Primare A20 Integrated Amplifier User Guide

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Dangerous voltages inside. Do not open the cabinet. There are no user serviceable parts inside. Repairs should be carried out by qualified service personnel only.

FCC Warning: This equipment generates and can radiate radio frequency energy and if not installed and used correctly in accordance with our instructions may cause interference to radio communications or radio and television reception. It has been type-tested and complies with the limits set out in Subpart J, Part 15 of FCC rules for a Class B computing device. These limits are intended to provide reasonable protection against such interference in home installations.

EEC: This product has been designed and type-tested to comply with the limits set out in EN55013 and EN55020.

This guide was produced by Human-Computer Interface Ltd.
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Introduction

Welcome to the Primare A20 Integrated Amplifier! This chapter introduces you to its key features, and explains how you can take advantage of its superb sound as the key component in your hi-fi system.

WELCOME TO THE A20 INTEGRATED AMPLIFIER

The A20 is an integrated preamplifier and power amplifier with extraordinary performance for its price.

High-performance power amplifier

The A20 incorporates a power amplifier providing 70 Watts per channel of superb quality sound.

Flexible inputs

The A20 preamplifier stage provides four inputs, labelled CD, TUNER, LINE 1, and LINE 2, to cater for a flexible range of sources.

Fixed and variable outputs

The currently selected source is provided on two pairs of line-level outputs, for connecting the A20 to other equipment. The TAPE OUT sockets are independent of the position of the volume control, and allow you to connect the A20 to a tape recorder. The PRE OUT sockets are controlled by the volume control, and can be used to connect the A20 to another output stage, or a digital surround processor such as the Primare P30.

Superb technical design

The A20 incorporates a classic circuit design based on J-FET input devices and bipolar output devices, typical of far more expensive equipment, giving high performance and excellent reliability.

Intuitive user interface

In keeping with the philosophy of the Primare range of systems, the A20 can be controlled through a very simple and intuitive set of front panel controls.

Alternatively all the functions of the A20 can be controlled by the C30 Remote Control, along with the other Primare components in your system.

USING THE A20 WITH OTHER PRIMARE PRODUCTS

Although the A20 is flexible enough to work with virtually any other equipment you have in your system, it is ideal for use with the other products in the Primare range, such as the Primare V20 DVD Player, Primare T20 FM Stereo Tuner, or Primare D20 Integrated CD Player. A particular benefit of using the A20 with other Primare sources is that you can control your entire system with a single remote control, to give you a fully integrated system with the simplest possible user interface.

TECHNICAL SPECIFICATION

Output power per channel	2 x 70W into 8Ω, 2 x 110W into 4Ω
Speaker terminals	4 –16Ω
Output impedance	<0.08Ω
DC offset	<5mV
Line inputs	330mV
Tape outputs	300mV
Frequency response	<10Hz – 100kHz, -3dB
THD	0.08% (1kHz, 10V into 8Ω)
Signal-to-noise, line	-98dB (A-weighted)
Power consumption, standby	<16W
Peak current	±20A
Dimensions (WxDxH)	430 x 275 x 95mm
Weight	11kg

Using the A20 Integrated Amplifier

This chapter explains how to operate the A20 Integrated Amplifier, using either the front panel controls or the C30 Remote Control.

