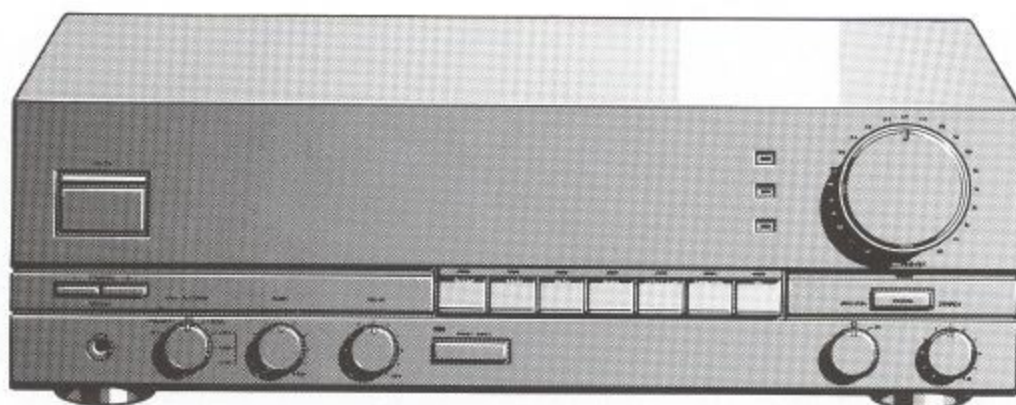




CONSUMER ELECTRONICS

PHILIPS



DFA 888

(GB)

Amplifier

(F)

Amplificateur

(D)

Verstärker

(NL)

