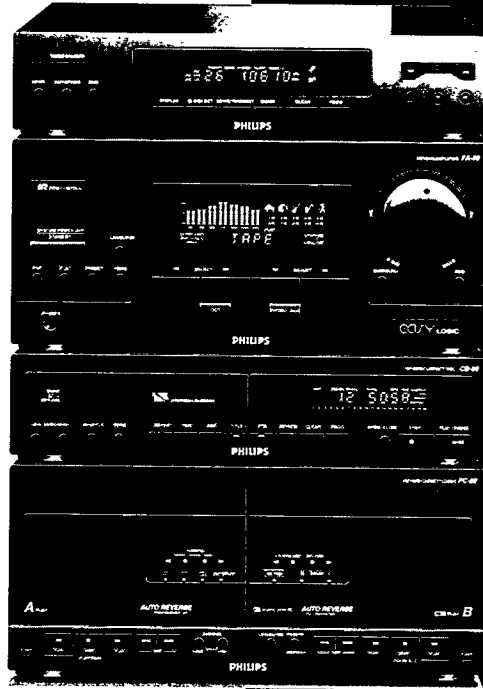


# PHILIPS

## FW 80 HiFi Mini System



**Declaración de conformidad con normas**

El que suscribe, en nombre y representación de:  
**Österreichische Philips Industrie GmbH**

declara, bajo su propia responsabilidad, que el

equipo: **Minicadena**  
fabricado por: **Philips BGW Althofen**  
en: **Austria**  
marca: **Philips**  
modelo: **FW 80**

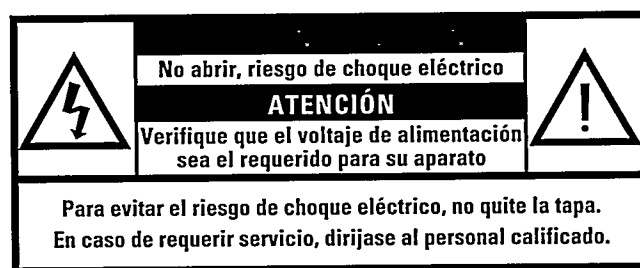
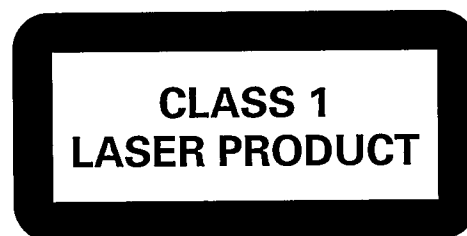
objeto de esta declaración, cumple con la normativa siguiente: Reglamento sobre Perturbaciones Radioeléctricas, Real Decreto 138/1989, Anexo V.

Hecho en: **Althofen, 18 - 03 - 1992**

Firma: *Fritz Schreiber*

Nombre: **Fritz Schreiber**  
Cargo: **Safety & Approbation Officer**

Es necesario que lea cuidadosamente su instructivo de manejo.

**NOM****AUS Australia****Guarantee and Service valid for Australia**

The benefits given to the purchaser by this warranty are in addition to all other rights and remedies, which, under the Trade Practices Act or other Commonwealth or State law, the purchaser or owner has in respect of the product.

The Philips product carries the following warranties:

- C-series HiFi-systems 12 months.
- Compact Disc Players: 12 months.
- Home Audio Systems: 6 months.
- Clock radios, portable radios, cassette recorders, cassette players and radio recorders: 90 days.

Any defect in materials or workmanship occurring within the specified period from the date of delivery, will be rectified free of charge by the retailer from whom this product was purchased.

**Note:** Please retain your purchase docket to assist prompt service.

**Conditions of this warranty**

1. All claims for warranty service must be made to the retailer from whom this product was purchased. All transport charges incurred in connection with warranty service or replacement will be paid by the purchaser.
2. These warranties do not cover batteries and extend only to defects in materials or workmanship occurring under normal use of the product where operated in accordance with our instructions.

**Philips Consumer Products Division,  
Technology Park  
Figtree Drive, Australia Centre  
Homebush 2140, New South Wales**

**NZ New Zealand****Guarantee and Service for New Zealand**

Thank-you for purchasing this quality Philips product. Philips New Zealand Ltd guarantees this product against defective components and faulty workmanship for a period of 12 months. Any defect in materials or workmanship occurring within 12 months from the date of purchase subject to the following conditions will be rectified free of charge by the retailer from whom this product was purchased.

**Conditions**

1. The product must have been purchased in New Zealand. As proof of purchase, retain the original invoice or cash receipt indicating the date of purchase.
2. The guarantee applies only to faults caused by defective components, or faulty workmanship on the part of the manufacturer.
3. The guarantee does not cover failures caused by misuse, neglect, normal wear and tear, accidental breakage, use on the incorrect voltage, use contrary to operating instructions, or unauthorised modification to the product or repair by an unauthorised technician.
4. Reasonable evidence (in the form of a sales docket or completed guarantee card) must be supplied to indicate that the product was purchased no more than 12 months prior to the date of your claim.
5. In the event of a failure, Philips shall be under no liability for any injury, or any loss or damage caused to property or products other than the product under guarantee.

This guarantee does not prejudice your rights under common law and statute, and is in addition to the normal responsibilities of the retailer and Philips.

**How to claim**

Should your Philips product fail within the guarantee period, please return it to the retailer from whom it was purchased. In most cases the retailer will be able to satisfactorily repair or replace the product. However, should the retailer not be able to conclude the matter satisfactorily, or if you have other difficulties claiming under this guarantee, please contact

**The Guarantee Controller  
Philips New Zealand Ltd.  
P.O. Box 41.021  
Auckland  
(09) 84 44 160**

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Italiano

# 1. INTRODUCTION

English

## Thank you for selecting the Philips FW80 HiFi mini system

This state-of-the-art HiFi mini stereo system offers the latest technology to give you a high degree of sound reproduction in combination with user-friendly operation.

Thanks to the integration of user-friendly computer technology, all the individual units in the FW80 function as a total system. Other features are:

### Amplifier

- A class-G amplifier with 2 x 60 W RMS output power
- A seven-band graphic equalizer with 5 fixed presets for classic, vocal, rock, jazz or disco music and 5 programmable presets
- Multi-Language; you can select one out of six languages to display most of the messages on the displays
- Digital sound processing

### Tuner

- A news function to switch to your favourite radio station at a specified time
- A permanent memory to assign names and desired equalizer settings to your favourite radio stations
- Automatic programming of 30 preset stations

### CD player

- Bitstream conversion
- Digital output
- A permanent memory to assign titles, equalizer settings and favourite track selections to CDs

### Double cassette deck

- both deck are autoreverse
- A CD synchro function to make recordings from a CD with a perfect coordination between CD player and cassette deck
- Dolby B/C NR and HxPRO
- An automatic music search function on the cassette deck to jump to the next or previous track on the tape

### Remote control

- One remote control to operate all units and some additional audiovisual systems

## HOW TO USE THIS INSTRUCTION MANUAL

*Please read this manual very carefully before you attempt to connect or operate the units.*

Here is some information to make it easy for you to read this manual:

- This manual is divided into eight sections:
  1. Introduction
  2. Installation
  3. Remote control
  4. Amplifier
  5. Tuner (including clock/timer)
  6. Cassette deck
  7. CD player
  8. General information (including maintenance, trouble shooting and technical data)
- Every time you have to perform an operation, a dot (•) is placed in the margin.
- When the system responds to an operation (by e.g. showing a message on the display), this is described directly after the operating instruction.
- The descriptions of the operations only contain the basic information. Read the notes (**Notes:**) to obtain additional information.

# 2. INSTALLATION

## POSITIONING YOUR SYSTEM

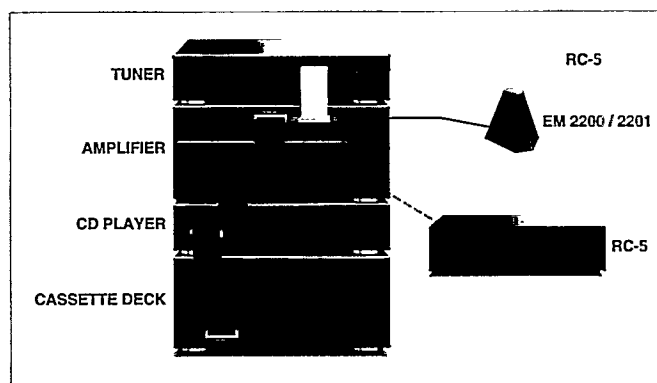
### Note:

When positioning the system, bear in mind that every amplifier produces heat which must be allowed to dissipate freely. For this reason do not cover any ventilation slots and make sure that there is sufficient ventilation around the unit. A minimum gap of 5 cm is necessary.

When positioning your system bear in mind the following points:

- Always place the tuner on top of the amplifier.
- Do not place any unit on top of the tuner.
- Do not cover the tuner.
- Place the amplifier on a hard surface.
- If you want to use a record player in combination with this system, it is recommended to position it on the right side of the system to minimize any disturbance from the system.

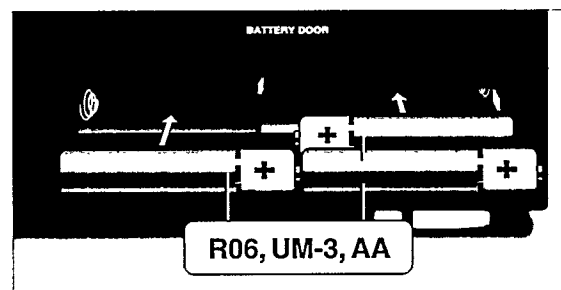
The preferred order for stacking the units of your system is shown in the diagram below.



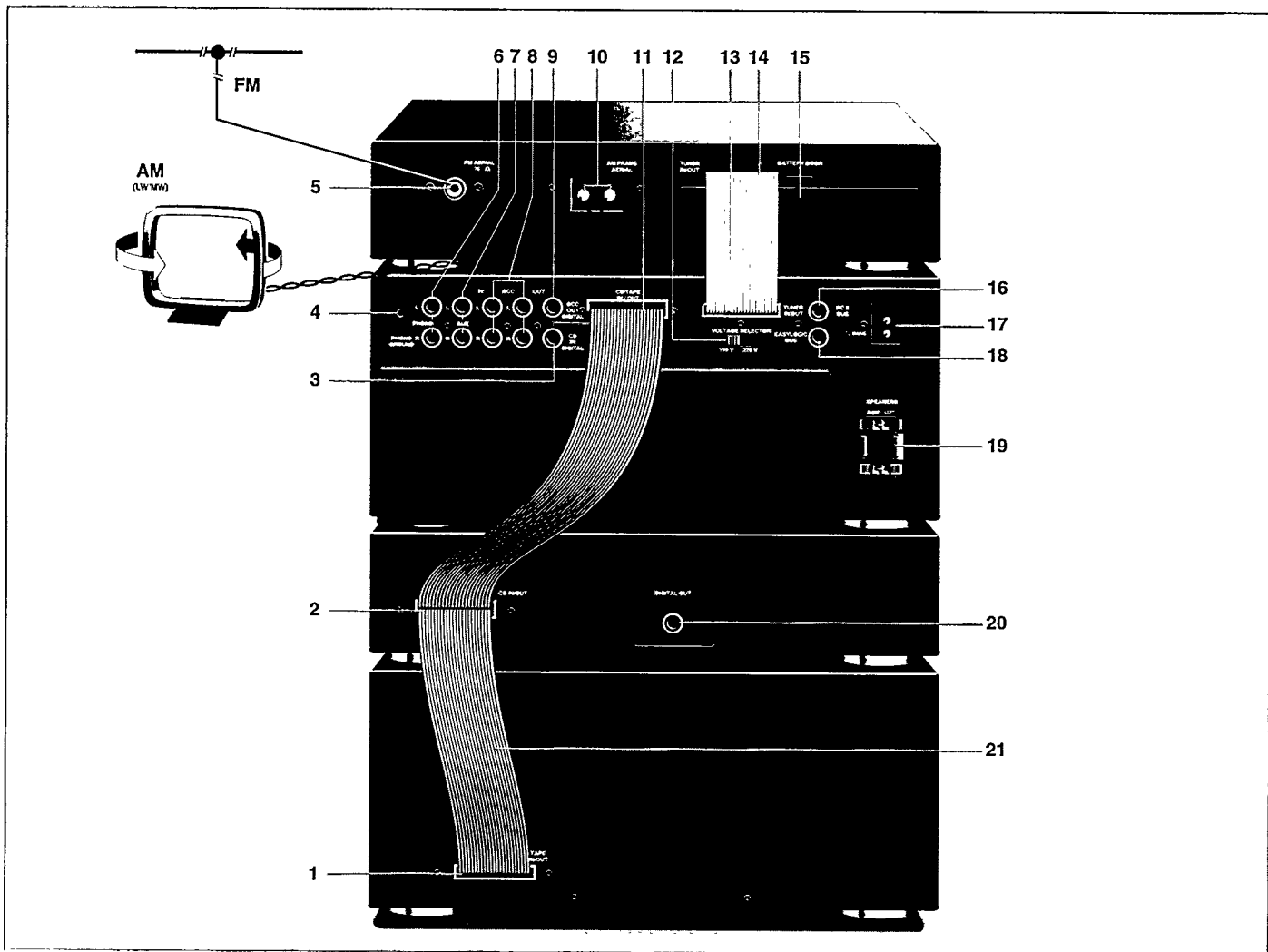
## BATTERIES

To keep the clock time running when the system is switched off (by pressing the SYSTEM POWER OFF/STANDBY button), three batteries should be inserted.

- Open the battery compartment 15 (on the back of the tuner).
- Insert three (preferably alkaline) batteries as indicated below.
- Remove the batteries when they are exhausted.