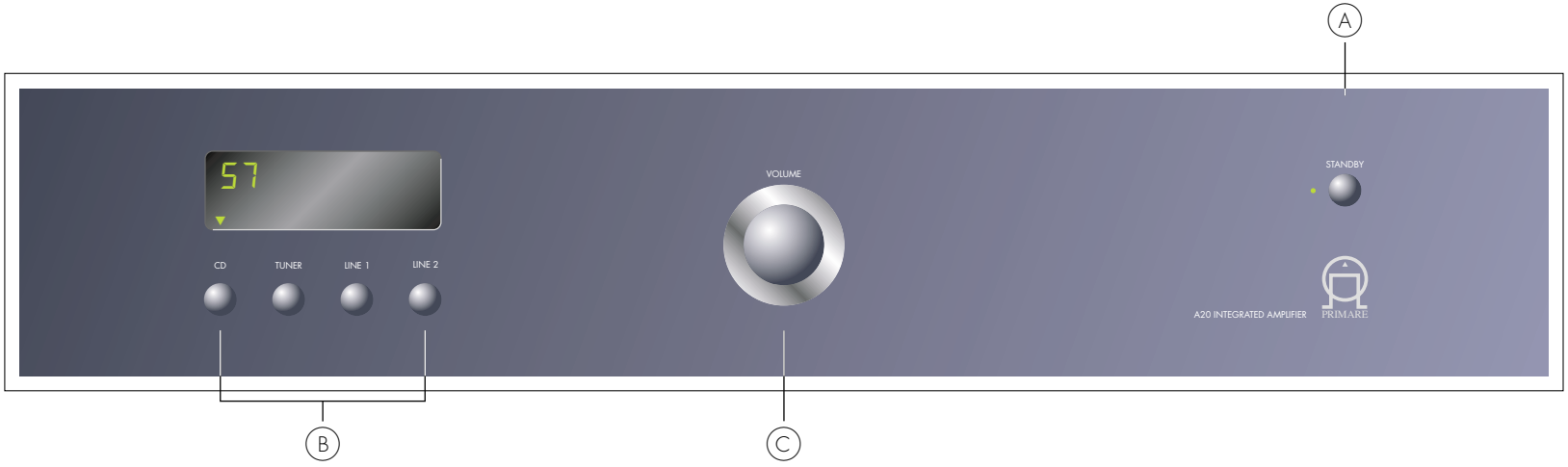
FRONT PANEL CONTROLS

All the functions of the A20 Integrated Amplifier can be accessed using the five front panel push buttons and volume control, and information about its operation is displayed on the front panel display:

(A) The **STANDBY** button switches the A20 to standby, or switches it on from standby.

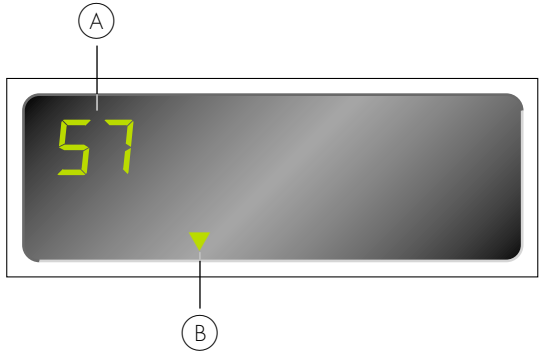
(B) The input selector buttons select one of the four source inputs.

(C) The **VOLUME** control changes the volume.



FRONT PANEL DISPLAY

The following illustration shows the information on the front panel display:



(A) Volume setting.

(B) Currently selected input.

To dim the front panel display

- Press the **DIM** button on the remote control.

The display will dim to show just the currently selected source.

To restore the normal display

- Press the **DIM** button again.

SWITCHING ON AND OFF

To switch on

- Use the switch under the left-hand edge of the front panel.

During normal operation you can leave the A20 switched on and in standby.

To switch to standby

- Press the **STANDBY** button on the front panel or the **STBY** button on the remote control.

To switch on from standby

- Press the **STANDBY** button on the front panel.

Selecting any function with the remote control will also switch on the A20 from standby.

SELECTING A SOURCE

The A20 Integrated Amplifier provides a choice of four line inputs, labelled: CD, TUNER, LINE 1, and LINE 2.

To select a source

- Press the button corresponding to the source you want to select until the name of the source is displayed on the front panel display.

For example:

- Alternatively, press the **SEL ▲** or **SEL ▼** buttons on the C30 Remote Control to step between sources.

