable to rely on this feature for important recordings.
DANGER
INVISIBLE LASER RADIATION WHEN OPEN.
AVOID DIRECT EXPOSURE TO BEAM

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LASER PRODUCT
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This Compact Disc recorder complies with radio interference requirements as laid down in EC regulations.

Cet appareil satisfait aux prescriptions de la CE en matière de dératisation radio.

Dieses Gerät entspricht den Funkentstörvorschriften der Europäischen Gemeinschaft.


Deze Compact Disc-recorder voldoet aan de radiostoringseisen zoals deze door de EG zijn opgelegd.

Es necesario que lea cuidadosamente su instructivo de manejo.

Questo apparecchio risponde alle esigenze imposte dalle normative della C.E. circa le interferenze radio.

Questo apparecchio corrisponde alle norme di sicurezza VDE 0860 e quindi alle norme internazionali IEC 65 risp. le CEE 1.

L'apparecchio è conforme al DM-04-1989 (Direttiva CEE/87/308) sulla soppressione dei radiodisturbi.

Dette apparat overholder det gældende EF-direktiv vedrørende radiostøy.

Usynlig laserudstråling ved åbning når sikkerhedsafbrydere er ude af funkt. Undgå udsættelse for stråling.

The Model and Serial Number will be found on the base of the set. Please record these in the space provided below.

MODEL NUMBER:

SERIAL NUMBER:
SAFETY INSTRUCTIONS - Read before operating equipment

This product was designed and manufactured to meet strict quality and safety standards. There are, however, some installation and operation precautions which you should be particularly aware of.

1. Read Instructions - All the safety and operating instructions should be read before the appliance is operated.
2. Retain Instructions - The safety and operating instructions should be retained for future reference.
3. Heed Warnings - All warnings on the appliance and in the operating instructions should be adhered to.
4. Follow Instructions - All operating and use instructions should be followed.
5. Water and Moisture - The appliance should not be used near water - for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement or near a swimming pool, etc.
6. Carts and Stands - The appliance should be used only with a cart or stand that is recommended by the manufacturer.
7. Wall or Ceiling Mounting - The appliance should be mounted to a wall or ceiling only as recommended by the manufacturer.
8. Ventilation - The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.
9. Heat - The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.
10. Power Sources - The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.
11. Grounding or Polarization - The precautions that should be taken so that the grounding or polarization means of an appliance is not defeated.
12. Power-Cord Protection - Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords and plugs, convenience receptacles, and the point where they exit from the appliance.
13. Cleaning - The appliance should be cleaned only as recommended by the manufacturer.
14. Power Lines - An outdoor antenna should be located away from power lines.
15. Nonuse Periods - The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.
16. Object and Liquid Entry - Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
17. Damage Requiring Service - The appliance should be serviced by qualified service personnel when:
   A. The power-supply cord or the plug has been damaged; or
   B. Objects have fallen, or liquid has spilled into the appliance; or
   C. The appliance has been exposed to rain; or
   D. The appliance does not appear to operate normally or exhibits a marked change in performance; or
   E. The appliance has been dropped, or the enclosure damaged.
18. Servicing - The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION
TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING
to QUALIFIED SERVICE PERSONNEL.

WARNING
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

CAUTION
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

This set complies with 21 CFR 1040.10 and with the FCC-Rules, Part 15.
CONNECTIONS

ANALOG OUTPUTS:
1 ANALOG UNBALANCED OUT
For connection to an analog 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 TAPE IN or DAT input of your amplifier.
  You can also use the CD, AUX or TUNER connection, but
  never the PHONO input!
  For this use a cinch lead with two cinch plugs on either end
  (15a).

2 ANALOG BALANCED OUT
For connecting to analog stereo equipment
with balanced XLR plugs.

ANALOG INPUTS:
6 MICRO
For connecting one (for mono recordings) or two (for
stereo recordings) microphones.

7 ANALOG BALANCED IN
For connecting analog stereo equipment with balanced
XLR plugs.

8 ANALOG UNBALANCED IN
For connecting any analog source (except PHONO) from
which you wish to record.

DIGITAL OUTPUTS:
15a DIGITAL OUT OPTICAL
- Pull out the protective plug from the socket.
- Connect one end of an optical lead to the socket 3.
- Connect the other end to the optical input of the amplifier
  or of another piece of equipment.
- Press in the plugs until you hear a mechanical click.

