

**Model PMD 601 User Guide**

**PROFESSIONAL**

Digital Compact Cassette Recorder

**manacantz®**

## ENGLISH

### WARRANTY

For warranty information, contact your local Marantz distributor.

### RETAIN YOUR PURCHASE RECEIPT

Your purchase receipt is your permanent record of a valuable purchase. It should be kept in a safe place to be referred to as necessary for insurance purposes or when corresponding with Marantz.

### IMPORTANT

When seeking warranty service, it is the responsibility of the consumer to establish proof and date of purchase. Your purchase receipt or invoice is adequate for such proof.

This device meets EMC directive (89/336/EEC) only. It does not meet Low voltage directive (73/23/EEC).

## FRANÇAIS

### GARANTIE

Pour des informations sur la garantie, contactez le distributeur local Marantz.

### CONSERVER L'ATTESTATION D'ACHAT

L'attestation d'achat est la preuve permanente d'un achat de valeur. La conserver en lieu sûr pour s'y reporter aux fins d'obtention d'une couverture d'assurance ou dans le cadre de correspondances avec Marantz.

### IMPORTANT

Pour l'obtention d'un service couvert par la garantie, il incombe au client d'établir la preuve de l'achat et d'en corroborer la date. Le reçu ou la facture constituent des preuves suffisantes.

Le présent appareil ne répond qu'à la directive EMC (89/336/EEC). Il ne répond pas à la directive sur les basses tensions (73/23/EEC).

## DEUTSCH

### WARRANTY

Für weitere Informationen wenden Sie sich bitte an Ihren Marantz-

### BEHALTEN SIE IHRE KAUFQUITUNG GUT AUF

Ihre Kaufquittung ist Ihr dauerhafter Nachweis für einen wertvollen Kauf. Bewahren Sie sie an einem sicheren Ort auf, um sie bei einer Versicherung oder bei entsprechenden Anfragen an Marantz vorlegen zu können.

### WICHTIG

Bei der Inanspruchnahme der Gewährleistung ist es die Verantwortung des Verbrauchers, den Kaufnachweis zu erbringen. Ihre Kaufquittung oder Rechnung ist dafür ausreichend.

Dieses Gerät entspricht nur der EMC-Vorschrift (89/336/EEC). Es entspricht nicht der Niederspannungsrichtlinie (73/23/EEC).

## ITALIANO

### CONDIZIONI DI GARANZIA

L'apparecchio è garantito per 365 giorni dalla data di acquisto comprovata da un documento attestante il nominativo del rivenditore e la data di vendita. La garanzia sarà prestata con la sostituzione o riparazione gratuita in parti difettose.

Non sono coperti da garanzia difetti derivanti da un improprio, errata installazione, manutenzione effettuata personale non autorizzato o, comunque, da circostanze che non passano riferirsi a difetti di funzionamento dell'apparecchio.

Sono inoltre esclusi dalla garanzia gli interventi inerenti l'installazione e l'allacciamento agli impianti di alimentazione.

Gli apparecchi verranno riparati presso i nostri Centri Assistenza. Le spese ed i rischi di trasporto sono a carico del cliente.

La casa costruttrice declina ogni responsabilità per i diritti o indritti provocati dalla mancanza delle prescrizioni di installazione, uso e manutenzione dettagliate nel presente manuale.

Per informazioni, sull'abbonamento al servizio Assistenza post-garanzia e per conoscere l'indirizzo dei Centri Assistenza Marantz rivolgetevi al nostro servizio consumatori (telefono 1678-20026 - numero verde).

Questo dispositivo è conforme alle sole norme EMC (89/336/EEC), ma non a quelle per il basso voltaggio (73/23/EEC).

## ESPAÑOL

### GARANTIA

Para información sobre las Condiciones de Garantía, sirva de consultar el Certificado que encontrará en el interior del embalaje del equipo.

### CONSERVE EL COMPROBANTE DE LA COMPRA

La factura es el comprobante de la adquisición de un producto valioso. Conserve la en lugar seguro para poder consultarla en caso necesario.

### IMPORTANTE

Para disponer de servicios cubiertos por la garantía, el usuario deberá acreditar la fecha y el lugar de adquisición del equipo. La factura o recibo de la compra constituyen el comprobante válido a tal efecto.

Este aparato sólo cumple con la directiva EMC (89/336/EEC). No cumple con la directiva de baja tensión (73/23/EEC).

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## IMPORTANT WORD

This manual must be read before any connection is made to the mains supply.

## WARNINGS

Do not expose the equipment to rain or moisture. Remove the cover from the equipment. Do not touch the mains lead with wet hands.

## COMPLIANCE

For further playback of any material may require further information refer to the following: EN 50135:1996 and Musical Performers Act 1958 and Copyright Protection Acts 1963 and 1972.

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## PRECAUTIONS

The following precautions should be taken when operating the equipment.

## GENERAL PRECAUTIONS

When setting the equipment ensure that:

- air is allowed to circulate freely around the equipment
  - it is on a vibration free surface
  - it will not be exposed to interference from an external source
  - it will not be exposed to excessive heat, cold, moisture or dust
  - it will not be exposed to direct sunlight
  - it will not be exposed to electrostatic discharges
- In addition, never place heavy objects on the equipment.

If a foreign body or water does enter the equipment, contact your nearest dealer or service center.

It is advisable when leaving the house, or during a thunderstorm, to disconnect the equipment from the mains supply.

# INTRODUCTION

## INTRODUCTION

Grundig has now further developed the music cassette - and the result is the DCC. The Digital Compact Cassette fills the large gap between music cassette and the compact disc. It is capable of being recorded on and played back just like a music cassette. It plays music digitally on a new design, new style audio cassette. It produces digital sound of high dynamic range and compact Disc quality. The PMD 601 incorporates the latest 18 bit DCC technology. High sound quality is guaranteed by sophisticated CIRC correction circuitry and PASC coding.

Please read the operation instructions carefully to be able to enjoy the troublefree operation of the PMD 601 for a long time.

Type plate is located on the base of the set.