CHANGING THE VOLUME

The A20 allows you to vary the volume from 0 (silence) to 79 (maximum volume).

To change the volume

- Rotate the volume control on the front panel, or press the **VOL ▲** or **VOL ▼** buttons on the C30 Remote Control.

The current volume setting is shown on the front panel.

For example:

CHANGING THE BALANCE

You can change the balance of the sound between the left and right channels to shift the position of the stereo image.

To change the balance

- Press the **MENU** button on the C30 Remote Control.

The front panel display shows the current balance setting, where -6 corresponds to the leftmost position, 0 corresponds to centre, and 6 corresponds to the rightmost position.

For example:

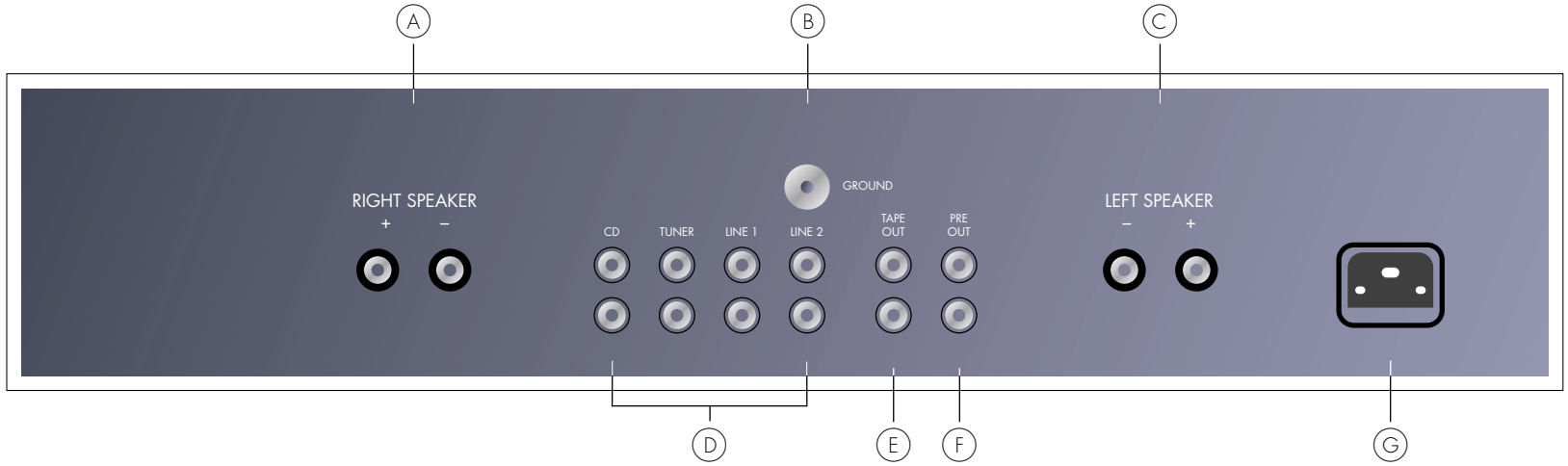
- Press the **VOL ▲** and **VOL ▼** buttons on the remote control to adjust the balance.
- Press the **MENU** button again to revert to the normal volume display.

Alternatively the normal display will revert automatically after four seconds.

Connecting the A20 Integrated Amplifier

This chapter explains how to connect the A20 to the other components in your system, using the connections on the back panel.

BACK PANEL CONNECTIONS



(A) Right loudspeaker outputs.

(B) Ground terminal.

(C) Left loudspeaker outputs

(D) Audio inputs.

(E) Tape outputs.

(F) Preamplifier outputs.

(G) Mains power input and fuse.

POWER CONNECTION

Warning: Before connecting power check that the required supply voltage, indicated on the back panel, corresponds to your local AC supply. If a different voltage is stated on the type plate do not connect the amplifier to the mains power, and seek advice from your dealer.

Connect the mains power using the enclosed mains cable.