15b DIGITAL OUT ELECTRICAL
Use here a cinch lead with one cinch plug on either end
(15c).

15c

5 OFF ON
For switching the digital outputs (3 and 4) on and off. Only
use this switch if you connect the recorder to other digital
equipment via one of the digital outputs.

DIGITAL INPUTS:
9 DIGITAL IN OPTICAL
For connecting to a source which supplies a
digital signal via an optical path and that has an optical
digital output; e.g. a CD or CDV player.
Connection takes place in the same way as via DIGITAL
OUT OPTICAL (3).

10 DIGITAL IN ELECTRICAL
For connecting to a source which supplies a
digital signal; e.g. a CD or CDV player.
Connection takes place in the same way as via DIGITAL
OUT ELECTRICAL (4).

11 SELECT
For switching on the optical (OPTICAL) or the digital (ELEC)
input.

NOTE!
Selection of analog or digital input is made with the INPUT
SELECT button (26) on the front of the recorder.
GENERAL CONNECTIONS:
12 INPUT SELECT
For selecting the analog inputs:
- BAL - ANALOG BALANCED IN (7);
- UNBAL - ANALOG UNBALANCED IN (8);
- MICRO - MICRO (6).
13 RCS REMOTE
- For connecting up the equipment when you are incorporating the recorder in a HiFi system with its own remote control system.
- For connecting the remote control receiver EM 2200, available as an accessory. (Not available in the U.K.)
- For connecting the recorder to a CD player with a CD REC SYNC function. See “Synchronized recording” on page 10.
14 Mains socket (a)
- Insert the plug of the mains lead into the mains socket.
- Connect the other end to your mains supply via a rim-earth wall socket.

IMPORTANT!
- For units set at 100 V/120 V: use a UL listed cord set consisting of a minimum 18 AWG, type SVT or SJT three conductor cord, a maximum of 15-feet in length and a parallel blade, grounding type attachment plug, rated 15 A, 125 V.
- For units set at 230 V (domestic USA): use a UL listed cord set consisting of a minimum 18 AWG, type SVT or SJT three conductor cord, a maximum of 15-feet in length and a tandem blade, grounding type attachment plug, rated 15 A, 250 V.
- For units set at 220V/230 V - 240 V (Europe except U.K): use a cord set consisting of a minimum 18 AWG cord and grounding type attachment plug, rated 15 A, 250 V.

Mains fuse holder (b)
See ‘Replacing the mains fuses’.
Voltage selector (c)
See ‘Power supply setting’.

FITTING A MAINS PLUG (U.K. only)
The wires in the mains lead are coloured:
- Blue - Neutral, Brown - Live and Green/Yellow - Earth.
As these colours may not correspond with the colour markings identifying the terminals in your plug, proceed as follows:
- The Brown wire must be connected to the terminal which is marked with the letter L or coloured Red.
- The Blue wire must be connected to the terminal which is marked with the letter N or coloured Black.
- The Green and Yellow wire must be connected to the earth terminal which is marked with the letter E or i.

For 13 A plugs, conforming to BS 1363, use a 3 A fuse.
For other plugs, use a 5 A or lower rated fuse in the plug, adapter or at the distribution board.

POWER SUPPLY SETTING
- Check that the voltage selector (14c) on the rear of your recorder indicates the correct supply voltage.
- If not, you can set the recorder to the correct mains voltage yourself.
- If your local mains supply will be changed to 230 V, the recorder should be set to 240 V.
When changing the voltage setting, it is also necessary to change the mains fuse to one of the correct rating.

Setting the mains voltage:
- Remove the plug from the wall socket before opening the fuse holder.
- Using a screwdriver, open the flap of the fuse holder.
- Remove the voltage selector.
- Turn the voltage selector until it shows the correct mains voltage.
- Refit the voltage selector.

