

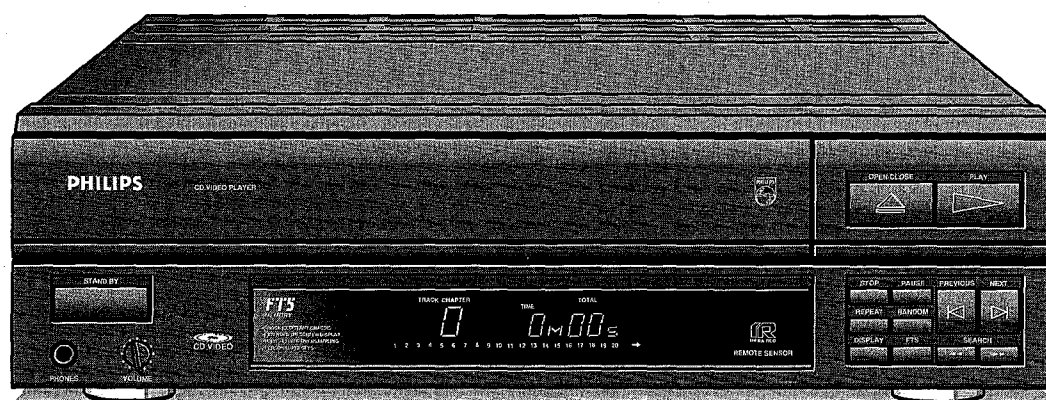


CONSUMER ELECTRONICS

PHILIPS



V15426



CDV 495/CDV 496

OPERATING INSTRUCTIONS

GB

CD Video Player

Introduction

Welcome to CD Video (CDV), the latest application of optical disc technology. CD Video combines the digital audio of the Compact Disc with high-quality analogue video, creating a new audio/video world standard.

CD Video is a logical extension of the CD Digital Audio system, which has already been accepted worldwide as the undisputed sound carrier of the future, and which, since the first Compact Disc players appeared on the market in late 1982, has achieved consumer acceptance faster than any other electronics product.

With this clear preference in mind, the idea of expanding the system to include moving video was the next logical step.

The result was the development of CD Video players, able to handle both audio and video discs.

This manual tells you everything you need to know about installing, operating and programming your CD Video player. Study it carefully, and keep it near your player for reference when needed.

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Unpacking

The following accessories are provided with this CD Video player:

- A power supply lead.
- An A/V Euro cable (not with all versions).
- A 75 ohm RF antenna cable.
- An audio cable.
- A remote control unit type RV 5914.
- Batteries for the remote control.
- A sheet of 'FTS' stickers.

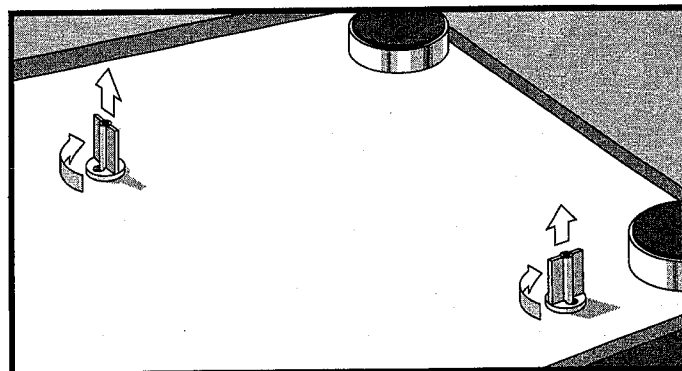
Make sure that all these accessories are removed from the box. Remove all packing materials from the player and accessories.

Checking the power supply

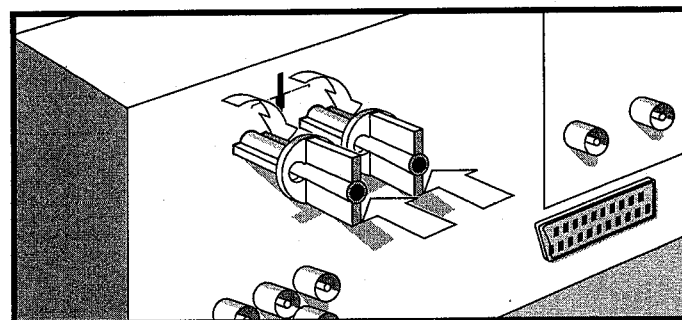
- Check that the type plate on the rear of your player indicates the correct supply voltage.
- If your mains supply voltage is different, consult your dealer or our Service Organisation.

Removing the transit clamps

The two red transit clamps on the bottom lock the play mechanism to protect it during transportation.



- Turn the player upside down.
- Turn the clamps clockwise and remove them from the player.



- Store them in the recesses provided at the rear of the player. If you want to transport the player, the transit clamps must be refitted. See 'Transporting the player' under 'ADDITIONAL INFORMATION'.

Siting the player

This player can equally well be sited free-standing as in an audio/video rack, or it can be stacked with other audio/video components.

Free-standing

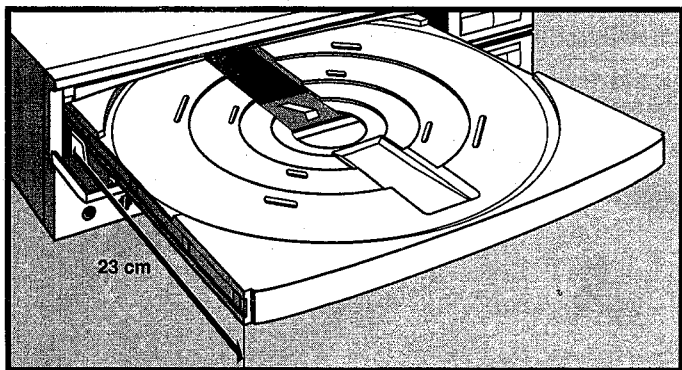
- Always position the player horizontally on a flat, firm surface.
- When installed in a cabinet, allow a free space of at least 3 cm above the player for good heat dissipation.

In an audio/video rack or stacked

- Site the player at the bottom, and preferably not directly underneath the tuner.

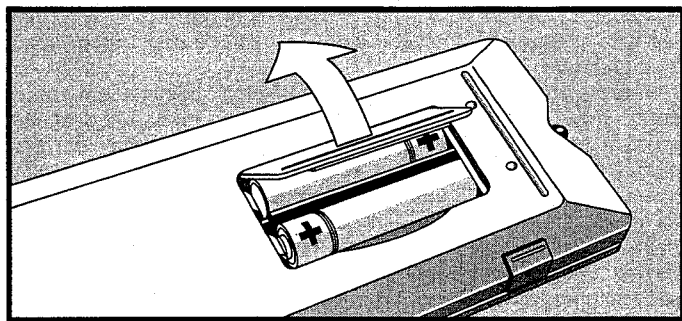
Please note!

- Never stand the player in persistent direct sunlight or near any heat source.
- Always position the player so that it can receive the signals from the remote control handset directly and without obstruction.



- When open, the tray extends 23 cm in front of the player. There must therefore be adequate room in front of the player for it to open fully and without obstruction.

Inserting and replacing the batteries in the remote control handset



- Open the battery compartment.
- Insert the two batteries according to the diagram in the compartment.
- Replace the cover.

The life of the batteries is around one year. Remove them when they are flat or when you are not intending to use the remote control handset for some time. In this way you will prevent damage to the handset by possible battery leakage.

For replacement only use batteries of the type R03, UM4 or AAA.

At the back of the player you will find the following connection sockets:

- 'REMOTE SYSTEM OUT/IN'
- 'VIDEO'
- 'DIGITAL OUT'
- 'AUDIO L/R'
- 'ANT.-IN'
- 'TV.-OUT'
- 'A/V EUROCONNECTOR'
- 'MAINS'

A 6.3 mm stereo headphone socket is located on the front panel ('PHONES').

The connection facilities are designed to ensure that you can always get the best possible CD Video sound and pictures via your audio and video equipment.

You get an optimal combination of picture and sound reproduction when you connect the player to a HiFi stereo TV via, if desired, an audio/video tuner-amplifier. A single connection between the Euroconnectors of the two equipments using an A/V Eurocable is all that is needed then.

If your TV does not have a HiFi stereo sound amplifier, use it for picture reproduction only, and for **sound reproduction** connect the player to a HiFi stereo (pre)amplifier or the Philips DAC 960 Digital-to-Analogue Converter.

Depending on the connection facilities on your TV, you can connect the player for **picture reproduction** to the:

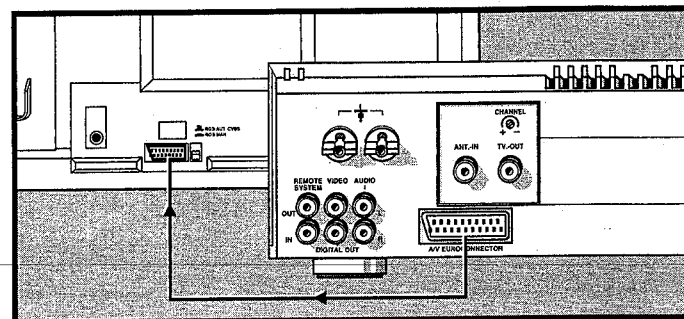
- Euroconnector ('RGB')
- Euroconnector ('CVBS')
- 'CVBS' cinch socket
- Antenna socket (via a video recorder if required)

Notes:

- If you use the Euroconnector socket or TV antenna socket, sound is also reproduced through the TV set. In this case, therefore, if you are using the TV for picture reproduction only, turn the TV sound off.
- For preference, position the loudspeakers used to reproduce the sound on either side of the TV for realistic stereo reproduction.