# Connections



## BACK PANEL

- 1 **TAPE IN/OUT** – cassette deck connector for the long system control cable 21
- 2 **CD IN/OUT** – CD player connector for the long system control cable 21
- 3 **CD IN DIGITAL** – input socket for connecting the digital output of a CD player using a coaxial cable (for digital recording to a DCC recorder only)
- 4 **PHONO GROUND** – for connecting the earth wire of a record player
- 5 **FM AERIAL 75  $\Omega$**  – socket for the FM aerial
- 6 **PHONO** – input sockets for connecting a record player with a magneto-dynamic pick-up cartridge
- 7 **AUX** – input sockets for connecting the sound channel of a TV set or video recorder
- 8 **DCC IN/OUT** – input and output sockets for connecting a Digital Compact Cassette recorder. These sockets can only be used for an analog input/output signal
- 9 **DCC OUT DIGITAL** – output socket for connecting a Digital Compact Cassette deck for digital recording only  
A DCC recorder can only make a digital recording from CD, if DIGITAL OUT 20 is also connected to CD IN DIGITAL 3!
- 10 **AM FRAME AERIAL** – socket for the MW/LW aerial
- 11 **CD/TAPE IN/OUT** – cassette deck and CD player connector for the long system control cable 21
- 12 **VOLTAGE SELECTOR** – for selecting the mains voltage (not on all versions). Check before mains connection that the voltage selector setting corresponds with your local mains voltage. See also the section entitled Installation
- 13 **TUNER IN/OUT** – tuner connector for the short system control cable 14
- 14 **SHORT SYSTEM CONTROL CABLE** – to connect the tuner to the amplifier
- 15 **BATTERY COMPARTMENT** – Open to insert the batteries.
- 16 **RC-5 BUS** – remote control input/output socket for connection to the corresponding RC-5 socket of e.g. a CD player or remote control receiver EM2200/2201 (optional).  
Connect the RC-5 socket to the RC-5 socket of the external equipment that is using the RC-5 remote control system. This socket has been added to maintain compatibility with older Philips Audio equipment.
- 17 **MAINS** – socket for mains lead
- 18 **EASY LOGIC BUS** – remote control input/output socket for connection to the corresponding EASY LOGIC socket of e.g. a DCC recorder or remote control receiver. It enables you to remote control components not included in the system through the remote control sensor on the amplifier. Always connect the EASY LOGIC BUS to another EASY LOGIC BUS.
- 19 **SPEAKERS** – terminals for connecting speakers
- 20 **DIGITAL OUT** – socket for connecting the digital output of the CD player to the amplifier (for digital recording only)  
This output supplies a digital signal and can therefore only be connected to the amplifier 'CD IN DIGITAL' 3. It can be used for making a digital recording on an optional DCC recorder connected to the 'DCC OUT DIGITAL' output 9. Never connect this socket to a non-digital input of an amplifier, such as AUX, CD, TAPE, PHONO, etc!
- 21 **LONG SYSTEM CONTROL CABLE** – to connect the CD player and the cassette deck to the amplifier

**MAINS SUPPLY****Warning**

Before connecting the unit to the mains, proceed as follows:

- If the unit is equipped with a voltage selector **12**, first adjust the voltage selector to the local mains voltage.
  - If the unit does not have a voltage selector, first check if the mains voltage as shown on the type plate on the back of the unit corresponds to your local mains voltage. If it does not, consult your dealer or service organisation.
  - First make all other connections.
- Connect the mains lead to the MAINS socket **17** (on the back of the amplifier) and insert the plug of the mains lead in the wall socket.
- After all other connections have been made, press the SYSTEM POWER OFF/STANDBY **1** (on the front of the amplifier). The mains supply is now switched on and the system is in standby mode.
- The little red indicator on the Volume knob of the amplifier will light up and the display of the tuner will show the current day and time (if already programmed).

**Important notes for users in the U.K.:****Mains plug**

This apparatus is fitted with an approved moulded 13 Amp plug.

To change a fuse in this type of plug proceed as follows:

- Remove fuse cover and fuse.
- Fix new fuse which should be a BS1362 3 A, A.S.T.A. or BSI approved type.
- Refit the fuse cover.

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

If the mains plug contains a fuse, this should have a value of 3 A. If a plug without a fuse is used, the fuse at the distribution board should not be greater than 5 A.

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

**How to connect a plug**

The wires in the mains lead are coloured with the following code: blue = neutral (N), brown = live (L).

As these colours may not correspond with the colour markings identifying the terminals in your plug, proceed as follows:

- Connect the blue wire to the terminal marked N or coloured black.
- Connect the brown wire to the terminal marked L or coloured red.
- Do not connect either wire to the earth terminal in the plug, marked E (or  $\frac{1}{2}$ ) or coloured green (or green and yellow).

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

**Copyright:** Recording and playback of material may require consent. See Copyright Act 1956 and The Performer's Protection Acts 1958 to 1972.

*This product complies with the radio interference requirements of the European Community*

**CONNECTING AERIALS**

- FM: for best reception connect the FM-AERIAL socket **5** to the Community or Cable Antenna System or to a roof-mounted FM aerial with an impedance of 75 ohms. If none of these are available, connect the supplied wire aerial (dipole) to this socket and position it not too close to the system. Never let the dipole aerial touch a system control cable to avoid unwanted noise. Adjust the position for optimum reception.

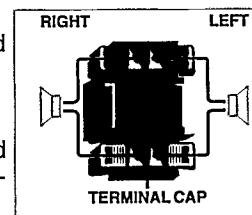
- MW/LW: connect the wires to both AM FRAME AERIAL terminals **10** and position the aerial for optimum reception. Do not place the AM loop aerial too close to the units, the wires or the boxes, as these units may cause unwanted noise.

**CONNECTING THE SPEAKERS**

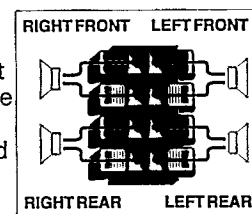
You can connect the two supplied speakers or you can add two extra speakers to obtain a 4-speaker system. When adding two extra speakers you are advised to use Philips speakers type FB80 (the same speakers as supplied) or FB305 (special surround speakers). If you want to connect a pair of speakers of another type, please contact your dealer.

**2-speaker system:**

- The terminal cap must be positioned in the centre.
- Connect the non-marked wires to the black terminals first and then connect the marked wires to the red terminals. Always connect the non-marked wires first.

**4-speaker system (optional):**

- Remove the terminal cap.
- For the supplied front speakers: first connect the non-marked wires to the black terminals on the top and then connect the marked wires to the red terminals on the top. Always connect the non-marked wires first.
- Connect the (optional) rear speakers to the terminals at the bottom in the same way as the front speakers. Always connect the non-marked wires first.

**CONNECTING THE UNITS**

**Warning:** Always switch off the system with SYSTEM POWER OFF/STANDBY **1** (on the front of the amplifier) before connecting or disconnecting the system control cable of the cassette deck, CD player or tuner.

**Tuner**

- Connect the supplied tuner to the TUNER IN/OUT **13** on the amplifier (after switching off the system) by inserting the plug of the SHORT SYSTEM CONTROL CABLE **14** until it clicks firmly in place.
- You can disconnect the tuner (after switching off the system) by pressing the left and right snaps together and pulling out the plug. Do not pull at the cable.

**Cassette deck/CD player**

- Connect the CD player and the cassette deck to the amplifier using the LONG SYSTEM CONTROL CABLE **21**.
- Insert the middle plug into the CD IN/OUT **2** until it clicks firmly in place.
- Insert the two remaining plugs into the TAPE IN/OUT **1** and the CD-TAPE IN/OUT **11**.
- You can disconnect the CD player and the cassette deck by pressing the left and right snaps together and pulling out the plugs. Do not pull at the cable.

**Note:**

- Both system control cables have three main functions:
- they supply power from the amplifier to the units
  - you to remote-control the individual units via the remote control sensor of the amplifier
  - they allow communication between the individual units for e.g. a function like CD dubbing.

### 3. REMOTE CONTROL

The supplied remote control can be used to operate all units in the system. In addition, it can be used to operate any other equipment (e.g. television) that is connected to the system and uses the RC-5 remote control system. If an operation is (also) possible by remote control, it will be explained in the description of the particular unit.

If you want to operate a source by remote control, you always have to select the source first by pressing one of the source select buttons on the remote control before pressing another button.

**E.g.1:** If you want to operate the CD player by remote control, you first have to press CD to select the CD player, followed by the key to select the desired CD function

**E.g.2:** If you want to operate one of the cassette decks, you have to press TAPE first to select the cassette deck and then DECK A or DECK B to select one of the two decks. Now you can select the desired tape function.

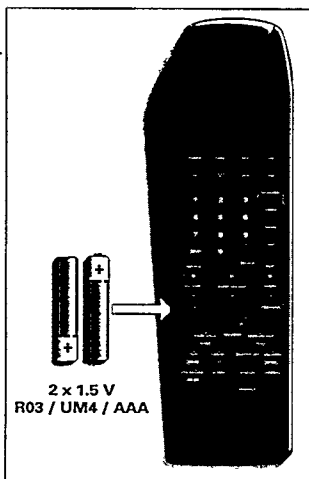
**E.g.3:** If you want to select another equalizer preset by remote control while listening to the CD player, you first have to press the EQ key on the remote control before pressing NEXT/PREVIOUS to select another equalizer preset.

#### BATTERIES OF THE REMOTE CONTROL UNIT

- Open the battery compartment and insert two batteries, type R03, UM-4 or AAA cells, as indicated above.

- Remove the batteries when they have run down or if they will not be used again for a long period.

The lifetime of the batteries of the remote control is around one year. For replacement use only batteries of the type R03, UM4 or AAA.



#### AMPLIFIER (FA 80)

The following keys can be used to operate the amplifier:

- **AUDIO VOLUME + or -** : for adjusting the volume

- **Source selectors**

**TUNER - TAPE - DCC - CD - TV - VCR - EQ**

When selecting a source only the TUNER will respond immediately.

For all other sources the selector must be pressed down for 1 second **or** the selection must be followed by a second command e.g. PLAY, SHUFFLE etc.

- **BALANCE L or R** - balance control, for correcting the stereo balance between the left and right-hand channel.
- **DSP** - for activating the Digital Sound Processing function

#### TUNER (FT 80)

The following keys can be used to operate the tuner:

- **0-9 digit buttons** - for selecting preset stations
- **▶▶** - for tuning to a higher frequency
- **◀◀** - for tuning to a lower frequency
- **TRACK** - for selecting the next (+) or previous (-) preset station
- **STANDBY** - for selecting the standby mode
- **STATUS** - for selecting FM, MW or LW band.

#### CLOCK/TIMER

The following keys can be used to operate the clock or the timer:

- **NEWS** - for (de)activating the news timer.
- **TIMER** - for (de)activating the timers.
- **BUZZER OFF** - for switching off the buzzer.
- **SLEEP** - for activating the sleep function.

#### CASSETTE DECK (FC 80)

The following keys can be used to operate the cassette deck:

- **DECK A/DECK B** - for selecting deck A or B
- **PLAY** - for starting playback
- **◀▶** - for changing the tape travel direction
- **STOP** - for stopping recording/play
- **TRACK** - for selecting the next (+) or previous (-) track
- **▶▶** - fast forward winding
- **◀◀** - fast backward winding
- **STANDBY** - for selecting standby mode

#### CD PLAYER (CD80)

The following keys can be used to operate the CD player:

- **0-9 digit buttons** - for selecting a track
- **TRACK** - for selecting the next (+) or previous (-) track
- **PLAY** - for starting play
- **STOP** - for stopping play
- **OPEN/CL(ose)** - for opening/closing the CD tray
- **SHUFFLE** - for playing in random order
- **◀◀** - searching backwards
- **▶▶** - searching forwards
- **II** - pause
- **FTS REVEAL** - for entering the FTS mode
- **DISC UP** (CD changer only) - disc selection
- **STANDBY** - for selecting standby mode

#### EQUALIZER

The following keys can be used to operate the equalizer:

- **NEXT** - for selecting the next equalizer preset
- **PREVIOUS** - for selecting the previous equalizer preset
- **FLAT** - for obtaining a flat frequency response

#### OTHER EQUIPMENT

The following keys can be used to operate other equipment (not supplied):

##### Video recorder - VCR

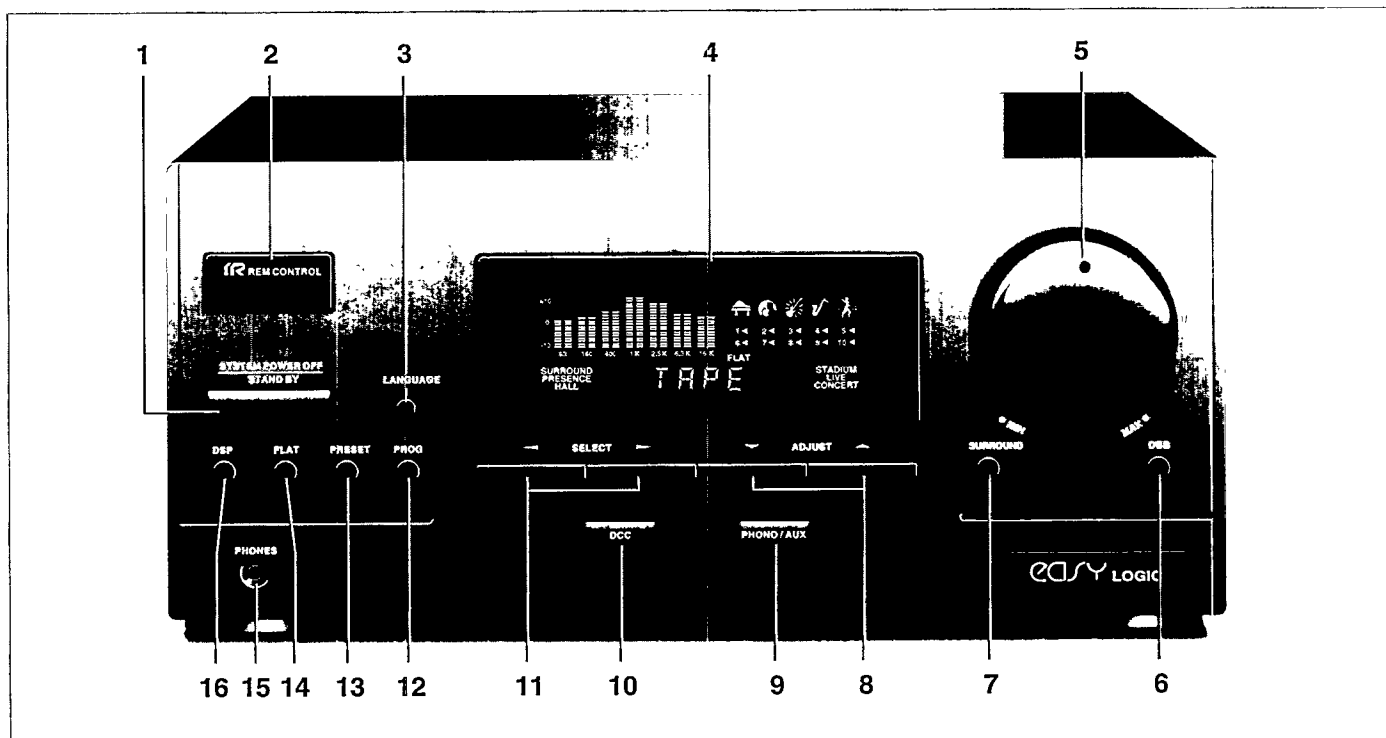
- **0-9 digit buttons** - for selecting stations
- **PLAY** - for starting playback
- **STOP** - for stopping recording/play
- **◀◀** - wind backward
- **▶▶** - wind forward
- **II** - pause
- **STATUS** - for activating the (optional) On Screen Display
- **STANDBY** - for selecting standby mode

