PHILIPS

DCC 900

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INTRODUCTION

Thank you for selecting the Philips DCC 900 Digital Compact Cassette recorder.

DCC is the logical, digital successor to Compact Cassette, It meets higher demands for sound quality, durability and style. DCC is the marriage of Compact Cassette to Digital Audio, and it forms a union that combines perfect sound and high convenience with great versatility.

Like Compact Cassette, DCC is a record and playback system that features both prerecorded 'Digital Music cassettes' and blank DCC's. With its advanced system of digital registration on tape, DCC is Compact Cassette made digital and totally modernised.

On top of this DCC has a unique and practical advantage: it is compatible with its analogue ancestor. Users can play their existing analogue Compact Cassette collections on your new DCC 900 cassette player.

Dolby Noise Reduction manufactured under license from Dolby Laboratories Licensing Corporation. 'DOLBY' and the double-D symbol ▯▯ are trademarks of Dolby Laboratories Licensing Corporation.

English

A B C   D   E   F   G   H   I
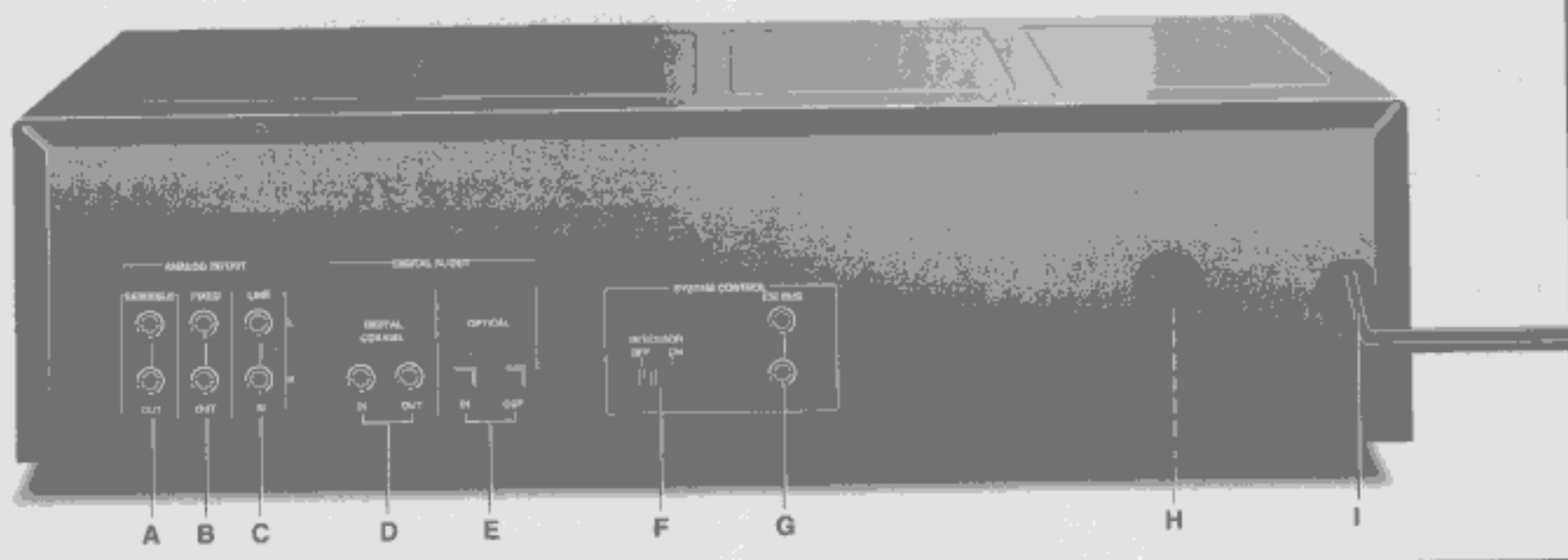
ANALOG CONNECTIONS:

A VARIABLE OUT – Output sockets for connection to an analog Philips amplifier or HiFi system. Use this connection when you want to control the volume with the supplied remote control

- 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 DCC IN input of your amplifier
  You can also use the TAPE, CD, AUX or TUNER inputs of your amplifier but **never** the PHONO input.
  When you have connected your recorder via these VARIABLE OUT sockets, the sound level can be adjusted with the VOLUME keys of the remote control supplied with your DCC 900.

B FIXED OUT – Output sockets for connecting the recorder to an analog Philips amplifier or HiFi system. Use this connection when you want to control the volume on your amplifier or on the remote control of your amplifier only. Connection takes place in the same way as via VARIABLE OUT. This connection is adviced for the Philips 900-series products.

Note: Only one of above mentioned connections (VARIABLE OUT, FIXED OUT) is needed.

C LINE IN – Recording input 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 DCC OUT output of your amplifier. You can also use the TAPE, or AUX outputs of your amplifier.
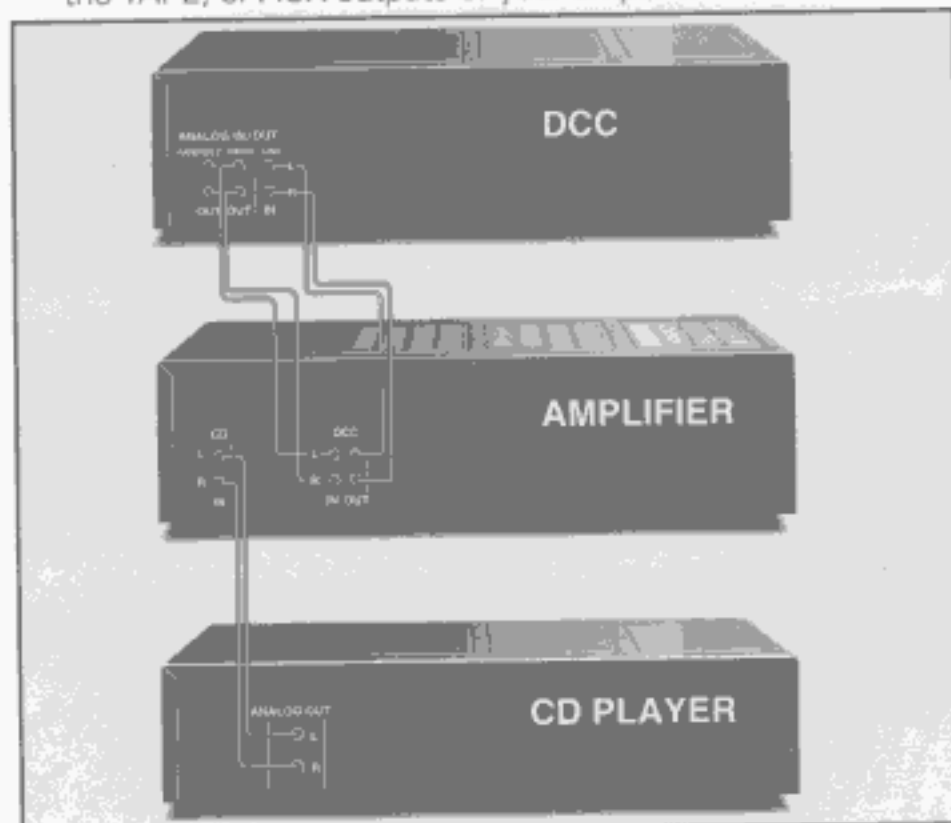
DIGITAL CONNECTIONS:

D DIGITAL COAXIAL
IN – Recording input for connecting the recorder to a source which supplies a digital signal and that has a digital output, e.g. a CD, CDV, DAT or DBS-Satellite tuner.
OUT – This output supplies a digital signal via an electrical path; for this reason it can only be connected to a product with a digital input e.g. amplifier, DCC, Digital to Analog Converter, Digital Signal Processor or DAT.
Use a cinch lead with one cinch plug on either end.

E OPTICAL
IN – Recording input for connecting the recorder to a source which supplies a digital signal via an optical path and that has an optical digital output, e.g. a CD, CDV, DAT or DBS-Satellite tuner.

- Pull out the protective plug from the socket.
- Connect one end of an optical lead to the socket.
- Connect the other end to the optical output of the amplifier or of another piece of equipment.
- Press in the plugs until you hear a mechanical click.
OUT – This output supplies a digital signal via an optical path. It can be connected to a product with a digital input e.g. amplifier, DCC, Digital to Analog Converter, Digital Signal Processor or DAT.
Connection takes place in the same way as via OPTICAL IN.