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# CONTROLS

## FRONT AND TOP PANEL (illustration on page 4)

### COUNTER

to select the tape counter to be shown on the display and to reset the tape counter to '0000'

### TIME

for selecting the different time modes to be shown on the display: absolute time, track time, total time and total remaining time. Press to scroll through the different modes. Only functional for DCC cassettes

### TEXT

for selecting text information to be shown on the display. Keep this key pressed to scroll the track title and the artist. Press this key briefly to scroll the album title and the artist. Only functional for prerecorded Digital Compact Cassettes

### MKR MODE

for selecting automatic or manual marker writing. (Only functional for DCC cassettes) **In recording pause mode:** for selecting the different markers to be recorded

### MKR WRITE

for manual recording of various markers (only functional for DCC cassettes)

### PLAY/SIDE

for starting playback and for changing the playback side of the tape

### STOP/OFF

to stop the tape transport. **in stop mode:** to turn off the power. **in power off mode:** to start charging the battery

### OPEN

to open the cassette compartment

### REC PAUSE

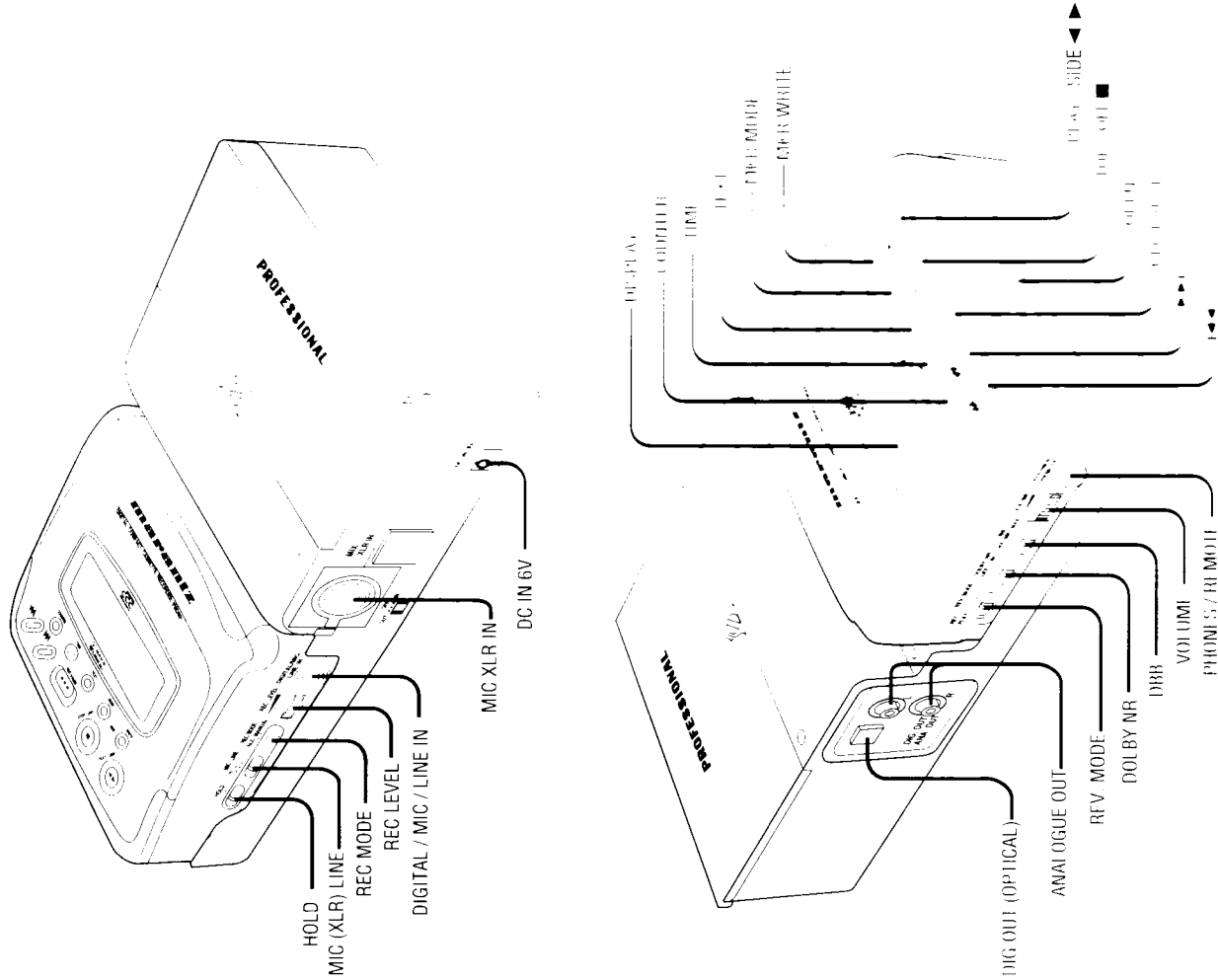
for selecting the recording pause mode by sliding this switch to the right. (Only functional for DCC cassettes)

### ▶▶

**in stop mode:** to advance the tape forward. **during playback:** to skip to the next track.

### ◀◀

**in stop mode:** to rewind the tape. **during playback:** to skip to the start of the current track. If you press this button several times, the backward step increases by one music track for each depression of the button.



## CONTROLS

(illustrations on page 4)

### LEFT SIDE OF (illustration on page 4)

- REV. MODE** for selecting the reverse mode.  
**during recording:** — the tape stops at the end of each side.  
 — recording of both cassette sides after which the tape stops at the end of the second side.  
**during playback:** — playback of both cassette sides, after which the tape stops at the end of the second side.  
 — continuous playback of both cassette sides.

**DOLBY NR** for switching the Dolby B Noise Reduction system on and off. Only functional when you are using a conventional analog compact cassette.  
 Dolby Noise Reduction manufactured under license from Dolby Laboratories Licensing Corporation.  
 \*DOLBY and the double D symbol are trademarks of Dolby Laboratories Licensing Corporation.

**DBB** Dynamic Bass Boost - to enhance the bass response via your headphones:  
**OFF** DBB off (no bass boost)  
**MID** low bass boost  
**MAX** high bass boost  
 The DBB-effect decreases as you raise the volume.  
 The DBB-selector does not affect the output signal of the DIGITAL (OPTICAL) / LINE OUT socket.

**VOLUME** for adjusting the volume of your headphones.  
 The VOLUME control does not affect the output signal of the DIGITAL (OPTICAL) / LINE OUT socket.

**PHONES/REMOTE** socket for supplied remote control with headphones.

**ANALOGUE OUT** ANALOGUE LINE OUT to the input SOCKET LINE IN, AUX or DEC IN of other set.

**DIGITAL OUT** (OPTICAL) DIGITAL OUT to the input socket (OPTICAL) DIGITAL IN of other set.

### RIGHT SIDE (illustration on page 4)

**HOLD** — when this switch is in the — position, the DCC recorder buttons are inoperative (the remote-control buttons can still be operated).

**MIC (XLR)/LINE** selecting microphone level (L, H) or LINE input

**REC MODE** selecting the recording mode:  
**ALC** automatic setting of suitable recording level  
**MANUAL** for manual adjustment of recording level with REC LEVEL volume control.