Note: Always disconnect the amplifier from the mains power before connecting or disconnecting any of the cables.

OUTPUTS

Loudspeaker outputs

Connect the left and right loudspeakers to the corresponding terminals. The terminals can accept speaker cables terminated with 4mm banana plugs, spade terminals, or bare wires. To connect bare wires unscrew the terminal, pass the bare wire through the hole in the terminal bolt, and clamp the wire in place by screwing the terminal back down.

Preamplifier outputs

The PRE OUT sockets provide a line-level output from the A20 preamplifier stage which can be connected to another preamplifier, such as the Primare P30 Processor. The level of this output is controlled by the volume control on the A20.

The TAPE OUT sockets provide a fixed level copy of the currently selected source, suitable for connecting to a tape recorder.

INPUTS

Source inputs

Connect each source to the appropriate source input, connecting the right channel to the red socket and the left channel to the white socket.

To connect an analogue turntable with a moving magnet or moving coil cartridge you will need an additional phono preamplifier such as the Primare R20. The output of the turntable is connected to the R20, and the output of the R20 should be connected to a spare input on the A20, such as LINE1.

A ground terminal is provided above the inputs sockets to allow you to provide a direct ground connection for sources in order to remove hum loops.

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Primare D20 Compact Disc Player User Guide

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Class 1 Laser Product

The compact disc player is classified as a CLASS 1 LASER product. Use of control adjustments or Performance of procedures other than those specified herein may result in hazardous radiation.

CAUTION – INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCK DEFEATED. AVOID EXPOSURE TO BEAM.

FCC Warning: This equipment generates and can radiate radio frequency energy and if not installed and used correctly in accordance with our instructions may cause interference to radio communications or radio and television reception. It has been type-tested and complies with the limits set out in Subpart J, Part 15 of FCC rules for a Class B computing device. These limits are intended to provide reasonable protection against such interference in home installations.

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Introduction

Welcome to the Primare D20 Compact Disc Player! This chapter introduces you to its key features, and explains how you can use it to achieve superb sound from your CD collection.

WELCOME TO THE D20 COMPACT DISC PLAYER

Every component of the D20, from the CD transport to the audio output stage, has been designed to achieve the highest possible audio performance.

Top of the range Sony transport mechanism

The Primare D20 Compact Disc Player uses an advanced Sony transport mechanism. A precision crystal clock oscillator is used to ensure low jitter, for excellent audio performance.

Precision digital to analogue conversion

Digital to analogue conversion is performed by an integrated 24 bit AKM D/A converter and filter, capable of handling up to 24 bit input data at a 96kHz sampling rate. In addition to providing standard phono audio outputs the D20 includes a gold-plated S/PDIF digital output.

No compromise power supply for the highest possible performance

The Primare D20 Compact Disc Player uses eight separate isolated power supplies for the digital and analogue circuits, for maximum isolation. The result is an extremely high signal to noise ratio, allowing you to take full advantage of the dynamic range possible with CD.

Careful design for mechanical stability

As with all Primare units, the D20 Compact Disc Player is housed in an alloy heavy gauge steel chassis, which provides strength, rigidity, and screening, while being effective at damping vibrations from external sources. The front panel design isolates the display circuitry from the audio circuitry to avoid interference.

Intuitive user interface

In keeping with the philosophy of the Primare range of systems, the D20 can be controlled through a very simple and intuitive interface, designed so that it will not distract you from the pleasure of listening to music on your system.

In fact most of the features of the D20 can be accessed through just six front panel push buttons. The full set of functions, including scan and programming, is available using the remote control supplied with the D20.

Alternatively, all the functions of the D20 can be controlled by the optional C30 remote control, along with the other Primare components in your system.