DIRECT DIGITAL CONNECTIONS

DCC

AMPLIFIER
FA930 / FA950
FR930E / FR940

CD PLAYER

A B C   D   E   F   G   H   I
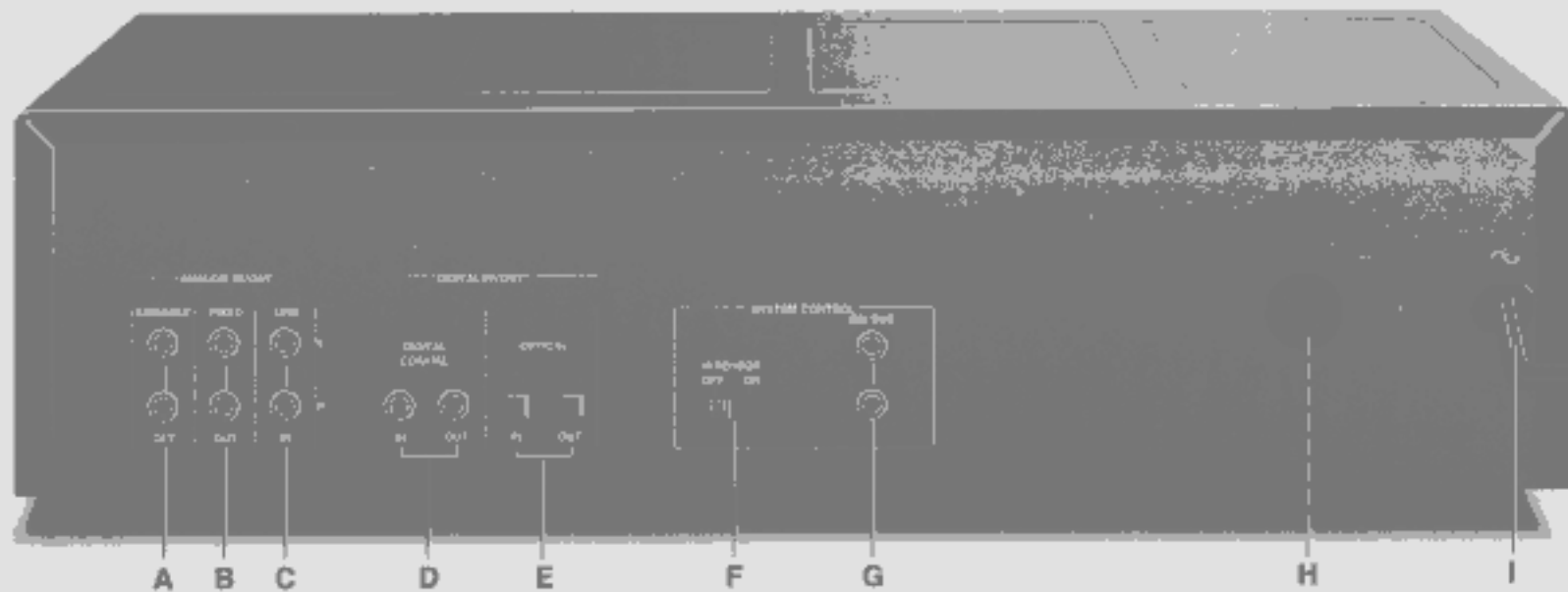
CONNECTIONS:

SYSTEM CONTROL:

F IR SENSOR ON/OFF – For switching the I(infra) R(ed) SENSOR on and off.

> **IMPORTANT!**
>
> When the recorder is incorporated in a HiFi system with ESI BUS connection (e.g. Philips 900 series), this switch should always be in the **OFF** position.
> When the recorder is **not** incorporated in a HiFi system with ESI BUS connection, the switch should be in the **ON** position.
> When changing the IR SENSOR switch, the recorder should always be *switched off*.

G ESI BUS – (Enhanced System Intelligence)(coloured green) Remote-control sockets for connection to the corresponding ESI sockets of other components in your HiFi system (e.g. the Philips 900 series)
Connect the ESI socket to the ESI socket of the external equipment that uses the ESI remote control system.
In this way you can operate external sets by remote control through the sensor of your amplifier.

ESI BUS CONNECTIONS

TUNER

AMPLIFIER

DCC

CD PLAYER
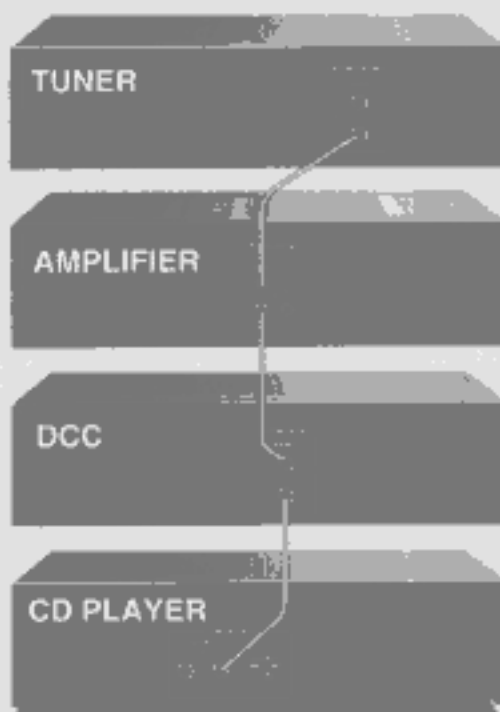
> **WARNING**
> Do not connect the set to the mains until all other connections have been made and the mains voltage (indicated on the type plate) has been checked.

MAINS SUPPLY

H Voltage selector 110/120/220/240 V – for selecting the mains voltage (not on all versions)

I Mains lead

- Check that the mains voltage as shown on the type plate corresponds to your local mains supply. If it does not, consult your dealer or service organisation.
- If your unit has a voltage selector, make sure **only** to change the voltage in the POWER OFF position.
- Insert the plug of the mains lead into the wall socket.
- If your amplifier has AC MAINS OUTLETS, you are advised to insert the plug of the mains lead into these outlets. The mains supply is now connected.
- To disconnect the set from the mains completely, remove the mains plug from the wall socket or from the AC MAINS OUTLETS of your amplifier.

FITTING A MAINS PLUG (U.K. only)

The wires in the mains lead are coloured in accordance with the following code: Blue = Neutral, Brown = Live.
These colours may not correspond with the colour markings identifying the terminals in your plug, so proceed as follows:
- Connect the brown wire to the terminal marked L or coloured brown or red.
- Connect the Blue wire to the terminal marked N or coloured blue or black.

> Do not connect either wire to the earth terminal in the plug, marked E or ⏚ or coloured green or green and yellow.
> For 13 A plugs conforming to BS 1363, use a 3 A fuse.
> For other plugs, use a 5 A or lower fuse in the plug or adapter at the distribution board.

If in doubt, consult a qualified electrician.