Video connections

Connection to TV Euroconnector ('RGB') socket

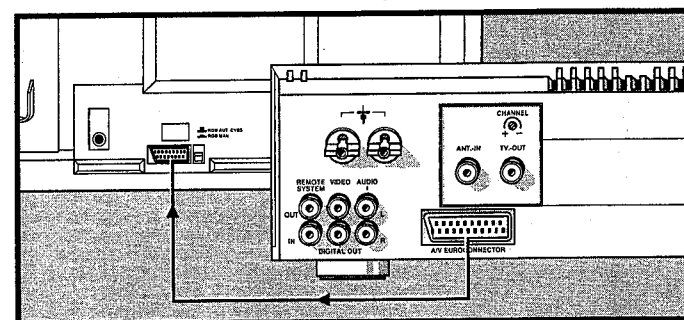


Connect the 'A/V EUROCONNECTORS' of the TV and the player using the Eurocable supplied.

If no Eurocable is supplied, you can obtain one from your dealer under type number SBC 1010.

With this method of connection, if you change over to TV reception during disc play, it may happen that you receive no TV picture or see a bad picture, still from the disc. In this case, you should always first set the CD Video player in the 'stand by' condition, or get your dealer to modify the TV Euroconnector and the Eurocable.

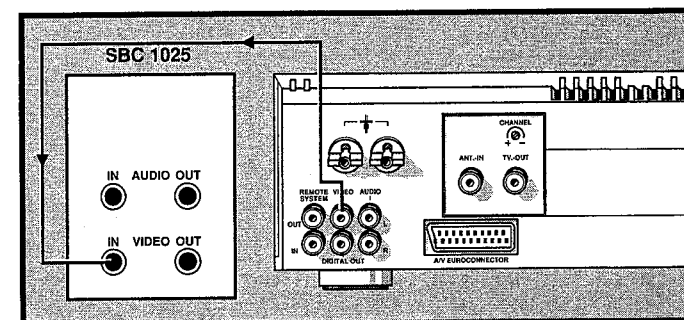
Connection to TV Euroconnector ('CVBS') socket



Connect the 'A/V EUROCONNECTORS' of the TV and the player using the Eurocable supplied.

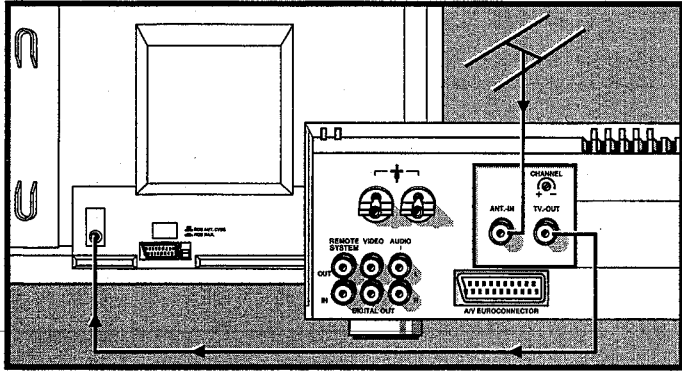
If no Eurocable is supplied, you can obtain one from your dealer under type number SBC 1035.

Connection to TV Cinch ('CVBS') socket

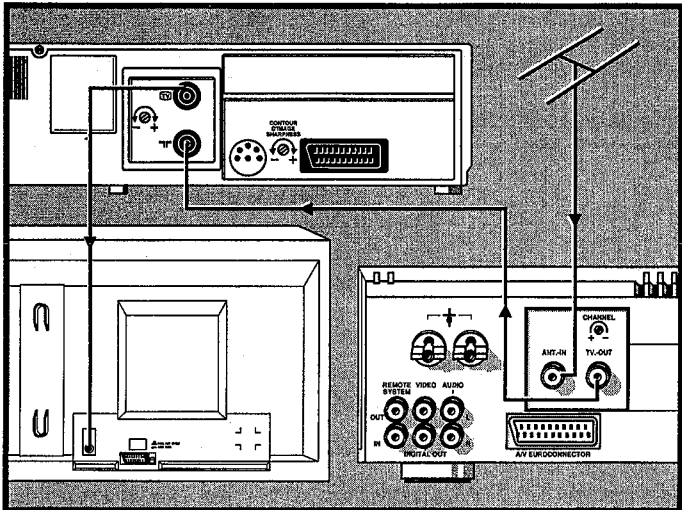


Connect the 'CVBS' cinch input on the TV to the 'VIDEO' output of the player. The necessary cable can be obtained from your dealer under type number SBC 1025.

Connection to TV or video recorder antenna socket



Remove the TV antenna plug from the TV or the video recorder and plug it into the 'ANT.-IN' socket of the player. Using the antenna cable supplied, connect the 'TV-OUT' socket of the player to the TV or video recorder antenna socket. In some cases, suitable adapters may be required; these can be obtained from your dealer.

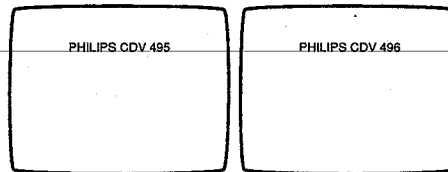


Now your player must always remain connected to mains power to avoid a loss in TV broadcast picture quality, which would result if power were removed from the antenna loop-through amplifier in the player. This would result in a reduction of signal strength.

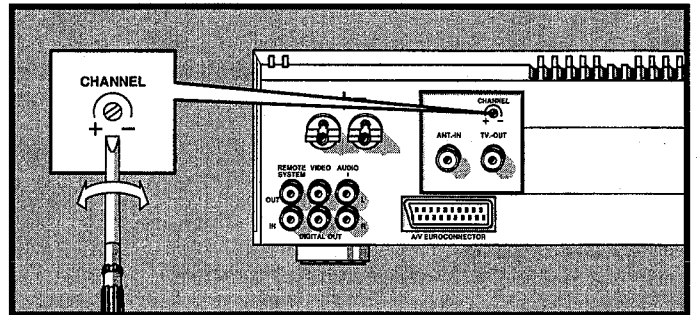
Tuning the TV when using the antenna input

The player is tuned to channel 36. After it is connected to the TV or video recorder antenna input, you must therefore tune your TV to channel 36 to receive the CD Video player signal. If necessary, refer also to the operating instructions of your TV.

- Connect the player to the mains supply (see 'Connecting to the mains').
- Switch on the player by pressing the 'STOP' key.
- Switch on your TV, and tune to channel 36. When your TV is properly tuned the type number of your player, preceded by PHILIPS, appears on a red TV screen:



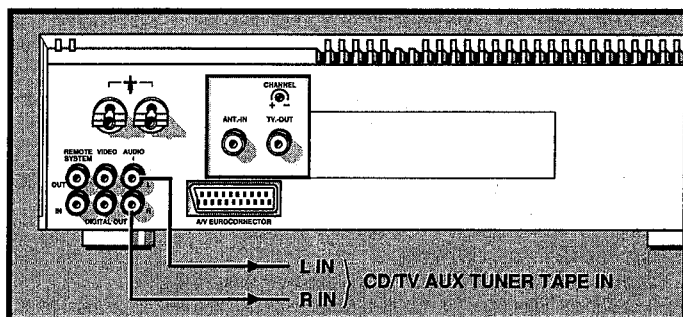
- Switch the player back to the 'stand by' condition by pressing the 'STAND BY' key.



Note - If you are using a VCR tuned to channel 36, the player must be retuned by means of the small 'CHANNEL' screw. Using a small screwdriver, turn this screw just a few degrees to retune to channel 38, or until a good picture is obtained from another chosen channel of the TV.

Audio connections

Connection to a (pre)amplifier

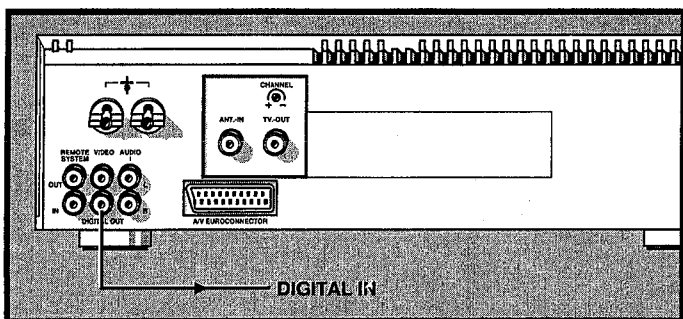


Use the audio cable supplied to connect the 'AUDIO L' and 'AUDIO R' sockets on the player to the corresponding 'CD/TV' or 'AUX' sockets on your (pre)amplifier.

You can also use the 'TUNER' or 'TAPE IN' connection, but **never** the 'PHONO' input! This latter is not suitable for the connection of a CD Video player.

Make sure that the code marking on the plugs and sockets correspond with each other.

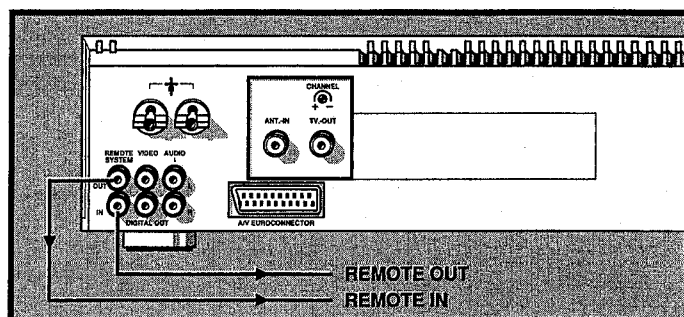
Connection to digital equipment



Via the 'DIGITAL OUT' bus, you can connect the player to a (pre)amplifier with digital input, or to the Philips DAC 960 Digital-to-Analogue Converter.

Using another remote control receiver

From an audio/video system

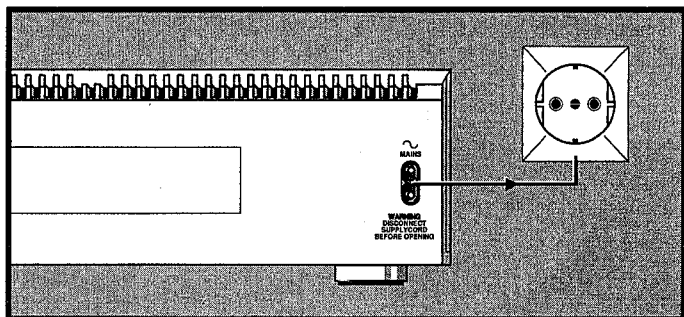


If you have an audio/video system with 'RC5' remote control, you can also control the player via the remote control receiver of that system by connecting the 'REMOTE SYSTEM OUT/IN' buses of the player to those of the system. Consult also the user guide for the system.