**REC LEVEL** for adjusting the recording level. (not necessary when digital or optical input is selected)

**DIGITAL/MIC LINE IN** socket for connecting a recording source of microphone.

**DC IN 6 V** socket for external power supply 6 V DC

**MIC. XLR IN** socket for connecting microphones with balanced output

## DISPLAY



**DCC** lights up when a DCC cassette is loaded

**TRACK NO.** indicates the current track number (only when using DCC cassettes)

**TOTAL** lights up when the total time mode or total remaining time mode is selected (only when using DCC cassettes)

**TRACK** lights up when the track time mode is selected (only when using DCC cassettes)

**ABS** lights up when the absolute time mode is selected (only when using DCC cassettes)

**AUTO** lights up when the automatic marker recording mode is selected. (only when using DCC cassettes)

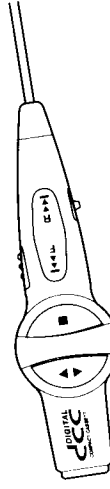
**WRITE** lights up when markers are written on the tape. (only when using DCC cassettes)

**B** lights up during playback of side B of a DCC cassette and starts blinking during the search/skip mode on side B

**A** lights up during playback of side A of a DCC cassette and starts blinking during the search/skip mode on side A

**Multi function level Meter** starts blinking when the battery runs down.  
 — indicates the peak level. (only when using DCC cassettes)  
 — indicates the winding direction and current position during search.

## REMOTE CONTROL



This remote control is connected to the headphone cord gives easy control of volume and track access. The buttons on the remote control have the same function as the ones on the DCC recorder.

- **STOP/OFF**
- to stop the tape transport
  - **in stop mode:** to turn off the power
  - **in power off mode:** to start charging the battery

- ◀ ▶ **PLAY/SIDE**
- for starting playback and for changing the playback side of the tape

- F ▶▶
- **in stop mode:** to advance the tape forward
  - **during playback:** to skip to the next track. If you press this button several times, the forward step increases by one music track for each depression of the button
- Note:** you can skip 99 tracks in forward or reverse direction.

- ◀◀ R
- **in stop mode:** to rewind the tape
  - **during playback:** to skip to the start of the current track. If you press this button several times, the backward step increases by one music track for each depression of the button.

**HOLD button**  
 This button can be used to switch the HOLD function of the remote control on and off.  
 This button acts independently from the HOLD switch on the DCC recorder.

**REC P slider**  
 This slider can be used to select the recording pause mode (RECP)  
 (Only when using DCC cassettes)

**VOLUME control**  
 Use this control to adjust the volume.  
 When you wish to adjust the volume via the remote control, set the volume control on the PMD 601 to position 5, 6 or 7.  
**Note:** When adjusting the VOLUME on the remote control, the volume cannot be turned down completely.

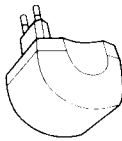
## POWER SUPPLY

The DCC recorder comes with a mains adapter and rechargeable battery. This makes your DCC recorder portable whenever possible, however, use the supplied mains adapter if you want to conserve battery life.

### MAINS ADAPTER

Use only the enclosed mains adapter, supplying 6 V DC with the pluspole  $\ominus$  to the center pin  $\oplus$ .  $\diamond$  Serious damage may occur if another adapter is used.

Make sure that the mains voltage of your mains adapter corresponds to the voltage of the country in which the DCC recorder is used. This should be borne in mind when you travel to another country.



The mains adapter is supplied in several versions:

USA/CANADA	120 V, 60 Hz
EUROPE	220-230 V, 50 Hz
U.K.	240 V, 50 Hz
AUSTRALIA/ NEW ZEALAND	230-240 V, 50 Hz
OTHER COUNTRIES	120/230 V, 50/60 Hz

- To supply the DCC recorder from the mains connect the mains adapter to the 6 V DC socket and to the wall socket. The battery supply is then switched off. After use, always disconnect the adapter from the wall socket.

### ALKALINE BATTERY OPERATION

- Open the battery compartment and insert four LR14 alkaline dry cell batteries following the  $\oplus$  polarity indication inside the compartment.

**Notes:** If non-alkaline dry cell batteries are used, the record and play time will be shortened.

- Battery life  
The use of four LR14 alkaline batteries allows about 8 hours of recording or playback. If alkaline batteries are used together with the rechargeable battery pack, the possible recording and playback time will be extended much longer.

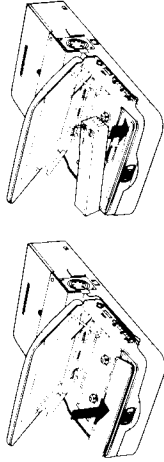
### (Note)

When fastening the battery cover, be sure to insert the protrusions on the battery lid into the two slots marked with an arrow at the rear of the battery compartment before tightening the screw.

### RECHARGEABLE BATTERY

This battery pack (when charged) allows the PMD 601 to record/play for approximately 2 hours (for DCC cassettes). Recharge the battery as follows:

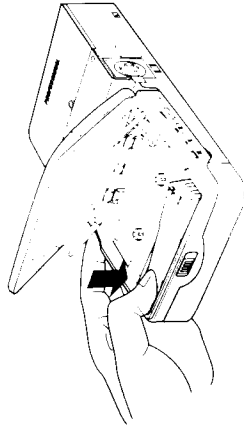
- Open the battery compartment and insert the battery in the DCC recorder.



- Connect the mains adapter to the DCC recorder and to the wall socket as described before.
- Press STOP/OFF  $\blacksquare$  in power off mode to start charging the battery. During charging the display will show:

### CHARGING

- When the battery is ready to use the indication 'Charging' will disappear from the display. Disconnect the adapter from the wall socket.
- After charging you can unplug the mains adapter and operate the DCC recorder with the charged battery.
- When taking out the battery, push the left edge of the battery.



### Notes:

- When the battery is recharged while it is not completely exhausted, its recharging capacity is reduced. Therefore, it is recommended to recharge the battery only when it is completely exhausted.
- If the rechargeable battery is new or has not been used for a long period, it may need several charging cycles to become fully charged.
- When the battery is recharged, the DCC recorder no longer functions, and the battery indicator  $\square$  blinks. Recharge the battery. After having been recharged about 600 times, the battery pack can no longer provide the required power. You should take it to your dealer or the point of the nearest used battery collection point. A new battery pack can be obtained from your dealer.

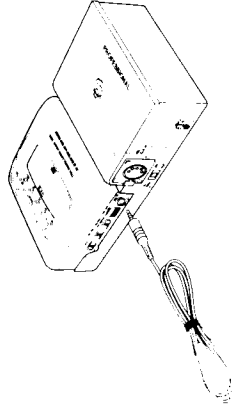
## Input

### DIGITAL/MIC/LINE IN

- The PMD 601 can be connected to a recording source via a digital, optical or analog cable.