Replacing the mains fuse:
- Withdraw the fuse holders from the recorder.
- Remove the old fuses and replace with fuses of the correct rating:
  - T600 mA (slow blow fuse) Wickmann 19198 for 100/120 V (USA - Canada);
  - T630 mA (slow blow fuse) Wickmann 19195 for 100/120 V (Japan);
  - T315 mA (slow blow fuse) Wickmann 19198 for 220/240 V (Europe);

NOTE!
Delivery position is 220 V T315mA Wickmann 19195 in all cases!
- Refit the fuse holders and close the flap.
CONTROLS

FRONT OF PLAYER

1 POWER – Switching on and off.
2 TIME – Selecting the time information you want to see.
3 SHUFFLE – Playing in random order.
4 IR SENSOR – Receives the signals from the remote control.
5 REPEAT – Repeating play.
6 A > B – Setting the starting and stopping point of a passage to be repeated.
7 SCAN – Automatically playing the beginning of each track.
8 <[Gand]> – Fast search to a particular passage during play. When used in conjunction with FAST, the search speed is increased.
9 Display – Informs you about the functioning of the recorder.
10 STOP/CM – Stopping play/recording. - Erasing a programme (CM = Clear Memory).
11 OPEN/CLOSE – Opening and closing the CD compartment.
12 PAUSE – Interrupting play/recording.
13 PREVIOUS and NEXT – Selecting another track during play.
14 MUTE – Making a silent recording.
15 PLAY – Starting play.
16 REC(ord) – Setting the recorder in recording-stand-by mode.
17 RECORDING LEVEL – Adjusting the recording volume when making an analog recording.
18 BALANCE – Adjusting the balance of the volume between the left and right channel when making an analog recording.
19 PHONES – Connecting headphones.
20 LEVEL – Adjusting the volume when listening with headphones.
21 DIRECT PLAY/PR(o)G(ram) – Direct programming or immediate selection and playback of track numbers.
22 REVIEW – Checking a programme.
23 CLEAR – Erasing track numbers you do not wish to include in a programme.
24 STORE – Storing tracks in a programme.
25 1-0 digit keys – Selecting another track during play.
26 INPUT SELECT – Selecting between digital or analog input (See also 'Installation').
27 NEW TRACK SELECT – Selecting between automatic (AUTO) or manual (MANUal) numbering of track numbers while recording.
28 SKIP – Skipping unwanted passages or tracks.
29 UNSKIP – Unskipping of skipped passages or tracks.
30 REC SYNC – Syncro start of the recorder and a CD(V) player.
31 FIX UP – Storing a recording (Fixing a recorded CD).

REMOTE CONTROL

- The buttons on the remote control have the same functions as the corresponding ones on the recorder.
- RANDOM = SHUFFLE
- < TRACK > = PREVIOUS and NEXT.
- < SEARCH > = < G and >
- The life of the batteries of the remote control is around one year. For replacement only use batteries of the type R03, UM4 or AAA.

REMOTE CONTROL
CONTROLS

DISPLAY

1-20 track number indicator – Shows the number of tracks on the CDR.
+20 – Lights up when there are more than 20 tracks on the CDR.
PLAY DIRECT – Lights up when the recorder is set to the direct play mode.
DIRECT PROGRAM – Lights up when the recorder is set to the direct program mode.
SHUFFLE – Lights up when the tracks are played in random order.
PROGRAM – Lights up when a programme is being stored.
FIX UP – Lights up when you store a recording permanently.
CD – Lights up when a conventional CD is loaded.
CD RECORDABLE – Lights up when a recordable CD (CDR) is loaded.
II0 – Lights up when the recorder receives a command from the remote control.
TRACK – Indicates what track is being played/recorded;
– the number of tracks on the CDR or in a programme.
TRACK TIME – Indicates the elapsed/recorded playing time of the track being played/recorded.
REM(aining) TRACK TIME – Indicates the remaining playing time of the track being played or the remaining recording time of the track being recorded.
TOTAL REM(aining) TIME – Indicates the remaining playing time of the CD or a programme or the remaining recording time of a (recordable) CD (CDR).
TOTAL TIME – Indicates the total playing time of the CD or a programme or the total recorded time on a (recordable) CD.
A B REPEAT – Lights up when a passage is repeated.
REPEAT – Lights up when you repeat a CD or programme.
REPEAT 1 – Lights up when you repeat a track.
REC SYNC – Lights up when a synchronized recording is being made.
Recording/reproduction level
RECORDING – Lights up when CD(R)’s contents list is being scanned.
OPEN – Lights up when you open the CD-compartment.
CLOSE – Lights up when you close the CD-compartment.
SUPER – Lights up when the first 10 seconds of each track are played.
ERROR – Lights up if you make a mistake when operating the player.
HEADS FOLLOWED BY RECORD – Lights up if you try to start playback or recording without a CDR in the CD compartment.
HEADS BPR – Lights up if you try to make a recording on a conventional CD.