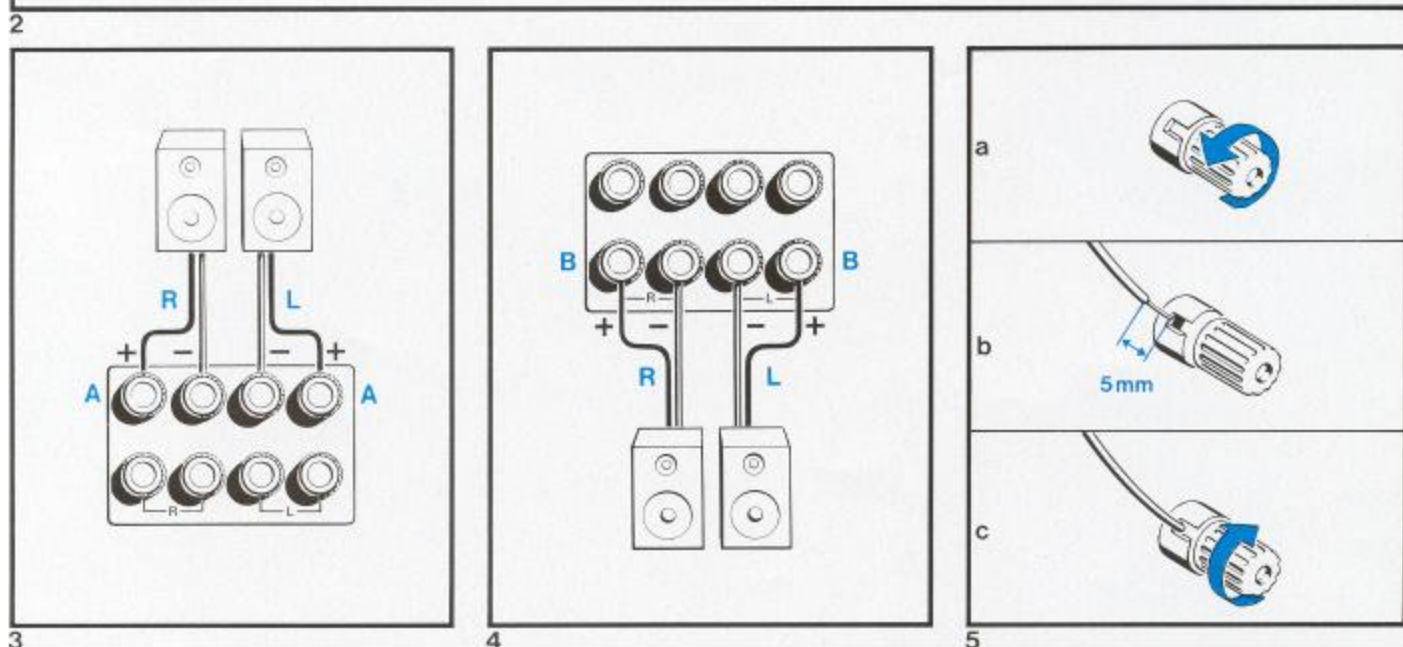
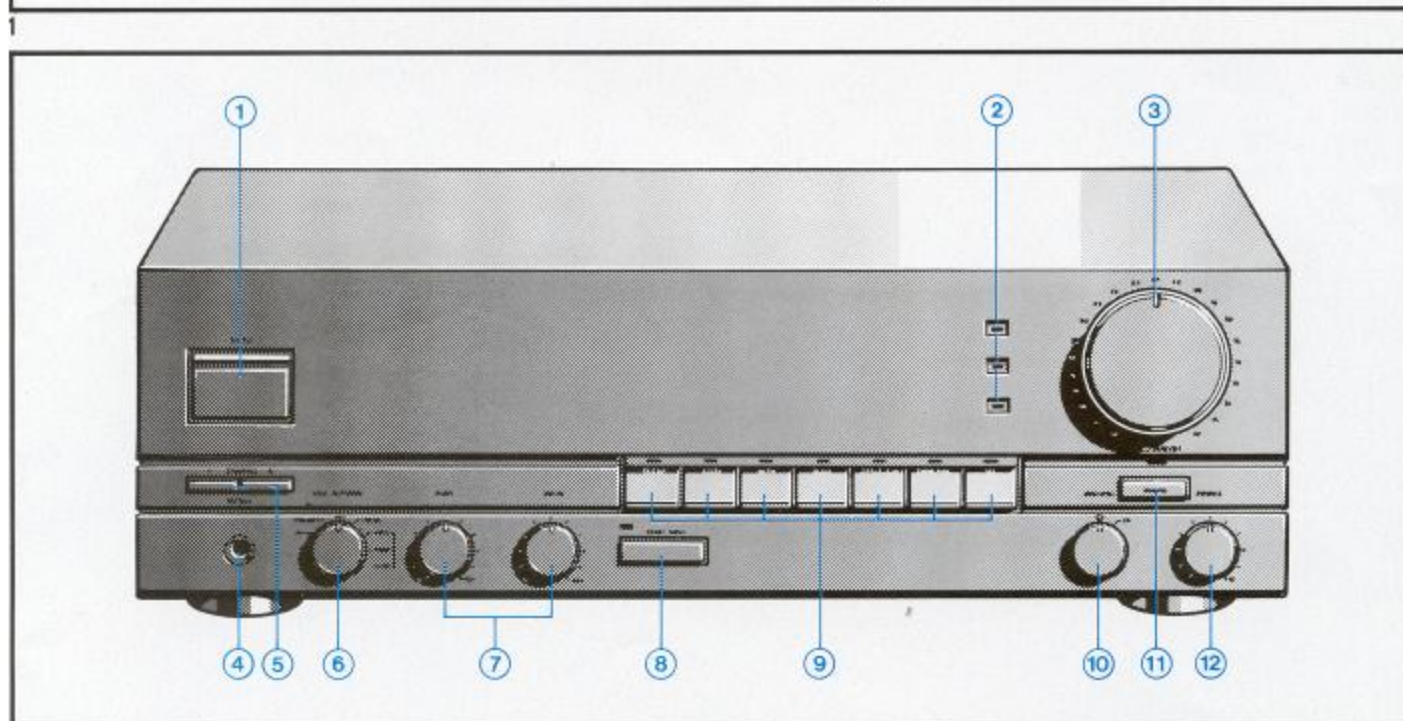
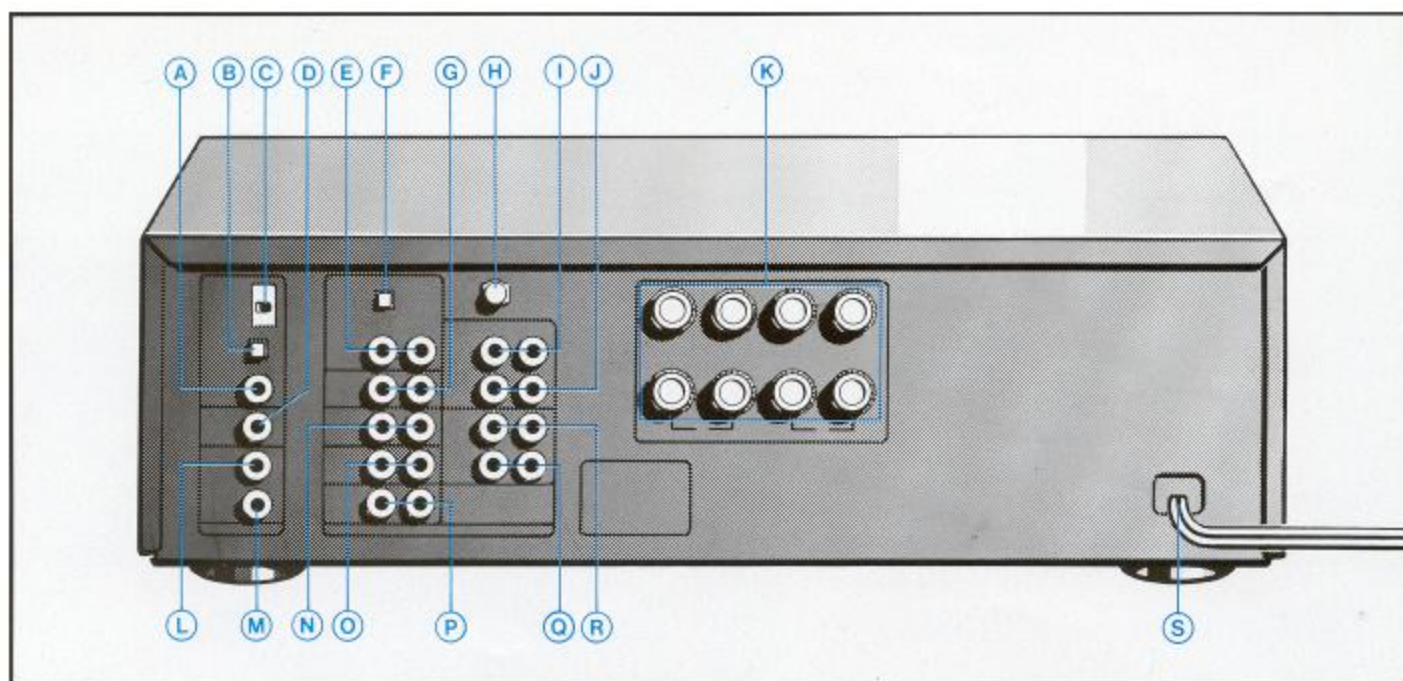
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(E)