##### Television - TV

- **VOLUME TV + or -** : for adjusting the volume
- **0-9 digit buttons** - for selecting preset stations
- **I or II** - for language selection
- **TXT** - for calling up Teletext:
  - PAGE HOLD**
  - MEMORY OUT** - for calling up pages from the memory
  - FTS REVEAL** - to reveal concealed information
  - CANCEL II** - to cancel temporarily
  - ENLARGE**
  - 0-9 digit buttons** - for selecting pages
  - PAGE + or -** : to select next or previous page
  - TIME** - for calling up the clock
- **PROGRAM + or -** : for selecting the next or previous program.
- **STATUS** - for activating the (optional) On Screen Display
- **STANDBY** - for selecting standby mode

## 4. AMPLIFIER

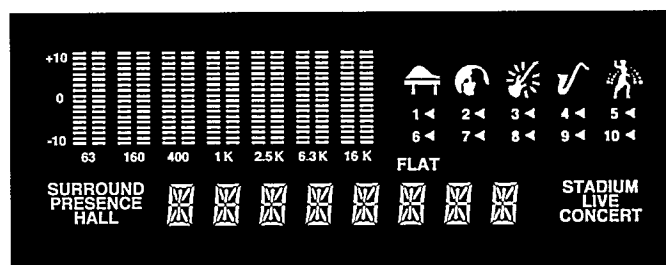
English



### FRONT OF AMPLIFIER

- 1 **SYSTEM POWER OFF/STANDBY** – for switching the system on (in standby mode) or for switching the power off.
- 2 **IR CONTROL** – infrared remote control eye. The little red indicator on VOLUME 5 flashes during reception from the remote control.
- 3 **LANGUAGE** – for selecting the language in which most of the messages are shown in the display.
- 4 **Display** – for showing messages, settings, etc.
- 5 **Volume** – knob for adjusting the volume. It contains a little red indicator for remote control reception and standby indication.
- 6 **DBB** – Dynamic Bass Boost, for enhancing the bass tones.
- 7 **SURROUND** – for creating a spatial effect. The effect works best when a 4-speaker system is used.
- 8 **▼ ADJUST ▲** – for adjusting a graphic equalizer frequency in the programming mode.
- 9 **PHONO/AUX** – for selecting a record player connected to the PHONO sockets 6 (on the back of the amplifier) or another sound source like a VCR, TV, CDV etc. which is connected to the AUX sockets 7 on the back of the amplifier. Press the button once to select the record player and press it again to select the source connected to the AUX sockets.
- 10 **DCC** – for selecting a Digital Compact Cassette recorder connected to the DCC IN/OUT sockets (only for analog signals)
- 11 **◀ SELECT ▶** – for selecting a graphic equalizer frequency band in the programming mode
- 12 **PROG** – for entering the programming mode to change and store graphic equalizer presets
- 13 **PRESET** – for selecting the 5 fixed and the 5 personally programmable graphic equalizer presets.
- 14 **FLAT** – for selecting a flat frequency response and switching off the graphic equalizer presets
- 15 **PHONES** – socket for stereo headphones
- 16 **DSP** – for activating the Digital Sound Processing function to add special sound effects.

### DISPLAY



- **7 BAND SPECTRUM ANALYZER/GRAPHIC EQUALIZER** - The spectrum analyzer shows the frequency distribution of the selected source in real time. The graphic equalizer shows the setting of the 5 programmable equalizer presets (6-10) during programming. This area is also used to show the stereo balance adjustment.
- **ICONS** - to indicate the 5 fixed equalizer settings for classic, vocal, rock, jazz and disco music
- **PRESET NUMBERS** - to indicate which equalizer preset is selected
- **SURROUND** - Lights up when the surround sound effect is selected.
- **PRESENCE, HALL, STADIUM, LIVE, CONCERT** - to indicate which Digital Sound Processing setting is selected
- **FLAT** - Lights up when the equalizer is not activated and the response is flat.
- **TEXT DISPLAY** - to show messages



## GENERAL

- Select a source by pressing one of the source select keys on the remote control or the amplifier.
- Adjust the volume with VOLUME 5 or on the remote control.
- Select the desired equalizer preset by pressing PRESET 13 or FLAT 14.
- Select the desired sound effect by pressing DSP 16 or SURROUND 7. The display shows whether SURROUND or DSP is selected.
- Press DBB 6 if you want to enhance the bass tones (volume-position-dependent). The DBB 6 key will light up if DBB is selected.

### Notes:

- DSP 16 will be switched off automatically when you switch on SURROUND 7. In order to avoid unwanted sound effects, you *cannot* use DSP and SURROUND at the same time.
- The surround sound effect cannot be obtained with monophonic signals.
- The surround sound effect can increase noise in the case of weaker FM stations.

## SYSTEM POWER OFF/STANDBY

- Press SYSTEM POWER OFF/STANDBY 1 to switch on the power. The system will enter the standby mode. The tuner display shows the current day and time and the red indicator on VOLUME 5 will light up.
- Press SYSTEM POWER OFF/STANDBY 1 again to switch off the power.

## STANDBY

The standby mode is a kind of sleeping mode. It is possible to wake up (a part of) the system by pressing a source selection button on the remote control or on the amplifier.

### Wake-up from standby:

There are several options to wake the system up from standby:

- Select a source on the amplifier by pressing DCC 10. The amplifier and the (optional) DCC recorder will wake up from standby.
- Select a source on the remote control by pressing a source selection key **for less than 1 second**. Only the selected source wakes up from standby, the amplifier stays in standby.
- Select a source on the remote control by pressing a source selection key **for longer than 1 second**. Both the selected source and the amplifier will wake up.

### Notes:

- When the tuner is selected it will always wake up both the tuner and the amplifier, even if the tuner select key is pressed for less than 1 second.
- It is also possible to wake up the units by pressing defined wake-up keys on the units (see the descriptions of the units).

### Putting (part of) the system in standby

- To put the **whole system** into the standby mode, press the STANDBY button on the remote control for longer than 1 second. The display of the tuner will switch to low brightness; the other displays will be switched off. The red indicator on the volume knob will not go out.
- To put a **selected unit** into standby mode: press the source selection key for less than 1 second and press the STANDBY button on the remote control also for less than 1 second. The display of the selected unit will be switched off. If the selected set is also the source that is being listened to, the whole system will be put in standby.

### Note:

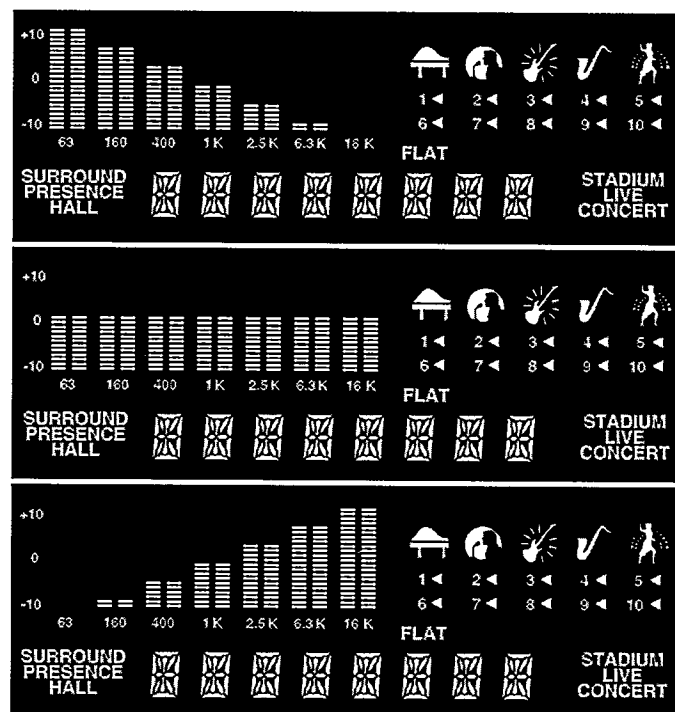
- It is possible to put the whole system into the standby mode if PHONO is selected as a source, but it is **not** possible to put just a record player into standby mode.

## BALANCE CONTROL

It is possible to adjust the stereo balance between the left and right channels with BALANCE L(left) or R(right) on the remote control.

- Press one of the balance keys on the remote control to select the balance mode. The display shows the current setting.
- Press BALANCE L(left) or R(right) on the remote control to adjust the stereo balance. There are 8 positions to the left and 8 positions to the right. The setting is changed one position every time one of the BALANCE buttons is pressed.
- Press a source selection button to leave the balance mode. The balance mode is left automatically when no balance adjustments are made for 20 seconds.

This control is shown graphically on the equalizer display as illustrated below (leftmost, middle and rightmost position)



## MULTI LANGUAGE

You can select the following languages to display messages on the amplifier, tuner and CD player:

- English
- Français
- Español
- Deutsch
- Português
- Italiano

- Press LANGUAGE 3 to change the current language. The display shows the next language for 2 seconds.
- Press LANGUAGE 3 again until the desired language appears on the display.
- The selected language is stored automatically when LANGUAGE 3 is not pressed for two seconds. Once chosen, the system will remember the language.

## CUSTOM GREETING

After language selection or when you wake up the system, it wishes you, depending on the time, Good Morning, Good Afternoon or Good Evening in the chosen language. When no time is available, the system greeting is Hello.

## SOURCE SELECTION

A source can be selected by pressing a source selection key on the amplifier or the remote control or by pressing specific keys on the units (see description of the units). The selected source will appear on the display.

Auxiliary units must be equipped with a compatible EASY LOGIC bus connection to support this.

TUNER – for selecting the supplied tuner  
 TAPE – for selecting the supplied cassette deck  
 DCC – for selecting a DCC recorder connected to the DCC sockets.  
 CD – for selecting the supplied CD player  
 TV – for selecting external equipment connected to the AUX sockets e.g. a TV set  
 VCR – for selecting recording equipment (e.g. VCR, tape recorder) connected to the AUX sockets (only for reproduction)  
 PHONO/AUX 9 (key on the amplifier) – for selecting a record player connected to the PHONO sockets or another sound source connected to the AUX sockets. Press PHONO/AUX 9 once to select the record player and press it again to select the sound source connected to the AUX sockets.

### Automatic source selection

The system is equipped with an automatic source selection function. Some keys on the units will make the system switch automatically to the related source. (See description of the units).

The display will show the selected sound source.

### Automatic stop

When the cassette deck is in the play mode, it is stopped automatically as soon as another source is selected. The CD player will enter the pause mode.

## STEREO HEADPHONES

You can connect a pair of stereo headphones with a 3,5 mm plug to the PHONES socket **15**. Inserting the plug will disconnect the speakers.

## DIGITAL SOUND PROCESSING (DSP)

You can add an extra special effect to the sound reproduction using DSP. The signal is then digitally processed, creating an impression of the room in which the music is being played. You can select: STADIUM, PRESENCE, LIVE, HALL, CONCERT or DSP off. The effect varies from a small room when PRESENCE is selected to a huge space when CONCERT is selected. The choice is shown on the display and the DSP **16** key will light up (except for DSP off).

**Example:** If you want rock music to sound as if it is being played in a stadium select the STADIUM setting of DSP.

- To select a DSP setting on the amplifier, press the DSP **16** key until the desired setting is indicated on the display.
- To select a DSP setting on the remote control, press the DSP key until the desired setting is indicated on the display.

### Notes:

- To switch off the DSP press DSP **16** until none of the DSP indicators in the display light up.
- The special effect remains stored in the memory until you select another DSP setting or DSP off.
- SURROUND **7** will be switched off automatically when you switch on DSP **16**. You can use SURROUND and DSP at the same time.

## STONE MANIPULATION

The display normally shows a 7-band spectrum analyzer with bar-graph indications for the following frequency bands: 63 Hz – 160 Hz – 400 Hz – 1 kHz – 2.5 kHz – 6.3 kHz – 16 kHz. This spectrum analyzer indicates the frequency distribution of the selected source. The peak value of the varying level of each frequency range which is heard is displayed in real time.

### Graphic equalizer

The graphic equalizer is for adjusting the sound to your individual taste and to compensate for the audio characteristics of the listening room. The equalizer has the same frequency bands as the spectrum analyzer and allows a maximum attenuation (decrease) or boost (increase) of 10 dB.

The equalizer has 10 presets. The presets 1-5 are fixed to give the optimal setting for classic (1), vocal (2), rock (3), jazz (4) and disco (5) music.

You can programme the presets 6-10 yourself.

### Selecting a preset

When you select one of the fixed equalizer presets (1-5), its corresponding preset number and icon light up on the display. The name of the equalizer preset will be displayed for two seconds.

The equalizer presets 6-10 are indicated by the corresponding preset number on the display.

- To select a preset on the amplifier, press PRESET **13** until the desired preset is indicated on the display.
- To select a preset on the remote control, first press EQ to select the equalizer, then press NEXT or PREVIOUS until the desired preset is indicated on the display.

### Note:

- To obtain a flat response press FLAT **14** (or FLAT on the remote control). No frequency band is now attenuated or boosted.

On the display the FLAT indicator lights up.