USING THE D20 WITH OTHER PRIMARE PRODUCTS

Although the D20 Compact Disc Player is flexible enough to work with virtually any other equipment you have in your system, it is ideally suited for use with the Primare A20 or A30.1 Integrated Amplifiers. A particular benefit of using the D20 with a Primare preamplifier is that you can control your entire system with a single remote control, to give you a fully integrated system with the simplest possible user interface.

TECHNICAL SPECIFICATION

Mechanism	**Sony**
D/A Converter + Filter	**24 Bit AKM**
Output Analogue	**1.9 VRMS**
Output Impedance	**100Ω**
Frequency Response	**20Hz – 20kHz (+0/0.4dB)**
Signal to Noise Ratio	**100dBA**
Harmonic Distortion	**<0.01% (20Hz – 20kHz)**
Digital Output	**75Ω coaxial**
Standby	**<10W**
Dimensions	**430 x 275 x 95mm**
Weight	**9kg**

Using the D20 Compact Disc Player

This chapter explains how to operate the D20 Compact Disc Player, using either the front panel controls or the remote control.

FRONT PANEL CONTROLS

The main functions of the D20 Compact Disc Player can be accessed using the six front panel push buttons, and information about its operation is displayed on the front panel display:

(A) The **COMMAND** button plays or pauses the disc. Held down it opens the disc tray.

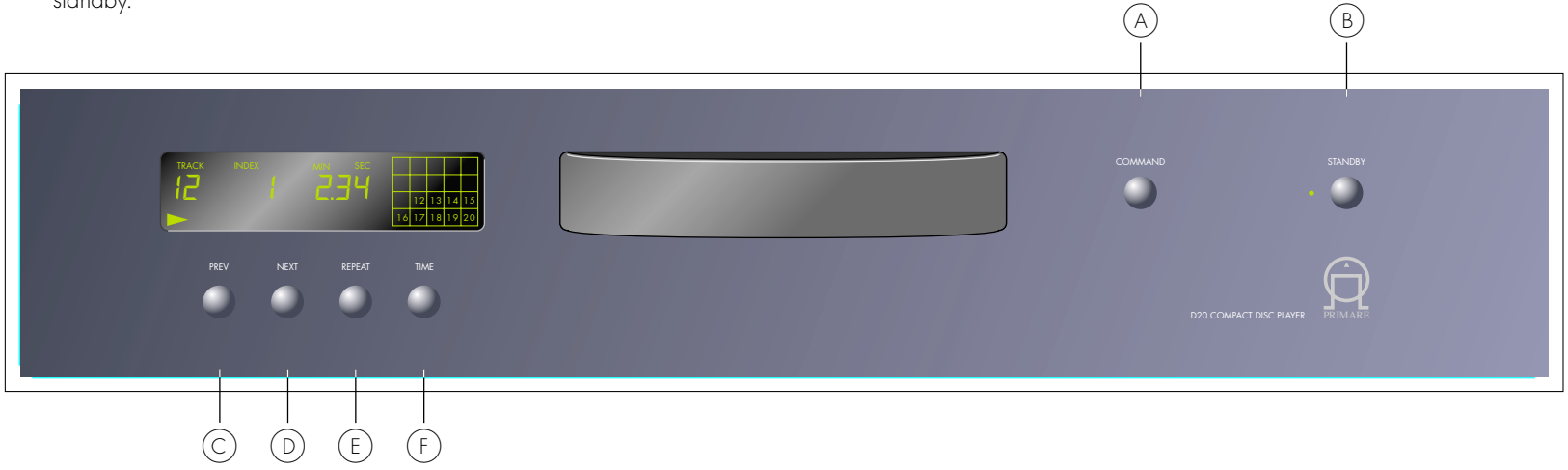
(B) The **STANDBY** button switches the D20 to standby, or brings it out of standby.

(C) The **PREV** button restarts the current track, or steps to the previous track.

(D) The **NEXT** button steps to the next track.