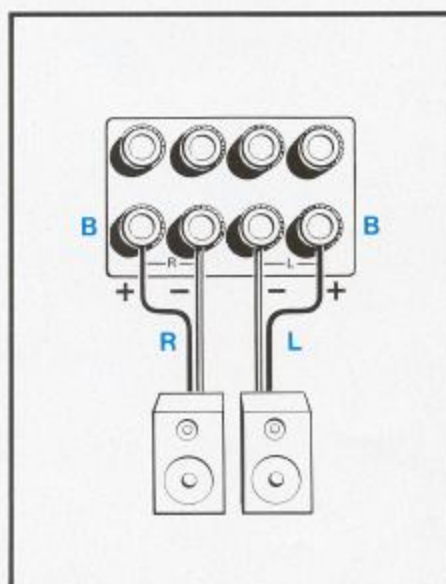
Amplificador

(I)

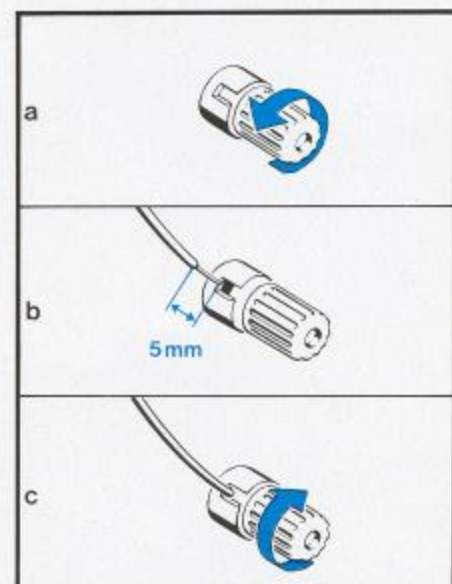
Amplificatore



3



4



5

English

INTRODUCTION

This amplifier represents a new step forwards in digital sound technology.