From a separate remote control receiver

If the location of the player - for example in a cabinet - makes reception of the remote control signals difficult, you can also connect a separate remote control receiver and locate it at a suitable place. Such a receiver is available as an accessory under type number EM 2200, and should be connected to the 'REMOTE SYSTEM IN' bus on the player.

Connecting to the mains



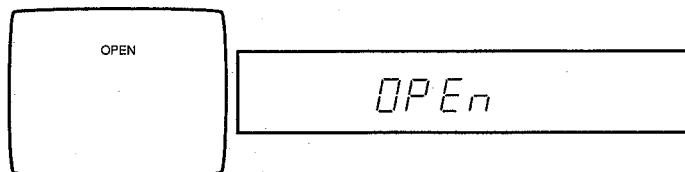
Connect the socket end of the mains lead to the 'MAINS' connector on the player, and the mains plug into a wall socket. As an indication that the player is in the 'stand by' condition, 'StAndby' appears briefly on the display, after which the LED 'I/O' lights.

In this mode, only the remote control receiver and antenna amplifier are powered; the rest of the player is switched off. If you wish to switch the player off completely, then you must disconnect the mains plug from the wall socket.

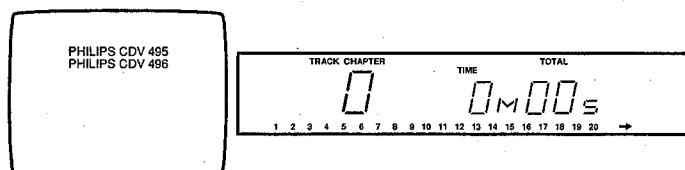
GETTING STARTED: PLAYING A DISC

Notwithstanding its many features, this CD Video player is designed for easy operation. To demonstrate this, now that the player is installed and connected, you can use the front panel keys to play a complete disc.

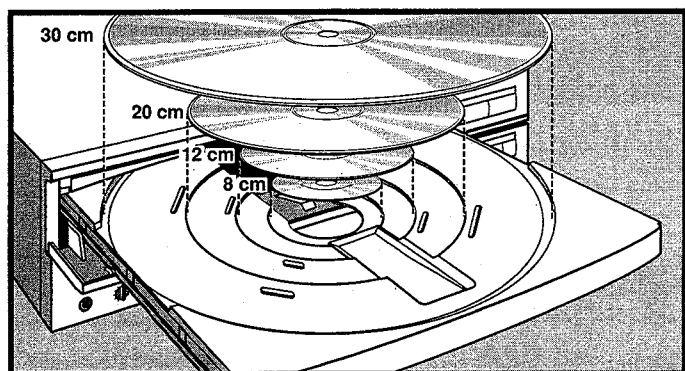
- Switch on your TV and select the desired channel.
- If used, switch on your amplifier too, and select the 'CDV' input.
- Press the 'OPEN/CLOSE' key to switch on the player and open the disc tray. The TV screen turns red and while the tray is sliding outwards you will see on the TV screen and on the display:



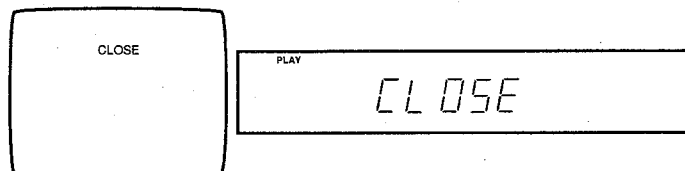
As soon as the tray is fully open the TV screen shows the type number of your player, preceded by PHILIPS, and on the display you see:



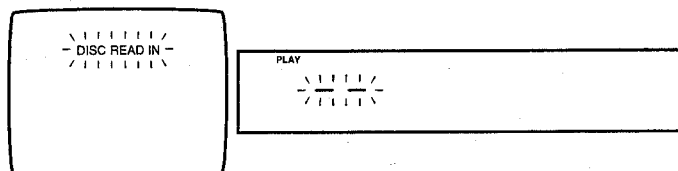
- Place your disc in the appropriate recess in the disc tray with the title **uppermost**. (In the case of double-sided CD Video and LaserVision discs, the title of the side you want to play must also be uppermost.)



- Press the 'PLAY' key (or push on the front of the tray). The tray slides inwards automatically; meanwhile the TV screen and display show:



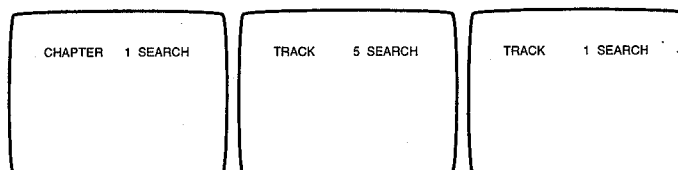
As soon as the tray is closed, the player starts up. The TV screen and display show that the disc is being read in:



At the moment the type of disc is recognized, the TV screen changes colour:

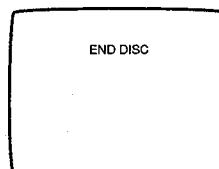
- green for CD Video and LaserVision discs
- blue for CD Video Singles
- black for Compact Discs and Compact Disc Singles

At the same time the TV screen shows that the player is searching for the start of the disc, e.g.:

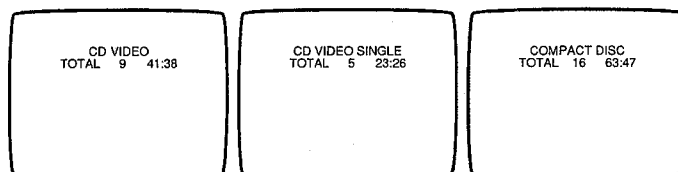


When that is found, play begins and you get both picture and sound (except of course, for Compact Disc; the screen then remains black, but shows the track number, index number and elapsed playing time of the track being played).

At the end of the disc, play stops automatically. The TV screen reverts to the colour corresponding to the type of disc and briefly displays:

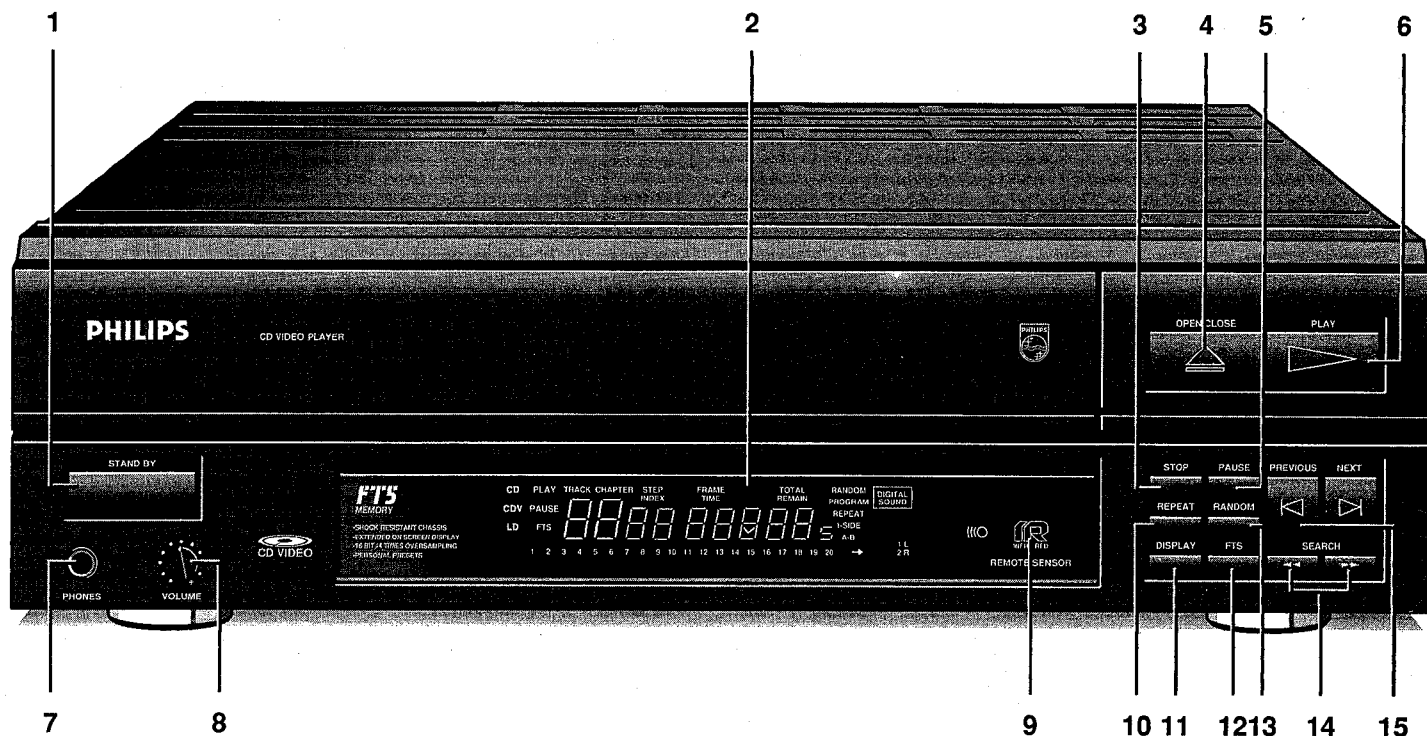


After that, the type of disc you have played remains visible on the screen, e.g.:



To remove the disc from the tray you press 'OPEN/CLOSE'. Use this key also to close the empty tray.

Note - If you do not wish to wait for the end of the disc, you can stop it with 'OPEN/CLOSE'. The tray then opens as soon as the disc has stopped.



Before you go any further with trying out the other facilities of the player, it is advisable to get to know the functions of the controls, the display and the messages on the TV screen.

First, the controls on the front of the player are described, and then the keys of the remote control. An explanation of the player's display, and the messages that appear on the TV screen, then follows.

Front panel controls

1 'STAND BY'

For switching the player to the 'stand by' condition from any operating condition.