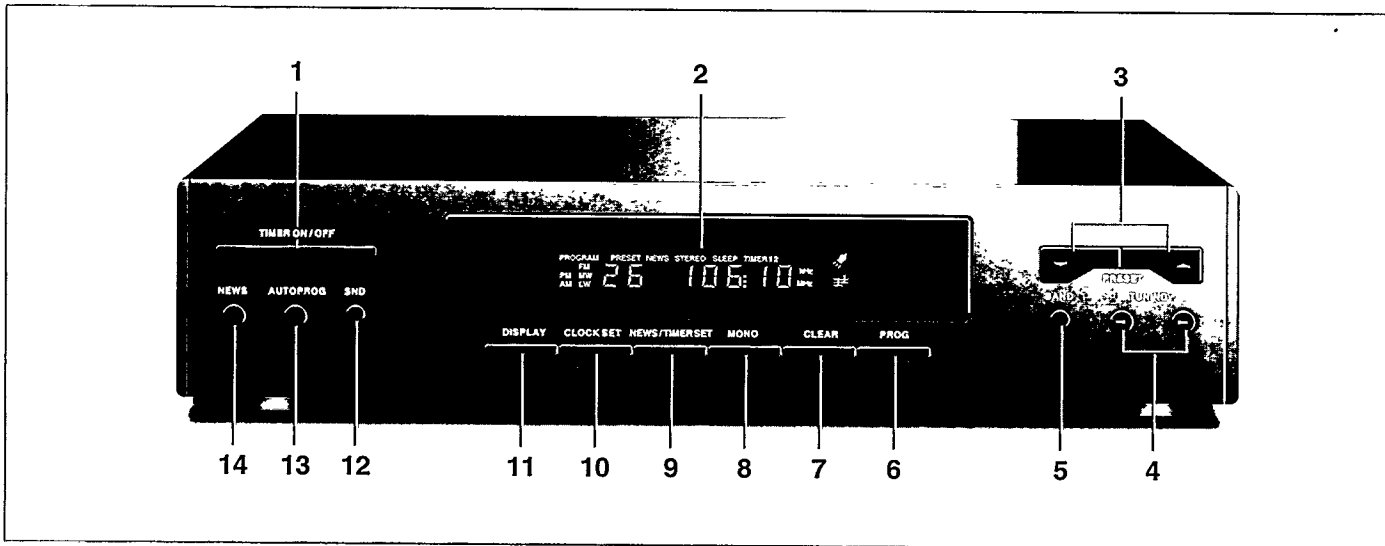
### Programming the equalizer presets 6-10

- Press PROG **12** to switch to the programming mode. If an equalizer preset was selected, the current settings are displayed and a cursor starts blinking in the left most frequency band. If one of the fixed presets 1-5 was chosen, preset 6 is automatically selected. If no preset was selected, press PRESET **13** until the desired equalizer preset appears on the display.
- Press the SELECT ◀▶ **11** keys to select the required frequency band. The band with the flashing cursor is the selected frequency band.
- Press the ADJUST ▲▼ **8** keys to adjust the attenuation or the boost of the selected frequency band. The display shows the indications for the +10 dB, 0 dB and -10 dB level and the settings are displayed as lines.
- Press PROG **12** again to leave the programming mode and store the changed equalizer presets.

### Notes:

- The effect of the change on the equalizer setting can be heard immediately.
- If no key is pressed within 20 seconds after the last change of the equalizer settings or if another source is selected, the programming mode will be left **without storing** the equalizer presets.

## 5. TUNER



### FRONT OF TUNER

- 1 **TIMER ON/OFF** – for (de)activating the timers
- 2 **Display** – for showing information
- 3 **PRESET ▲** – for selecting a preset station
- 4 **TUNING ►** – for tuning to a desired frequency
- 5 **BAND** – for selecting FM, MW or LW band (LW not in all versions)
- 6 **PROG** – for entering the programming mode to change and store preset stations
- 7 **CLEAR** – for erasing station names, preset numbers and equalizer/tuner preset combinations
- 8 **MONO** – for switching between mono and stereo
- 9 **NEWS/TIMER SET** – for entering the timer and news programming mode to change and store the news and timer settings
- 10 **CLOCK SET** – for setting date and time of the clock
- 11 **DISPLAY** – for switching the tuner display between clock, frequency and station name mode
- 12 **SND** – for assigning a station name and a desired equalizer setting to a preset station
- 13 **AUTOPROG** – for activating the automatic programming of preset stations
- 14 **NEWS** – for (de)activating the news timer

### TUNING GRID

In North and South America the frequency step between adjacent channels in the AM band must be 10 kHz. In all other parts of the world this step is 9 kHz. In the /01 version of this unit the frequency step can be changed, if necessary.

#### To change to 9 kHz:

- Switch off the **POWER**
- Keep **BAND 5** and **TUNING ◀** pressed down and switch on the **POWER** again.
- Release the **BAND** and **TUNING** keys.
- The display shows for 2 seconds: **FM 9 kHz**

#### To change to 10 kHz:

- Switch off the **POWER**
- Keep **BAND 5** and **TUNING ►** pressed down and switch on the **POWER** again.
- Release the **BAND** and **TUNING** keys.
- The display shows for 2 seconds: **FM 10 kHz**

Usually the frequency step has been preset in the factory for correct operation in your area.

### SWITCHABLE LW WAVEBAND

In some countries (Australia, New Zealand, etc.) the LW Waveband does not exist. In the /00 version of this unit it is possible to delete the LW waveband from the **BAND** menu.

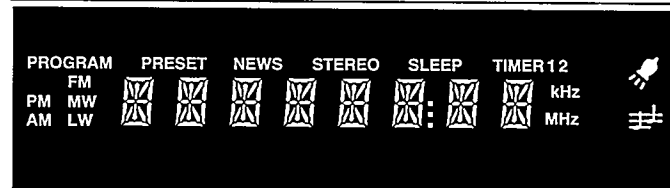
#### To delete the LW waveband:

- Switch off the **POWER**
- Keep **BAND 5** and **TUNING ►** pressed down and switch on the **POWER** again.
- Release the **BAND** and **TUNING** keys.
- The display shows for 2 seconds: **LW OFF**

#### To include the LW waveband:

- Switch off the **POWER**
- Keep **BAND 5** and **TUNING ◀** pressed down and switch on the **POWER** again.
- Release the **BAND** and **TUNING** keys.
- The display shows for 2 seconds: **LW ON**

### DISPLAY



- **PROGRAM** - Flashes when you are in the programming mode to programme a preset station.
- **PRESET** - Lights up when a preset station is selected.
- **NEWS** - Lights up when the news timer is activated
- **STEREO** - Lights up when you are receiving a FM stereo transmitter. If you press **MONO 8** while receiving a mono transmitter, **STEREO** lights up for 2 seconds.
- **SLEEP** - Lights up when the sleep timer is activated.
- **TIMER (1, 2)** lights up to indicate which timer is activated.
- **PM, AM** - to indicate part of the day for the 12-hour clock
- **FM, MW, LW** - to indicate the selected band
- **TEXT DISPLAY** - to show messages, day and time, frequency (and preset number) or station name
- **MHz, kHz** - to indicate whether the frequency is given in **MHz** (FM band) or **kHz** (for MW and LW)
- **SYMBOLS** - The bell symbol lights up if the buzzer is selected for an active timer and the music note symbol lights up if a music source is selected for an active timer.

**GENERAL**

- Select the tuner by pressing TUNER on the remote control or by pressing PRESET▲▼3, TUNING◀▶4 or BAND 5 on the tuner.
- Select a preset station.
- When a non-stored frequency is required, select the band by pressing BAND 5 until the desired band appears on the display and tune to a desired frequency. The correct procedure is described in the following sections.
- When STEREO appears on the display, you are receiving an FM-stereo transmitter. A disturbing noise, due to a weak FM-stereo signal, can be suppressed by pressing MONO 8. You will then hear the FM transmitter in mono.

**TUNING**

- Select the tuning range with BAND 5. The tuner will automatically be selected as the active source.
- Press TUNING◀▶4 for more than 0.5 seconds and release the key. The tuner will now search until a transmitter of sufficient strength has been found. The display shows the tuned frequency. The preset number is also displayed if the frequency has already been stored.
- If the transmitter found is not the desired one, press TUNING◀▶4 again for more than 0.5 seconds.

**Notes:**

- The search tuning can be interrupted by pressing PRESET▲▼3, TUNING◀▶4 or BAND 5.
- When the limit of the band is reached, a jump to the opposite limit is made and the search continues.

**Tuning to weak transmitters**

Weak transmitters are skipped during search tuning. They can be tuned to as follows:

- Keep TUNING◀▶4 pressed until you approach the required frequency.
- Press TUNING◀▶4 for less than 0.5 seconds to change the frequency one step each time until the right frequency has been reached or until optimum reception is obtained.

**Note:**

- When tuning to a frequency that has been stored as a preset station, the number appears on the display next to the frequency or station name.

**PRESET STATIONS**

You can store 30 preferred stations in the memory of the tuner.

**Selecting of preset stations**

There are several options to select a preset station:

- On the tuner, press PRESET▲▼3 until the desired preset station appears on the display.
- On the remote control, press NEXT or PREVIOUS until the desired preset station appears on the display.
- On the remote control, press the numeric key combination to form the desired preset number.

**Example:** to select preset number 25, press the numeric keys 2 and 5 within two seconds (otherwise preset number 2 is selected). To select the preset number 1, 2 or 3, press the numeric keys 01, 02 or 03, or press only 1, 2 or 3 and wait for two seconds.

**Notes:**

- NO PRESET appears on the display when no presets are stored in the memory or when a non-existent preset number is selected.
- If a name is programmed for a preset station, the name is displayed or the preset number and the frequency.

**Automatic programming of preset stations**

Thirty stations can be stored automatically in the memory as a preset. The strong FM transmitters will be stored first and afterwards, during a second scanning, the weak FM transmitters. If less than thirty stations are found on the FM band, the unit will also scan the MW band (and if necessary the LW band) to store preset stations in the rest of the memory locations.

- Press AUTOPROG 13 for more than 1 second and then release. AUTOPROGRAM appears on the display. When a transmitter is found the frequency and the preset number are displayed for two seconds. The scanning is finished when the preset number 1 is displayed again (for more than two seconds).
- Press AUTOPROG 13 again if you want to interrupt the automatic programming. The first preset station will be selected.

**Notes:**

- This function will clear the old preset numbers (including assigned station names and desired equalizer settings) when the preset number is used to store a new frequency. If less than thirty FM, MW or LW transmitters are found, the remaining preset numbers will not be changed.
- It takes some time before the complete scanning is finished.

**Manual programming of preset stations**

- Press PROG 6 to enter the programming mode. PROGRAM starts flashing on the display.
- Select the band and tune to the frequency to be stored (as described under TUNING).
- Select the preset number (as described under Selecting of preset stations) in which the frequency is to be stored.
- Press PROG 6 again. The selected band and frequency are stored under the selected preset number.
- Repeat this procedure to store other frequencies and presets in the memory.
- You can clear a preset number by storing another frequency in its place or by pressing CLEAR 7 in the programming mode.

**Notes:**

- A stereo FM transmitter can be stored in mono by pressing MONO 8 before selecting a preset number.
- When a new frequency is stored as a preset, the station name and equalizer setting belonging to the old frequency are cleared.
- If a preset number is cleared, it is no longer possible to select this preset number except when programming in the programming mode.
- The programming mode is left without storing anything when STANDBY, AUTOPROG 13, TIMER/NEWS SET 9, CLOCK SET 10 or any source selection key is pressed.

## STATION NAME DISPLAY (SND)/DESIRED EQUALIZER SETTING (DES)

This function allows a name and a desired equalizer setting to be assigned to the preset stations 1-20. Every time the preset station is selected, the station name will be displayed and the amplifier will switch to the desired equalizer setting.

### Programming a station name (SND)

- Choose a preset station.
- Press **SND 12** to enter the SND programming mode. The display shows ENTER NAME. If a name has already been stored, this name will then be displayed. A flashing cursor is located in the leftmost position.
- Press **TUNING ◀** or **▶ 4** to move the cursor to a next or previous position.
- Press **PRESET ▲ ▼ 3** until the desired character is displayed at the position of the cursor.
- If the station name is correct, press **SND 12** to store the name in the memory. You now enter the DES programming mode.

### Notes:

- It is not possible to assign a station name or a desired equalizer setting to the presets 21-30.
- The maximum station name length is 8 characters.
- You can erase a station name by pressing **CLEAR 7** in the SND programming mode.
- If the SND programming mode is selected for more than 1.5 minutes without pressing **TUNING ◀ ▶ 4** or **PRESET ▲ ▼ 3**, the last name will be recalled again and the SND programming mode will be left without storing any changes.
- The SND programming mode is left without storing a station name when **BAND 5** or **STANDBY, SLEEP**, numeric keys on the remote control or any source selection key is pressed.
- Press **SND 12** three times in succession (within approx. 3 seconds) after entering the correct station name, to skip the DES programming mode.

### Programming a desired equalizer setting (DES)

- Press **SND 12** when you are in the SND programming mode to store the station name and to enter the DES programming mode. **SELECT EQ SETTING** will appear on the display, followed by **EQ OFF**.
- Press **PRESET ▲ ▼ 3** on the tuner or **PRESET 13** on the amplifier to show the current desired equalizer setting. If no desired equalizer setting is stored, **EQ OFF** is displayed.
- Press **PRESET ▲ ▼ 3** on the tuner or **PRESET 13** on the amplifier again until the one of the 10 equalizer presets which is required is selected. The selected equalizer setting is displayed on the amplifier and the effect can be heard.
- Press **SND 12** to store the desired equalizer setting and leave the DES programming mode.

### Notes:

- Press **SND 12** three times in succession (within approx. 3 seconds) after selecting a preset to skip the SND programming mode and enter the DES programming mode directly.
- You can erase a desired equalizer setting in the DES programming mode by pressing **CLEAR 7** or by selecting **EQ OFF**.
- The DES programming mode is left without storing a desired equalizer setting when **BAND 5** or **STANDBY, SLEEP**, numeric keys on the remote control or any source selection key is pressed.

## CLOCK

The clock function contains two items: day of the week and the time. It can be set to a 12-hour or 24-hour clock. When the system is in standby mode, day and time are always displayed, but the brightness of the display is low.