Because this amplifier incorporates a Digital/Analog converter, it offers a number of facilities which until now have not been available.

The combination of Digital/Analog converter with a high-specification amplifier makes it possible for you to play digital signals from, for example, a Compact Disc, DAT or digital radio transmissions without external interference, such as from electromagnetic waves (radio and TV transmissions), the mains supply and/or other electrical equipment.

The fact that the digital signals enter the amplifier directly eliminates any sort of external interference and in addition to this guarantees absolutely top-quality sound.

The Digital/Analog converter automatically switches to the correct sampling frequency, such as for a digital transmitter (32 kHz), Compact Disc player (44 kHz) and DAT (48 kHz).

The optical input for the Compact Disc player on this amplifier gives a considerable improvement in playback because interference and signal loss are completely eliminated. You are advised to read this operating manual through carefully and you will then quickly become familiar with the facilities this amplifier has to offer.

INSTALLATION

When positioning the amplifier you should bear the following points in mind:

- Do not expose the amplifier to rain or moisture, as this can damage it.
- When in operation every amplifier produces a certain amount of heat, which must be able to dissipate freely. For this reason, do not cover any ventilation openings and ensure that there is sufficient space for ventilation behind, above and around the amplifier.
- Avoid placing the amplifier in direct sunlight or close to a heat source, as this will only create extra heat.
- If your local mains voltage is not the same as that stated on the type plate on the rear of the unit, contact your dealer.

CONNECTIONS

When connecting units to the amplifier the following points must be taken into account:

- Ensure that the amplifier is not switched on.
- Make the connections one by one.
- Check that every connection made is correct and press the plugs firmly into the sockets.
- Always connect sockets or plugs which are white or marked 'L' or 'LEFT' with similarly marked terminal sockets or plugs. Do the same for sockets or plugs which are red or marked 'R' or 'RIGHT'.
- Always connect the 'OUT' outputs of a recorder with the 'PLAY' sockets of the amplifier and the 'IN' inputs of the recorder with the 'REC' sockets of the amplifier.

Figure 1

- (A) 'DIGITAL CD COAX' coaxial socket
For connecting the digital output of a Compact Disc player using a coaxial cable.
- (B) 'OPT/COAX' selection switch
Depending on the digital connection system used when using a CD player, the switch must be in the 'OPT' or 'COAX' position.

Button (B) not pressed: 'COAX' position (connection via the coaxial socket (A))

Button (B) pressed in: 'OPT' position (connection via the glass-fibre socket (C)).

- (C) 'DIGITAL CD OPT' glass-fibre socket
For connection of a digital output of a Compact Disc player using an optical glass-fibre cable.
- (D) 'DIGITAL DBS/AUX' coaxial socket
For connecting by means of a coaxial cable the digital output of a digital satellite tuner (DBS) or the digital output of another unit. (Consult your dealer).
- (E) 'PHONO' terminal sockets
For connecting a record player with an 'MM' (Moving Magnet) or an 'MC' (Moving Coil) cartridge.
Note: These connection sockets are gold-plated in order to minimise the contact resistance between these terminal sockets and the connection cables of the player. In order to maintain the high quality of this connection, you are advised to use connection cables which have gold-plated plugs.
- (F) selection switch for 'MM' or 'MC' record player cartridge.
Depending on the cartridge used, this switch must be in either the 'MM' (Moving Magnet) or 'MC' (Moving Coil) position. See the record player operating instructions.
Button (F) not pressed in: 'MM' position.
Button (F) pressed in: 'MC' position.