2 Display

Provides information about the operation of the player.

3 'STOP'

For stopping play without removing the disc from the tray.

4 'OPEN/CLOSE'

For opening and closing the tray. Also for stopping the play of a disc when you want to remove it from the tray.

5 'PAUSE'

For short play interruptions and holding play at the start of a chapter, track or passage.

6 'PLAY'

For starting play and returning to the beginning of a chapter or track.

7 'PHONES'

For connecting a headphone.

8 'VOLUME'

For adjusting the sound level when listening with a headphone connected to the 'PHONES' socket.

9 'IR REMOTE SENSOR'

For receiving the signals from the remote control.

10 'REPEAT'

For repeating a chapter, track, disc or programme.

11 'DISPLAY'

For selecting the information that you want to see on the player display or the TV screen. This information depends on the type of disc.

12 'FTS'

For storing and recalling favourite selections.

13 'RANDOM'

For playing of all the chapters or tracks of a disc or programme in a random order determined by the CD Video player.

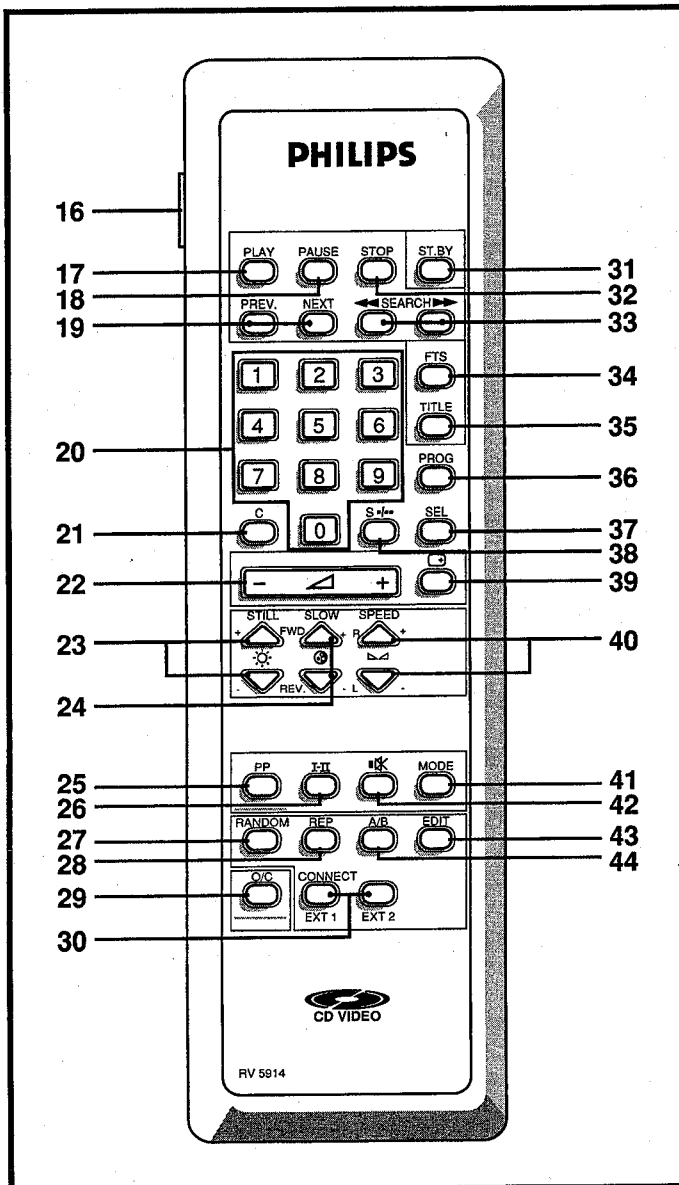
14 '<< SEARCH >>'

For searching for a particular passage, either backwards ('<<') or forwards ('>>').

15 'PREVIOUS' and 'NEXT'

For returning to a preceding chapter or track ('PREVIOUS'), and going on to a following one ('NEXT').

Note - The player is switched on automatically when you press 'OPEN/CLOSE', 'PLAY', 'STOP', 'PAUSE', 'PREVIOUS', 'NEXT' or 'RANDOM'.



TV functions

You can use two of the below-listed TV functions directly, but for the others you must **hold down** the TV function key (16) while you press the desired key. In so far as there is a yellow symbol near the key, you then get the function indicated by the symbol.

Direct use

22 '— / +'

For adjusting the sound level.

42 'M'

For switching the sound off and back on (audio mute)

Use in conjunction with the TV function key

20 Numeric keys '1-0'

For selecting programme or preset numbers.

23 '+ / -'

For adjusting picture brilliance.

24 '+ / -'

For adjusting colour saturation.

25 'PP' (PERSONAL PREFERENCE)

For selecting your personal preference setting of picture and sound.

26 'I-II'

For selecting a language with bilingual broadcasts.

30 'CONNECT EXT 1 EXT 2'

For selecting a video source connected to one of the Euroconnectors of the TV.

31 'ST.BY'

For putting the TV in the 'stand by' condition.

38 '1-0'

For keying in one or two digit programme or preset numbers.

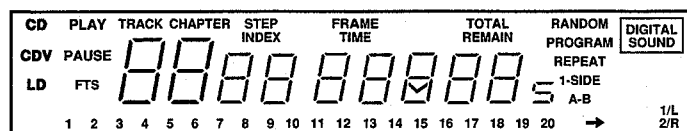
39 'O/C'

For switching the 'OSD' (On Screen Display) on and off.

40 'R / L'

For adjusting the balance.

Indications on the display



The following indications are a fixed part of the display, but become visible only when activated:

'CD'

A Compact Disc is being or has been played.

'CDV'

A CD Video disc or a CD Video Single is being or has been played.

'LD'

A LaserVision disc is being or has been played.

'PLAY'

A disc or programme is being played.

'PAUSE'

The player is in the pause condition.

'FTS'

Flashes during the storage and recall of favourite selections and when a favourite selection from a disc is registered in the 'FTS' memory. Lights continuously when a favourite selection is being played.

'TRACK'

Flashes during track search on a Compact Disc or CD Video Single. Lights continuously during the play of a track.

'CHAPTER'

Flashes during chapter search on a CD Video or LaserVision disc. Lights continuously during the play of a chapter.

'STEP'

Shows the number of chapters or tracks in a programme.

'INDEX'

Indicates index numbers.

'FRAME'

Shows that the frame numbers of an Active Play disc are being displayed.

'TIME'

Shows that the elapsed time of a chapter or track is being displayed.

'REMAIN'

The remaining playing time of a chapter or track on a disc with a table of contents is being displayed.

'REMAIN TOTAL'

The remaining playing time of a disc with a table of contents is being displayed.

'TOTAL'

The total number of chapters or tracks and the total playing time of a disc with a table of contents are being displayed.

'RANDOM'

A disc or programme is being played in a random order determined by the CD Video player.

'PROGRAM'

Flashes during the compiling of a programme. Lights continuously during the playing thereof.

'REPEAT'

A chapter or track is being repeated.

'REPEAT 1-SIDE'

A disc or programme is being repeated.

'A-B'

Flashes when the starting point (A) of a passage to be continuously repeated is set. Lights continuously when the ending point (B) is also set.

'DIGITAL SOUND'

Indicates that digitally recorded sound is being reproduced.

Number indicator '1-20'

Indicates the number of chapters or tracks on a disc with a table of contents.

'=>'

The disc contains more than 20 chapters or tracks.

'1/L'

The left sound channel of a bilingual disc is being played.

'2/R'

The right sound channel of a bilingual disc is being played.

'(IO)'

The LED in this symbol lights up briefly when a signal is received from the remote control handset.

The following indications are not a fixed part of the display, but are formed as required from the digits which normally show the chapter or track number and the playing time.

'OPEN'

The tray is opening.

'CLOSE'

The tray is closing.

'_ _'

Flashes when the player is started and reads in the disc.

'disc X'

Sequential number of a disc in the permanent 'FTS' and title memory.

'SPEC'

An optical disc that cannot be played is in the tray.

'm' and 's'

Indicate that the playing time is displayed in minutes and seconds.

'P 0mXXs'

A pause of a given number of seconds between two chapters or tracks is being counted down.

'Er'

You have given a command that cannot be carried out.

'Er CAV'

You have selected a function that can only be carried out with an Active Play disc.

'STOP'

Play is being stopped.

'StAndby'

The player is going into the 'stand by' condition.

Note - Besides the above, the display can form a number of indications that appear only when certain functions are used. They are mentioned, therefore, in the descriptions of those functions.

Messages on the TV screen

All player functions are accompanied by messages on the TV screen. A number of general messages as well as those that correspond with the display indications are given below. Messages that appear only when certain functions are used are mentioned in the description of those functions.

'PHILIPS CDV 495 or CDV 496' on a red TV screen

The player is switched on but not yet started.

'OPEN'

The tray is opening.

'CLOSE'

The tray is closing.

'DISC READ IN'

The player has been started and is reading in the disc.

'NO DISC'

There is no disc in the tray, or a Compact Disc or a CD Video Single is upside-down.

'INCORRECT DISC' (CDV 495 only)

A LaserVision disc is in the tray. Only the pictures of this can be played.

'NTSC DISC'

An NTSC-type CD Video Single is in the tray. Only the audio part of this can be played.

'SPECIAL'

An optical disc that cannot be played is in the tray.

'DISC NUMBER X'

Sequential number of a disc in the permanent 'FTS' and title memory.

Green TV screen

A CD Video or LaserVision disc is being played.

Blue TV screen

A CD Video Single is being played.

Black TV screen

A Compact Disc is being played.

'CHAPTER X SEARCH'

The player is searching for chapter X of a CD Video or LaserVision disc.

'TRACK X SEARCH'

The player is searching for track X of a Compact Disc or CD Video Single.

'FRAME X SEARCH'

The player is searching for frame X of an Active Play disc.

'XX XX XX:XX'

Number, index number and elapsed playing time in minutes and seconds of a chapter or track on a disc with a table of contents.

'XX XX:XX'

Chapter number and elapsed playing time of the complete disc in minutes and seconds for a Linear Play disc without a table of contents.