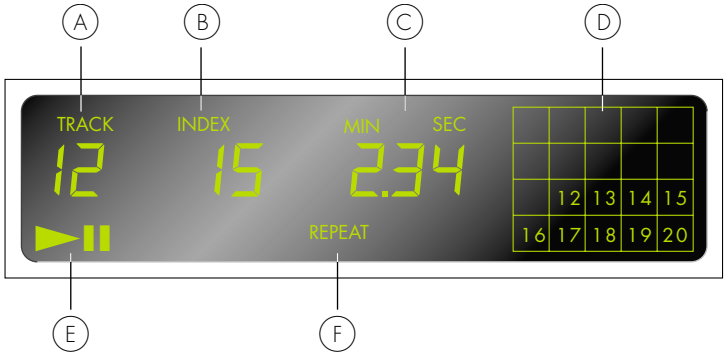
(E) The **REPEAT** button repeats a track, or the entire disc.

(F) The **TIME** button changes the display between track time, remaining track time, or remaining disc time.



FRONT PANEL DISPLAY

The following illustration shows the information on the front panel display:



(A) Current track.

(B) Current index number.

(C) Current track time.

(D) Track list.

(E) Play/pause mode.

(F) Repeat mode.

To dim the front panel display

- Press the **DIM** button on the remote control.

The display will blank.

To restore the front panel display

- Press the **DIM** button again on the remote control.

The display will also be restored briefly if you give any command.

SWITCHING ON AND OFF

To switch on

- Use the switch under the left-hand edge of the front panel.

During normal operation you can leave the D20 switched on and in standby.

To switch to standby

- Press the **STANDBY** button on the front panel or the **STBY** button on the remote control.

To switch on from standby

- Press the **STANDBY** button on the front panel, or any command on the remote control.

PLAYING A DISC

To insert a disc

- Hold down the **COMMAND** button on the front panel, or press the **OPEN** button on the remote control, to open the tray.
- Place the CD in the tray with the label uppermost.
- Press the **COMMAND** button on the front panel or the **OPEN** button on the remote control to close the tray.

If you close the tray using the remote control the front panel display briefly shows the total number of tracks on the disc, and the total duration of the disc.

For example:

To play a disc

- Press the **COMMAND** button on the front panel, or the **PLAY** button on the remote control.

While a disc is playing the front panel display shows the current track number, the current index number, and the time of the current track.

For example:

Note: If the disc does not include index points, the index number will be shown as 1.

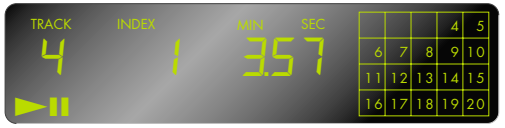
To stop play

- Press the **STOP** button on the remote control.

To pause play

- Press the **COMMAND** button on the front panel or the **PLAY** button on the remote control

The pause indicator will be shown on the front panel display:



You can then resume play by pressing the **COMMAND** button on the front panel or the **PLAY** button on the remote control.

LOCATING A POSITION ON THE DISC

You can step between tracks to locate a particular track on the disc, or you can scan forwards or backwards to locate a position within a track.

To step between tracks

- Press the **PREV** or **NEXT** buttons on the front panel, or the ⏮ or ⏭ buttons on the remote control.

You can hold down the button to step quickly between tracks.

The front panel display shows the number of the track as you step:

When you release the button the current track starts playing from the beginning.

If you step between tracks on a CD while the disc is paused it will wait for you to press the **COMMAND** button on the front panel or the **PLAY** button on the remote control before playing from the track you have selected.

To scan through the disc

- Hold down the ◀◀ or ▶▶ button on the remote control

As you scan, the front panel display shows the current track and position within the track. If the disc includes index points the display also shows the current index number.

- Release the button to start playing from the position you have located.

Advanced use

This chapter explains how to use the more advanced features of the D20 Compact Disc Player which you can access from the remote control.