RECORDING

You can record from any CD(V) player and from any analog source. You can also record sound from different sources on the same CDR (= recordable CD). A digital recording will be of the same quality as the original.

Once a recording has been made it cannot be erased, it is however possible, provided the recording has not yet been stored permanently (FIX UP), to skip over unwanted passages, tracks etc. The passages/tracks remain on the CDR, but are skipped over when it is played. You can also add to the recording at any time.

As long as a recording has not yet been stored permanently (fixed up), the CDR can only be played on a CD recorder. Once a recording has been stored permanently (fixed up) on the CDR, it can be played on any CD recorder as well as on any CD(V) player.

You can make unlimited copies of CDRs you have recorded yourself (both analog and digital).

NOTE!

As soon as you press PLAY to start a recording, the other recorder functions (except MUTE, NEW TRACK, TIME and STOP/CM) will temporarily be switched off to prevent the recording being interfered with.

Under no circumstances should you switch off the power during recording as this will damage the CDR.

BEFORE RECORDING

• Check whether your recorder, the amplifier and the source from which you are going to record are connected to each other via the correct inputs and outputs.
• Press POWER to switch the recorder on.
• Press REC/REC lights up.
• Select the sound source from which you wish to record, on your amplifier; the selected source will be indicated on the display.
• If no connection has been made and DIGITAL INPUT is selected, then AUDIO will light up.
• Select automatic (AUTO) or manual (MANUAL) (track) numbering with the NEW TRACK buttons.
• AUTO: every recorded track is automatically assigned a serial number on the CD.
If you are recording from an analog source, recording is automatically stopped if the audio output signal from both channels is below -60 dB for longer than 30 seconds.
If you are recording from a digital source, then recording is stopped if the pause between two tracks is longer than 6 seconds.
• MANUAL: with the INCREMENT button you can assign a serial number to the tracks yourself. You can also store more track numbers from the same sound source under the same serial number. If, however, you interrupt (PAUSE) or stop (STOP/CM) the recording, a serial number will be assigned automatically to the next recording.
• Open the CD compartment by pressing OPEN/CLOSE.
• UPDATE lights up, followed by DP/II.
I-FIX lights up; the recording will now be stored. The time
The recording has now been stored on the CDR and can
Press POWER to switch the recorder off.
Press OPEN/CLOSE to open the CD compartment and take
The RECORD indication (red led above the button) starts
When automatic track numbering (AUTO) is selected,
The track being played/recorded is always shown under
• If you do not wish to store anything else on the CDR, you
can store the recording permanently by pressing FIX UP and
then within 2 seconds REC(ord).
• FIX UP lights up; the recording will now be stored. The time
needed for this will be counted down on the display.
• The recording has now been stored on the CDR and can no
longer be changed.
• Press OPEN/CLOSE to open the CD compartment and take
out the CDR.
• Press POWER to switch the recorder off.

**DIGITAL RECORDING**

- Select DIGITAL with the INPUT SELECT button.
  - You can now record from any (digital) CD(V) player.
  - You do not need to set the recording level; the signal is
taken over exactly from the original.
  - Press PLAY to start recording.
  - The track being played/recorded is always shown under
  TRACK and on the number indicator, and its elapsed
  playing/recording time is shown under TRACK TIME.
  - When automatic track numbering (AUTO) is selected,
  recording will stop automatically after the last track.
  - When manual track numbering (MANUAL) is selected, you
  must stop recording by pressing STOP/CM.
  - If you do not yet wish to store the recording permanently,
you can remove the CDR and add to the recording at any
time or skip unwanted passages and/or tracks.
  - If you do not wish to store anything else on the CDR, you
can store the recording permanently by pressing FIX UP and
then within 2 seconds REC(ord).
  • FIX UP lights up; the recording will now be stored. The time
needed for this will be counted down on the display.
  • The recording has now been stored on the CDR and can no
longer be changed.

**SYNCHRONIZED RECORDING (REC SYNC)**

If the recorder is connected via the RCS REMOTE sockets to a
CD(V) player with a REC SYNC function you can synchronize
the start of recording and playback.

**NOTE!**

This function is only possible when the PAUSE mode of the
CD player is cancelled by pressing the PAUSE button again!