- Press **CLOCK SET 10** to enter the clock setting mode. The display shows the name of a day abbreviated to 3 letters, e.g. SUN.
- Press **PRESET ▲ ▼ 3** until the correct day appears on the display.
- Press **CLOCK SET 10** to store the correct day. The display shows **CLOCK** followed by **12 HOUR** or **24 HOUR**.
- Press **PRESET ▲ ▼ 3** to select the 12-hour or 24-hour clock.
- Press **CLOCK SET 10**. Now the display shows either **-- (24-hour clock)** or **AM --:-- / PM --:-- (12-hour clock)**.
- Press **TUNING ◀** or **▶ 4** to select the digit to be changed or **AM/PM** and press **PRESET ▲ ▼ 3** to change the selected digit or **AM/PM**.
- Press **CLOCK SET 10** to store the changes and leave the clock setting mode. The seconds are set to zero and the clock starts running.

### Notes:

- It is also possible to use the **NEXT/PREVIOUS** and **◀ / ▶** keys on the remote control instead of the **PRESET 3** and **TUNING 4** keys on the tuner.
- The clock can be set when the tuner is in standby mode or active mode.
- For the 12-hour clock: **AM 12:00** means midnight and **PM 12:00** means noon.
- If a source is selected, **BAND 5** is pressed or if no key is pressed in the clock setting mode for 1.5 minutes, the clock setting mode will be left and the last changes (made before leaving this mode) will be stored.

## TIMER

You can programme two separate timers.

These timers (timer 1 and timer 2) can be set to a time at which several options are possible:

- the tuner wakes up and is tuned to a selected preset station;
- the CD player wakes up and starts playing a selected track;
- the cassette deck wakes up and starts playing;
- the (optional) DCC recorder wakes up and starts playing a selected track;
- the buzzer starts (automatically for 1 minute).

- Press **NEWS/TIMER SET 9** to enter the timer setting mode. The display shows **SELECT TIMER/NEWS** followed by **NEWS**.
- Press **PRESET ▲ ▼ 3** until **TIMER 1** or **TIMER 2** appears on the display.
- Press **NEWS/TIMER SET 9** to confirm the selection of the correct timer. The display shows **SELECT SOURCE**, followed by the last selected source.
- Press **PRESET ▲ ▼ 3** until the desired source or the buzzer appears on the display.
- Press **NEWS/TIMER SET 9** to store the selected source or buzzer. If you have selected **CD** or **DCC**, the **TRACK** will be displayed. If you have selected **tuner**, the **PRESET** will be displayed. If you have selected **buzzer**, the display will show the selected waking days.
- If you have selected **CD, DCC** or **tuner**: press **PRESET ▲ ▼ 3** until the desired track or preset appears and press **NEWS/TIMER SET 9** afterwards to store the track or preset. The display shows the selected waking days.
- Press **PRESET ▲ ▼ 3** to select the waking days: **ONCE, DAILY, WEEKEND** (Saturday and Sunday) or **WEEKDAY** (Monday – Friday).
- Press **NEWS/TIMER SET 9** to store the selection. The display shows **START TIME**, followed by a time.

- Press TUNING ◀ or ▶ 4 to select the digit to be changed and press PRESET ▲ ▼ 3 to change the selected digit.
- Press NEWS/TIMER SET 9 to store the start time. If you selected the buzzer as the source, the timer setting mode is ended, otherwise the display will show STOP TIME, followed by a time.
- Press TUNING ◀ or ▶ 4 to select the digit to be changed and press PRESET ▲ ▼ 3 to change the selected digit.
- Press NEWS/TIMER SET 9 to store the timer settings and leave the timer setting mode.
- Press TIMER ON/OFF 1 (or TIMER on the remote control) until the desired timer combination is displayed. You can choose between: timer 1 activated, timer 2 activated, both timers activated or both timers deactivated. When TIMER ON/OFF 1 (or TIMER on the remote control) is not pressed for 3 seconds, the last displayed timer (combination) is activated. The display shows which timers are activated. If a timer is activated, the display also shows whether a buzzer (the bell symbol) or a sound source (the musical notes) has been selected for the timer.

**Notes:**

- when the timer is activated from standby, the volume will increase gradually to a fixed level over a 30-second period.
- during dubbing, the timer will not function.
- It is not possible to start recording on the cassette deck or DCC recorder via timers.
- If the set is in the recording mode at the start time of a timer, the timer is deactivated.
- It is also possible to use the NEXT/PREVIOUS and ◀◀ or ▶▶ keys on the remote control instead of the PRESET 3 and TUNING 4 keys on the tuner.
- If a source is selected, BAND 5 is pressed or if no key is pressed in the timer setting mode for 1,5 minutes, the timer setting mode will be left and the last changes (made before leaving this mode) will be stored.
- When a CD player, cassette deck or DCC recorder is selected as the source, the unit must be loaded with a CD or cassette, otherwise the tuner will be selected as the source with the last selected preset station. If there is no cassette in deck B, the cassette deck will play the cassette in deck A.
- Any source selection on the system will deactivate the timer.
- Any playing source will be interrupted at the start time of a timer and will continue after the stop time.
- If the start time and the stop time of a timer are equal, then the timer will be deactivated.
- If the start time of timer 1 is equal to the start time of timer 2 then timer 2 will be cancelled.
- The last start time has a higher priority than an earlier start time.

**Example:** If the start time of timer 2 is before the stop time of timer 1, the selected source of timer 1 will go to stop and the selected source of timer 2 will be heard.

**REPEAT BUZZER (remote control only)**

When the buzzer is switched on, it is possible to stop it sounding and delay its restart time for 10 minutes.

- Press one of the two AUDIO VOLUME keys or one of the two BALANCE keys on the remote control to temporarily switch off the buzzer. After 10 minutes it will start sounding again.
- Press BUZZER OFF on the remote control to permanently switch off the buzzer.

**Note:**

- Pressing any key on the system itself has no effect on the buzzer.

**NEWS**

The news function will interrupt any playing source to switch to a programmed radio station in order to listen to the next news broadcasting. You have to programme your favourite radio station and the start/stop time.

**Example:**

You are playing a CD, but you also want to hear the news in a few minutes. When you activate the news function, it will automatically switch to the programmed radio station at the programmed time.

- Press NEWS/TIMER SET 9 to enter the timer setting mode. The display shows SELECT TIMER/NEWS followed by NEWS.
- Press NEWS/TIMER SET 9 to select the news option. The display shows SELECT NEWS STATION, followed by a preset number and frequency or a station name.
- Press PRESET ▲ ▼ 3 until the desired preset station appears on the display.
- Press NEWS/TIMER SET 9 to store the desired preset station. The display shows START NEWS, followed by :00.
- Press TUNING ◀ or ▶ 4 to select the digit to be changed and press PRESET ▲ ▼ 3 to change the selected digit.
- Press NEWS/TIMER SET 9 to store the desired start time. The display shows STOP NEWS, followed by :00.
- Press TUNING ◀ or ▶ 4 to select the digit to be changed and press PRESET ▲ ▼ 3 to change the selected digit.
- Press NEWS/TIMER SET 9 to store the news setting and leave the timer setting mode.
- Press NEWS 14 (or NEWS on the remote control) to activate or deactivate the news timer. The display shows whether the news timer is active or not.

**Notes:**

- It is also possible to use the NEXT/PREVIOUS and ◀◀ or ▶▶ keys on the remote control instead of the PRESET 3 and TUNING 4 keys on the tuner.
- If a source is selected, BAND 5 is pressed or if no key is pressed in the timer setting mode for 1.5 minutes, the timer setting mode will be left and the last changes (made before leaving this mode) will be stored.
- If the start time of the news function is the same as the start time of a timer, the timer will be cancelled.
- If the selected source is recording at the start time of news, the newstimer will be cancelled.
- If the start time and the stop time of the news function are the same, then news will be broadcast for 60 minutes.

**SLEEP (remote control only)**

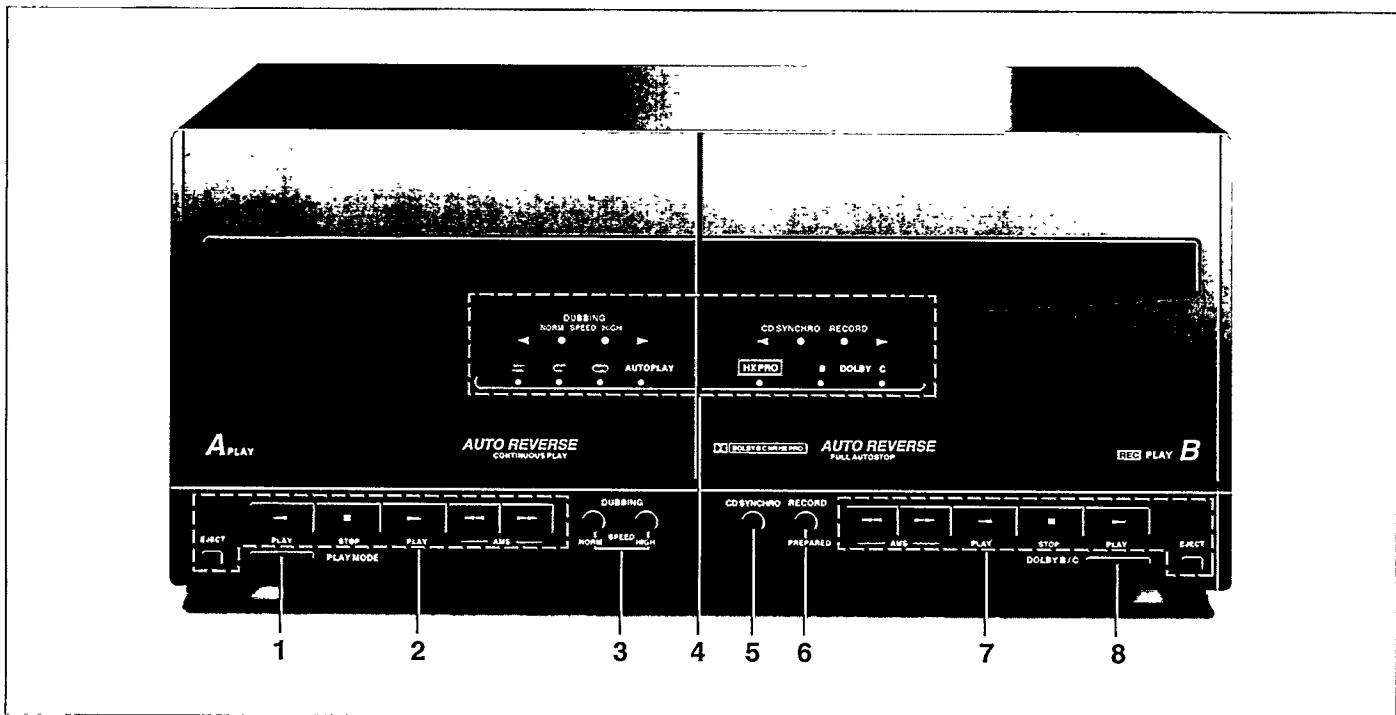
The sleep function is a countdown timer for switching the whole system into standby mode after a specified time. It enables you to listen to your system prior to falling asleep. The sleep timer can be set to 60, 30 or 10 minutes.

- Press SLEEP on the remote control to activate the sleep function. The display shows SLEEP, followed by 60 MIN.
- Press SLEEP again until the desired sleep time or OFF (to switch the sleep timer off) appears on the display. If SLEEP is not pressed for 10 seconds the sleep timer will be set and start counting down to zero. The display will switch back to the previous display mode but the display will contain a indication that the sleep function is activated.

**Note:**

- The sleep function is cancelled when the system is switched to the standby mode via the STANDBY key on the remote control.

## 6. CASSETTE DECK



### FRONT OF CASSETTE DECK

- 1 PLAY MODE** – for selecting the play mode
  - to play just one side of the cassette (|)
  - to play both sides of the same cassette (C)
  - to continuous play on one deck (C)
  - for continuous play over both decks (autoplay)
- 2 Keyboard Deck A** ( for playback only)
  - EJECT** – for opening the cassette holder of deck A
  - PLAY** ◀ – for starting playback of the reverse side of the cassette
  - STOP** ■ – for stopping the tape transport
  - PLAY** ▶ – for starting playback of the front side of the cassette
  - ◀◀ AMS ▶▶** – fast winding to left or right and Automatic Music Search when pressed during playback.
- 3 DUBBING** – to start dubbing from deck A to deck B at NORMAL or HIGH speed.
- 4 INDICATORS** – for indicating the features used.
- 5 CD SYNCHRO** – for the synchronised starting of deck B and the CD player when recording from the CD player.
- 6 RECORD PREPARED** – for preparing a recording or creating a muted passage during recording.
- 7 Keyboard Deck B** (for recording and playback)
  - ◀◀ AMS ▶▶** – fast winding to left or right and Automatic Music Search when pressed during playback
  - PLAY** ◀ – for starting playback of the reverse side of the cassette
  - STOP** ■ – for stopping the tape transport
  - PLAY** ▶ – for starting playback of the front side of the cassette
  - EJECT** – for opening the cassette holder of deck B
- 8 DOLBY B/C** – for switching the Dolby Noise Reduction system on and off and for selecting DOLBY B or C.  
Dolby noise reduction and HX Pro headroom extension system are manufactured under licence from Dolby Laboratories Licensing Corporation. Hx Pro originated by Bang and Olufsen. DOLBY, the double-D symbol DD and HX Pro are trademarks of Dolby Laboratories Licensing Corporation.

### INDICATORS ON CASSETTE HOLDERS

These indicators 4 will light up when certain features are used.

- ◀ direction ▶ – indicates the tape travel direction of deck A or B. The indicators are flashing when automatic rewind is activated.
- **RECORD** – flashes when RECORD PREPARE is active and remains illuminated when actually recording.
- **CD SYNCHRO** – is illuminated during a synchronised CD recording.
- The selected play mode indicators for both decks:
  - | – the tape stops at the end of each side;
  - C – playback (+ recording for deck B) of both cassette sides, after which the tape stops at the end of the second side;
  - C – continuous playback of both cassette sides; autoplay – continuous playback of both cassette sides on both decks
- Dubbing speed: **NORMAL** or **HIGH**
- **HXPRO**: lights up during recording and dubbing
- **Dolby B** or **C** – depends on what you selected by pressing DOLBY B/C 8


**WAKE UP FROM STANDBY**

The set is woken up from the standby mode by pressing any key on the cassette deck (except DOLBY B/C 8, PLAY MODE 1 or one of the EJECT buttons) and by pressing TAPE on the remote control.