'XXm'

Elapsed playing time of the complete disc in minutes and seconds for a Linear Play disc not divided into chapters.

'XX XXXXX'

Chapter number and frame number of an Active Play disc.

'REMAIN XX:XX'

Remaining playing time in minutes and seconds of a chapter or track on a disc with a table of contents.

'REM TOT XX XX:XX'

Remaining number of chapters or tracks and remaining playing time in minutes and seconds of a disc with a table of contents.

'TOTAL XX XX:XX'

Total number of chapters or tracks and total playing time in minutes and seconds of a disc with a table of contents.

'END DISC'

The end of the disc has been reached.

'CD VIDEO TOTAL XX XX:XX'

A CD Video disc with a table of contents has been played.

'CD VIDEO' on a green TV screen

A CD Video disc without a table of contents has been played.

'LASERVISION DISC' on a green TV screen

A LaserVision disc has been played.

'CD VIDEO SINGLE TOTAL XX XX:XX'

A CD Video Single has been played.

'COMPACT DISC TOTAL XX XX:XX'

A Compact Disc has been played.

'1/L-CH'

The left sound channel of a bilingual disc is being played.

'2/R-CH'

The right sound channel of a bilingual disc is being played.

'STEREO'

Both sound channels of a bilingual disc are being played.

'OUT OF RANGE'

You have selected a chapter number, track number, frame number or time that is not present on the disc.

'NOT POSSIBLE'

You have given a command that cannot be carried out.

'CAV ONLY'

You have selected a function that can only be carried out with an Active Play disc.

'CLIP ONLY'

You have selected a function that can only be carried out with a CD Video Single.

'A REPEAT'

The starting point (A) of a passage to be continuously repeated is set.

'REPEAT SEARCH'

The laser is returning to the starting point of a passage to be continuously repeated.

'CHAPTER REPEAT'

A chapter of a CD Video or LaserVision disc is being repeated.

'TRACK REPEAT'

A track of a Compact Disc or a CD Video Single is being repeated.

'SIDE REPEAT'

A disc or programme is being repeated.

'RANDOM SEARCH'

The player itself is selecting the next chapter or track at random.

'PAUSE'

The player is in the pause condition.

'STOP'

Play is being stopped.

'PROGRAM'

The player is in the programming mode.

'FTS'

Flashes during the storage and recall of favourite selections and when a favourite selection from a disc is registered in the 'FTS' memory. Lights continuously when a favourite selection is being played.

'RC'

Appears briefly when a signal is received from the remote control handset.

'STANDBY'

The player is going into the 'stand by' condition.

OPERATION

Types of disc

You can play all optical discs mentioned below on this CD Video player.

All the instructions given apply to the playing of all types of disc. If they differ for a particular type, this is stated separately.

CD Video and LaserVision discs

CD Video discs contain video pictures with CD Digital Audio sound in stereo or 2-channels. LaserVision discs also contain video pictures, but with mono, stereo or analogue sound.

CD Video and LaserVision EP discs are 20 cm in diameter and play on one or two sides. Each side has a maximum playing time of 20 minutes.

CD Video and LaserVision LP discs measure 30 cm in diameter and also play on one side or two sides. The maximum playing time of each side is 60 minutes.

CD Video discs and LaserVision discs are both of either Linear Play-(CLV) or Active Play(CAV) type. Both types are usually divided into numbered chapters that each contain a distinct section of the disc and are indicated on the TV screen and the display by 'CHAPTER'. On Active Play discs, each picture frame is also numbered, making them individually accessible and offering a number of extra facilities. The maximum playing time of these discs is 36 minutes per side.

Note - The CDV 495 can play the pictures, but not the sound, of LaserVision discs. If you load such a disc in the player, the TV screen briefly shows 'INCORRECT DISC'. You then know that you need not expect sound.

CD Video Singles

CD Video Singles are 12 cm in diameter and play on one side only. They consist of two parts. The outer part contains video pictures with CD Digital Audio sound in stereo or 2-channels and has a maximum playing time of 6 minutes. On the inner part are CD Digital Audio tracks in stereo with a total playing time of 20 minutes maximum. Both the video part and the audio tracks are indicated on the TV screen and the display by 'TRACK'.

Compact Discs and Compact Disc Singles

Compact Discs are 12 cm in diameter and contain a maximum of 74 minutes of CD Digital Audio sound in stereo.

Compact Disc Singles measure 8 cm in diameter and have a maximum playing time of 20 minutes.

Both types play on one side only. The numbered tracks that they contain are indicated on the TV screen and the display by 'TRACK'. If you are not using the TV for sound reproduction, it is not necessary to switch it on when playing these discs because the display gives sufficient information for the majority of functions. This is not the case if you want to programme the disc, or use the functions described in 'FURTHER FEATURES OFFERED BY THE PLAYER'. In these situations, the information on the TV screen is essential.

Disc table of contents

On all types of disc a 'table of contents' is recorded:

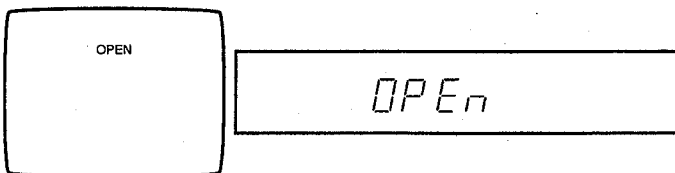
- the chapter or track numbers;
- any subdivision of chapters or tracks by index numbers;
- the playing time of each chapter or track;
- the durations of any pauses between chapters or tracks;
- the total playing time of the disc.

This table of contents is always first read in and recorded in the player memory so that, among other things, the above-mentioned information can be supplied to the TV screen and the display.

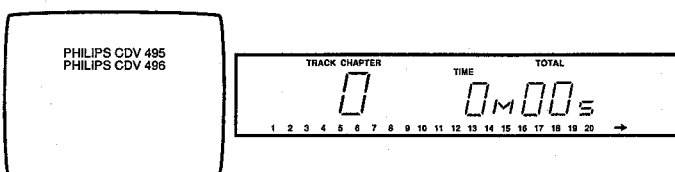
Note - On LaserVision discs and on some CD Video discs there is no (complete) table of contents, with the result that less information, or information of another type, is provided, and certain functions cannot be used.

Switching on the player/opening the tray

Switch on the player and open the tray by pressing 'OPEN/CLOSE'. The LED 'I/O' goes out, and while the tray slides open you see, on a red TV screen and on the display:



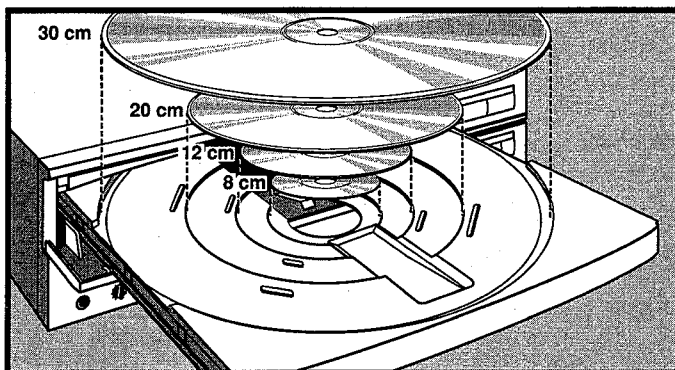
As soon as the tray is fully open the TV screen shows the type number of your player, preceded by PHILIPS, and on the display you see:



Loading and unloading the tray

Loading

- Take the disc carefully from its holder, holding it by the edge and, still holding it in the same way, lay it in the appropriate recess in the tray.



Compact Discs, Compact Disc Singles and CD Video Singles must always lie with the **title side up**. For CD Video and LaserVision discs, the **title of the side you want to play must face upwards**.

Take care when loading Compact Disc Singles; they are so small that it is possible for them to fall through the slot in the tray.

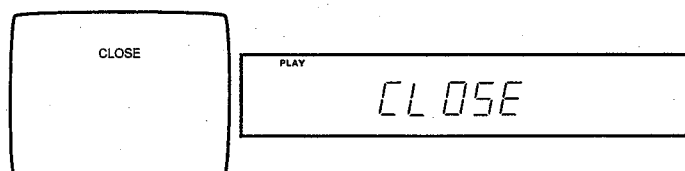
- Close the tray as given under the function that you want to use.

Unloading

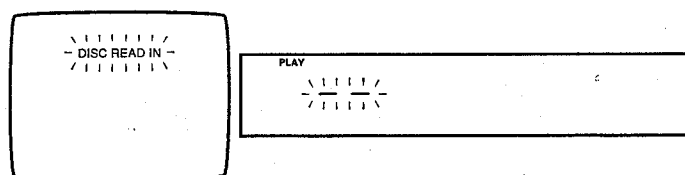
- Open the tray with 'OPEN/CLOSE'.
 - Take hold of the disc as for loading.
 - Return it immediately to its holder; this prevents any dust or damage.
 - Close the tray with 'OPEN/CLOSE'.
- Do not leave the tray open unnecessarily to prevent it from getting dusty.

Playing the complete disc

Close the tray by pressing 'PLAY' or by briefly pushing the front of the tray. While the tray closes you see on the TV screen and on the display:



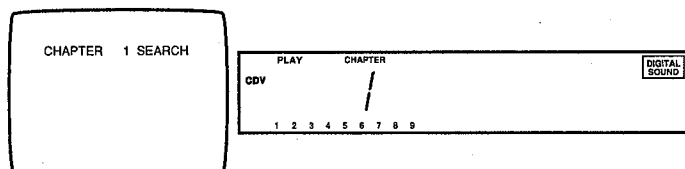
As soon as the tray is closed, the player reads in the disc. The TV screen and the display show:



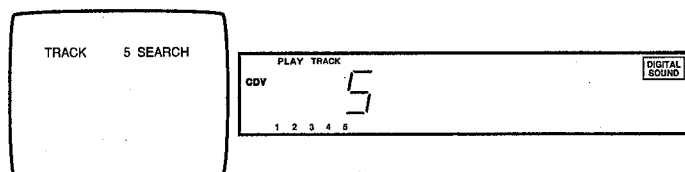
When the disc has been read in, the red TV screen changes to:

- green for CD Video and LaserVision discs
 - blue for CD Video Singles
 - black for Compact Discs and Compact Disc Singles
- and on the display, 'CDV', 'CD' or 'LD' light. For discs with digital sound the indication 'DIGITAL SOUND' lights at the same time. In addition the number indicator '1-20' shows how many chapters or tracks a disc with a table of contents contains. The player searches for the beginning of the disc, and this is indicated on the TV screen and the display.