- Press REC SYNC on the recorder.
  - REC SYNC lights up.
  - Press RECORD to set the recorder to the recording/stand-by
mode.
  - Press PLAY on the recorder.
  - Playback and recording will start at the same time.
  - When automatic track numbering (AUTO) is selected,
  recording will stop automatically after the last track.
  • When manual track numbering (MANUAL) is selected, you
must stop recording by pressing STOP/CM.

**RECORDING A SILENT PASSAGE (MUTE)**

- Press RECORD to set the recorder to the recording/stand-by
mode.
- Press MUTE.
  - A 3-second pause will now be recorded.
  - The pause time will be counted down on the display.

**RECORDING VIA (A) MICROPHONE(S)**

- Connect a microphone with a 6.3 mm jack plug to the
MICRO L/MONO socket if you wish to make a mono recording.
- Connect one microphone with a 6.3 mm jack plug to each of
the MICRO sockets (L/MONO and R) if you wish to make a
stereo recording.
- Select ANALOG with the INPUT SELECT button (27) on the
front of the recorder.
- Set the INPUT SELECT switch (11) on the rear of the player
to MICRO.
- You can now record your voice.
- Adjust the recording volume using the RECORD LEVEL
button.
CALLING UP OTHER TIME INFORMATION (TIME)

- Press TIME whenever you want to know the remaining playing/recording time of the track being recorded (REM TRACK TIME).
- Press TIME again if you wish to know the remaining playing/recording time of the entire CDR (TOTAL REM TIME).
- Press TIME again if you wish to return to the elapsed playing/recording time indication (TRACK TIME).

INTERRUPTING RECORDING (PAUSE)

- Press PAUSE.
  - The track number will now be incremented automatically.
- Press PLAY to restart recording.

STOPPING RECORDING (STOP/CM)

- Press STOP/CM.
  - Playback and recording will stop.

SKIPPING UNWANTED PASSAGES, TRACKS ETC. (SKIP)

As long as a recording has not been stored permanently (FIX UP), you can pass over unwanted passages and tracks with SKIP. The passages/tracks remain on the CDR, but are skipped when it is played on your CD recorder. If the CDR is played back from a CD player, the skipped passages/tracks remain audible. Every skipped passage/track can be reinserted and then skipped again, as required. For each CDR you can skip and/or reinsert a passage or a track a maximum of 20 times.

NOTE!
- Under no circumstances should you switch off the power during skipping/unskipping as this will damage the CDR.
- The last 3 seconds of the last recorded track will only become audible during play as soon as the recording is stored permanently (FIX UP).

Skipping a passage
- During play press A-B at the beginning of the passage you wish to skip.
  - A- lights up.
- Press A-B again at the end of the passage.
  - A-B REPEAT lights up and the RECORD indication starts flashing.
- At this point you can still cancel the skipping by pressing A-B, REPEAT, STOP/CM or PLAY.

Unskipping a passage
- During play press A-B at the beginning of the passage you wish to unskip.
  - A- lights up.
- Press A-B again at the end of the passage.
  - A-B REPEAT lights up.
  - The passage between points A and B will now be replayed continuously.
- At this point you can still cancel the unskipping by pressing A-B, REPEAT, STOP/CM or PLAY.
- Press UNSKIP.
  - UNSKIP and RECORD light up.
  - The passage will now be unskipped.
  - Play continues from point B.

To find the starting and stopping quickly, you can use the <3> or > buttons.
Starting and stopping point of a passage must be within the same track.
PLAYBACK

- Press POWER to switch the recorder on.
  - POWER lights up.
- Open the CD compartment by pressing OPEN/CLOSE.
  - OPEN/CLOSE lights up.
- Insert a CD, printed side up and close the compartment.

- STOP lights up and the number of tracks and the playing time (or the remaining recording time) of the CD are shown on the display.
- Press PLAY immediately after inserting the CD: the compartment then closes 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 stops after the last track.
- Press OPEN/CLOSE to open the CD compartment and take out the CD.
- Press POWER to switch the recorder off.

You can interrupt playback by pressing PAUSE. Press PAUSE to restart.
If you press PLAY during play, the current track starts again from the beginning.
You can stop playback by pressing STOP/CM or OPEN/CLOSE.