### DIGITAL (COAXIAL/OPTICAL) connection

- Connect the supplied coaxial or an optical signal lead to the DIGITAL/MIC/LINE IN socket of your DCC recorder and the corresponding output socket of the required recording source (e.g. DIG OUT/OPT OUT).
- Do not connect anything to the DIGITAL/MIC/LINE IN socket of the DCC recorder when you are using a digital/optical connection there is no need to adjust the recording level.

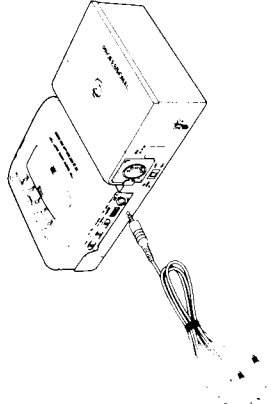


### Warnings

- The PMD 601 cannot record the digital input when you are using the rechargeable battery. Make sure that during digital recording the DCC recorder is being powered via the mains adapter.
- Make sure to use the cable for coaxial digital connection. When using another cable the connection may not work properly.

### ANALOG connection

- Connect a signal lead to the DIGITAL/MIC/LINE IN socket of your PMD 601 and to the corresponding output socket of the recording source (e.g. LINE OUT).
- The input signal is automatically changed to analog.
- Make sure the MIC (XLR)/LINE switch to the LINE position, set the REC MODE switch and adjust the recording level. (See also chapter RECORDING).



## CONNECTIONS

### MICROPHONE connection

- Connect the microphones to the DIGITAL/MIC/LINE IN socket of your PMD 601.
- The input signal is automatically changed to analog.
- Slide the MIC (XLR)/LINE switch to the MIC-L or MIC-H position, set the REC MODE switch and adjust the recording level. (See also chapter RECORDING).

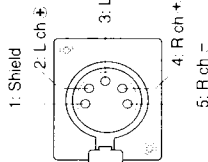
### MIC XLR IN

- Connect microphones to MIC XLR IN.

- Do not connect anything to DIGITAL/MIC/LINE IN

- Slide the MIC (XLR)/LINE switch to the MIC-L or MIC-H position, set the REC MODE switch and adjust the recording level. (See also chapter RECORDING).

### MIC XLR socket

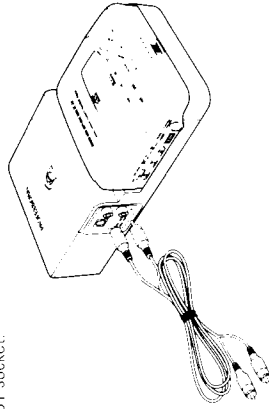


### DIGITAL (OPTICAL) OUT

- For DCC reproduction through a high-quality stereo system with an optical digital socket, use an optical signal lead to connect the socket DIGITAL (OPTICAL) OUT to the input socket OPTICAL DIGITAL IN of the other set.

### ANALOGUE OUT

- For DCC reproduction at home through your stereo system (amplifier, receiver, recorder, etc.), use the supplied signal lead to connect the socket ANALOGUE OUT to the input sockets LINE IN, AUX or DCC IN of the other set.
- Adjust the sound with the controls of the stereo system. The VOLUME control and the DBB selector of the DCC recorder do not affect the output signal of the ANALOGUE OUT socket.



### PHONES/REMOTE

- When you are using the remote control, connect it to this socket. The plug of the head phones can then be inserted in the PHONES socket of the remote control.
- When you are not using the remote control, you can connect the head phones directly to the PHONES/REMOTE socket of your PMD 601.

## OPERATION

### POWER ON/OFF

- The DCC recorder can be turned on by pushing one of the following buttons: PLAY/SIDE ◀▶, ◀▶, ▶▶, ▶▶▶, REC PAUSE on the player or on the remote control. The DCC recorder is activated and enters the mode of the button that was pushed.

**Note:** If no tape is loaded the set will not be activated.

- The DCC recorder will be switched off:
  - when you push the STOP/OFF ■ button again while the player already was in the stop mode
  - when you fail to push any operating button within 3 minutes after the DCC recorder has entered the stop mode.

The following information will be kept in the memory: present track number, time information and the tape travel direction.

- The memory will be cleared when you take out the cassette.

- The DCC recorder will also be switched off when you open the cassette compartment with the OPEN switch.

### HOLD

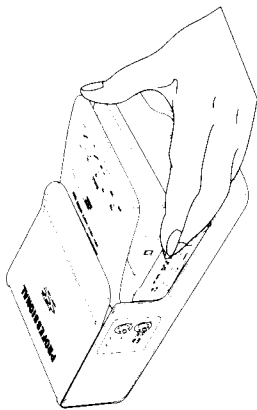
- When carrying the player with you, you can slide the HOLD switch to the ON position. The DCC recorder buttons are then inoperative (not the remote control buttons). The playing of a cassette will now not be interrupted when a button is accidentally touched.
- When the DCC operating buttons are pressed while the HOLD switch is in position ON, the following information will blink (3x) on the display:

Set is on Hold

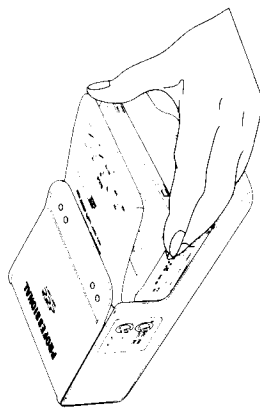
Then, the display will go back to showing the previous information.

### LOADING A CASSETTE

- Open the cassette compartment with the OPEN switch.
- Insert a DCC cassette with the label side up and the protective slider pointed to the compartment.



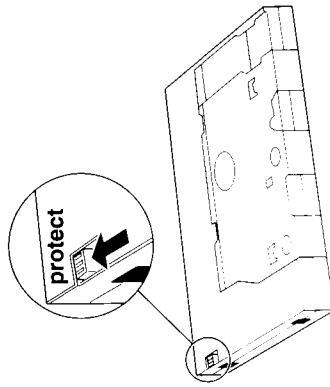
- When using a conventional analog cassette, insert it as shown below.



- Close the cassette compartment.

### PROTECTING A CASSETTE AGAINST RECORDING

Accidental erasure of recordings made on your DCC cassette 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.



## PLAYBACK

### PLAYING A DCC CASSETTE

- Pushing the HOLD function is switched OFF, otherwise the F.W. and under buttons will not operate.

1 Connect the remote and your HEAD PHONES to the (REMOTE) - (HEADPHONE) socket.

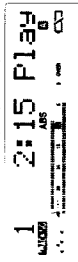
2 Open the cassette compartment with the OPEN switch

3 Insert a cassette and close the compartment.

4 Adjust the volume using the VOLUME control and the bass sound using the DBB selector.

5 Start playback by pressing PLAY/SIDE ◀▶.

As soon as playback starts, the display shows the corresponding track number and the absolute elapsed time (the time which has elapsed from the start of the tape until the present playback position).