**PLAYBACK**

The cassette deck has several options for the playback of a tape.

**Playback of one side (deck A or B)**

- Press the EJECT button to open the cassette holder of the corresponding deck.
- Insert a recorded cassette with the open side facing downwards.
- Close the cassette holder.
- Press PLAY MODE 1 until the indicator  lights up.
- If desired, switch on the Dolby B/C noise reduction system by pressing DOLBY B/C 8.
- Press PLAY ◀ or ▶ on the keyboard of the corresponding deck or choose a deck with DECK A or DECK B, a direction with ◀ ▶ (if necessary) and press PLAY on the remote control.


The display shows the chosen deck, TAPE A or TAPE B.

The playing direction is shown by the direction indicators on the cassette holders.

The deck plays one cassette side and the tape stops automatically at the end of a side.


- Press STOP ■ 2 (A) or 7 (B) or STOP on the remote control to stop playback.
- Press PLAY ◀ or ▶ or PLAY on the remote control to restart playback.

**Playback of both sides (deck A or B)**

If you want to play both sides of the cassette, proceed as described under 'Playback of one side' but select  with the PLAY MODE selector 1.

The deck plays both sides of the cassette and the tape stops automatically at the end of the second side of the tape.

**Continuous playback with one cassette (deck A or B)**

If you want to play one tape in one deck continuously, proceed as described under 'Playback of one side' but select  with the PLAY MODE selector 1.


The selected deck keeps on playing both sides of the cassette (up to a maximum of six times) until you press STOP ■ on the playing deck or STOP on the remote control.

**Continuous playback with two cassettes (deck A and B)**

This option lets you play both sides of two cassettes continuously. When the first deck has played both sides of the cassette the deck switches to the second deck and starts playing both sides of the cassette. After playing both sides of the cassette in the second deck it switches back to the first deck to start again. Each cassette is played a maximum of three times.

- Insert a recorded cassette into both cassette holders as indicated above.
- Press PLAY MODE 1 until the indicator **autoplay** lights up.
- If desired, switch on the Dolby B/C noise reduction system by pressing DOLBY B/C 8.
- Press PLAY ◀ or ▶ to start playback. It is possible to start with deck A or B.
- Press STOP ■ 2 (A) or 7 (B) (depending which deck is playing) or STOP on the remote control to stop playback.
- Press PLAY ◀ or ▶ or PLAY on the remote control to restart playback.

**Notes:**

- The two decks never play at the same time.
- It is also possible to change the play mode to autoplay when one deck is already playing.
- The autoplay mode is not available if only one tape is inserted. The cassette deck automatically switches to  mode.

**AUTOMATIC TAPE DETECTION AND SELECTION**

The presence of a cassette in the cassette holder is detected. When no cassette is inserted in the cassette holder, no tape action can be started.

When a cassette is inserted in the cassette holder, the deck will always automatically select the tape type (NORMAL or CrO2) as soon as the cassette holder is closed.



**RECORDING (deck B only)****Copyright**

Recording or copying is only authorised if there is no violation of copyright or other rights of third parties.

**Note for users in the U.K.**

Recording and playback of material may require consent. See Copyright Act 1956 and The Performers' Protection Acts 1958 to 1972

It is not possible to make a recording when the autoplay mode is selected with PLAY MODE 1. The cassette deck will automatically switch to the mode for playback of both sides.

- Press EJECT to open the cassette holder of deck B.
- Insert a cassette which is not protected against recording, with the open side facing downwards.
- Close the cassette holder.
- If desired, switch on the Dolby B/C noise reduction system by pressing DOLBY B/C 8.
- Select the sound source on your remote control or on the system (for PHONO only on your amplifier) from which you wish to make a recording.
- Press PLAY MODE 1 to select the play mode  or .
- Press RECORD PREPARED 6 to set deck B in the record-pause mode. The red RECORD indicator starts flashing.
- Press PLAY ◀ or ▶ to start the recording in the left or right direction. The red RECORD indicator lights up.
- Press the STOP ■ key to stop recording before the end of the tape.

**Notes:**

- The system is equipped with an Automatic Level Control (ALC). The record level is adjusted automatically and can not be adjusted manually.
- Recording is only possible when deck A is not playing. Fast winding of deck A to left or right is however possible.
- It is not possible to change the tape playing direction during recording.



## RECORD MUTE

You can create a silent passage of at least 5 seconds in a recording (see chapter 'AMS').

- Press RECORD PREPARED **6** for less than 5 seconds during recording to create a silent passage of 5 seconds.
- Press RECORD PREPARED **6** for more than 5 seconds during recording to create a silent passage. The silent passage will last as long as you keep the key pressed down. Undesired passages (announcements etc.) can thus be omitted during recording. During record mute the RECORD indicator is flashing.

### Notes:

- Record mute only works during recording and not during dubbing (NORMAL, FAST or CD SYNCHRO).
- If record mute is active the red RECORD indicator is flashing.

## DUBBING (FROM DECK A TO B)

You can duplicate a recorded cassette by simultaneously playing the recorded cassette in deck A and making a recording of it in deck B using the dubbing function. The dubbing can be done at normal or high speed.

- Press the EJECT buttons to open the cassette holders of decks A and B.
- Insert the **recorded** cassette into the cassette holder of deck A with the open side facing down and close the cassette holder.
- Press **◀** to go to the beginning of the recorded tape.
- Insert a cassette which is **not protected** against recording into the cassette holder of deck B with the open side facing down and close the cassette holder.
- Press **◀** to go to the beginning of the tape.
- Press PLAY MODE **1** to select the required play mode (**☐** or **◁**) to make a single or double-sided dubbing.
- Press NORM or HIGH **3** for more than 0.5 seconds to start the dubbing process at normal or high (double) speed. The two cassette decks start playing simultaneously, the display shows TAPE and the corresponding dubbing speed indicator lights up. The RECORD indicator also lights up.
- Press STOP **■** (A or B) to stop dubbing at any desired point. Both decks then stop simultaneously.

### Notes:

- Both decks always start in the selected direction.
- The dubbing is stopped when the tape in deck A or B is at the end (play mode **☐**).
- In the play mode **◁**: when the tape in deck A reaches the end, deck B will stop so that deck A can switch direction. After 2.5 seconds both decks will continue with dubbing.
- While dubbing you can listen to any other source.
- An original cassette recorded with Dolby Noise Reduction will always produce a copy with Dolby NR.

## DOLBY HX PRO HEADROOM EXTENSION SYSTEM

The built-in HX Pro headroom extension system improves the recording performance of your cassette deck. The HX Pro system is automatically activated when a recording or dubbing is started and the indicator HX Pro lights up.

The HX Pro system prevents large high-frequency signals from overloading the tape by introducing automatic bias compensation. HX Pro is not a noise reduction system because it functions only during recording and no decoding is required.

Therefore, a tape recorded with the HX Pro system can be played back on any other cassette deck while retaining the benefits of HX Pro.

## CD SYNCHRO DUBBING

You can synchronise the start of a recording on deck B with the start of play of a CD (or CD program) by just pressing one button.

- Insert a cassette and prepare your CD player for playback.
- If desired, switch on the Dolby B/C noise reduction system by pressing DOLBY B/C **8**.
- Press PLAY MODE **1** to select the play mode **☐** or **◁**.
- Press CD SYNCHRO **5** for more than 0.5 sec. Both the CD SYNCHRO and the RECORD indicator will light up. The CD player returns to the beginning of the disc (or program) and enters the pause mode. Recording starts and after a 7-second delay the CD will start playing. This delay is to ensure that the recording does not start until after the leader tape. CD SYNCHRO dubbing will stop when one or both sides of the cassette are full (depending on play mode) or when the CD reaches the end.
- Press the STOP key on the CD player or cassette deck to stop the dubbing at an earlier stage.

### Notes:

- The pauses between the tracks are extended to 5 seconds by the CD player to ensure operation of the AUTOMATIC MUSIC SEARCH function on the cassette deck.
- When the standby mode is selected during CD SYNCHRO dubbing, the dubbing will be cancelled.
- Listening to another source during CD dubbing is not possible. The message CD-SYNCHRO ACTIVE appears in the display of the CD player.
- If the CD player has an error (e.g. bad disc) the CD SYNCHRO will be cancelled and the message DISC ERROR will appear on the display of the CD player.
- When in play mode **◁**: if the tape is at the end of the side the CD player will pause so that deck B can switch direction. After 7 seconds the CD player replays the track.
- If stop is pressed on the cassette deck, the CD SYNCHRO function will be cancelled and the tape will stop, the message CD SYNCHRO CANCELLED appears on the CD display but the CD player will keep on playing.
- The play mode (**☐** or **◁**) can be switched at any time.
- On the cassette deck only the STOP **■** key of deck B can be pressed. Any other key will be ignored and the CD SYNCHRO indicator will blink for 3 seconds.

## ACTIVE REWIND

You can rewind the tape to the beginning where it starts playing automatically.

- Press **◀** and **▶** simultaneously to start the active rewind. The direction indicator starts flashing.

### Notes:

- Press any key on the keyboards **2** or **7** to stop the ACTIVE REWIND.
- ACTIVE REWIND can be activated while playing or when playback is stopped.
- ACTIVE REWIND cannot be activated with the remote control.

**AMS (Automatic Music Search)**

If a recorded cassette has 5-second gaps between the tracks, it is possible to jump to a next or previous track during playback using the AMS function. The deck starts fast winding to the desired track and plays the track. There are several options:

**On the cassette deck (with playback direction ►):**

- Press ◀ or ▶ as often as you like until you hear the desired song.
- If you press ◀ once while playing, the current track will be played again from the beginning. If you press it twice you will hear the previous track. If you press ▶ once the next track will be played.

**Notes:**

- With playback direction ◀ : press ◀ to hear the next track(s) and press ▶ once to replay the current track and twice to hear the previous track(s).
- Press STOP ■, PLAY ◀ or PLAY ▶ to stop the Automatic Music Search.

**On the remote control (with playback direction ►)**

- Press PREVIOUS once to replay the current track.
- Press PREVIOUS twice to hear the previous track.
- Press NEXT once to hear the next track.
- Press NEXT e.g. three times to play the third track following after the currently played track.

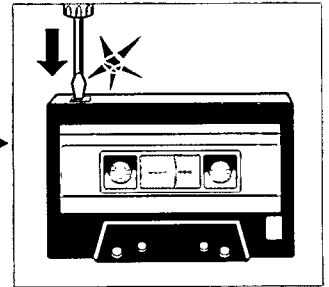
**Notes:**

- You can press the NEXT or PREVIOUS keys a maximum of 15 times for one AMS command.
- Press STOP ■, PLAY ◀ or PLAY ▶ to stop the AMS.

**COMPACT CASSETTES**

- The tape in the cassette is attached at both ends with leader tape. Nothing can be recorded for 6 to 7 seconds at the beginning and the end of the tape.

- Accidental erasure of a recording can be prevented by breaking the small tab in the top left-hand corner on the back of the cassette when playing the tape in the ► direction. When playing the tape in the ◀ direction you must break the tab in the top right-hand corner. You can then no longer record on this side. This protection can be removed by covering the hole with a small piece of adhesive tape.



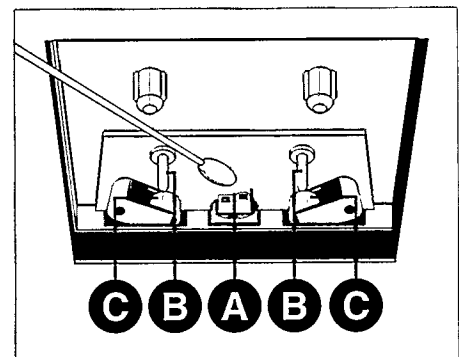
- Store your cassettes after use in the box provided. Keep the cassettes at room temperature and avoid leaving them in the sun or too close to magnets and transformers of e.g. recorders, radios, television units and loudspeakers.

**DOLBY NOISE REDUCTION**

- The Dolby Noise Reduction system is manufactured under license from Dolby Laboratories Licensing Corporation. The word 'Dolby' and the □ symbol are trademarks of Dolby Laboratories Licensing Corporation.
- The system is switched on and off with DOLBY B/C button 8. Noise reduction is approximately a factor 3 with Dolby B and a factor 10 with Dolby C. A cassette recorded with the Dolby Noise Reduction system must also be played back in the Dolby NR mode. If you forget to operate the Dolby B/C on/off button, the treble may be reproduced too strongly or too faintly.
- Dolby Noise Reduction System has no influence when dubbing. An original cassette recorded with Dolby NR automatically produces a copy with Dolby NR during dubbing.

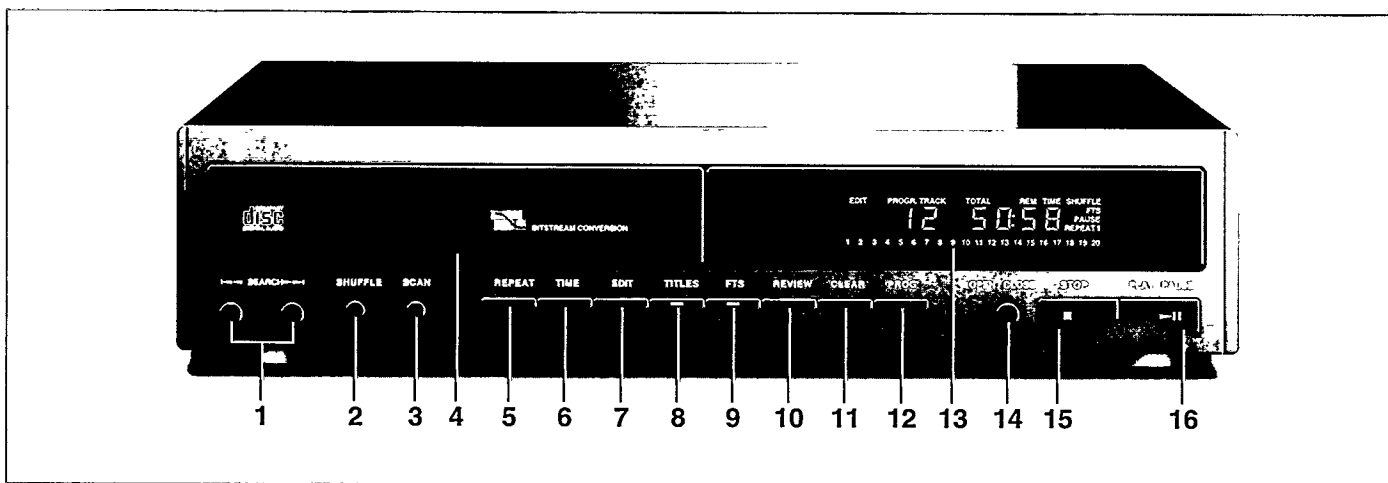
**CASSETTE DECK MAINTENANCE**

- *After approximately 15 hours of use the heads (A), the capstans (B) and the pressure rollers (C) must be cleaned.* You can clean them by playing a cleaning cassette or with a cotton bud dipped in alcohol. Make sure that the unit is not connected to the mains.