SCANNING A CD (SCAN)

- Press SCAN before or during play.
  - SCAN lights up and the first 10 seconds of each track are played in turn.
- When the player reaches a track which you wish to hear in full, press SCAN again.

STARTING WITH A PARTICULAR TRACK (1/0)

- Set the player to the direct play mode (PLAY DIRECT) using DIRECT PLAY/PR(o)GRAM.
- Key in the required 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 using NEXT or PREVIOUS and then pressing PLAY.

PLAYING THE CD IN RANDOM ORDER (SHUFFLE)

- Press SHUFFLE before or during play.
  - If the CD compartment was open, it will now close.
  - SHUFFLE will light up and all the tracks will now be played in a random order.
- Press SHUFFLE again if you wish to return to normal play.
During random play NEXT, PREVIOUS can be used.
If you press REPEAT, the tracks will be repeated in a different order each time.

REPEATING A PASSAGE (A>B)

- During play press A>B at the required starting point.
  - A lights up.
- Press A>B again at the required stopping point.
  - A-B REPEAT lights up.
  - The passage between points A and B will now be replayed continuously.
To find the starting and stopping points quickly, you can use the < and > buttons.
Starting and stopping point of a passage must be within the same track.

REPEATING THE ENTIRE CD (REPEAT)

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

REPEATING A TRACK (REPEAT)

- Press REPEAT twice before or during playback.
  - REPEAT lights up and the track will now be repeated continuously.
  - Press REPEAT again to stop the track being repeated.

SEARCHING FOR A PASSAGE DURING PLAY (< or >)

- Hold < or > down to search backwards to the beginning.
- Hold > down to search forwards to the end.
If you reach the end of the last track and release >, play will resume a few seconds before the end of the disc.
At this search speed sound is audible.

Fast search for a passage:
  - Press FAST.
  - Press < or > again.
At this search speed no sound is audible.

CALLING UP OTHER TIME INFORMATION (TIME)

- Press TIME 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 (TRACK TIME).

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 using NEXT or PREVIOUS.

SEARCHING FOR A PASSAGE DURING PLAY (< or >

- Hold < or > down to search backwards to the beginning.
- Hold > down to search forwards to the end.
If you reach the end of the last track and release >, play will resume a few seconds before the end of the disc.
At this search speed sound is audible.

Fast search for a passage:
  - Press FAST.
  - Press < or > again.
At this search speed no sound is audible.
It is possible to programme in three ways:

**ADD-IN PROGRAMMING** you store in the recorder’s memory the tracks which are to be played and their order. Up to 20 tracks can be stored in this way. If you exceed the maximum of 20 tracks, FUL.L will light up.

**TAKE-OUT PROGRAMMING** you erase the track numbers you do not want to hear. Up to 20 tracks can be erased. If you exceed the maximum of 20 tracks, ru:_L. will light up.

**DIRECT PROGRAMMING** every number you key in, will be directly included in the programme. Up to 20 tracks can be stored in this way. If you exceed the maximum of 20 tracks, FUL.L will light up.

**NOTE!**
Once you are programming in one of the two ways, you can no longer switch to the other way.

**ADD-IN PROGRAMMING** (STORE)
- Key in the first required number (numbers consisting of two figures must be keyed in within 2 seconds).
- Press STORE within 2 seconds.
  - PROGRAM lights up; the number is now stored in the recorder’s memory.
  - Store the other tracks required in the same way.
- Each time you store a track, the number of tracks and the playing time of the programme will be shown under TRACK and TOTAL TIME.
- The track number indicator always shows which tracks have been stored.
You can also select the numbers by using NEXT or PREVIOUS and then store them by pressing STORE within 7 seconds.
You can also store the tracks during play; as soon as you have stored the first number, play continues with the programmed track numbers.

**TAKE-OUT PROGRAMMING** (CLEAR)
- Key in the required required number (numbers consisting of two figures must be keyed in within 2 seconds).
- Press CLEAR within 2 seconds.
  - The number disappears from the track number indicator; it has now been erased.
- Erase the other tracks you do not wish to hear in the same way.
  - Each time you erase a track, the remaining tracks and their playing time will be shown on the display.
  - The track number indicator always shows which tracks remain for inclusion in your programme.
You can also select the numbers by using NEXT or PREVIOUS and then clear them by pressing CLEAR within 7 seconds.
You can also erase the tracks during play; as soon as you have stored the first number, play continues with the programmed track numbers.