If ever you are using a prerecorded DCC cassette, the display will automatically show the track title after the text information on the tape has been read.



Side: A and B of the cassette will be played back continuously (up to a maximum of 12 cassette sides).

To stop playback, press STOP/OFF ■.

The DCC recorder also stops:

when the cassette compartment is opened.

If the battery runs down or if the power supply is interrupted in another way,

when the player has played back 12 cassette sides of the same cassette (when reverse mode C is selected).

Open the cassette compartment only when the DCC recorder is in the STOP position.

To switch off the DCC recorder immediately, press STOP/OFF ■ a second time.

In the STOP position, the DCC recorder shuts down automatically 3 minutes after the last command.

### Remarks:

If the battery has run down, the DCC recorder will not function normally. For example, it will not start. Recharge the battery or use the mains adapter.

### PLAYING AN ANALOG CASSETTE

- If you want to playback an analog cassette, follow the instructions as described for DCC cassettes.

The player distinguishes metal/high position tapes and normal tapes automatically.

Use the DOLBY NR selector to switch the Dolby Noise Reduction System on or off.

As soon as playback starts, the display will show the tape counter. The level meter will not be indicated on the display.

Fwd 3104 Play

### OPERATION FEEDBACK VIA HEADPHONES

When you are pressing a button or when the unit is performing an operation, a beep tone will be heard to let you know which operation is being performed.

#### Operation

Side A (Fwd) starts recording/playback

Side B (Rev) starts recording/playback

Stop

Power off

Fast forward wind

Fast rewind

Next track search (during winding)

Previous track search (during winding)

— = short high tone

— = short low tone

— = long low tone

## SEARCH

The **◀▶** and **▶▶** buttons can be used to search for a passage or a particular track on the tape.

### PREVIOUS/NEXT TRACK SEARCH

- When you use the **◀▶** and **▶▶** buttons during playback, you can search for a particular track on the tape.
- Press **◀▶** to search for the beginning of the current track.
- Press **▶▶** to search for a track next to the current track.
- If you press these buttons several times, the forward or backward step increases by one music track for each depression of the buttons.
- When the deck reaches the selected track playback will be continued automatically.

**Note:** During the search, the audio signal will be muted.

- In case you are using a DCC cassette the tracks on the tape are recognized by the player each time a next start marker is detected.
- When you are using a conventional cassette the tracks on the tape must be separated by a silent passage of at least 4 seconds.
- When the end of side B is reached during next track search (**▶▶**), the player will enter the Stop mode.
- When the beginning of side A is reached during previous track search (**◀▶**), the player will also enter the Stop mode.

During next track search the display will show for instance:



- When you are using a user-recorded DCC cassette or a conventional cassette, the display will show the forward or backward steps.

### TITLE SEARCH

If you have selected the text mode (with the **TEXT** button), the title of the selected track (up to 24 tracks) will be shown on the display during previous or next track search.

**Note:** Title search is only functional when you are using prerecorded DCC cassettes.

### SEARCHING FOR A PASSAGE

- When you use the **◀▶** and **▶▶** buttons while the player is in the stop mode, you can search for a passage on the tape.
- Press **▶▶** to search in the tape travel direction (forward) the tape is travelling (backward).
- The winding will continue until you press **PLAY/SIDE ▶▶** or **STOP/OFF**.

During search the display will show for instance:



### REVERSING THE PLAYING DIRECTION

- You can reverse the tape travel direction by pressing **PLAY/SIDE ◀▶** during playback.
- The selected side for DCC cassettes is indicated on the display as A or B.
- The selected side for conventional cassettes is indicated on the display as FWD or REV.
- When you press this button, the playing direction will be reversed and playback will be continued on the other side of the tape.

### Notes:

- During search the meter indicates the tape running direction and the position on the current tape side.
- The upper meter indicates the tape running direction.
- Forward: "→" will be moving from left to right.
- Backward: "←" will be moving from right to left.
- The lower meter indicates the approximate position of the current tape side (in six steps).
- Beginning: "→" is shown at the left end of the display.
- End: "←" is shown at the right end of the display.

**Remark:** for some analog cassettes, the meter is not able to indicate the correct tape position.

## TEXT/TIME INFORMATION

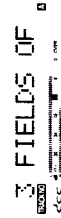
### DISPLAYING TEXT INFORMATION

Text information is only functional when you are using conventional cassettes.

Press **TEXT** and to call up information from the DCC cassette during playback.

When you press the **TEXT** button, the track number and the track name of the current track will be displayed. Then the total playing time of the track will be shown on the display from right to left. Press **TEXT** again, the album title, the album title followed by the artist will once be scrolled on the display. Press the **TEXT** button again, the display will show the previous track name.

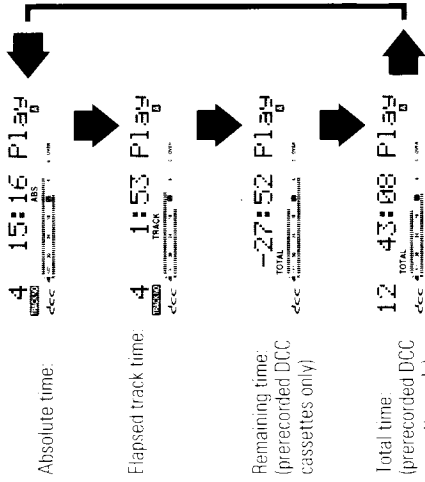
Press the **TEXT** button for more than 0.5 seconds the display will scroll to the next track. If once be scrolled on the display from right to left. Press the **TEXT** button again, the display will show the previous album name again.



### DISPLAYING TIME INFORMATION

Normally the display shows the absolute elapsed playing time.

- When you press the **TIME** button the display will show the elapsed playing time of the current track.
- Press the **TIME** button again to display the remaining time on the tape.
- Press the **TIME** button again to display the total time.
- Press the **TIME** button once more if you wish to indicate the absolute elapsed playing time again.



Calling up time information is not possible when conventional cassettes are used. In this case the display will always show the counter setting.

### COUNTER

When you press the **COUNTER** button the display will show the counter setting. By pressing the **COUNTER** button again the tape counter will be set to 0000.

**Note:** When the backside of the tape is being played, the tape counter will count down.

# RECORDING

## CONNECTION TO THE RECORDING SOURCE

- Connect your PMD 601 to the desired recording source as described in the chapter CONNECTIONS (page 9).

## BEFORE STARTING A RECORDING

Before you start a recording make sure that the following switches are set to the correct position:

- **REV MODE**  
— if you want to record on only one side (A or B) of the cassette.  
— if you want to record on side A and B of the cassette (autoreverse).

**Note:** when you are using the autoreverse function, the recording time may be shorter than the time indicated on the tape.