After having made all the necessary connections (some may not be applicable for your set-up), your system is ready for use. In the next chapters we will describe how to operate it.
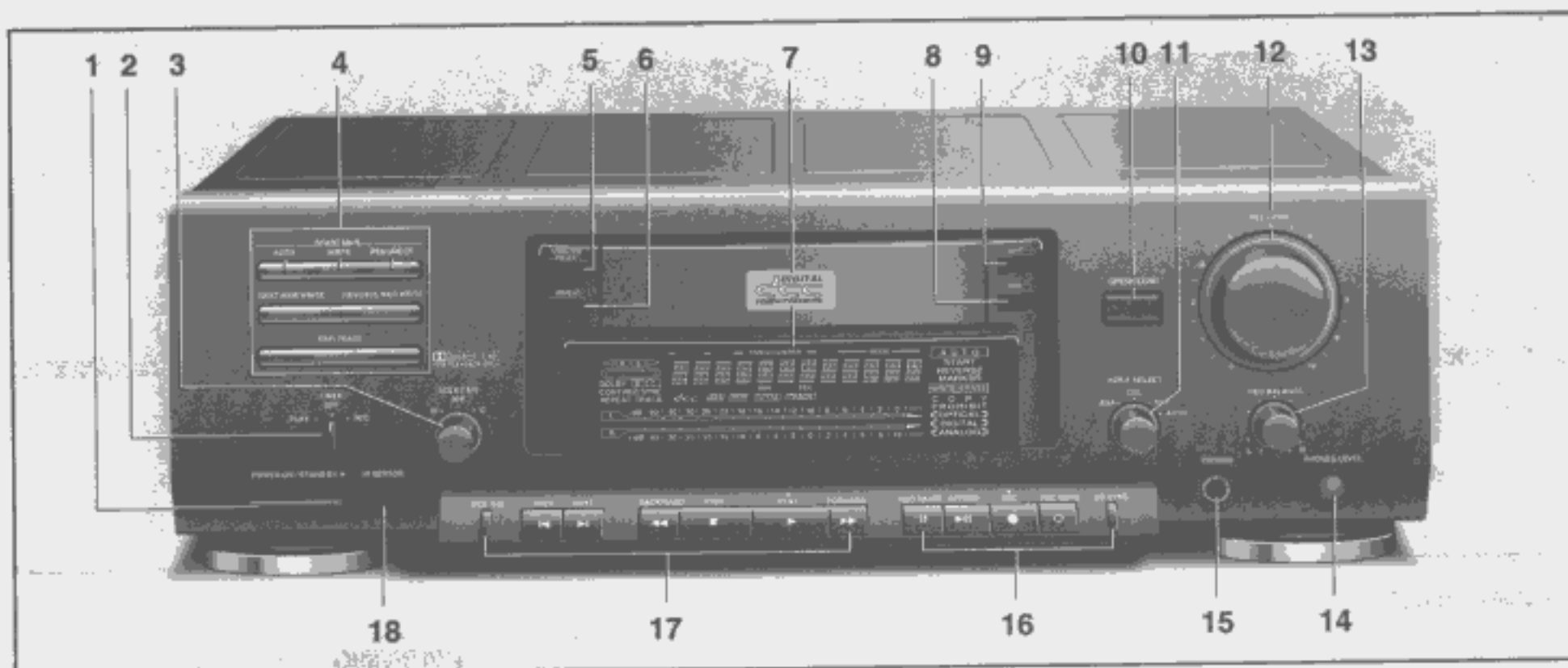
FRONT OF RECORDER

1 POWER STANDBY/OFF – For switching on and off.

2 TIMER PLAY/OFF/REC – This switch enables the recorder to be set in advance for recording or playback, so that the equipment can be switched on or off with a timer.

3 DOLBY NR – for switching the Dolby Noise Reduction system on and off and for selecting Dolby B and C. Only functional when you are using a conventional Analog Compact Cassette

4 MARKER controls (see page 14)
– **AUTO START MKR** – automatic start marker generation on/off
– **START MKR WRITE** – for writing a start marker manually, marking the start of a new music track.
– **RENUMBER** – for checking the complete tape on correctness of track numbers and making a correct sequence of tracknumbers.
– **Auto reverse control (see page 15)**
NEXT MKR WRITE – for writing a next marker, marking the end of a side and causing the deck to continue at the start of the other side.
REVERSE MKR WRITE – for writing a reverse marker, marking that the side must be reversed at this location.
– **MKR ERASE** – for erasing any marker at the current location.

5 COUNTER RESET – for returning the tape counter to 0000.

6 REPEAT – for repeating the current track, for repeating all tracks or for switching repeat off.

7 Display

8 TIME – for selecting the different time modes to be shown on the display: absolute time, track time, remaining time and counter mode. Press to scroll through the different modes.

9 TEXT – for displaying text information like the album title, track title, artist, total number of tracks and time. Press to scroll through the different text information.
Always functional for prerecorded Digital Compact Cassettes and sometimes functional for user-recorded Compact Cassettes

10 OPEN/CLOSE – for opening and closing the tray loader
The tray can also be closed by briefly pushing its front.

11 INPUT SELECT – for selecting the ANALOG, DIGITAL or OPTICAL input from which you wish to record.
In case the recorder is connected via the ESI BUS sockets to your HiFi system (e.g. Philips 900 series), the input is selected automatically when the INPUT SELECT knob is set to AUTO.

12 REC LEVEL – for adjusting the recording volume only when recording from the analog input.

13 REC BALANCE – for adjusting the recording balance only when recording from the analog input.

14 PHONES LEVEL – for adjusting the volume level of the headphones.

15 PHONES – socket for headphones
You may connect a pair of stereo headphones with 6.3 mm plug to this socket.

16 RECORDING controls (see page 10)
– **REC PAUSE II** – for immediate entering of the RECORDING PAUSE mode and for interrupting recording.
– **APPEND ►II** – for initializing a recordable (blank) tape or for searching the end of the last recording after which the recorder switches to the RECORDING PAUSE mode.
It is advised to use this key before starting the actual recording with the REC ● key.
– **REC ●** – for starting the recording. The recording can only be started when the recorder is in the RECORDING PAUSE mode.
– **REC MUTE ○** – for recording a pause (silent passage)
– **CD SYNC.** – for synchro start of the recorder and a CD player (connected via the ESI BUS sockets) when recording from a Compact Disc.

17 PLAYBACK controls (see page 9)
– **SIDE A/B** – for reversing the tape travel direction
– **PREV. I◄** – for searching the previous track on the tape (also for analog cassettes)
– **NEXT ►I** – for searching the next track on the tape
– **BACKWARD ◄◄** – for fast winding backward
– **STOP ■** – for stopping the tape transport
– **PLAY ►** – for starting playback. When this key is pressed during playback, the current track starts again from the beginning.
– **FORWARD ►►** – for fast winding forward

18 IR SENSOR – infra red remote control eye

DIFFERENT CASSETTE SORTS

On your DCC recorder you can use Digital Compact Cassettes (DCC) and conventional Analogue Compact Cassettes (ACC).

Both of these cassette sorts are available on the market with different tape length and material.

- Digital Compact Cassettes can be used for playback and recording on your DCC 900.
- Analogue Compact Cassettes can only be used for playback on your DCC 900.

The DCC cassette can be divided into two sorts:

DCC PRERECORDED

These cassettes can be bought prerecorded in the shop. Prerecorded cassettes contain also information on the album, like the album title, artist, track title, track number, total tracks, time (track time, absolute time, remaining time and counter) and tape side information.
It is not possible to make a recording on these cassettes yourself.

DCC USER-RECORDED

Cassettes that you have recorded yourself from different sources.
- Track and time information is automatically recorded when the APPEND key is used (see chapter RECORDING).
  When the recording is done with the RECP key on an area of the tape that already contains a recording or directly after the last recording (APPEND) track and time information will also be available.
  This information will not be recorded when the recording is done in the middle of a blank area on the tape with the use of the RECP key.
  Note: when playback is started in the middle of a track, the time and track information may not yet be known by your DCC 900. The display will then show '- -'.
  As soon as a new track is detected the track and time information will be shown on the display again.

Note: TEXT INFO can not be recorded.

ANALOGUE COMPACT CASSETTES

- Conventional analogue compact cassettes can be played back on your DCC 900. During playback of these cassettes the display will show the counter setting.

CASSETTE MAINTENANCE

Keep the cassettes at room temperature and avoid leaving them in the sun or too close to magnets and transformers or e.g. recorders, radios, TV's and loudspeakers.
Do not push the tape protection of DCC cassettes aside and avoid touching the tape.

PROTECTING A CASSETTE AGAINST RECORDING

Accidental erasure of recordings made on your DCC cassettes can be prevented by sliding the red switch on the back of your cassette upward as shown below.
No recording will then be possible on this tape.

POWER STANDBY/OFF

- Use the POWER STANDBY/OFF key to switch the power on and off.
  After switching on the power, the recorder will become active.
- When the recorder is switched to standby mode (with the remote control) it will be activated as soon as you press one of the keys that activate a play function e.g. PLAY ▶, STOP ■, PREV. ◄, NEXT ►, BACKWARD ◄◄, FORWARD ►►.
- If you have connected the plug of the mains lead to the MAINS OUTLETS of your amplifier, the power will automatically be switched off as soon as you switch off the amplifier.

LOCAL TIMER SWITCH

With the TIMER control **2** the recorder can be set to automatically start recording or playback when the set is switched on.
- Switch on the power with the POWER STANDBY/OFF key **1**.
- Set the TIMER control **2** in position PLAY or REC.
- Connect the mains plug to the socket of an external timer.
- The local timer has now been set and as soon as the power is switched on (e.g. the next day), playback or recording will start automatically.
- You can also make use of the 900 series system timer to switch on the cassette deck (See SYSTEM ASPECTS, page17).