- The drive mechanism must **not** be lubricated!

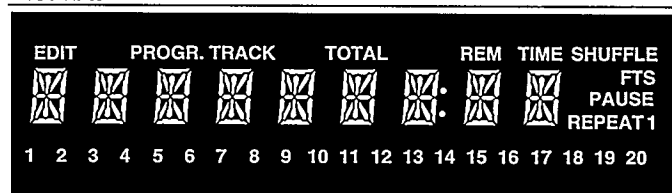
## 7. CD PLAYER



### FRONT OF PLAYER

- 1 **SEARCH** – for selecting the next/previous track or searching for a particular passage during playback.
- 2 **SHUFFLE** – for playing a CD or program in random order.
- 3 **SCAN** – for playing the first 10 seconds of each track on a CD or in a program.
- 4 **CD TRAY** – for inserting a CD.
- 5 **REPEAT** – for repeating a particular track, a program or the whole CD.
- 6 **TIME** – for selecting the time information you want to see on the display.
- 7 **EDIT** – for automatically creating a selection of tracks adjusted to the maximum playing time of a cassette for making a recording.
- 8 **TITLES** – for assigning a name and a desired equalizer setting to a CD.
- 9 **FTS** – for activating the FTS memory (FTS = Favourite Track Selection).
- 10 **REVIEW** – for checking a program.
- 11 **CLEAR** – for erasing track numbers from a program, erasing a whole (FTS) program or erasing titles and desired equalizer settings.
- 12 **PROG(ram)** – for activating the program memory when compiling a program and for storing a program in the FTS memory.
- 13 **DISPLAY** – for displaying information about the functioning of the player.
- 14 **OPEN/CLOSE** – for opening and closing the CD compartment. The compartment also closes when the front is pressed briefly.
- 15 **STOP** – for stopping play.
- 16 **PLAY/PAUSE** – for starting and interrupting play.

### DISPLAY



- **EDIT** – Lights up when the player is in the EDIT mode.
- **PROGR.(am)** – Lights up during programming, when a program is stored and when a program is being played.
- **TRACK** – Indicates what track is being played; the number of tracks on the CD or in a program.
- **TOTAL TIME** – Indicates the total playing time of the CD or a program.
- **TOTAL REM(aining) TIME** – Indicates the remaining playing time of the CD or a program.
- **TRACK TIME** – Indicates the elapsed playing time of the track being played.
- **REM(aining) TRACK TIME** – Indicates the remaining playing time of the track being played.
- **SHUFFLE** – Lights up when the tracks are played in random order in the shuffle mode.
- **FTS** – Flashes after the FTS key has been pressed; lights up when an FTS program is played.
- **PAUSE** – Lights up when play is interrupted.
- **REPEAT** – Lights up when you repeat a CD or a program.
- **REPEAT 1** – Lights up when you repeat one track
- **TEXT DISPLAY** – To show messages, playing time information or disc titles.
- **1-20 track number indicator (Music calendar)** – Shows the track currently playing and the (remaining) tracks which are not being played at the moment.

**WAKE UP FROM STANDBY**

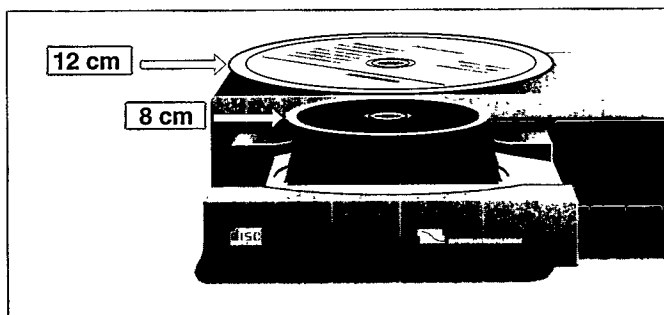
The player is woken from the standby mode by pressing any key on the CD player (except TIME 6, TITLES 8, FTS 9, REVIEW 10, CLEAR 11 and PROG 12) or by pressing CD on the remote control.

**GENERAL PLAYBACK OF A CD**

- Press OPEN/CLOSE 14 or OPEN/CL on the remote control to open the CD compartment. The message OPEN appears on the display.
- Insert a CD, *printed side up*.
- Press OPEN/CLOSE 14 or OPEN/CL on the remote control to close the compartment (pushing briefly against the front of the CD TRAY 4 has the same effect). The message CLOSING appears on the display, followed by READING for about 2 seconds; the number of tracks and the total playing time of the CD are shown on the display.
- Press PLAY/PAUSE 16 or PLAY on the remote control to start playback. The display shows the track being played under TRACK. Its elapsed playing time is shown under TRACK TIME.
- You can interrupt playback by pressing PLAY/PAUSE 16 or II on the remote control; PAUSE then lights up on the display. Press PLAY/PAUSE 16 or PLAY on the remote control to continue playback. Play will stop after the last track.
- You can stop playback by pressing STOP 15 or OPEN/CLOSE 14 (STOP or OPEN/CL on the remote control).

**Notes:**

- You can also press PLAY/PAUSE 16 (PLAY on the remote control) SHUFFLE 2 or SCAN 3 immediately after inserting the CD; the compartment then closes automatically and starts executing the commands.
- The title of the CD appears on the display after closing the compartment when a title is assigned to the CD.
- The music calendar shows how many tracks are on the CD; when a track has been played its number disappears.
- The FTS indicator in the display flashes for three seconds after closing the CD TRAY, when an FTS program is assigned to the inserted CD.
- When the CD player cannot play a disc the display shows DISC ERROR.
- When no disc is in the CD tray and a CD player button is pressed, the display shows INSERT DISC - NO DISC.

**SELECTING ANOTHER TRACK DURING PLAYBACK**

There are three options to select a track during playback:

**On the remote control using the numerical keys 0-9**

- Select the desired track by pressing the corresponding numerical key(s). Track numbers consisting of two figures must be selected *within 2 seconds*, otherwise only the first number will be selected. The music stops and a moment later the selected track begins to play.  
**Example:** to select track 15, press the numeric keys 1 and 5 within two seconds. To select track 1, 2 or 3, press 01, 02 or 03, or press only 1, 2 or 3 and wait for two seconds.

**On the remote control using NEXT or PREVIOUS TRACK**

- Press PREVIOUS once to return to the beginning of the current track.
- Press PREVIOUS twice to select the previous track.
- Press NEXT once to select the next track.
- Press NEXT e.g. three times to select the third track following the track currently playing.

**On the CD player using ◀ SEARCH ▶ 1**

- Press ◀ once for less than 0.5 seconds to return to the beginning of the current track and twice to select the previous track.
- Press ▶ once for less than 0.5 seconds to select the next track.

**Notes:**

- The display shows the selected track number.
- When the first track is selected and you press ◀ 1 twice or PREVIOUS on the remote control then the CD player will jump to the last track.
- When the last track is selected and you press ▶ 1 or NEXT on the remote control then the CD player will jump to the first track.
- Pressing ◀ or ▶ 1 for more than 0.5 seconds starts the search function.

**SEARCHING FOR A PASSAGE DURING PLAY**

It is possible to search for a passage somewhere on the CD during normal play. During playback of a program or in the shuffle mode, searching for a passage is only possible within the track being played.

- On the CD player: press ◀ or ▶ 1 for *longer than 0.5 seconds* to search backwards or forwards.
- On the remote control: press ◀ to search backwards or press ▶ to search forwards.

**Notes:**

- When the search function is started the sound level is decreased.
- If you reach the end of the CD or the end of a track (in program mode or shuffle mode) and release ▶, play will resume 5 seconds before the end.
- If you reach the beginning of the CD or the beginning of a track (in program mode or shuffle mode) and release ◀, play will resume 5 seconds after the beginning.
- Pressing ◀ or ▶ 1 for less than 0.5 seconds starts the track selection function.

### STARTING PLAYBACK WITH A PARTICULAR TRACK

- On the remote control: select the desired track by pressing the corresponding numeric key(s). Track numbers consisting of two figures must be selected *within 2 seconds*, otherwise only the first number will be selected. The playback of the selected track starts automatically.  
**Example:** to select track 25, press the numeric keys 2 and 5 within two seconds. To select track 2, press the numeric keys 0 and 2 or only 2 and wait for two seconds.

#### Notes:

- You can also select the track number by pressing NEXT or PREVIOUS TRACK on your remote control or ◀ SEARCH ▶ 1 on your CD player and then pressing PLAY/PAUSE 16 or PLAY on the remote control to start playback.
- If a CD has less than 10 tracks and you select a track by pressing the corresponding number on the remote control, the track (1...9) will be selected without the 2-second delay (only if the CD TRAY 4 is closed).

### SCANNING A CD

When the scanning function is activated, it plays the first 10 seconds of each track of the CD or program, starting with the lowest track number or the first programmed track.

- Press SCAN 3 before or during play to start the scanning. If the CD compartment was open, it will now close. The display shows the message SCAN before each track, followed by a countdown of the first 10 seconds. If a program is active, the display will show the message PROGRAM SCAN once.
- Press SCAN 3 again or PLAY/PAUSE 16 (PLAY on the remote control) when the player plays a track you wish to hear completely. The scanning mode will then be cancelled and the player will revert to normal play.

#### Notes:

- If a program is active the SCAN function will operate only on the program.
- Pressing SHUFFLE 2 (or SHUFFLE on the remote control) cancels the scanning and switches to the shuffle mode.

### PLAYING THE CD IN RANDOM ORDER

The tracks of a CD or program can be played in random order using shuffle.

- Press SHUFFLE 2 before or during playback to switch to the shuffle mode and start playback in random order. If the CD compartment was open, it will now close. During shuffle play the SHUFFLE indicator lights up. The display shows the message SHUFFLE before each track. If a program is active, the display will show the message PROGRAM SHUFFLE once.
- Press SHUFFLE 2 again to switch back to normal play.

#### Notes:

- If a program is active, then the shuffle function will operate only on the program.
- Selecting a track by pressing one (or two) of the numeric keys 0-9 on the remote control cancels the shuffle mode and causes the selected track to be played in full.

### REPEAT

It is possible to repeat a whole CD/program or a particular track using the repeat function.

#### The whole CD or program:

- Press REPEAT 5 once during playback or in the stop mode to repeat the whole CD or program continuously. The display shows the message REPEAT ALL and REPEAT lights up in the display.
- Press REPEAT 5 twice to stop the CD or program being repeated. The display shows the message REPEAT OFF.

#### A particular track:

- To repeat a single track continuously,
  - *during playback*, press REPEAT 5 twice;
  - *from the stop mode*, press REPEAT 5 twice and press PLAY to start playback.
 The display shows the message REPEAT TRACK and REPEAT 1 lights up in the display
- Press REPEAT 5 again to stop the track being repeated. The display shows the message REPEAT OFF.

#### Notes:

- Every time a whole CD or program is repeated in the shuffle mode, a new sequence is created.
- REPEAT is not possible from the SCAN mode.

### CALLING UP TIME INFORMATION

The display normally shows information about the elapsed playing time of the track currently playing. It is also possible to obtain other time information about the track or the CD/program.

- Press TIME 6 when you want to know the remaining playing time of the track being played. REM TIME lights up on the display.
- Press TIME 6 again if you want to know the remaining playing time of the entire CD or program. TOTAL REM TIME lights up on the display.
- Press TIME 6 again if you want to know the total elapsed time of the entire CD or program. TOTAL TIME lights up on the display.
- If a title is stored then you can press TIME 6 again to display the title of the CD.
- Press TIME 6 again if you wish to return to the elapsed playing time indication of the current track.

#### Notes:

- This function cannot be used for CDs containing more than 29 tracks. Otherwise the display will show the message MORE THAN 29 TRACKS.
- This function cannot be used in the scan mode.
- When TIME 6 is pressed in the stop mode and a title is stored for the CD, the display switches between the CD title and the total playing time of the CD or program.

# Programming

## STORING A PROGRAM

You can store up to 20 tracks of a CD in any required sequence in a program. All play functions (play, shuffle and scan) will then use this program. To create a program repeat the following two steps until the program is finished.

### Select a desired track

- On your remote control, press NEXT or PREVIOUS until the desired track appears on the display or select the track directly by pressing the desired combination of numeric keys.
- On your CD player, press ◀◀ or ▶▶ 1 until the desired track appears on the display.

### Store the track

- Press PROG 12 to store the selected track.  
If you pressed PROG in the stop mode, the display shows SELECT TRACK.  
The display shows the number of tracks and the playing time of your program for 2 seconds.  
The track number indicator (music calendar) shows which numbers have been stored.

### Notes:

- It is also possible to store the track currently playing in scan, shuffle and normal play mode.
- The display will show the message FULL if you try to exceed the maximum of 20 tracks.
- The display will show – : – (after pressing PROG 12) if the inserted CD has more than 29 tracks, if you programmed a tracknumber above 29, or if the total programmed time exceeds 100 minutes.
- It is possible to compile a program when the CD TRAY 4 is open. The display will show WRONG TRACK after the closing of the CD TRAY 4, if you have stored a non existent track. If the entire programme does not exist, the message PROGRAM CANCELLED will be shown.

## CHECKING THE PROGRAM

It is possible to quickly check the contents of the program using the REVIEW function.

- Press REVIEW 10 to display each track number for 2 seconds in the programmed sequence.
- Press REVIEW 10 again to interrupt the review function.