- **MIC (XLR)/LINE**

If you wish to record with the microphone you normally set the switch to the MIC-H position. In case you are recording a loud source, the sound may be distorted. Set the switch to the MIC-L position. The input signal will then be attenuated by 20dB.

- **LINE**  
if you wish to record from an analog input source (LINE connection)

**Note:** Do not change this switch during recording.

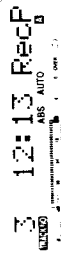
- **REC MODE**  
With this switch you can select the recording mode when recording from the analog input
- **ALC**  
The recorder sets the suitable recording level automatically.
- **MANUAL**  
Allows you to set the recording level yourself as described below.

- **ADJUSTING THE RECORDING LEVEL**

Only necessary when you wish to record from the analog (MIC/LINE) input.

- Insert a cassette and slide the REC MODE switch to MANUAL.
- Slide the REC PAUSE switch to the right. The player enters the recording pause mode.
- Allow the recording source to play and adjust the level with the REC LEVEL volume knob.

A level of -12dB is recommended. If the level exceeds the level, OVER will be indicated and the recorded signal will be distorted!



## STARTING A RECORDING

1. Open the cassette compartment and insert a blank DCC cassette.
2. Close the cassette compartment.
3. Press the **◀▶** key.

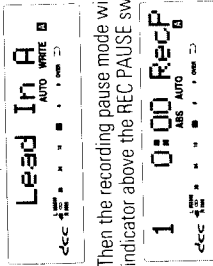
The DCC recorder will be turned on automatically and will rewind to the beginning of the tape.

### Notes:

- In order to ensure correct recording of absolute time it is recommended always to perform the rewind action (▶◀) even when using new cassettes.
- Do not operate the PMD 601 until the rewinding is completed and it has stopped.

4. Slide the REC PAUSE switch to the right.

The unit will now record a LEAD IN area and the display shows the input source and the sampling frequency.



Then the recording pause mode will be entered (The indicator above the REC PAUSE switch will start flashing).

### Notes:

- A LEAD IN area is a buffer area at the beginning of the tape side which guarantees optimum tape-recording conditions.
- If you wish to start recording on side B, first select side with the PLAY/SIDE key and then press **◀▶** to write a LEAD IN area at the beginning of side B.
- The sampling frequency is changed automatically depending on the digital signal input. In case of analog (mic or line) input, 44.1 kHz is selected as the sampling frequency.
- When you slide the REC PAUSE switch to the right while in recording pause mode, the display will again show the input source and the sampling frequency.
- 5. Press the PLAY/SIDE **◀▶** key to start the recording. During recording the indicator above the REC PAUSE switch will light up.
- 6. To interrupt the recording slide the REC PAUSE switch to the right.

The set enters the recording pause mode and the indicator above the REC PAUSE switch will start flashing. Press the PLAY/SIDE key **◀▶** to continue the recording.

7. Press the STOP/OFF **■** key to stop the recording. The set will write a marker on the tape to indicate the end of the recording and then enters the stop mode. This marker takes a few seconds.

**Caution:** make sure that the stop mode is entered before opening the cassette compartment.

**Note:** Automatic start marker recording is selected automatically if you wish to record start markers manually, change the mode before starting a recording (see page 17).

# RECORDING

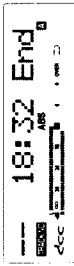
## RECORDING ON A SPECIFIC LOCATION OF A RECORDED DCC

To obtain correct track and time information (in order to be able to check the location of the tape and to search for a desired track), it is required to record the absolute time continuously. If the cassette contains an incorrect recorded part (or when recording is started at a position where absolute time is not known) it is not possible to record the absolute time after that position.

In order to avoid incorrect areas, make sure to perform following steps when recording on a specific location on the tape.

## A. CONTINUOUS RECORDING AFTER A PREVIOUSLY RECORDED LOCATION

1. Insert the recorded cassette.
2. Start playback at a position shortly before the end of the recorded part on the tape.
3. Press STOP/OFF **■** when the display is showing the END indication as shown below:



4. Follow the procedure as described before to start recording (from point 4. onward)

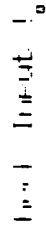
## B. OVERWRITING FROM A SPECIFIC LOCATION

1. Insert the recorded cassette.
2. Search for the specific location on the tape with the playback and/or skip functions.
3. Check whether the display shows the ABS indication and whether the correct track number and absolute time is indicated.
4. Follow the procedure as described before to start recording (from point 4. onward).

### Notes

- If the time mode is different, change it to ABS time mode (see page 13)
- A track number is recorded only at the beginning of the tracks.
- In case the display is not showing the track number although it is showing the absolute time, try to go back to the beginning of a previous track and start playback.
- When recording is started while the display is not showing the track number, no track number recording is possible for following tracks.
- When recording is started while the display is not showing the absolute time, no absolute time recording is possible for following tracks.

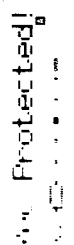
## PLAY MODES



When using the DCC (DUAL) / MIC / LINE input socket is not inserted, the unit will automatically switch to the normal time mode (see page 9)



The DCC cannot record the digital input when you are using the autoreversible battery connector (see page 8)



The recording is protected by the slider switch on the back of the cassette.

Slide the switch to the other position (see page 10)

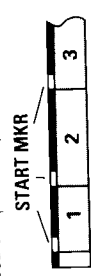


# MARKERS

Markers are special written signals on the DCC tape, marking certain positions on the tape. The PMD 601 uses these marked positions to make operation easier. You can write these markers yourself with the PMD 601. There are two ways of recording markers: AUTO and MANUAL. The main markers that can be recorded by the PMD 601 are:

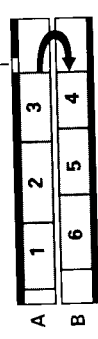
Name	Function	recorded by the PMD 601
------	----------	-------------------------

**START MKR** Marks the beginning of each track on the tape. Skip search operates upon detection of these markers.



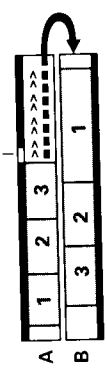
**REVERSE MKR** A reverse marker marks the end of the last recording on side A of the tape. When a reverse marker is detected during playback, the PMD 601 will immediately change to side B at the current position after which playback will be continued (it is not possible to record a reverse marker at side B).

REVERSE MKR



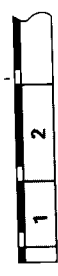
**NEXT MKR** A next marker marks the end of the last recording on side A or B of the tape. When a next marker is detected during playback, the PMD 601 will automatically wind to the beginning of the next side after which playback will be continued.

NEXT MKR



**END MKR** An end marker indicates the end of the recording. When an end marker is detected during playback, the PMD 601 will show the 'End' marker indication on the display (see page 15).