LOADING A CASSETTE

- Open the tray by pressing the OPEN/CLOSE key **10**.
  OPEN appears on the display.
- Slide out your DCC cassette from its box.
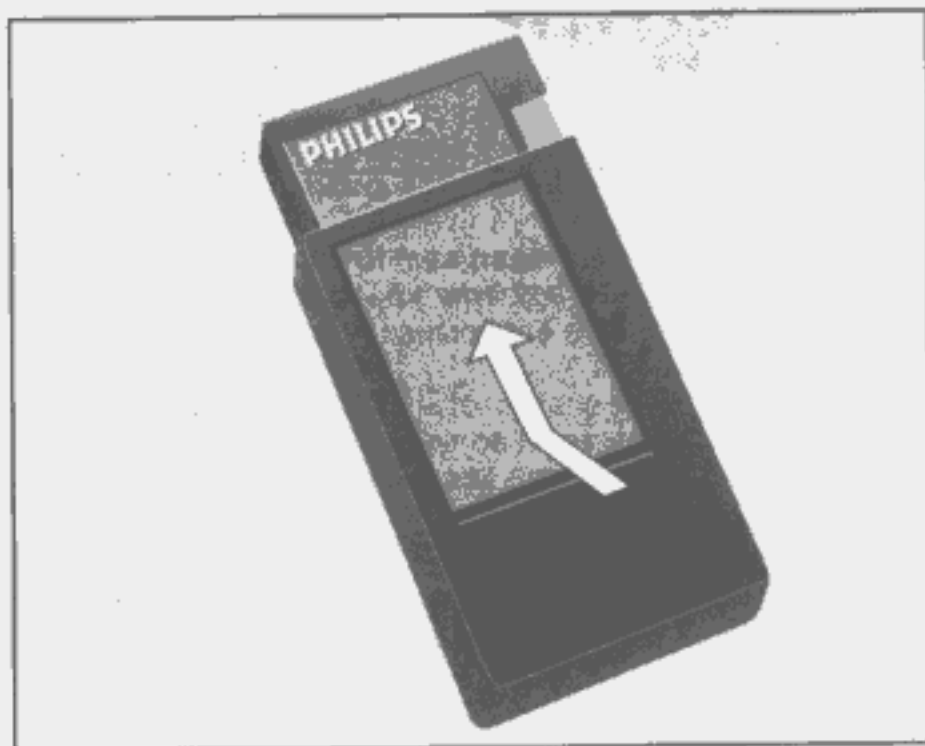
- Insert a DCC cassette with the printed side up as shown below and protective slider pointed to the DCC-player.

- When using an analogue cassette, insert it as shown below preferably with side A facing up and the full spool on the right.

- Close the tray by briefly pushing its front or by pressing the OPEN/CLOSE key **10** again.
  The display shows CLOSE.

- After closing the tray your DCC 900 will read the tape information.
  READING will appear on the display.
  During this period your DCC 900 will:
  - determine the tape sort used
  - determine the tape position
  - read the title of the album (when using prerecorded cassettes).

- When a prerecorded DCC cassette is loaded, the title of the album will be displayed.

- For all other DCC tape sorts the recorder will enter the track-time display mode. As soon as this information is available on the tape it will be displayed.

- When a conventional analogue cassette is loaded, the counter mode will be displayed.

SIDE A/B	PREV	NEXT	BACKWARD	STOP	PLAY	FORWARD
▯	◄◄	►►|	◄◄	■	►	►►

PLAYBACK

Playback of a cassette is similar to operating a CD-player.

• Open the tray by pressing OPEN/CLOSE **10**. OPEN appears on the display
• Insert a cassette as explained before. (see page 8)
• Close the tray. The display shows CLOSE.
The recorder will now retrieve the information on the tape and during this period READING TEXT appears on the display.
• When using a pre-recorded DCC cassette, the album title will be displayed
• Press PLAY ►.
Playback will start from the present position of the tape and the display will show the track title.
• Press the STOP ■ key to stop playback. STOP appears on the display
When playing a user-recorded tape, the track number and time will be displayed just like a CD. In case this information is not (yet) known by the player, the track number will be indicated by '– –' and instead of the time, the display will show a counter setting (e.g. 0000).

REPLAY

• If you press the PLAY ► key during playback, the currently playing track will be replayed from the beginning.

PREVIOUS/NEXT TRACK

• The PREV. ◄◄ and NEXT ►► keys can be used to search for a particular track on the tape or scroll through the tracklist (see title search). Press PREV. ◄◄ to search for a track previous to the current track.
Press NEXT ►► to search for a track next to the current track.
If these keys are pressed during playback, the deck will wind/rewind to the next/previous track after which playback continues. During the (re)winding the green indicator above the PLAY ► key flashes.
Note: these keys are also functional when using analogue compact cassettes.

TITLE SEARCH

Compared to CD, DCC has a new feature: the track title of a pre-recorded DCC will be displayed during playback. It is also possible to search for a track based on its title. When you press NEXT ►► while the deck is in the stop mode the title of the next track appears on the display. Searching for the track does not start yet. You can actually wind to the track by pressing the PLAY ► key. The message READING appears on the display during the time that your DCC 900 is retrieving the track titles from the cassette.

SEARCHING FOR A PASSAGE

• Searching for a passage during playback can be done with the BACKWARD ◄◄ and FORWARD ►► keys.
Hold FORWARD ►► pressed down to search in the tape travel direction. Hold BACKWARD ◄◄ pressed down to search in the opposite direction in which the tape is travelling. Playback will continue as soon as you release the key.
• When you press the FORWARD ►► or BACKWARD ◄◄ keys while the deck is in the stop mode, the winding will continue until you press another key of the playback controls **17**.

REVERSING THE PLAYING DIRECTION

• The SIDE A/B key is used to reverse the direction in which the tape is travelling.
This selected side is indicated on the display as ◁ Ⓑ or Ⓐ ▷
When you press this key during playback, the playing direction will be reversed and playback will be continued at the other side of the tape.

SIDE A	1	2	3	4
SIDE B	7	6		5
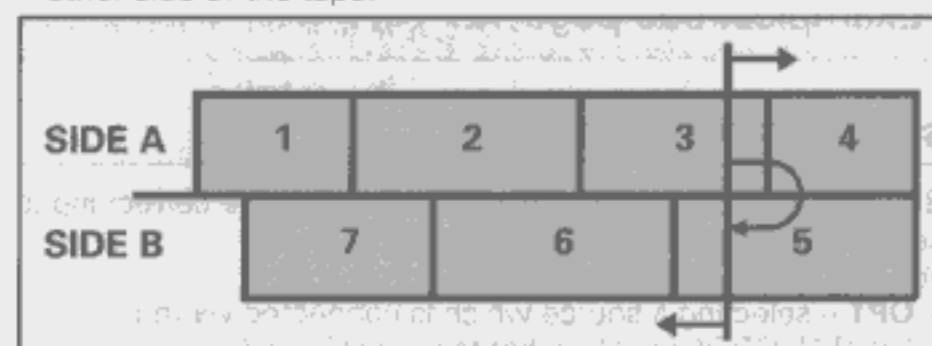
REPEAT

• You can use the REPEAT key **6** to repeat a particular track or the total number of tracks on the tape.
• Press this key once to repeat the current track.
The indication **REPEAT TRACK** will appear on the display. Repeating the current track is not possible when you are using conventional analogue cassettes.
• Press this key once again if you wish to repeat all tracks on the tape. The display will show **CONT REPEAT**.
• Press this key another time to switch repeat off again.
NOTE: When analogue cassettes are used, only the function **CONT REPEAT** can be activated. **REPEAT TRACK** does not work

DOLBY NOISE REDUCTION

The Dolby Noise Reduction function will only be active when you are using conventional analogue cassettes.
Use the Dolby selector knob **3** to switch the Dolby NR system on and off and to select Dolby B and Dolby C.

REC PAUSE	APPEND	REC	REC MUTE	CD SYNC
❚❚	▶❚❚	●	◻	

RECORDING

The two major controls that are used to make a recording are the **APPEND** ▶❚❚ key and the **REC** ● key.

- Insert as explained before a cassette on which you want to make a recording.
- Close the tray.
- Select the correct input source (as described under 'SELECTING THE INPUT')
- Press the APPEND ▶❚❚ key.
  The deck will search for the start of the tape or for the end of the last recording and during this period the indication APPEND >> or << will appear on the display.
  When a position has been found for a possible recording the deck will play the last few seconds of the previous (last) recording during which APPEND PLAY appears.
  Then the recorder will enter the RECORD PAUSE (RECP) mode.
- In case you want to record from the analogue input, adjust the recording level (as described under 'RECORDING LEVEL')
- You can now start recording by pressing the REC ● key.
- Press STOP ■ to stop recording.
  The actual recording is stopped immediately. The deck will continue to write for a short period. The display shows **MARKER WRITE** and STOP is flashing. During this period a marker is written on the tape to mark the end of the last recording.