**DIRECT PROGRAMMING** (1-0)
- Set the player to the direct programming mode (DIRECT PROG) using DIRECT PLAY/PR(o)G(ram)
  - Every track number you now key in will be directly included in the programme.
  - Key in the required numbers.
  - 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.
You can also store the tracks during play, as soon as you have entered (= stored) the first number, play continues with the programmed track numbers.

**STORING A PROGRAMME USING SCAN**
- Press SCAN before or during play.
  - SCAN lights up.
  - The first 10 seconds of each track are played in turn.
- Now you can compile your programme.
**Add-in**
- Press STORE at each track you wish to include in the programme.
  - The programmed numbers appear on the track number indicator.
**Take-out**
- Press CLEAR at each track you do not wish to include in the programme.
  - The erased numbers disappear from the track number indicator.

**CHECKING THE PROGRAMME** (REVIEW)
- Press REVIEW prior to, during or after programmed play.
  - RE-view lights up.
  - All the numbers appear in the programmed sequence under TRACK.
- NO PROGRAM lights up if no track numbers have yet been stored.

**PLAYING THE PROGRAMME** (PLAY)
- Press PLAY.
  - Playback starts with the first number of the programme.
  - All buttons can be used during programmed play.
  - Search for a particular passage is only possible within the track being played.

**ERASING A PROGRAMME** (STOP/CM or OPEN/CLOSE)
- Press STOP/CM twice or, if the CD has already stopped, just once, you can also press OPEN/CLOSE straight away.
  - The programme has now been erased.

**ERASING A TRACK FROM THE PROGRAMME** (REVIEW)
- Enter the track number you wish to erase or press NEXT or PREVIOUS until the number appears under TRACK.
- Press CLEAR.
  - The number disappears from the number indicator; it has now been erased.
LISTENING WITH HEADPHONES (PHONES)

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

MAINTENANCE

The CD(R)s
• Never write on the printed side of a CD(R).
• Do not attach any stickers to the CD(R).
• 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 recorder
• A chamois leather slightly moistened with water is sufficient for cleaning the recorder.
• Do not use cleaning agents containing alcohol, spirits, ammonia or abrasives.

FAULTS AND THEIR LIKELY CAUSES

If a fault occurs, run through the points listed below before taking your recorder for repair. Check whether:
– condensation has formed on the lens of the laser due to a dramatic change in temperature; this will disappear automatically after some time;
– the CD(R) has been inserted correctly with the printed side up and that there is a CD(R) in the compartment;
– the CD(R) is dirty, badly scratched or warped;
– the recorder has been connected to the PHONO socket of the amplifier.

If the fault remains, try to clear it by switching the recorder off and on again.
If this also fails to help, consult your dealer.

Under no circumstances should you repair the recorder yourself, as this will invalidate the guarantee!
Analog unbalanced outputs

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output voltage</td>
<td>2 Vrms, ± 1.5 dB</td>
</tr>
<tr>
<td>Phase non-linearity</td>
<td>± 0.5°</td>
</tr>
<tr>
<td>Signal-to-noise ratio</td>
<td>-90 dB</td>
</tr>
<tr>
<td>Dynamic range</td>
<td>-60 dB</td>
</tr>
<tr>
<td>Total harmonic distortion + noise</td>
<td>-92 dB</td>
</tr>
<tr>
<td>Channel separation</td>
<td>-88 dB</td>
</tr>
<tr>
<td>Muting during random access</td>
<td>-90 dB</td>
</tr>
<tr>
<td>Load impedance</td>
<td>100 K ohms/100 pF</td>
</tr>
</tbody>
</table>

Analog balanced outputs (XLR)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output voltage</td>
<td>3 Vrms, ± 0.1 dB</td>
</tr>
<tr>
<td>Unbalance</td>
<td>±0.2 dB (typ. 0 dB)</td>
</tr>
<tr>
<td>Output impedance</td>
<td>100 ohms</td>
</tr>
<tr>
<td>Amplitude linearity</td>
<td>±0.5 dB (20 Hz - 20 kHz)</td>
</tr>
<tr>
<td>Signal-to-noise ratio</td>
<td>-90 dB (BW = 20 kHz)</td>
</tr>
<tr>
<td>Dynamic range</td>
<td>-60 dB (1 kHz)</td>
</tr>
<tr>
<td>Total harmonic distortion + noise</td>
<td>-85 dB (2 Hz - 20 kHz)</td>
</tr>
<tr>
<td>Channel separation</td>
<td>-80 dB (1 kHz)</td>
</tr>
<tr>
<td>Muting during random access</td>
<td>-85 dB (2 Hz - 20 kHz)</td>
</tr>
<tr>
<td>Load impedance</td>
<td>100 K ohms/100 pF</td>
</tr>
</tbody>
</table>