END MKR



**SKIP MKR** A skip marker indicates an area that will be skipped during playback. When a skip marker is detected during playback, the PMD 601 will start winding the tape until the next start marker is detected, after which playback will be continued.

SKIP START MKR MKR



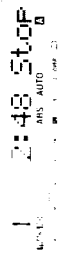
**NOTE** The PMD 601 can be recorded on pre-recorded DCC cassettes. The PMD 601 cannot record a skip marker.

# RECORDING OF MARKERS

Start markers can be recorded manually by pressing the MKR START key on the display. Pressing the MKR START key on the display will start recording. Pressing the MKR STOP key on the display will stop recording. Pressing the MKR WRITE key on the display will record a marker. Pressing the MKR WRITE key on the display will record a marker. Pressing the MKR WRITE key on the display will record a marker. Pressing the MKR WRITE key on the display will record a marker.

## RECORDING A START MARKER

Automatic recording start markers are recorded from a track to the next track automatically. Pressing the MKR MODE key on the display will stop recording. Pressing the MKR MODE key on the display will stop recording.

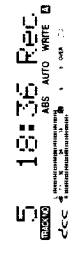


Automatic recording via the digital/optical connection. Pressing the MKR MODE key on the display will stop recording. Pressing the MKR MODE key on the display will stop recording.

Automatic recording via the analog (LINE) connection. Pressing the MKR MODE key on the display will stop recording. Pressing the MKR MODE key on the display will stop recording.

## MANUAL RECORDING OF START MARKERS

- Press the MKR MODE key until **AUTO** no longer lights up on the display.
- Start markers can now be recorded manually by pressing the MKR WRITE key at the desired positions on the tape.
- The marker will be recorded (WRITE lights up on the display) and the tracknumber will be increased by one each time a new marker is recorded.



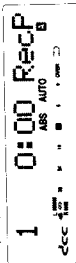
**Note:** Even when automatic start marker recording has been selected, you can manually add start markers. Press MKR WRITE at the desired position to record an additional start marker. This is useful when you want to mark a certain position on the tape (convenient search).

# RECORDING OF MARKERS

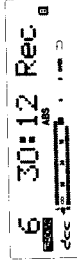
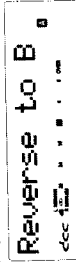
## RECORDING A REVERSE MARKER

### AUTOMATIC RECORDING OF A REVERSE MARKER

- Slide the REV MODE switch to position . The selected reverse mode will be shown on the display when the recording pause mode is selected.



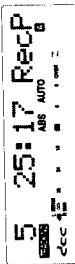
- During recording of side A the PMD 601 will write a reverse marker before the end of side A. The tape will be reversed automatically and recording will be continued on side B. The track number will be increased by one.



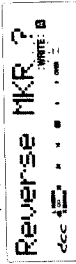
**Caution:** The PMD 601 reverses the tape direction before the end of side A upon detection of remaining space on the tape. In case the PMD 601 cannot detect this remaining space, recording will be continued until the end of side A. Then the direction will be reversed, a LEAD IN area will be written and recording on side B will start with track number 1.

### MANUAL RECORDING OF A REVERSE MARKER

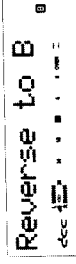
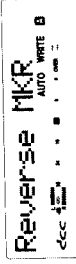
- Select the recording pause mode (by sliding the REC PAUSE switch to the right) at the position on side A where you want to write a reverse marker.



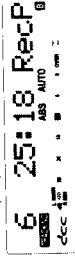
- Press the MKR MODE key once.



- Press the MKR WRITE key. The PMD 601 will now write a reverse marker and reverse to side B.



The recording pause mode will be entered again. The display will show:



- Press the PLAY/SIDE key to continue recording on side B

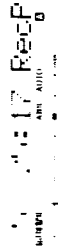
**Note:** Manual recording of a reverse marker acts regardless of the position of the REV MODE switch. Even when the REV MODE switch is set to position , the above procedure remains unchanged.

# RECORDING OF MARKERS

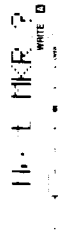
## RECORDING A NEXT MARKER

### RECORDING A NEXT MARKER ON SIDE A

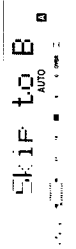
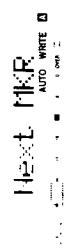
- Select the recording pause mode (by sliding the REC PAUSE switch to the right) at the position on side A where you want to write a next marker.



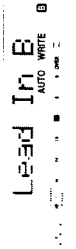
Press the MKR MODE key twice.



- Press the MKR WRITE key. The PMD 601 will now write a next marker and wind to the next side.



From the tape will be reversed to side B and a LEAD IN area will be written. The recording pause mode will be entered again.

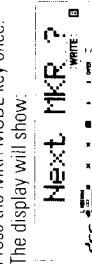


- Press the PLAY/SIDE key to continue recording on side B.

**Note:** Recording of a next marker acts regardless of the position of the REV MODE switch. Even when the REV MODE switch is set to position , the above procedure remains unchanged.

### RECORDING A NEXT MARKER ON SIDE B

- Select the recording pause mode (by sliding the REC PAUSE switch to the right) at the position on side B where you want to write a NEXT marker.



- Press the MKR WRITE key. The PMD 601 will now write a next marker, wind to the end of side B and stop.

### OVERWRITING SIDE B

In case you wish to overwrite side B after writing a reverse or next marker on side A, please note the following:

- Before entering the recording pause mode at the position where you want to write a reverse or next marker, make sure that the display is showing the track number and absolute time. If this information is not shown, the recording will be continued without recording of the correct track and/or absolute time information. (see also page 15 'Recording on a specific location of a recorded DCC').

- In case you are overwriting a recorded DCC which already contains a reverse or next marker, make sure to write the new marker at the same position or before the position of the old marker. If this is not done, the new marker will not work correctly.

## TROUBLESHOOTING

If a fault occurs, first check the points listed below before taking the apparatus for repair. If you are unable to remedy a problem by following these hints, consult your dealer or service centre.

### WARNING

Under no circumstances should you try the apparatus yourself, as this would invalidate the guarantee.