- (G) 'CD' terminal sockets
For connecting a Compact Disc player.
Note: See note at (E).
- (H) connection screw for earthing wire of 'GND' record player
For connecting the earthing wire of the record player.
To prevent hum.
- (I) 'TAPE 1 PLAY' terminal sockets
For connecting the line outputs (LINE OUT-) of a 'TAPE 1' recorder.
- (J) 'TAPE 1 REC' terminal sockets
For connecting the line inputs (LINE IN) of a 'TAPE 1' recorder.
- (K) 'SPEAKER SYSTEMS' loudspeaker connection terminals
For connecting loudspeakers. See figs. 3 and 4.
Read also the section 'Loudspeaker connection' under the heading 'GENERAL INFORMATION'.
- (L) 'DIGITAL DAT PLAY' coaxial socket
For connecting the digital output of a DAT recorder using a coaxial cable.
- (M) 'DIGITAL DAT REC' coaxial socket
For connecting the digital input of a DAT recorder using a coaxial cable.
- (N) 'TUNER' terminal sockets
For connecting a tuner.
- (O) 'AUX 1' terminal sockets
For connecting an extra tuner, receiver, CD player, audio output of a TV set, recorder (only for playback) or another unit, with an output level which is suitable for this input. (Consult your dealer).
- (P) 'AUX 2' terminal sockets
For connecting an extra tuner, receiver, CD player, audio output of a TV set, recorder (only for playback) or another unit, with an output level which is suitable for this input. (Consult your dealer).
- (Q) 'DAT/TAPE 2 REC' terminal sockets
For connecting the line inputs (LINE IN) of a DAT or second recorder.
- (R) 'DAT/TAPE 2 PLAY' terminal sockets
For connecting the line outputs (LINE OUT) of a DAT or second recorder.
- (S) mains cable

OPERATING ELEMENTS AND THEIR FUNCTION

Figure 2

- ① 'ON/OFF' switch
Once the 'ON/OFF' switch has been pressed, it will take approximately 7 seconds before the amplifier is fully switched on. This can be heard by the clicking of the loudspeaker relays.
- ② '48 kHz', '44 kHz', '32 kHz' frequency indicators
For indicating the sampling frequency of the selected digital signal source. The amplifier automatically switches to the correct sampling frequency and the corresponding indicator then lights up.
- ③ 'VOLUME' control
Inside the amplifier there are four volume controls, the reason for this being to improve the signal/noise ratio at low volume levels.
- ④ 'PHONES' terminal socket for stereo headphones
For connecting stereo headphones with an impedance of 8-1000 ohms. By releasing the 'SPEAKERS' switches ⑤, it is possible to listen separately through the headphones.
- ⑤ 'SPEAKERS' A and B switches
For switching on and off the loudspeakers, which are connected to the corresponding loudspeaker connections ⑥.
- ⑥ 'REC SELECTOR' recorder selection switch
For transferring the signal from the signal source to be recorded to the terminal sockets ⑦ 'TAPE 1 REC' or ⑧ 'DAT/TAPE 2 REC'.
If no recording is being made, this switch should preferably be in the 'OFF' position.
For copying sound recording tapes from 'TAPE 1' to 'DAT/TAPE 2' and vice versa.
Note: For further information on the use of this switch, see section on 'Use with a recorder' under the heading 'OPERATION'.
- ⑦ 'BASS/TREBLE' controls
Using these controls you can set the base and treble to your own personal preference. The neutral position is '0'.
- ⑧ signal source direct switch with 'SOURCE DIRECT' indicator
If this switch is pressed, the signal from the connected signal source will be channelled directly via the volume control and 'Tone Defeat', with a flat curve, to the final amplifier and the sound will be amplified.
- ⑨ signal source selector switches with 'PHONO', 'AUX 1', 'AUX 2', 'TAPE 1', 'DAT/TAPE 2', 'TUNER/DBS' and 'CD' indicator.
For playback of the selected signal source which is connected to the corresponding terminal sockets.
- ⑩ 'LOUDNESS' correction switch
Switch for extra amplification of the bass and treble at low volume levels.
- ⑪ 'DIGITAL' analog/digital switch with indicator
Depending on the signal source connections to be used, the switch must be in the 'ANALOG' or 'DIGITAL' position.
When switch ⑪ is not pressed: 'ANALOG' position, indicator does not light up. (This is the setting for units connected to the connections ⑫, ⑬, ⑭, ⑮, ⑯, ⑰, ⑱ and ⑲.)
When switch ⑪ is pressed: 'DIGITAL' position, indicator lights up. (This is the setting for units connected to the connections ①, ②, ③, ④ and ⑤.)
- ⑫ 'BALANCE' control
Used to give a balanced adjustment of left and right stereo channels.