This procedure will ensure the correct recording of time and track numbers on the tape.
Examples: see page 12.

SELECTING THE INPUT

Before starting a recording you should select the correct input source with the INPUT SELECT knob **11**.
You can select 4 positions:
- **OPT** – selecting a source which is connected via the DIGITAL OPTICAL IN socket to your DCC 900
  The display shows ⊂ OPTICAL ⊃ (*note 1*)
- **DIG** – selecting a source which is connected via the DIGITAL COAXIAL IN socket to your DCC 900
  The display shows ⊂ DIGITAL ⊃ (*note 1*)
- **ANA** – selecting a source which is connected via the ANALOG LINE IN sockets to your DCC 900
  The display shows ⊂ ANALOG ⊃
- **AUTO** – in case you have incorporated your DCC 900 in a HiFi system of the Philips 900 series, the input source is always automatically selected when the INPUT SELECT knob is set to this position.

Notes:
1 When the indication is blinking it indicates that no digital signal is received; recording is not possible.
2 During a recording it is not possible to change the selected input.

ADVISE:
It is recommended always to use the digital input when it is available. You then do not have to adjust the recording level and recording of correct tracknumbers (see Auto Start Marker writing, page 14) will take place automatically.

RECORDING LEVEL

Adjusting the recording level is only needed when you are recording from a source which is connected via the ANALOG LINE IN sockets to your DCC 900.

The recording level is monitored when the deck is in the RECORD PAUSE (RECP) mode.
Start playback of the unit you wish to record from.
Adjust the recording level with the REC LEVEL control **12** so that the recording level indicators in the display light up during passages with an average volume safely below 0 dB. A level of -12 dB (indicated red on the display) is recommended.
The dynamic range of your DCC recorder is so high that the dynamic range of any analogue source can be covered, even at this setting.
If the level exceeds the 0 dB level, an overload (**OVER** ▶) will be indicated and the recorded signal can be distorted.

L ⌐ -dB 60 ┆ 40 ┆ 30 ┆ 26 ┆ 22 ┆ 18 ┆ 16 ┆ 14 ┆ 12 ┆ 10 ┆ 8 ┆ 6 ┆ 4 ┆ 2 ┆ 0 ┆ OVER
R
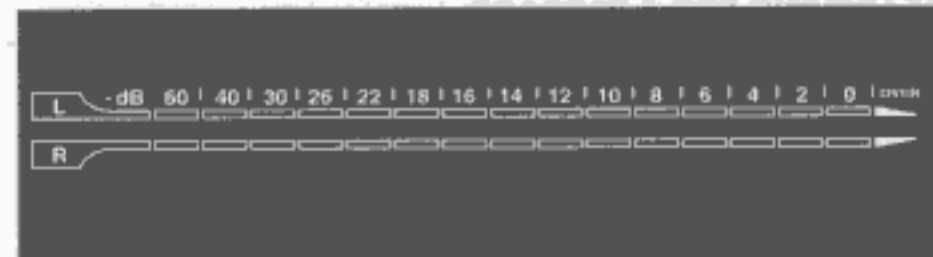
INTERRUPTING A RECORDING

- RECORD PAUSE
• You can interrupt the recording temporarily by pressing the REC PAUSE II key during recording.
The deck will stop recording.
RECP will appear on the display to indicate that the RECORD PAUSE mode is entered.
• Press the REC ● key to continue recording.
The display shows **START MARKER WRITE** and the recording starts again (REC) with a new tracknumber indication on the display.

- RECORD MUTE
• A 3-second silent recording can be obtained when you press the REC MUTE ○ key during recording or in RECORD PAUSE mode.
MUTE appears on the display during these 3 seconds after which the deck switches to the RECORD PAUSE (RECP) mode.
• Press the REC ● key to continue recording.
The display shows **START MARKER WRITE** and the recording starts again (REC) with a new tracknumber indication on the display.
This function is very useful to separate music tracks by a 3-second pause.
You can also use this function to overwrite old recordings.

MUTE RECORDING (during playback)

During playback, the REC MUTE ○ key can also be pressed.
The DCC player stores the area which must be muted.
While pressing this key the audio signal will not be muted to allow you to exactly check the area that needs to be muted.
The indication MUTE appears on the display

The area that will be muted will last as long as you hold the REC MUTE ○ key pressed (to a maximum of 10 seconds).
While pressing the recorder will only store the positions of the muting; no marker is written yet.

The area will actually be muted when you press the REC ● key less than 5 seconds after releasing the REC MUTE ○ key.

- MUTING A SMALL AREA
• Mark the area you wish to mute by pressing the REC MUTE ○ key (to a maximum of 10 seconds)
• Press the REC ● key less than 5 seconds after releasing the REC MUTE ○ key
A mute marker will be written.

- SKIPPING A LARGE AREA
• Mark the area you wish to skip by pressing the REC MUTE ○ key for more than 10 seconds.
• Press the REC ● key less than 5 seconds after releasing the REC MUTE ○ key
A skip marker and a start marker will be written.
When the skip marker is detected during playback, the deck will wind to the startmarker after which playback will be continued.

CD SYNCHRO DUBBING

With this function you can synchronise the start of a recording with the start of a CD or CD program as follows:

• Set the deck in the RECORD PAUSE mode by pressing APPEND or by pressing REC PAUSE.
• Press the CD SYNC. key.
The deck verifies the communication with the CD-player through the ESI interface.
– The CD-player will start playback.
If the analog input is selected you can check and adjust the recording level with the REC LEVEL key.
– If the communication between the deck and the CD-player is not correct the display will show 'STOP'.
Check if the CD-player is switched on, if the ESI bus is connected correctly and if the IR sensor is switched off.

• Press the REC ● key to start the synchronized recording.
– The CD-player returns to the beginning of the disc.
Playback of the disc starts again and the DCC deck will start recording simultaneously.

Warning:
• The AUTOSPACE function on the CD-player (CD 930, 940, 950) must be set to 0 seconds.
• EDIT-mode on the CD-player (CD 930, 940, 950) must be switched off.
The DCC deck takes care of correct writing of a reverse marker automatically (see page 15)

• When the DCC reaches the end of side A during the CD synchro recording, the CD player will switch to the pause mode.
The DCC player will rewind to the end of the last recorded complete track and write a reverse marker (see also page 15). Then, it will restart the CD player at the beginning of the interrupted track and continue the recording on side B.

• During CD synchro recording all keys are inactivated with the exception of the stop key.

RECORDING ON A BLANK DCC

- Insert a cassette and close the tray.
  First the display will show READING and afterwards --
  0000 STOP

- Press APPEND ►II
  The deck searches for the start of side A and writes a buffer
  area (LEAD-IN).
  This buffer area is to guarantee optimum tape-recording
  conditions.
  APPEND >> or << appears and then LEAD IN, **MARKER
  WRITE** and TAPE BEGIN.
  After doing so, the RECORD PAUSE (RECP) mode is
  entered.
  The deck is now ready to record track 1.

- (• Select the correct input source and adjust the recording level
  when needed).

- Press REC ● to start the actual recording.
  REC and **START MARKER WRITE** appears on the display

- Press STOP ■ when you want to stop recording.
  The recording will be stopped and the deck marks the end of
  the last recording. The display shows **MARKER WRITE** and
  STOP.

RECORDING ON A PARTIALLY RECORDED DCC

- Press APPEND ►II
  The deck will search for the end of the last recording.
  APPEND >> or << appears.
  When this has been found the last 10 seconds of this music
  track will be played back (APPEND PLAY), after which the
  RECORD PAUSE (RECP) mode is entered.

- (• Select the correct input source and adjust the recording level
  when needed).

- Press REC ● to start the actual recording.
  REC and **START MARKER WRITE** appears on the display

- Press STOP ■ when you want to stop recording.
  The recording will be stopped and the deck marks the end of
  the last recording. The display shows **MARKER WRITE** and
 STOP.

COMPLETELY OVERWRITING A RECORDED DCC

- Select side A with the SIDE A/B key

- Press BACKWARD ◄◄.
  The deck will rewind to the beginning of side A and will stop
  automatically at the beginning of the tape.