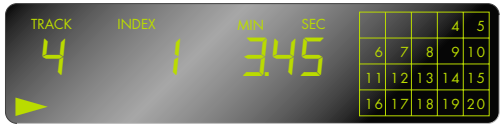
CHANGING THE FRONT PANEL DISPLAY

You can change the front panel time display to show elapsed time for the current track, remaining time for the current track, or remaining time for the entire disc.

To change the time display

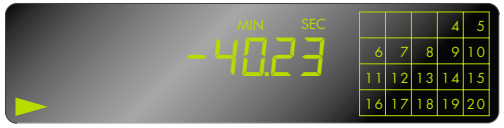
- Press the **TIME** button on the front panel or remote control.

The display switches between the following three options:



Elapsed time for the current track.

Remaining time for the current track.



Remaining time for the entire disc.

REPEATING PLAYBACK

You can choose to repeatedly play back the current track of the CD, or the entire CD. You can also repeatedly play back a section of a CD between two specified positions.

To repeat the entire disc

- Press the **REPEAT** button on the remote control.

The front panel display shows **REPEAT**:

To repeat the current track

- Press the **REPEAT** button twice on the remote control.

The front panel display shows **REPEAT1**:

To repeat a specific section of a disc

- Press the **A/B** button on the remote control at the start of the section you want to repeat.

The front panel display shows **REPEAT A-**:

- Press the A/B button again at the end of the section you want to repeat.

The front panel display shows **REPEAT A-B**:

The compact disc player will then automatically return to the start of the section you have marked and play back repeatedly.

To turn off repeat

- Press the **REPEAT** button again.

The **REPEAT** symbol in the front panel display will be cleared.

PROGRAMMING A SELECTION OF TRACKS

The D20 Compact Disc Player allows you to program a selection of tracks on the current disc. You can then play just the tracks you have selected.

To program a selection of tracks

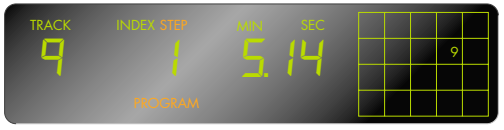
- Press the **MEM** button on the remote control while the disc is stopped.

The front panel display shows **PROGRAM**.

- Use the ⏮ and ⏭ buttons on the remote control to select the first track you want to program.

As you step between tracks the front panel display shows the number of the track you are programming, the number of the step in the program, and the duration of the track.

The track number also flashes in the track list on the right-hand side of the display:



- Press the **MEM** button on the remote control to program the currently selected track.
- Repeat for any other tracks you want to program.
- Press the **MEM** key to exit from programming mode.

The front panel display shows **CONTINUE**, and then reverts to the normal track time display.

To play the selection you have programmed

- Press the **MEM** button on the remote control while the disc is playing.

The front panel display shows **PROGRAM**, and the track list shows the tracks you have programmed:

To revert to playing the entire disc

- Press the **MEM** button on the remote control.

The front panel display shows **CONTINUE**, and the compact disc player reverts to normal playing mode.

Connecting the D20 Compact Disc Player

This chapter explains how to connect the D20 to the other components in your system, using the connections on the back panel.

BACK PANEL CONNECTIONS

(A) Analogue audio output.

(B) Digital S/PDIF output.

(C) Mains power input.

POWER CONNECTION

Warning: Before connecting power check that the required supply voltage, indicated on the back panel, corresponds to your local AC supply. If a different voltage is stated on the type plate do not connect the compact disc player to the mains power, and seek advice from your dealer.

Connect the mains power using the enclosed mains cable.

Note: Always disconnect the compact disc player from the mains power before connecting or disconnecting any of the cables.

AUDIO OUTPUTS

The D20 provides alternative audio outputs.

Analogue output

The analogue output provides stereo phono connections for connection to a conventional stereo preamplifier.

Digital output

The D20 Compact Disc Player provides an S/PDIF digital output for connection to a digital preamplifier or digital surround processor, such as the Primare P30 Processor.

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