OPERATION

Use with the signal source selection switch

1. Ensure that the 'VOLUME' control ③ is not on maximum.

This should preferably be set at a lower position to prevent damage to the loudspeakers.

2. Switch on the amplifier using the 'ON/OFF' switch ①.
The lighting around the volume control ③ and above the 'ON/OFF' switch ① lights up.
3. Switch on the loudspeakers using the 'SPEAKERS' switch-
(es) ⑤.
When button 'A' is pressed: for loudspeakers connected to the loudspeaker connections ⑥ 'system A', see figure 3.
When button 'B' is pressed: for loudspeakers connected to the loudspeaker connections ⑥ 'system B', see figure 4.
4. Switch on the required signal source and prepare this for playback.
5. On the amplifier, press the selection switch ⑨ appropriate for the signal source. The corresponding indicator will light up.
6. If you are using a digital signal source, press 'DIGITAL' switch ⑪. The corresponding indicator will light up.
7. Slowly adjust the volume level using 'VOLUME' control ③.

If you hear nothing and no indicator lights up:

- The amplifier is not switched on.
- The amplifier is not connected to the mains supply.
- There is no power at the mains.

If you hear nothing but an indicator does light up:

- Check selection switch ⑨ is in the correct position.
- Check that the selected sound source is working properly
- Check that the loudspeakers are switched on.
- Check that the volume control is set high enough.
Do not leave it on MAX!
- Check that the loudspeakers are properly connected.
Before checking this, the amplifier must be switched off.

8. Adjust the stereo balance using 'BALANCE' control ⑫.
9. Adjust the bass and treble using the 'BASS/TREBLE' control ⑦.
10. If required, at a low volume level, switch on the loudness using the 'LOUDNESS' correction switch ⑩.

If sound comes from one side only:

- check that the position of the balance control is correct.
- check the connection to the faulty loudspeaker.
- check the connection between the signal source and amplifier.
- if using stereo headphones, push the plug fully into the terminal socket.

If the amplifier hums, buzzes or howls during record playback.

- Check the earthing of the record player.
- Check that the connection plugs are inserted far enough into the terminal sockets.
- Ensure that the connection cable to the record player is as far away as possible from the mains cables (hum) or TV circuits (buzz).
- The amplifier may howl as a result of acoustic feedback from the loudspeakers to the record player. This may occur particularly at high volume levels.
In such a case, change the position of the loudspeakers.

Use with the signal source direct switch

For direct playback from a signal source selected using the signal source selection switch ⑨.

If you use this switch, the signal from the connected signal source will be channelled directly via the volume control and 'Tone Defeat', with a flat curve, to the final amplifier and the sound will be amplified.

The advantage of this is that the sound signal passes through the lowest possible number of circuits and is therefore reproduced most naturally.

Playback

1. Switch on the amplifier using 'ON/OFF' ①.
2. Switch on the loudspeakers using 'SPEAKERS' ⑤.
3. Switch on the required signal source and prepare this for playback.
4. If you are using a digital signal source, press 'DIGITAL' switch ⑪.
The corresponding indicator will light up.
5. On the amplifier press 'SOURCE DIRECT' switch ⑧.

Note:

- If the 'SOURCE DIRECT' switch (8) is pressed:
 - the 'SOURCE DIRECT' indicator lights up.
 - the 'BASS/TREBLE' controls (7) are switched off.
 - A 'SOURCE DIRECT' switch which is pressed in should be released after you have finished, by pressing the switch once more. The indicator will then go out.
6. Slowly adjust the volume using 'VOLUME' control (3).
 7. Adjust the stereo balance using 'BALANCE' control (12).
 8. If required, at a low volume level, switch on the loudness using 'LOUDNESS' correction switch (10). This makes the bass and treble more pronounced at low volume levels.