- Press APPEND ►II
  When the tape already contains a LEAD IN area the deck will
  play back the first 10 seconds of track nr. 1, after which it
  will go back to the beginning of this track and enter the
  RECORD PAUSE mode. (I 0:00 RECP).

- Press REC PAUSE II when the tape does not yet contain a
  LEAD IN area. The deck will now write a LEAD IN area at the
  beginning of side A and will enter the RECORD PAUSE
  mode (I 0:00 RECP).

- (• Select the correct input source and adjust the recording level
  when needed).

- Press REC ● to start the actual recording.
  REC and **START MARKER WRITE** appears on the display

- Press STOP ■ when you want to stop recording.
  The recording will be stopped and the deck marks the end of
  the last recording. . The display shows **MARKER WRITE** and
  STOP.

RECORDING ON A SPECIFIC LOCATION

- First, you must go to the location on the tape at which you
  want to make a recording by pressing keys like NEXT ►I,
  PREV. I◄, FORWARD ►►, BACKWARD ◄◄.

- Press REC PAUSE II
  The deck will enter the RECORD PAUSE (RECP) mode at
  the current position.

- Press REC ● to start the actual recording.
  REC and **START MARKER WRITE** appears on the display

- Press STOP ■ when you want to stop recording.
  Note: Correct time will only be recorded when the tape is
  positioned at a location where the absolute time is already
  recorded on the tape.

NO RECORDINGS CAN BE MADE:

- On a prerecorded DCC

- On a conventional analogue cassette

- On a DCC which is protected against recording.
  This protection can be activated and deactivated with the red switch on the bottom of your cassette.
  See also page 7 '**PROTECTING A CASSETTE AGAINST RECORDING**'

- From a source which is already a digital copy of an original music-program
  The **COPY PROHIBIT** indication will light up on the display.
  The DCC deck operates with a Serial Copy Management System, which includes that a fully digital
  copy can be made from Prerecorded digital material but only directly from the original material.
  E.g. You can make a digital recording from a CD to your DCC 900 via the digital in- and output sockets.
  However, it is not possible to make a digital copy of this recorded DCC cassette to another DCC deck
  When you want to copy this cassette from one DCC deck to another you can only do this via the
  analogue in- and output sockets.

- No direct digital recording can be made when the digital source is not connected or switched on.
  CHECK DIG IN will appear on the display and the input-selector indicators will be blinking. It is
  always possible to make a (digital) DCC recording via the analogue input sockets; the high-quality A/D
  converter of your DCC 900 will convert this signal to a digital signal.
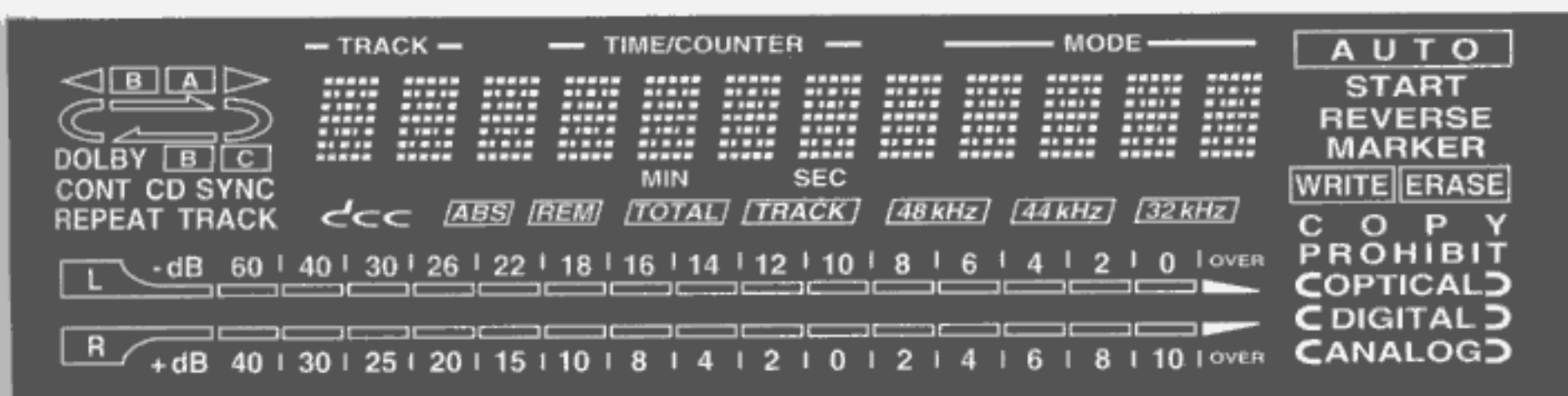
DISPLAY

Shows:

- ◁ B A ▷ – indicates the tape travel direction
- ⟲ – indicates the reverse mode
- **DOLBY** B C – indicates the selected Dolby Noise Reduction system B or C
- **CD SYNC** – lights up during a synchronized recording
- **CONT REPEAT** – lights up to indicate that all tracks on the tape will be repeated
- **REPEAT TRACK** – lights up to indicate that the current track will be repeated
- **– TRACK –** – shows the playing track or the total number of tracks on the tape.
  – – will be indicated if no track information is (yet) available
- **– TIME/COUNTER –** – shows the different time modes 00:00 or the counter mode 0000.
- **ABS** – lights up to indicate the absolute time on the tape
- **REM** – lights up to indicate the remaining time on the tape
- **TOTAL** – lights up when the total time on the tape is being displayed
- **TRACK** – lights up when track information is displayed
- **48 kHz, 44 kHz, 32 kHz** – indicates the sampling frequency
- **— MODE —** – indicates the mode of the deck, e.g. PLAY, REC, RECP
- **AUTO** – lights up when the automatic start marker generation is switched on.
- **MARKER WRITE** – lights up each time a marker is written on the tape.
- **START MARKER WRITE** – lights up when a start marker is written on the tape
- **MARKER ERASE** – lights up when a marker is being erased from the tape.
- **REVERSE MARKER WRITE** – lights up when a reverse marker is written on the tape.
- **COPY PROHIBIT** – indicates that it is not possible to make a digital copy of the tape that you have digitally recorded yourself
- C **OPTICAL** ⊃ – lights up when the optical input has been selected.
- C **DIGITAL** ⊃ – lights up when the digital input has been selected
- C **ANALOG** ⊃ – lights up when the analogue input has been selected.
- The recording level is monitored when the deck is in the RECORD PAUSE mode. An overload (**OVER ▶**) indication will be indicated when the level exceeds the 0dB level.

DISPLAYING TEXT INFORMATION

The TEXT key **9** is only functional when you are using a prerecorded DCC
It calls up information from the DCC to be shown on the display
Normally the album title of the tape is displayed.

- When you press the TEXT key, the artist will be displayed.
- Press the TEXT key again to display the current track title.
- Press TEXT again to display the total number of tracks and total time on the tape.
- Press TEXT once more if you wish to return to the album title indication.

Notes:

– When the player has not yet retrieved the requested information from the tape, READING will appear on the display indicating that the player is in process of retrieving the information.
– When no text-information is available on a user-recorded DCC tape, the display will show NO TEXT INFO.

DISPLAYING OTHER TIME INFORMATION

Normally the displays shows the track number and the elapsed playing track time.

- When you press the TIME key **8** the display will show the absolute elapsed time on the tape.
- Press the TIME key again to display the remaining time on the tape.
  The total remaining time will be displayed on a prerecorded DCC; the remaining time on the current side will be displayed when recording on side A (and side B when a next marker has been written).
- Press TIME again to display the counter setting.
- Press TIME once more if you wish to return to the elapsed playing time indication.

Note: It may happen that on some user-recorded tapes some information is not available (e.g. when a recording is inserted on a specific location, the absolute time is not recorded). Then, it will not be possible to select this information.

Calling up time information is not possible when conventional analogue cassettes are used.

RESET

By pressing the COUNTER RESET key **5**, the tape counter will be set to 0000.
When the display is not in the counter mode at the moment this key is pressed, it will show the counter setting 0000 for a few seconds and then return to the original display mode.

Markers are special written signals on the DCC tape to mark a special area on the tape. The DCC player/recorder uses these marked areas to make operation easier.

The most important markers on a DCC tape are:

- **Track-start markers**
- **Reverse marker**
- **Next side marker**

You can write each of these markers yourself with the DCC 900.

START MARKER FUNCTIONS

```
..............................START MKR................................
       AUTO          WRITE          RENUMBER
```

Start markers mark the start of a new music track. This makes the search of the start of a track very easy.