Analog balanced in/balanced out (XLR in/ XLR out)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input sensitivity</td>
<td>0.475 Vrms for max. level (0 dB on disc)</td>
</tr>
<tr>
<td>Unbalance</td>
<td>±0.85 dB</td>
</tr>
<tr>
<td>Amplitude linearity</td>
<td>±0.5 dB (20 Hz - 20 kHz)</td>
</tr>
<tr>
<td>Signal-to-noise ratio</td>
<td>-90 dB (BW = 20 kHz)</td>
</tr>
<tr>
<td>Dynamic range</td>
<td>-95 dB (1 kHz)</td>
</tr>
<tr>
<td>Total harmonic distortion + noise</td>
<td>-85 dB (2 Hz - 20 kHz)</td>
</tr>
<tr>
<td>Channel separation</td>
<td>-90 dB (1 kHz)</td>
</tr>
<tr>
<td>Muting during random access</td>
<td>-85 dB (2 Hz - 20 kHz)</td>
</tr>
<tr>
<td>Low level linearity</td>
<td>0 dB (at -90 dB)</td>
</tr>
</tbody>
</table>

Electrical digital output

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output level</td>
<td>0.5 Vpp</td>
</tr>
<tr>
<td>DC level</td>
<td>120 mV</td>
</tr>
<tr>
<td>Load impedance</td>
<td>75 ohms</td>
</tr>
</tbody>
</table>

Optical digital output

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output level</td>
<td>0.5 Vpp</td>
</tr>
<tr>
<td>DC level</td>
<td>120 mV</td>
</tr>
<tr>
<td>Load impedance</td>
<td>75 ohms</td>
</tr>
</tbody>
</table>

Headphone output

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output voltage</td>
<td>0 - 6.5 Vrms (no load)</td>
</tr>
<tr>
<td>Phase non-linearity</td>
<td>± 0.1 dB</td>
</tr>
<tr>
<td>Signal-to-noise ratio</td>
<td>-90 dB</td>
</tr>
<tr>
<td>Dynamic range</td>
<td>-90 dB</td>
</tr>
<tr>
<td>Muting during random access</td>
<td>-90 dB</td>
</tr>
<tr>
<td>Load impedance</td>
<td>100 K ohms/100 pF</td>
</tr>
</tbody>
</table>

Recording performance

1 inputs

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analog sensitivity</td>
<td>±0.5 V (impedance 100 K. ohms)</td>
</tr>
<tr>
<td>Microphone sensitivity</td>
<td>2 mV (impedance 10 K. ohms)</td>
</tr>
<tr>
<td>Digital</td>
<td>according to the standard digital input</td>
</tr>
</tbody>
</table>

2 input selection:

- Toggle function for analog/digital switching (front)
- Analog selection by a 3 position switch (backside)

3 recording level adjustment:

- Analog input: manual, 2 rotary potentiometers for level and balance
- Digital output: no adjustment required

Overall audio performance (record and playback):

- Digital in - digital out (electrical and optical): full digital reproduction
- Analog in - analog out:
  - Amplitude linearity: ±0.1 dB
  - Phase non-linearity: ±0.2°
  - Signal-to-noise ratio: 89 dB (typ. 84 dB)
  - Dynamic range: -60 dB
  - Total harmonic distortion + noise: -85 dB
  - Channel separation: -80 dB

Power supply

- Main voltage and frequency: see the voltage selector (14 c) on the rear of the player
- Power consumption: 40 W at nominal voltage
- Safety requirements: IEC 65

Cabinet

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material/finish</td>
<td>metal and polystyrene with decorative trim</td>
</tr>
<tr>
<td>Dimensions (w x h x d)</td>
<td>420 x 137 x 347 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>9.5 kg (10.6 lbs) approx</td>
</tr>
</tbody>
</table>

Subject to modification