Use with a DAT and/or recorder

Playback

Playback from a DAT or recorder connected to the terminal sockets (L) and (M), (I) and (J) or (C) and (R) takes place just as from any other sound source, as indicated in steps 4. to 7. under the heading 'Use with the signal source selection switch'.

Recording

A recording can be made in two ways:

- With the 'REC SELECTOR' recorder selection switch (6) in the 'source' position. The same signal will be produced at the terminal sockets (J) and (C) as can be heard through the loudspeakers and/or headphones.

At the same time, switch on a recorder which is connected to the terminal sockets (I) and (J) or (C) and (R) to record.

- With the 'REC SELECTOR' recorder selection switch (6) in the 'CD' or 'TUNER' position. The same signal will then be produced at the terminal sockets (J) and (C) as corresponds to the selected 'REC SELECTOR' position (on condition that the signal source is operative).

At the same time, switch on a recorder connected to the terminal sockets (I) and (J) or (C) and (R) to record.

Note:

- If the recorder used has separate heads for recording and playing back, then it is possible to monitor the recording. For further information see the operating manual of the recorder.
- Operating the bass/treble, volume level, balance control and loudness switch has no effect during the recording.

Listening to a different signal source whilst making a recording

If you make a recording with the 'REC SELECTOR' recorder selection switch (6) in the 'CD' or 'TUNER' position, it is possible to listen to a different signal source.

If you wish to do so, press on the amplifier the selection switch (C) which corresponds to the signal source. The corresponding indicator will light up.

If the recording fails:

An unsuccessful recording may be the result of:

- faulty operation of the signal source to be recorded.
- operation of the 'REC SELECTOR' recorder selection switch (6).
- operation of the 'DIGITAL' switch (1).

Copying tapes

With the 'REC SELECTOR' recorder selection switch (6) in the 'COPY 1 → 2' position, a tape in recorder 1 can be copied onto that in recorder 2.

With the 'REC SELECTOR' recorder selection switch (6) in the 'COPY 2 → 1' position, a tape in recorder 2 can be copied onto a tape in recorder 1.

In the meantime, if required, it is possible to listen to a different signal source.

- Set the 'REC SELECTOR' recorder selection switch (6) to the 'COPY 1 → 2' or 'COPY 2 → 1' position.
- Play back using recorder 1 or 2.
- Record simultaneously using recorder 2 or 1.

GENERAL INFORMATION

Loudspeaker connection

Loudspeakers must be connected in pairs to the 'SPEAKERS' loudspeaker connections (K) (impedance 4 to 16 ohms, if only system A or system B is used or loudspeakers with an impedance of 8 to 16 ohms if system A and system B are used).

In order to do this, the wires of the loudspeaker cables, which should preferably have a minimum diameter of $1\frac{1}{2}$ mm², must be prepared by removing the insulation (+5 mm.) and twisting the core wires. If necessary, remove the loudspeaker plugs to do this. If you prefer not to do this, use suitable adaptor cables.

One of the two wires of a loudspeaker cable or adaptor cable is marked throughout with a special marking. This may be a colour, stripe, rib or other indication.

Bear this distinction in mind!

Connection

1. Ensure that the amplifier is switched off!
2. Determine which group of terminals you will use (e.g. A).
3. Select the loudspeaker to be connected (e.g. the left, 'L'). This will then determine which two wires are to be connected to which two terminals.
4. Insert the marked wire into the red terminal, the non-marked wire into the black terminal (see Figs. 5a, 5b and 5c). Tighten the loudspeaker terminal firmly to limit the contact resistance between the terminal and the wire as far as possible.
5. In exactly the same way, connect the wires of the other loudspeaker (in this case the right, 'R') with the two other terminals (in this case A), i.e. the marked wire in the red terminal, the non-marked wire in the black terminal. If you do not do this, the loudspeakers will not work 'in phase'. The stereo reproduction will then not be correct.
6. If connecting a second pair of loudspeakers, connect these in exactly the same way to the remaining terminals (in this case the B terminal).
7. Check all connections made are correct:
 - Uninsulated wire ends must not touch (short circuit!).
 - The wires must not be loose in the terminals (tighten fully).
8. Ensure that the volume control is not on MAX and only then should you switch on the amplifier.