### Notes:

- The display shows NO PROGRAM ACTIVE if no tracks have been stored yet.
- If REVIEW 10 is pressed during programmed play, only the current track and the tracks still to come will be displayed.

## PLAYING THE PROGRAM

- Press PLAY/PAUSE 16 or PLAY on the remote control. The display shows PROGRAM PLAY.  
Playback starts with the first programmed track.

### Notes:

- All keys (except EDIT, PROG, CLEAR, TITLES and FTS) can be used during programmed play.
- Searching for a particular passage is only possible within the track being played.

## ERASING A (TRACK FROM THE) PROGRAM

It is possible to erase a selected track from the program or to erase the whole program.

- To erase the **whole program**, press CLEAR 11 in the stop mode or press OPEN/CLOSE 14 (OPEN/CL on the remote control).  
The message PROGRAM CANCELLED appears on the display.
- To erase a **selected track** from the program, press REVIEW 10 in the stop mode and press CLEAR 11 as soon as the track number you want to erase appears on the display.

### Note:

- If CLEAR 11 is pressed and no program has been stored, the display will show the message NO PROGRAM ACTIVE.

## Favourite track selection

A selection of tracks can be stored in the permanent Favourite Track Selection (FTS) memory. Your favourite track selection of a CD can then be recalled and played whenever you wish. The selection will remain stored in the FTS memory even if you play the entire CD or compile a different program from it. The number of CDs which can be stored in the FTS memory depends on the number of tracks in each program.

### STORING A FAVOURITE TRACK SELECTION

To store a selection of favourite tracks you have to transfer a program to the FTS memory.

- Compile and store a program (as described in 'Storing a program')
- Press FTS 9 in the stop mode to enter the FTS mode. The FTS indication is flashing on the display and the message PRESS PROGRAM is displayed.
- Press PROG 12 to transfer the program to the permanent FTS memory. The display shows the message FTS PROGRAMMED.

#### Notes:

- If a selection from a particular CD has already been stored, but you want to store a new selection, press after FTS 9 the button PROG 12 (*and not PRESS PLAY as the display will show*).
- If the FTS memory is too full, the display will show the message MEMORY FULL. You must erase one or more favourite track selections to make room to store a new FTS.
- If FTS 9 is pressed and no program has been stored the display will show the message MAKE PROGRAM.
- Press REVIEW 10 in FTS mode to review the programmed tracks in the FTS memory for two seconds.

### PLAYBACK OF A FAVOURITE TRACK SELECTION

It is possible to play back the favourite track selection in the normal playback mode, in the scan mode or the shuffle mode.

- Insert a CD which has a stored FTS.
- Press FTS 9 (in the stop mode) to enter the FTS mode. The display shows the message PRESS PLAY.
- Press PLAY/PAUSE 16, SHUFFLE 2 or SCAN 3 **within 5 seconds** after the message is shown to start the selected playback mode. If you wait for more than 5 seconds, the player will leave the FTS mode and enter the stop mode.

#### Notes:

- A CD with a stored FTS can be recognised because the FTS indicator in the display will flash for 3 seconds after the closing of the CD tray and the reading of the contents.
- If no FTS program has been stored, the display will show the message NO FTS PROGRAM.

### ERASING A FAVOURITE TRACK SELECTION

- Insert the CD from which you want to clear the FTS.
- Press FTS 9 (in the stop mode) to enter the FTS mode. The display shows the message PRESS PLAY and the FTS indicator starts flashing.
- Press CLEAR 11 to clear the stored favourite track selection. The display shows the message FTS CANCELLED.

### ERASING THE PERMANENT MEMORY OF THE CD PLAYER

#### WARNING:

This action will erase the whole permanent memory of the CD player for the Favourite Track Selection (FTS), disc titles and Desired Equalizer Settings (DES). All the stored information of all CDs will be erased.

- Press FTS 9 to enter the FTS mode. The FTS on the display starts flashing.
- Press REPEAT 5 and CLEAR 11 **simultaneously** to erase the permanent memory of the CD player. The display shows the message DISC INFO CLEARED.

## Disc titles/DES

This function allows a name (disc title) and a desired equalizer setting (DES) to be assigned to your favourite CDs. These disc titles and desired equalizer settings are stored in the permanent memory of the CD player. Every time the CD is loaded the disc title will appear on the display (instead of the maximum number of tracks and the maximum playing time) and the amplifier will switch to the desired equalizer setting.

### STORING OF A DISC TITLE

- Insert the CD you want to give a title.
- Press TITLES 8 (in the stop mode) to enter the title programming mode. The display shows DISC TITLE. If a name has already been stored this name will be displayed afterwards. A flashing cursor is located on the left-most position.
- Press ◀◀ or ▶▶ 1 or NEXT/PREVIOUS on the remote control to select the character you want on the first position.
- Press TITLES 8 to confirm the selection. The flashing cursor moves to the second position.
- Repeat the selection and confirmation of each character until all nine character positions are entered. If TITLES 8 is pressed to confirm the 9th character, the title programming mode will be left. You now enter the DES programming mode.
- If you want to exit the title programming mode without changing the current disc title, press STOP 15.

#### Notes:

- If you press TITLES 8 without changing the first character, the player will leave the title programming mode and enter the DES programming mode. So if you want to change other characters but not the first, you have to change the first character and change it back again.
- If TITLES 8 is not pressed in the stop mode the message GO TO STOP will appear on the display.
- To erase a disc title from the permanent memory of the CD player press CLEAR 11 in the disc title programming mode (you also exit the title programming mode) or fill all character positions with blanks (spaces).
- If you do not change any character for 90 seconds, the titles programming mode will be cancelled and the last changed title will be stored in the permanent memory of the CD player.
- Press TITLES 8 three times in succession (within approx. 3 seconds) after entering the correct disc title to skip the DES programming mode.

### STORING A DESIRED EQUALIZER SETTING (DES)

- Press TITLES 8 three times in succession (within approx. 3 seconds) when you are in the stop mode or once to confirm the 9th character (in the disc title programming mode) to enter the DES programming mode. SELECT EQ SETTING, followed by EQ OFF, will appear on the display.
- Press ◀◀ or ▶▶ 1 or PRESET 13 (on the amplifier) to show the current selected equalizer setting. If no equalizer setting has been stored, EQ OFF will be displayed.
- Press ◀◀ or ▶▶ 1 or PRESET 13 (on the amplifier) again until the desired one of the 10 equalizer presets is selected. The selected equalizer setting is displayed on the amplifier.
- Press TITLES 8 to store the desired equalizer setting and leave the DES programming mode.
- If you want to leave the DES programming mode without changing the current equalizer setting, press STOP 15.

#### Note:

- You can erase a desired equalizer setting in the DES programming mode by pressing CLEAR 7 or by selecting EQ OFF with ◀◀ or ▶▶ 1.

## ERASING THE PERMANENT MEMORY OF THE CD PLAYER

### **WARNING:**

This action will erase the whole permanent memory of the CD player for the Favourite Track Selection (FTS), disc titles and Desired Equalizer Settings (DES). All the stored information of all CDs will be erased.

- Press TITLES **8** once to enter the title programming mode or twice to enter the DES programming mode.
- Press REPEAT **5** and CLEAR **11** *simultaneously* to erase the permanent memory of the CD player. The display shows the message DISC INFO CLEARED.

The edit function automatically creates a selection of tracks adjusted to the maximum playing time of a cassette for making a recording. You define the recording time of the tape. The function has three modes: ADVANCED EDIT, OPTIMAL EDIT and COMPILE EDIT.

**Advanced edit** – The CD player will determine the number of consecutive tracks that fit on one side of the tape. The remaining tracks can be recorded on the other side of the cassette.

**Optimal edit** – The CD player calculates the optimal combination of tracks to fill one side of the tape as well as possible. The remaining tracks can be recorded on the other side of the cassette.

**Compile edit** – Same as optimal edit, except that at the end of the recording, the tray will be opened so you can insert another CD to fill the remaining recording time.

### **NOTE!**

The EDIT function *cannot* be used for CDs containing more than 29 tracks.

## Making a recording using the EDIT function

- Prepare deck B of the cassette deck for recording (insert a cassette, select play mode and switch on the Dolby system if desired).
- Press EDIT **7** in the stop mode to enter the edit mode. The display shows the message SELECT EDIT MODE, followed by ADVANCED and EDIT lights up.
- Press **◀** or **▶** **1** or NEXT/PREVIOUS on the remote control until the desired edit mode appears on the display (ADVANCED, OPTIMAL, COMPILE or EXIT).
- Press EDIT **7** to confirm the selected edit mode or to select exit. Exit will leave the edit mode. The display shows the message SELECT TAPE LENGTH.
- Press **◀** or **▶** **1** or NEXT/PREVIOUS until the desired tape length appears on the display (C60, C90, C100, C120, C30 or C46).
- Press EDIT **7** to confirm the selected tape length.
- You are now able to create a new program or to change an existing program. If you do not store a program all tracks of the CD will be used for the edit function.
- Press CD SYNCHRO (on the cassette deck) or PLAY/PAUSE **16** to start the desired edit mode. It is recommended to start the desired edit mode with CD SYNCHRO in combination with play mode **◀**. At the end of the selection of tracks for the first side of the cassette, the CD player waits until the end of the tape is reached. After changing the tape travel direction the recording continues automatically.
- Press STOP **15** or OPEN/CLOSE **14** to interrupt edit play. The message EDIT CANCELLED appears on the display.

### **Notes:**

- When the edit mode is selected, all other function are disabled except TIME, REVIEW, OPEN/CLOSE and STOP.
- The message EDIT ACTIVE appears on the display when a wrong key is pressed in the edit mode.
- If the CD player cannot calculate a program the message EDIT FAILED appears on the display.
- Should the CD or the program be longer than the total recording time of the tape, play will stop after the last track that fits onto side B of the tape.
- A pause of 5 seconds is automatically created in between the tracks for Automatic Music Search (AMS).



# 8. GENERAL INFORMATION

## CD MAINTENANCE

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

## SYSTEM MAINTENANCE

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

## FAULTS AND THEIR LIKELY CAUSES

If a fault occurs, run through the points listed below before taking your set to service for repair.

### CD player

- The lens may steam up when the set is taken from a cold into a warm environment. Playing a CD is then not possible. Let the set acclimatize for a while.
- Check that there is a CD in the compartment and that the CD has been inserted correctly with the printed side up;
- Check whether the CD is dirty, badly scratched or warped;

### Cassette deck

- Dust and dirt on the heads can influence the sound reproduction and the quality of the recording. Clean the heads (see Cassette deck maintenance).

### Tradeshaw mode

The system has a tradeshaw that describes various features available in the system. The system is in the tradeshaw mode if the display of the amplifier shows the message PHILIPS MIINI FW80 after switching on the power, followed by a series of other messages.

- To leave the tradeshaw mode and enter the normal standby mode: switch off the power and keep the buttons PHONO/AUX **9** and DCC **10** (on the amplifier) pressed while switching on the power again with SYSTEM POWER OFF/STANDBY **1** (on the amplifier).
- To enter the tradeshaw mode: keep the buttons PHONO/AUX **9** and DCC **10** (on the amplifier) pressed while switching on the power with SYSTEM POWER OFF/STANDBY **1**.

### Problems with the whole system

Electrostatic charge may cause unexpected symptoms, e.g. a unit fails to react to any key pressed. The best thing to do is to reset the unit by switching off the power.

- Press the SYSTEM POWER OFF/STANDBY on the front of the amplifier to switch off the power for the whole system.
- After a few seconds switch on the power again by pressing SYSTEM POWER OFF/STANDBY again. The system now enters the standby mode.

### WARNING:

If the remedies fail to help, consult your dealer.

**Under no circumstances should you repair any unit yourself as this will invalidate the guarantee!**

## TECHNICAL DATA

(subject to modification)

### Amplifier

- Output power: 2 x 60 W RMS / 6  $\Omega$  / THD 10% (EQUALIZER setting at 0 dB)
- Power bandwidth: 20 - 40 000 Hz
- Frequency response: 40 - 20 000 Hz
- Signal-to-noise ratio:  $\geq$  75 dBA (IEC)
- Stereo separation:  $\geq$  50 dB (IHF)
- Input sensitivity  
Tuner: 200 mV  
Phono MD: 2,5 mV  
CD: 350 mV  
Tape: 350 mV  
DCC: 250 mV  
Aux: 250 mV
- Outputs  
Tape out: 250 mV  
DCC out: 250 mV  
Loudspeakers:  $\geq$  6  $\Omega$   
Headphones: 8  $\Omega$  - 1000  $\Omega$  (5 Vemk - 120  $\Omega$ )

### Tuner

- FM Wave range: 87,5 - 108 MHz
- AM Wave range: 522 - 1611 kHz
- LW Wave range: 153 - 279 kHz
- Sensitivity at 75  $\Omega$   
mono, 26 dB signal-to-noise ratio: 1,2  $\mu$ V  
stereo, 46 dB signal-to-noise ratio: 45  $\mu$ V
- Selectivity: 45 dB
- Total harmonic distortion:  $\leq$  0,6 %
- Frequency response: 40 - 15 000 Hz ( $\pm$  3 dB)
- Signal-to-noise ratio: 72 dBA (mono)

### CD player

- Frequency range: 20 - 20 000 Hz
- Signal-to-noise ratio: 89 dB
- Dynamic range: 80 dB
- Channel separation: 80 dB
- Total harmonic distortion: 70 dB
- Conversion: Bitstream

### Cassette deck

- Frequency range  
CrO2 tape (type II): 100 - 12 500 Hz ( $\pm$  5 dB)  
Normal tape (type I): 100 - 12 500 Hz ( $\pm$  5 dB)
- Signal-to-noise ratio (without Dolby NR)  
CrO2 tape (type II): 53 dBA  
Normal tape (type I): 51 dBA
- Wow and flutter:  $\leq$  0,29% DIN

### General

- Dimensions  
Amplifier (w x h x d): 260 x 115 x 312 mm  
Tuner (w x h x d): 260 x 57,5 x 254 mm  
CD player (w x h x d): 260 x 57,5 x 254 mm  
Cassette deck (w x h x d): 260 x 115 x 254 mm  
Speakers (w x h x d): 172,5 x 345 x 254 mm











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