With **CD Video Linear Play discs** you see:

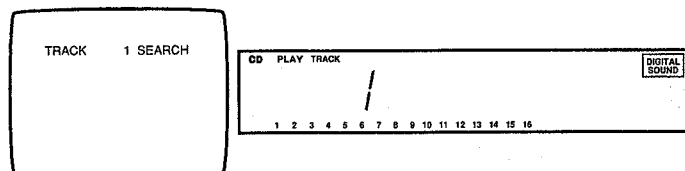


With **CD Video Singles** you see e.g.:

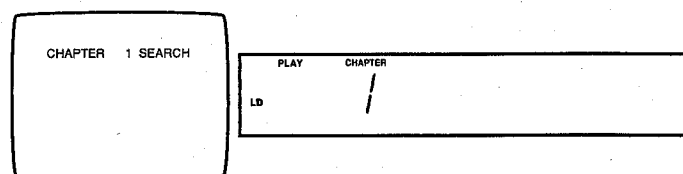


Note - The video part of a CD Video Single is always played first; therefore you see the number of the video track first.

With **Compact Discs** and **Compact Disc Singles** you see:

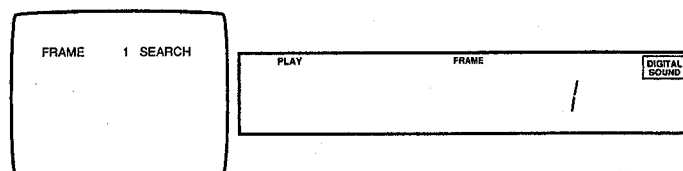


With **LaserVision Linear Play discs** you see:

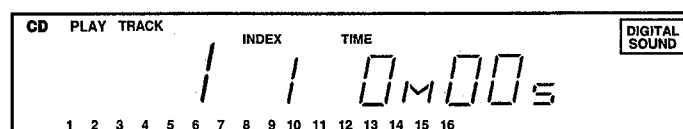
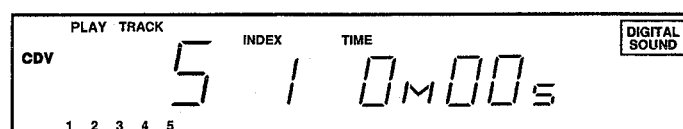
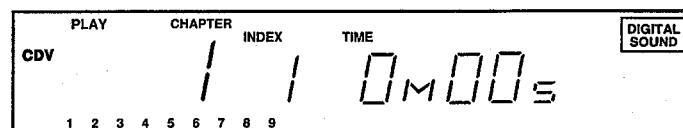


Note - For discs **not** divided into chapters the '1' is replaced by '0'.

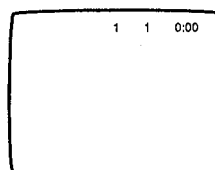
With **Active Play discs** you see:



Play begins as soon as the index number and elapsed playing time of the first chapter or track, or of the video part of a CD Video Single appear on the display:



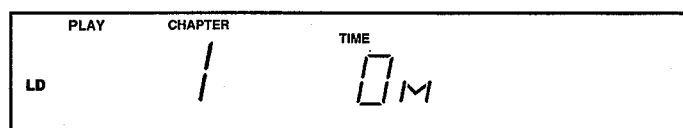
With **Compact Discs** and **Compact Disc Singles**, and the audio part of CD Video Singles, the track and index number and the playing time also appear on the TV screen:



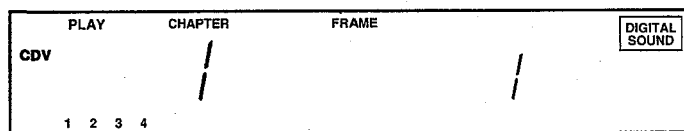
Notes:

- The index number only changes if a chapter or track is subdivided into indexes.
- With **CD Video Linear Play discs not having a table of contents**, no index numbers are displayed.

With **LaserVision Linear Play discs** you see no index number and play begins as soon as the playing time of the complete disc appears.



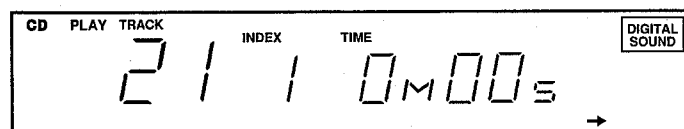
With **Active Play discs** you do not see the index number and playing time, but the frame number:



Each time that a chapter or track finishes, its number goes out on the number indicator '1-20' and the number and elapsed playing time of the next chapter or track appear. If there is a pause between two chapters or tracks, the index number gives way to a 'P' and the pause is first counted off in seconds.

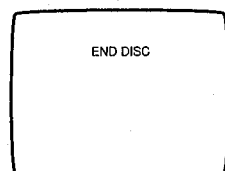
Note - With **CD Video Linear Play discs not having a table of contents** and with **LaserVision discs**, the elapsed playing time displayed is not for the chapter, but for the complete disc.

If a disc with more than 20 chapters or tracks is played, the '⇒' indicator stays lit after the twentieth finishes to show that there are still a number of chapters or tracks to follow:

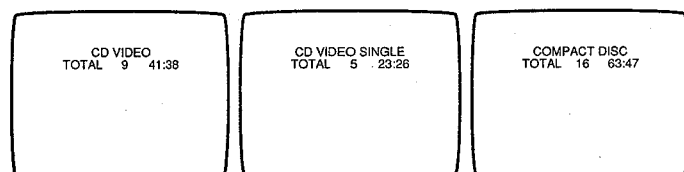


The picture numbers on **Active Play discs** do not start again from '1' at the beginning of each chapter, but simply carry on.

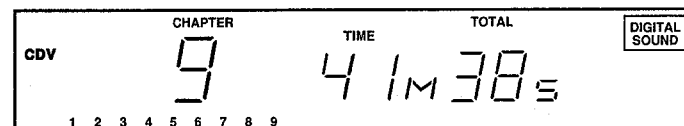
At the end of the disc, the TV screen shows 'END DISC' on the appropriate background colour and the disc is stopped.



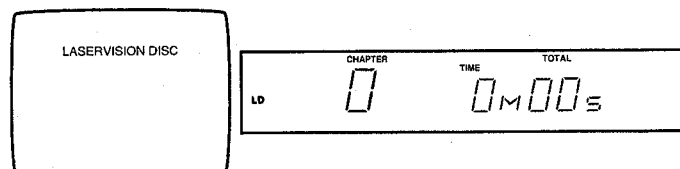
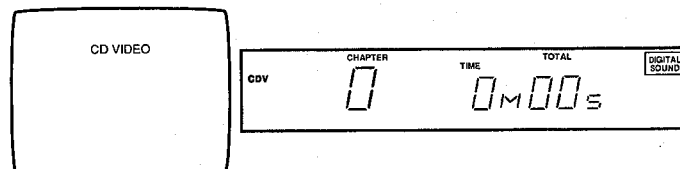
The TV screen then shows the type of disc you have played, along with the total number of chapters or tracks and total playing time, e.g.:



The total number of chapters or tracks and the total playing time are also shown on the display, e.g.:



With **CD Video discs not having a table of contents** and with **LaserVision discs**, the TV screen and the display show:

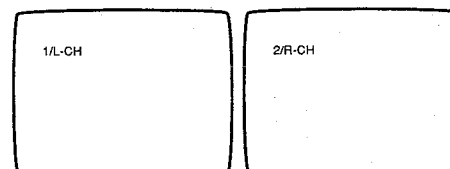


Selecting sound track 2 with bilingual discs

With a bilingual disc or a bilingual video part on a CD Video Single, the player automatically selects sound track 1 (the left channel). After disc read-in, this is shown by the lighting of the '1/L' indication on the display.

To listen to sound track 2 (the right channel) you must use the 'I-II' key.

● Press 'I-II' as soon as play begins. '1/L-CH' then appears for about 2 seconds on the TV screen.



● While '1/L-CH' is visible, press 'I-II' again. Now the TV screen shows '2/R-CH' for about 2 seconds, the '2/R' indication lights on the display and you can hear sound track 2.

Notes:

- If the '1/L-CH' indication disappears before you are able to select, pressing 'I-II' once is sufficient to bring it back.
- Press 'I-II' once also if you want to check on the TV screen which sound track is being played.
- To change sound tracks between times, press 'I-II' until the indication for the other track appears on the TV screen and the display.
- With a CD Video Single the player switches automatically over to stereo when the video part is finished; with a CD Video or a LaserVision disc this happens when you open the tray. The '1/L' or '2/R' indication then goes out.
- If, in making a recording, you also want to record both tracks, you must press 'I-II' until 'STEREO' appears on the TV screen.

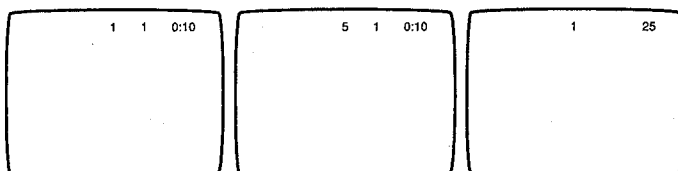
Changing the playing time information on the display/ extending the information on the TV screen

With the 'DISPLAY' key you can bring up the chapter or track number and playing time information, supplied by the display during play of a CD Video or LaserVision disc or the video part of a CD Video Single, on the TV screen too. In addition, for all discs with a table of contents, you can display the remaining playing time of each chapter or track or the number of remaining chapters or tracks and the remaining playing time of the disc with this key. In the last case, the TV screen display is extended into a review screen with extra information.