Positioning the loudspeakers

In order to obtain as good a stereo effect as possible, take some time when positioning your loudspeakers. Because every room has its own limitations, the best positioning can only be obtained by experimenting.

The following rules should be borne in mind:

- Looking from the listener's position, place the loudspeaker connected to the 'L' terminal on the left. Place the loudspeaker connected to the 'R' terminals on the right.
- Try to keep the distance between the two loudspeakers equal to that between each of the loudspeakers and the listener's position.
- Bass reproduction is amplified by placing the loudspeakers on the floor or in a corner.
- Treble reproduction is adversely affected by placing the loudspeakers behind objects (furniture, sunblinds, curtains, etc.).
- Try to keep the arrangement and the positioning height as symmetrical as possible.

Maintenance

The amplifier can be cleaned on the outside using a damp cloth (not wet!). Use only water to dampen the cloth.

TECHNICAL DATA

(Subject to alteration)

- o Power output acc. to FTC
 - at 8 ohm load
 - (20-20.000Hz, D <0.03%): 75 W continuous sine wave
 - at 4 ohm load
 - (20-20.000Hz, D < 0.05%): 90 W continuous sine wave
- o Power output acc. to IEC
 - at 8 ohm load
 - (63-12.500Hz, D <0.3%): 80 W continuous sine wave
- o Power output acc. to DIN
 - (1 kHz, D <0.7%)
 - at 8 ohm load: 85 W continuous sine wave
 - at 4 ohm load: 115 W continuous sine wave
 - at 2 ohm load: 140 W continuous sine wave
- o IHF music power
 - at 8 ohm load: 95 W
 - at 4 ohm load: 140 W
 - at 2 ohm load: 160 W
- Harmonic distortion (1 kHz): 0.01%
- Intermodulation distortion: 0.03%
- o Power bandwidth (– 3 dB): 10-30.000 Hz
- o Frequency response: 20-20.000Hz \pm 0.5 dB
- o S/N ratio: 90 dB (weighted)
- o Channel separation (1 kHz): 70 dB
- o Damping factor at 8 ohms: 80
- o Input sensitivity:
 - Phono MC: 0.25 mV/150 ohm
 - Phono MM: 2,5 mV/47 kohm
 - Compact Disc: 150 mV/20 kohm
 - Tuner: 150 mV/20 kohm
 - Aux 1: 150 mV/20 kohm
 - Aux 2: 150 mV/20 kohm
 - Tape 1: 150 mV/20 kohm
 - DAT/Tape 2: 150 mV/20 kohm
 - Compact Disc optical: 1 x Toslink
 - Compact Disc: 0.5 V p-p/75 Ohm
 - DBS/Aux.: 0.5 V p-p/75 Ohm
 - DAT/Play/Rec: 0.5 V p-p/75 Ohm
- o Outputs:
 - DAT/Tape: 150 mV/550 ohm
 - 2 x 2 loudspeakers: 4-8 ohm
 - Headphones: 8-1000 ohm
- Tone control:
 - bass: \pm 8 dB to – 8 dB at 100 Hz
 - treble: \pm 8 dB to – 8 dB at 10 kHz
- o Loudness: +6 dB at 100 Hz, +4 dB at 10 kHz
- o Balance control: 0-co dB
- o Power consumption: 330 W

This product complies with the radio interference requirements as laid down in EC (European Community) regulations.

Important note for users in UK:

The U.K.-version is not fitted with a mains plug

When fitting a mains plug to the mains lead proceed as follows: The wires in the mains lead are coloured with the following code:

BLUE = NEUTRAL,

BROWN = LIVE.

As these colours may not correspond with the colour markings identifying the terminals in your plug proceed as follows: The Brown wire must be connected to the terminal which is marked with the letter L or coloured Red.

The Blue wire must be connected to the terminal which is marked with the letter N or coloured Black.

Note: This apparatus must be protected by a 3 Amp Fuse if a 13 Amp plug is used or, if any other type of plug is used, by a 5 Amp Fuse either in the plug or adapter or at the distribution board. If in doubt consult a qualified electrician.