SYMPTOM	POSSIBLE CAUSE	REMEDY
<b>BOTH DCC AND ANALOG CASSETTES</b>		
<b>No recharging</b>	- Mains adapter is not properly connected	• Connect the mains adapter properly
<b>No operation</b>	- The unit is still in the HOLD mode	• Switch the HOLD mode off
	- Mains adapter is not properly connected	• Connect the mains adapter properly
	- The rechargeable battery has run down	• Recharge the battery
<b>Intermittent playback sound</b>	- The head section is dirty	• Clean the head section
<b>DCC CASSETTES</b>		
<b>Distorted signal</b>	- Recording was made with too high peak level (OVERLOAD)	• Make a new recording with lower peak level
<b>Track number or elapsed play time is not displayed correctly</b>	- The cassette has been loaded in the middle of one of the tracks	• Rewind the tape to the start of the track and start playback
<b>No track number indication</b>	- Recording has been started while track and time information was not known	• You may consider to re-record the tape
<b>ANALOG CASSETTES</b>		
<b>Poor sound quality</b>	- Dolby NR has not been set correctly	• Set Dolby NR to the correct position

## DISPLAY MESSAGES

No Text Info

- This indicates that the DCC tape does not contain text information. The display will go back to showing the previous information.

Press Play-key

- TEXT information cannot be read when the player is in stop mode. Press the PLAY/SIDE key to start playback.

## MAINTENANCE

Regular maintenance is essential for the best performance of your DCC player. It should be carried out at regular intervals. The following instructions should be followed:

- Clean the tape compartment with a soft, lint-free cloth.
- Clean the tape heads with a cotton swab dipped in alcohol.
- Clean the tape heads with a cotton swab dipped in alcohol.
- Clean the tape heads with a cotton swab dipped in alcohol.

## WARNING CASSETTES

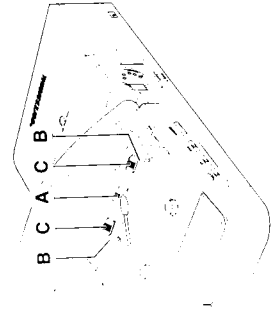
The use of warning cassettes is essential for the best performance of your DCC player. It should be carried out at regular intervals. The following instructions should be followed:

- Clean the tape compartment with a soft, lint-free cloth.
- Clean the tape heads with a cotton swab dipped in alcohol.
- Clean the tape heads with a cotton swab dipped in alcohol.
- Clean the tape heads with a cotton swab dipped in alcohol.

## DCC HEADER MAINTENANCE

The DCC header is a critical component of the DCC player. It should be cleaned regularly to ensure optimal performance. The following instructions should be followed:

- Clean the header with a cotton swab dipped in alcohol.
- Clean the header with a cotton swab dipped in alcohol.
- Clean the header with a cotton swab dipped in alcohol.



## GENERAL INFORMATION

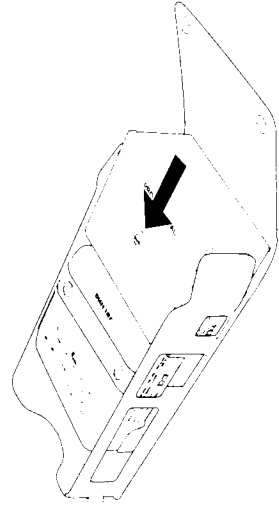
### USE YOUR HEAD WHEN USING HEADPHONES

- Hearing safety**
  - Do not play your headphones at a high volume. Hearing experts advise that continuous use at high volume can permanently damage hearing.
- Traffic safety**
  - Do not use headphones while driving a vehicle. It may create a traffic hazard and it is illegal in many countries. Even if your headphones are open-air type designed to let you hear outside sounds, do not turn up the volume so high that you cannot hear what is going on around you.

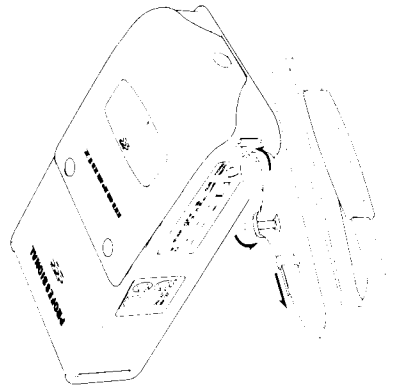
### RADIO INTERFERENCE SUPPRESSION

This DCC player complies with the radio interference requirements as laid down in European Community regulations.

### CARRYING CASE



### Attaching the carrying case strap



# TECHNICAL DATA

English

## DIGITAL SIGNAL FORMAT

Tape recording system ..... Digital Compact Cassette  
 Sampling frequencies ..... 48 kHz, 44.1 kHz, 32 kHz  
 (selected automatically)  
 Coding format ..... PASC  
 No. of channels ..... 2 channel stereo

## AUDIO PERFORMANCE

**DCC**  
 Frequency response ..... 20 Hz - 20 kHz +0.5/-1.5 dB  
 fs 44.1 kHz  
 fs 48 kHz ..... 20 Hz - 22 kHz +0.5/-1.5 dB  
 fs 32 kHz ..... 20 Hz - 14.5 kHz +0.5/-1.5 dB  
 S/N ratio ..... > 92 dB  
 Dynamic range ..... > 108 dB  
 Wow and flutter ..... Quartz crystal precision

## Compact cassette

Track format ..... 4 track 2 channel stereo  
 Frequency range ..... 20 Hz - 18 kHz  
 S/N ratio (C:O2) ..... > 50 dB

## TERMINALS

DIGITAL OUT ..... optical  
 ANALOG OUT ..... RCA pin jack  
 line output level ..... 1.0 V (20 kOhm)  
 PHONES/REMOTE ..... 3.5 mm jack  
 Output max. output power ..... 10 mW + 10 mW (16 Ohm)  
 DIGITAL/MIC/LINE ..... 3.5 mm jack  
 Input ..... digital input ..... optical/coaxial  
 ..... microphones input  
 LINE INPUT ..... XLR 5 pin  
 ..... MIC XLR Input

## POWER REQUIREMENTS

Battery ..... Ni-Cd rechargeable bat  
 Recording time ..... approx. 2 h  
 Playback time ..... approx. 2 h  
 Recharging time ..... approx. 3 h  
 External ..... mains adp  
 USA/Canada ..... 120 V, 60 Hz  
 Europe ..... 220-230 V, 50 Hz  
 U.K. ..... 240 V, 50 Hz  
 Australia/  
 New Zealand ..... 230-240 V, 50 Hz  
 Other countries ..... 120/230 V, 50/60

## MECHANISM

Head ..... 36 channel thin-film  
 Motor ..... Brushless  
 Tape speed ..... 4.76 cm

## GENERAL

Dimensions (w x h x d) ..... 120.0 x 46.5 x 225.  
 Weight (incl. rechargeable battery) ..... 1

## ACCESSORIES

Plug adaptor ..... (3.5 ø stereo mini to 6.3 ø stereo)  
 Remote control  
 Rechargeable battery  
 Coaxial cable  
 Mains adaptor  
 Carrying case  
 Hi-fi connection cable (3.5 ø stereo mini to Pin)  
 Hi-fi connection cable (Pin to Pin)

*These specifications are subject to change without notice.*