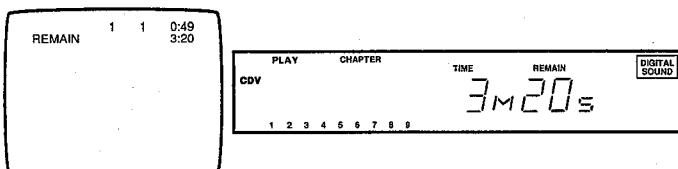
The number of times that you need to use 'DISPLAY' to get the desired information depends on the type of disc.

CD Video and LaserVision discs or the video part of CD Video Singles

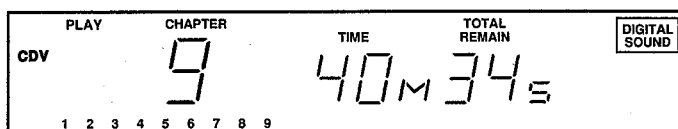
- Press 'DISPLAY' if you want to see the chapter or track number, index number and elapsed playing time of the chapter or track in play also on the TV screen. With Active Play discs, frame numbers are displayed instead of the index number and playing time. E.g.:



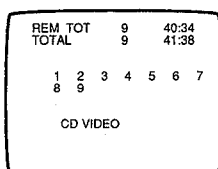
- Press 'DISPLAY' again if you want to know the remaining playing time of each chapter or track. With the prefix 'REMAIN', this is added to the information on the TV screen. On the display, as 'TIME REMAIN', it replaces the elapsed playing time or the frame numbers, while the chapter or track and index numbers disappear. E.g.:



- Press 'DISPLAY' for the third time if you want to have the number of remaining chapters or tracks and the remaining playing time of the disc displayed. On the display the 'TOTAL' indication also lights and moreover you see e.g.:



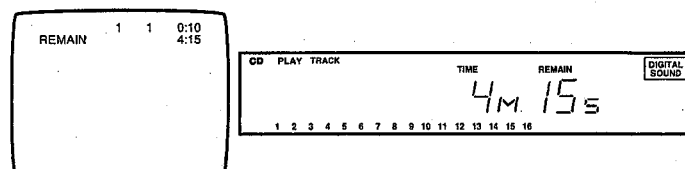
In a review the TV screen shows not only the number of remaining chapters or tracks and the remaining playing time of the disc after 'REM TOT', but also the total number of tracks and total playing time after 'TOTAL'. At the same time a number indicator shows the numbers of the remaining chapters or tracks and the type of disc is displayed. E.g.:



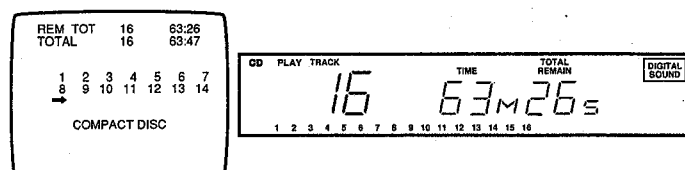
To remove the review from the TV screen press 'DISPLAY' a fourth time. The original number and playing time information then reappear on the display.

Compact Discs or the audio part of CD Video Singles

In this case, the track and index numbers and the elapsed playing time are already displayed on the TV screen. After pressing 'DISPLAY' once, therefore, the remaining playing time of each track appears, e.g.:



Pressing 'DISPLAY' again brings up the review on the TV screen and the number of remaining tracks and the remaining playing time of the disc on the display, e.g.:



Pressing 'DISPLAY' for the third time is sufficient to bring the original information back on the TV screen and the display.

Notes:

- The number indicator on the TV screen can show a maximum of 14 numbers spread over two rows. If more numbers remain, this is indicated by an arrow. This is displayed all the time there is no room for these numbers also to be shown.
- The first number of the number indicator is always yellow to show that this is the number of the chapter or track in play.
- The review screen also shows that a particular function, such as 'A-B', 'REPEAT', 'RANDOM', 'PROGRAM', 'FTS' or 'EDIT', is being used. Except with 'A-B' and 'REPEAT', the two uppermost rows then disappear from the screen. If a disc has an 'FTS' sequence number or a title that you have given it, the screen shows this too.
- The particular playing time indication selected for the video part of a CD Video Single remains operative for the audio part.
- With CD Video discs **not having** a table of contents and with LaserVision discs you can only display the chapter number and elapsed playing time of the disc, or the frame numbers, on the screen. When 'DISPLAY' is pressed a second time, this indication disappears and the TV screen shows only 'CD VIDEO' or 'LASERVISION DISC' together with any function being used. When 'DISPLAY' is pressed a third time, this information also disappears.

Replaying a chapter or track

You can re-start a chapter or track that is already playing by pressing 'PLAY'. Until play re-starts, the playing time or frame number disappears from the display, and the TV screen shows the number together with 'CHAPTER SEARCH' or 'TRACK SEARCH'.

Moving to another chapter or track

Any time during play you can select another chapter or track with the numeric keys '1-0' or the 'NEXT' or 'PREVIOUS' keys.

- With the numeric keys '1-0', key in the desired chapter or track number. This appears on the TV screen and on the display.

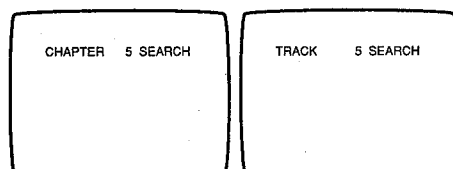
Or:

- Hold the 'NEXT' key pressed until the number of the desired following chapter or track appears.

Or:

- Hold the 'PREVIOUS' key pressed until the number of the desired previous chapter or track appears.

After 1 sec the laser will have moved to the selected number. Until it is reached, 'CHAPTER' or 'TRACK' flashes on the display and the TV screen shows the number together with 'CHAPTER SEARCH' or 'TRACK SEARCH', e.g.:



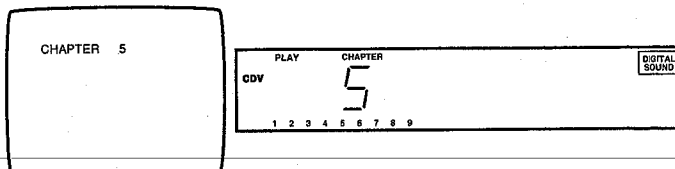
Notes:

- You can take any chapter or track number incorrectly selected by the numeric keys back off the TV screen and the display by pressing 'C', provided that 'SEARCH' has not yet appeared on the TV screen. The laser does not then move.
- If, with the numeric keys, you have selected a chapter or track number that does not appear on the disc, then in the case of a disc **with** a table of contents 'OUT OF RANGE' immediately appears on the TV screen, and 'Er' on the display; the laser does not move. In the case of a disc **without** a table of contents it does move, and the error messages appear only after the number has been searched for in vain; play then re-starts shortly before the end of the disc.

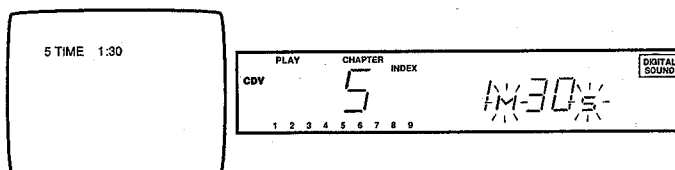
Moving to a specific time

During play you can move to any desired time within a chapter or track.

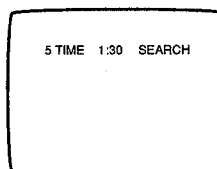
- Press 'SEL' and then key in the desired chapter or track number with the numeric keys '1-0'. This appears on the TV screen and on the display, e.g.:



- Press 'SEL' again and now key in the desired time. This also appears on the TV screen and on the display, e.g.:



- Press 'PLAY' to move the laser. Until the time is reached, 'M' and 's' flash on the display and the TV screen shows:



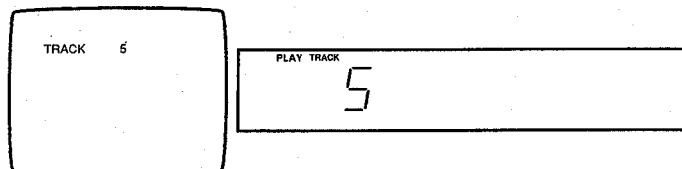
Notes:

- You can correct any mistake made in keying in the chapter or track number by pressing 'C', then 'SEL' again, and then keying in the correct number.
- If you make a mistake in keying in the time, you must press 'C' and then key in the correct time.
- If, after you have pressed 'SEL' to key in the time, 'OUT OF RANGE' appears on the TV screen and 'Er' on the display, you have selected a chapter or track number that does not appear on the disc. In such a case press 'SEL' so that you can key in the correct number.
- If the same fault messages appear after you have pressed 'PLAY', the selected time does not appear in the chapter or track and the laser does not move. In such a case you must select the chapter or track number and time again via 'SEL'.
- With a **Linear Play disc not having a table of contents** you do not need to enter the chapter number first, but can enter the time immediately after pressing 'SEL' **twice**. Entering a time that does not appear on the disc causes a fruitless search before 'OUT OF RANGE' and 'Er' appear and play resumes shortly before the end of the disc.

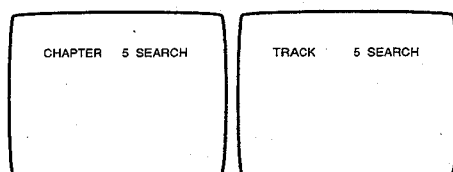
Beginning at a specific chapter or track

You can also begin play with a chapter or track other than the first.

- Load the disc into the tray but do not close it.
- Key in the desired chapter or track number with the numeric keys '1-0'. This appears together with 'TRACK' on the TV screen and on the display, e.g.:



After 1 sec the tray closes automatically and the disc is read in. Then 'TRACK' or 'CHAPTER' flashes on the display and the TV screen shows 'CHAPTER 5 SEARCH' or 'TRACK 5 SEARCH' until play begins.