AUTO: Automatic start marker writing during recording.

- When you are making a recording from a source which is connected via the digital COAXIAL or OPTICAL sockets to your DCC 900, the deck will always automatically write a start marker each time a new track is detected.

- When you are making a recording from a source which is connected via the analog input sockets to your DCC 900, the deck can also write start markers automatically.
  The indication **AUTO** is shown on the display. A start marker is written each time a silence (< -60dB) of more than three seconds is detected. The display will then show **START MARKER WRITE**.
- Press the AUTO key if you wish to switch off the automatic start marker writing. The indication **AUTO** will disappear from the display.
- Press the AUTO key once more to switch the automatic start marker writing on again.

NOTES:

- When the source you are recording from is supplying a considerable amount of noise during a silence it may happen that this silence will not be < -60dB and will not be detected by your DCC. In this case no marker is written.

- In some cases a very faint passage in a piece of music can be picked up by your DCC as a silent passage and a start marker will be written.

WRITE: Manually writing a start marker

- When this key is pressed during recording or playback, the deck writes a marker to indicate the start of a new track. **START MARKER WRITE** will appear on the display.

  NOTE: When using this function, you will change the origina[l] sequence of tracknumbers. In order to obtain a correct sequence of tracknumbers you are advised to perform a renumber action as explained below.

RENUMBER: Checking the complete tape on correctness of track numbers and writing a tracklist.

- This function can only be used on a user-recorded DCC.
- It is useful when the correct sequence of tracknumbers has been changed due to adding an extra startmarker or erasing a startmarker.
- Press the RENUMBER key.
- First the deck will rewind the tape to the beginning of side A
- Then the complete tape will be checked on correctness of several markers. The deck performs this check by winding through the total tape during which the markers on the tape are detected.
  During this period *RENU* will be shown in the mode-area of the display.
- If the tracknumbering was not correct the tracknumbers will be changed.

AUTO REVERSE CONTROL

NEXT MKR WRITE   REVERSE MKR WRITE

AUTOREVERSE MECHANISM

The NEXT MKR WRITE and REVERSE MKR WRITE keys are used when you want to record more tracks than the amount of tracks that fit on one side of your tape.

Example: during recording of 9 tracks, it appears that track number 6 does not fit on side A of the tape anymore. The remaining time on the sector is too short.
• You should now temporarily interrupt the recording at the end of track number 5 by pressing the REC PAUSE **II** key or REC MUTE key.
– The deck will enter the RECORD PAUSE (RECP) mode. Only in this mode the NEXT MKR WRITE key can be used. The REVERSE MKR WRITE key can also be used during recording (a renumber action will then be necessary).
• It is also possible that you let the recording continue until the end of side A is reached. Afterwards you can go back to the end of track number 5, press the REC PAUSE **II** key and then use the NEXT MKR WRITE or REVERSE MKR WRITE key .

NEXT MARKER

• By pressing this key the deck will first write a marker (NEXT MARKER WRITE lights up)and then wind to the start of side B. The indication A TO B >> will appear on the display. At the beginning of side B a new buffer area will be written after which the deck will enter the RECORD PAUSE mode again. The display shows LEAD IN, TAPE BEGIN and then RECP.
• Press the REC ● key.
The recording will be continued with the following track. (e.g. track number 6)
This track will be recorded as track 1 of side B.

When the next marker is detected during playback, the deck will automatically wind to the beginning of side B (A TO B >> will appear on the display) after which playback will be continued with the first track on side B.
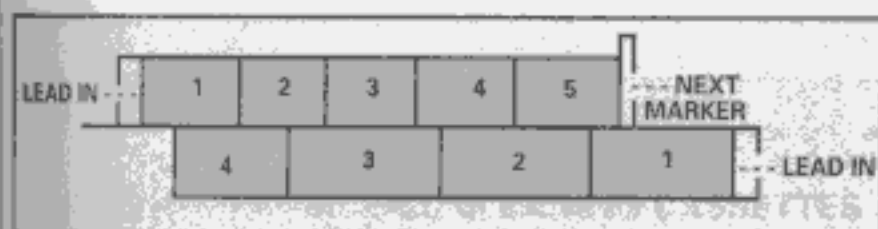

The NEXT MKR WRITE key can also be activated on side B.

REVERSE MARKER

When you do not want playback to be interrupted by the winding at the end of side A you can use a reverse marker during recording.

• By pressing this key the deck will first write a marker (**REVERSE MARKER WRITE** lights up) and will then immediately change the tape travel direction at the current position to side B. The deck will enter the RECORD PAUSE mode again.
• Press the REC ● key.
The recording will be continued with the following track. (e.g. track number 6)
The track numbering will not start with no. 1 on side B but the numbering will be continued (e.g. track number 6)

When the reverse marker is detected during playback, the deck will immediately change to side B after which playback will be continued.
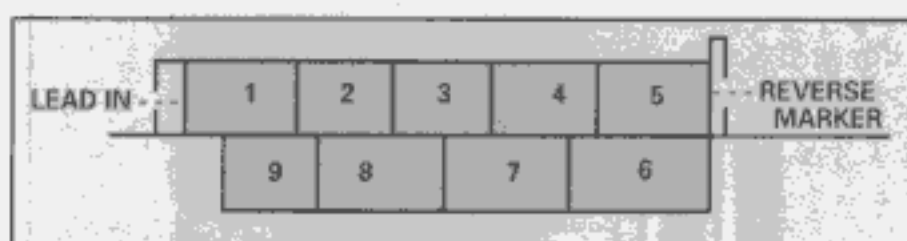
When the REVERSE MKR WRITE key is pressed during recording, the deck will immediately reverse and continue the recording on side B.
A correct reverse marker is not yet written at side A. During playback the deck will not reverse correctly. In order to write a correct reverse marker, the RENUMBER key must be pressed to verify the tape and write the correct markers.

The REVERSE MKR WRITE key can only be operated at side A.

ERASING A MARKER

MKR ERASE

You can erase a marker when you press the MKR ERASE key shortly before the location of this marker.
• Go to the location of the marker that you want to erase.
• Press the MKR ERASE key shortly before the location of this marker.
• Your deck will now check if there is a marker at that position.
• After detection of this marker the display will show **MARKER ERASE** and the indicator of the REC ● key will light up
– The marker has now been erased from the tape.
Note: After you have erased a marker the sequence of tracknumbers has been changed and a RENUMBER action will be necessary.

English

REMOTE CONTROL

2 X 1.5 V
R03 / UM4 / AAA
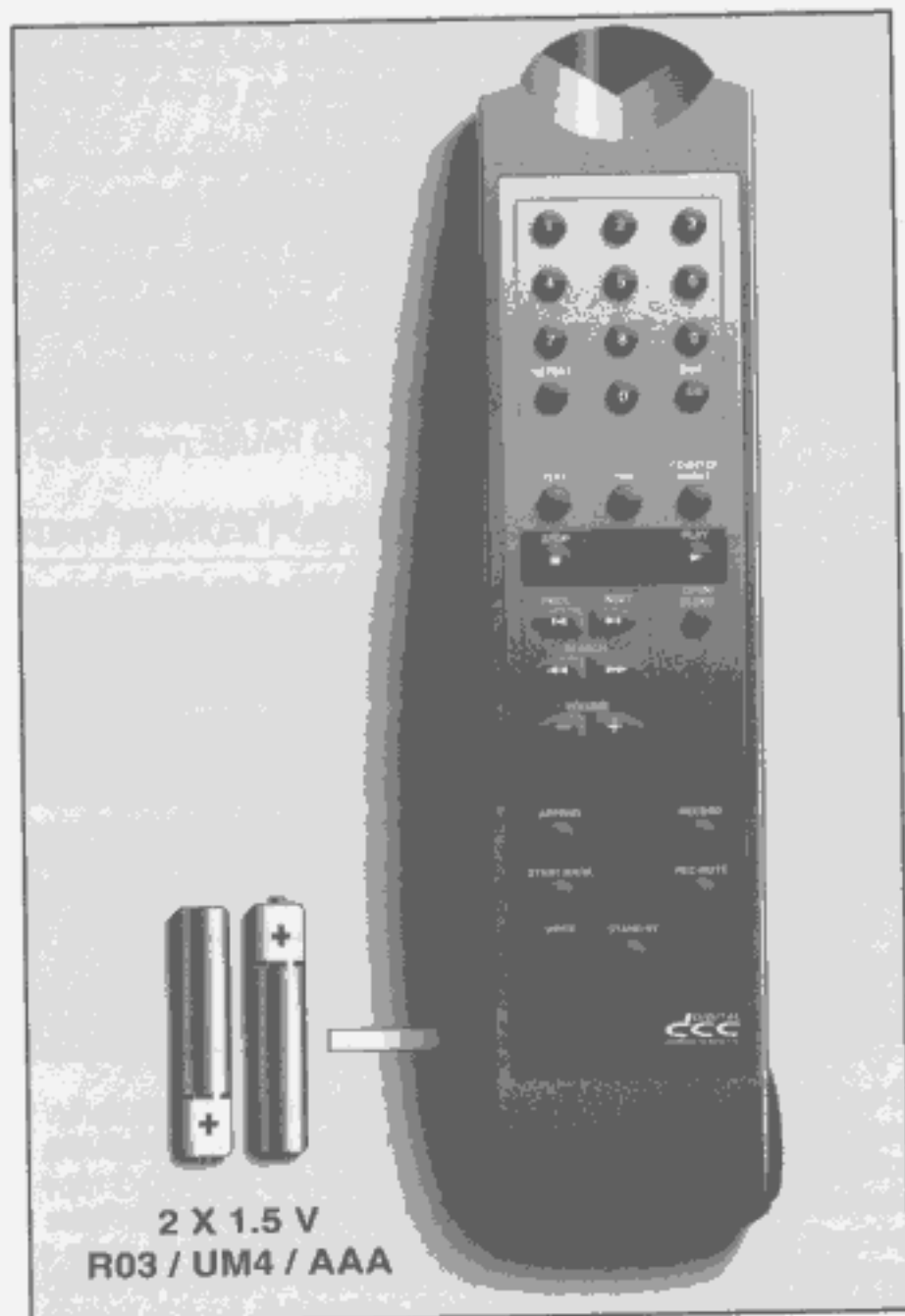
REMOTE CONTROL

– The keys on the remote control have the same functions as the corresponding ones on the recorder
SEARCH ◀◀ and **▶▶** = BACKWARD ◀◀ and FORWARD ▶▶.
– Extra keys:
0 - 9 digit keys - for selecting track numbers; these keys are only functional when a DCC cassette (with tracknumber list) is used.
– VOLUME + - Adjusting the sound level when the recorder is connected (via the VARIABLE OUT sockets) to an amplifier or HiFi system;
STANDBY - for selecting standby mode.

IMPORTANT!
When the recorder is incorporated in a HiFi system with ESI BUS connection (e.g. Philips 900 series), the IR SENSOR ON/OFF switch (**F**) on the back of the recorder should always be in the **OFF** position. The recorder can then be operated via the remote control of the system.
When the recorder is not incorporated in a HiFi system with ESI BUS connection, this switch should be in the **ON** position. The recorder can then be operated with the remote control supplied.
Make sure that the recorder is *switched off* when the IR SENSOR switch is changed.

BATTERIES

• Open the battery compartment and insert two batteries as indicated, type R03, UM-4 or AAA-cells.
• Remove the batteries when they have run down or when they will not be used again for a long period.

16

ENHANCED SYSTEM INTELLIGENCE

If the recorder is connected via the ESI BUS sockets to the ESI BUS sockets of a HiFi system (e.g. the Philips 900 series), the recorder can be operated via the remote control of the system. In addition, the functions mentioned below are then accessible.

NOTE
When using any of the following functions the IR SENSOR ON/OFF switch on the back of the recorder should be in the **OFF** position.
When changing this switch, make sure that the recorder is switched off.

AUTOMATIC SOURCE SELECTION

If the AUTO SELECT function on your amplifier is activated, the recorder will automatically be selected as soon as you press the PLAY ▶ key.

AUTOMATIC STOP

If the AUTO SELECT function on the amplifier is activated, the recorder will automatically stop playing or recording as soon as another source in the system is selected.
e.g. When you select TUNER with the source select knob on your amplifier while listening to your DCC 900, the recorder will be stopped.

STANDBY

• Switching your recorder to standby can also be done via the system remote control.
• First select DCC on the system remote control and then briefly press the standby key.
– The recorder will be switched to standby.
• If the standby key is kept pressed for more than approx. 1 second the whole system will be switched to standby.
All light indicators will be switched off with the exception of the standby indicator on the amplifier.
If AUTO SELECT (on the amplifier) is activated, the indicator of this key will also light up during standby.
NOTE: If the whole system is switched to standby when a recording is active, the recording will be cancelled.
• By selecting the DCC source on the amplifier or on the system remote control the recorder will be activated again.
• The recorder will also be activated again as soon as you press one of the PLAY ▶, STOP ■, NEXT ▶I, PREVIOUS I◀, FORWARD ▶▶ or BACKWARD ◀◀ keys

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English

TIMER

By connecting your DCC deck to a timer, you can start and stop playback or recording automatically.
- If the tuner in your HiFi system (of the Philips 900 series) is equipped with a timer (e.g. FT 930), make sure that the correct ESI BUS connections are made.
- Set the timer and switch on the DCC deck.
- Prepare the deck for playback or recording (see under chapter PLAYBACK or RECORDING).
- At the time set on the timer, the deck will start playback or recording.
- When you are using the timer, set the TIMER control to the OFF position.

SYSTEM REMOTE CONTROL

The following DCC functions can be operated via your Philips (900 series) system remote control (provided the correct ESI BUS connections are made):
- **0-9 digit keys** - for selecting track numbers;
- **PRESET/TRACK** - next or previous track;
- **PLAY** - for starting playback;
- **STOP** - for stopping recording/playback;
- **◄◄** - for rewinding the tape;
- **►►** - for winding the tape;
- **MODE** - for selecting the tape travel direction;
- **STANDBY** - for selecting standby mode

GENERAL REMARKS

- The DCC 900 might influence the quality of a broadcast signal when the radio antenna is located close to the DCC player.

MAINTENANCE

- Do not leave the unit for any length of time in direct sunlight or other places where high temperatures can occur, such as in the vicinity of heating apparatus.
- Do not expose the equipment to humidity or rain.
- A chamois leather cloth slightly moistened with water is sufficient for cleaning the deck.
- Do not use cleaning agents containing alcohol, spirits, ammonia or abrasives.

WARNING

ONLY USE SPECIAL DCC CLEANING CASSETTES FOR YOUR DCC 900 !

DO NOT USE DEMAGNITIZE CASSETTES !

TECHNICAL SPECIFICATIONS

FREQUENCY RESPONSE

DIGITAL DCC prerecorded: 20 Hz - 20 kHz ± 0.2 dB
(fs = 44.1 kHz)
Sample frequencies: 32 kHz, 44.1 kHz, 48 kHz dig. in
44.1 kHz analog input
S/N ratio: playback ≥ 92 dB
overall ≥ 92 dB
Dynamic Range: playback ≥ 95 dB
overall ≥ 92 dB
THD: playback ≤ 0.003%
overall ≤ 0.005%
Channel separation: playback ≥ 95 dB
overall ≥ 85 dB
Wow and Flutter: Quartz Crystal Precision

ANALOG CASSETTE: playback only
Frequency response: $30 - 16$ kHz CrO_2
S/N ratio: $≥ 50$ dB CrO_2
Dolby B/C: Improvement B 10 dB
Improvement C 20 dB
Wow and Flutter: 0.15 CCIR WTD
signal also supplied to digital outputs

INPUTS

Analogue line input: unbalanced
impedance > 20 kOhm
Digital Coaxial: 0.5 V / 75 Ohm
Digital Optical: acc. to IEC 958 tos link

OUTPUTS

Analogue fixed: 2 V
Analogue variable: motorised
Digital Coaxial: 0.5 V / 75 Ohm
Digital Optical: acc. to IEC 958 tos link

HEADPHONE AMPLIFIER PERFORMANCE

Load Impedance Range: $8 - 600$ Ohm
Frequency range: $20 - 20$ kHz, ± 0.5 dB
Signal to Noise Ratio – Playback: 90 dB
THD (including noise): 80 dB

MISCELLANEOUS

Display: 16 segment level meter
2 scales
Remote Control: ESI bus
Mechanism 2 motor metal deck
Tape-speed level: 4.76 cm/sec
Trayloader system

CABINET GENERAL

Dimensions (wxhxd): 435 x 140 x 300
Weight: 9 kg