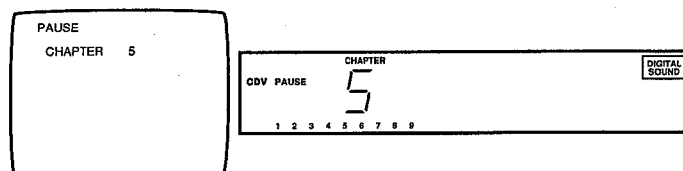
Notes:

- You can correct any mistake made in keying in the chapter or track number, provided that 'SEARCH' has not yet appeared on the TV screen, by pressing 'C' and then keying in the correct number.
- Instead of entering the chapter or track number with the numeric keys, you can hold the 'NEXT' key pressed until the desired number appears. Any mistake made in doing this can be corrected with 'NEXT' or 'PREVIOUS' provided that play has not yet begun.
- If you have selected a chapter or track number that does not appear on the disc, play starts at the beginning in the case of a disc **with** a table of contents, and shortly before the end in the case of a disc **without** a table of contents.

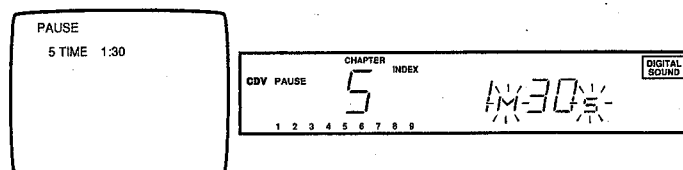
Beginning at a specific time

You can begin play at any desired time of a chapter or track.

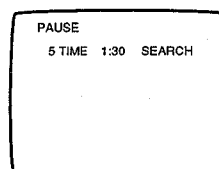
- Close the tray with 'PAUSE' and wait until 'PAUSE' appears on the TV screen.
- Press 'SEL' and then key in the desired chapter or track number with the numeric keys '1-0'. This appears on the TV screen and on the display, e.g.:



- Press 'SEL' again and now key in the desired time. This also appears on the TV screen and on the display, e.g.:



- Press 'PLAY' to start play. Until the time is found and play begins, 'M' and 's' flash on the display and the TV screen shows:



Notes:

- You can correct any mistake made in keying in the chapter or track number by pressing 'C', then 'SEL' again, and then keying in the correct number.
- If you make a mistake in keying in the time, you must press 'C' and then key in the correct time.
- If, after you have pressed 'SEL' to key in the time, 'OUT OF RANGE' appears on the TV screen and 'Er' on the display, you have selected a chapter or track number that does not appear on the disc. In such a case press 'SEL' so that you can key in the correct number.
- If the same fault messages appear after you have pressed 'PLAY', the selected time does not appear in the chapter or track and the laser does not move. In such a case you must select the chapter or track number and time again via 'SEL'.
- With a **Linear Play disc not having a table of contents** you do not need to enter the chapter number first, but can enter the time immediately after pressing 'SEL' **twice**. Entering a time that does not appear on the disc causes a fruitless search before 'OUT OF RANGE' and 'Er' appear and play starts shortly before the end of the disc.

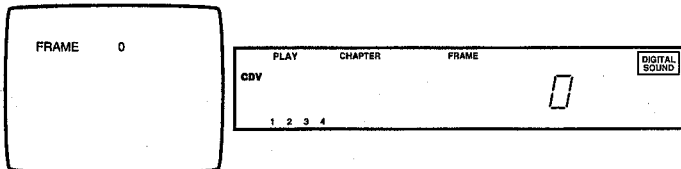
The extra features of Active Play discs

The features that only Active Play discs offer are described below. If 'CAV ONLY' appears on the TV screen and 'Er CAV' on the display, this indicates that the disc in the tray is a Linear Play type and that the requested function is not possible.

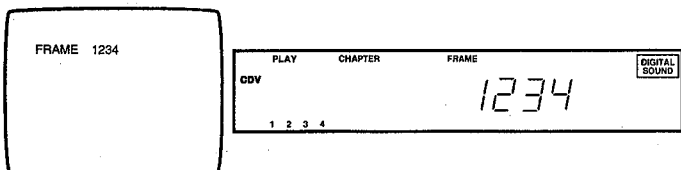
Moving to a specific frame

During play, you can move to any desired frame on the disc.

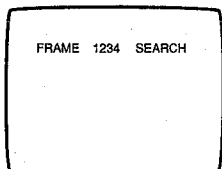
- Press 'SEL' **twice**. The TV screen and the display show:



- Key in the required frame number with the numeric keys '1-0'. This appears on the TV screen and on the display, e.g.:



- Press 'PLAY' to move the laser. Until the frame number is reached, 'FRAME' flashes on the display and the TV screen shows:



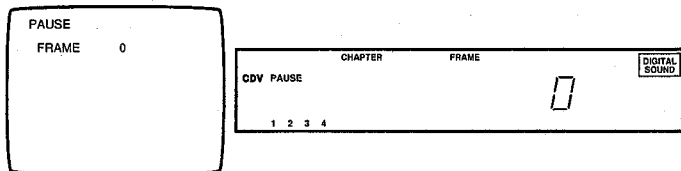
Notes:

- If you make a mistake in keying in the frame number, you must press 'C' and then key in the frame number again.
- If, after you have pressed 'PLAY', 'OUT OF RANGE' appears on the TV screen and 'Er' on the display, you have selected a frame number that does not appear on the disc. A disc **with** a table of contents then plays on normally, but a disc **without** a table of contents stops after showing a number of the final frames.
- Instead of continuing play from the chosen frame, you can 'freeze' the frame, and from there go on to frame-by-frame play, reversing play or changing the playing speed. See the appropriate headings below.

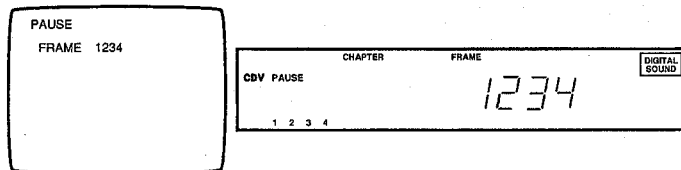
Beginning at a specific frame

You can begin play with any desired frame number.

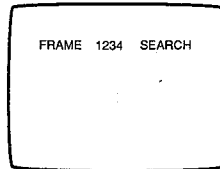
- Close the tray with 'PAUSE'.
- Wait until 'PAUSE' appears on the TV screen and then press 'SEL' **twice**. The TV screen and the display show:



- Key in the required frame number with the numeric keys '1-0'. This appears on the TV screen and on the display, e.g.:



- Press 'PLAY' to start play. Until the frame number is found and play begins, 'FRAME' flashes on the display and the TV screen shows:



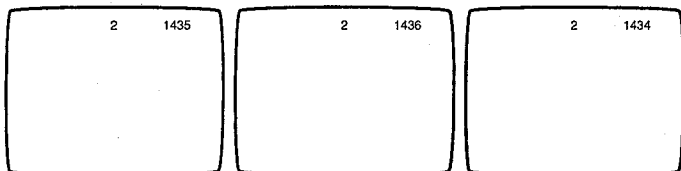
Notes:

- If you make a mistake in keying in the frame number, you must press 'C' and then key in the frame number again.
- If, after you have pressed 'PLAY', 'OUT OF RANGE' appears on the TV screen and 'Er' on the display, you have selected a frame number that does not appear on the disc. A disc **with** a table of contents does not then begin to play; a disc **without** a table of contents does, but only just before the end.
- Instead of playing on normally from the chosen frame, you can 'freeze' the frame, and from there go on to frame-by-frame play, reversing play or changing the playing speed. See the appropriate headings below.

Still pictures/frame-by-frame

You can 'freeze' or stop the picture, by pressing 'STILL FWD' or 'STILL REV'.

From this still position you can also play the disc one frame at a time, either forward or in reverse. Each time you press 'STILL FWD', the picture steps one frame forwards, each time you press 'STILL REV.', the picture steps one frame backwards.



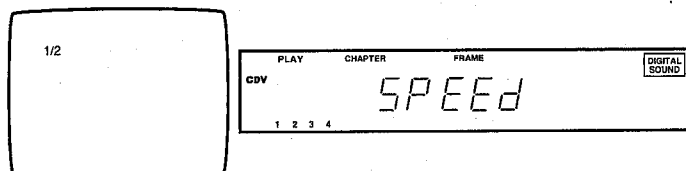
The sound is muted for still picture and frame by frame playback. To resume normal play, press 'PLAY'.

You can also use still pictures in searching for a specific passage by pressing 'STILL FWD' or 'STILL REV.' before you start to use '◀◀ SEARCH ▶▶'. Every time you stop the search you then get a still picture.

Note - With discs on which one or more frames are provided with a stop code, the picture automatically 'freezes' as soon as such a frame is reached.

Play at half speed

Press 'SLOW FWD' or 'SLOW REV.'. The TV screen and the display briefly show:



The disc now plays forwards or backwards at half speed; the sound is muted.

You end this slow play by pressing 'PLAY' again.

Note - Half speed for forward and reverse play is stored as standard in the player memory. If you want another speed temporarily, you can select it as given below. If, on the other hand, you want to choose another speed permanently, consult 'Personal preference settings'.

Play at another speed

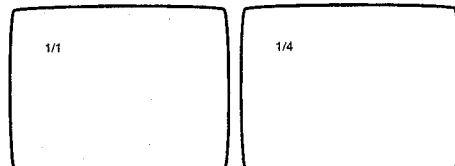
For both forward and reverse play you can use the 'SPEED + -' keys to select one of the following speeds:

- two, four and eight times normal speed;
- $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$ and $\frac{1}{16}$ times normal speed;
- 1 frame per second and 1 frame per 3 seconds.

Every time the 'SPEED +' key is pressed, the speed, starting from '1/2', is increased by one step to the maximum of 8 times normal speed.

Every time the 'SPEED -' key is pressed, the speed, again starting from '1/2', is reduced by one step to the minimum of 1 frame per 3 seconds.

During this process, the display shows 'SPEED', and on the TV screen you see the possible speeds appear, e.g.:



- Press 'SPEED +' or 'SPEED -' until the desired speed appears on the TV screen.
- Press 'SLOW FWD' to play the disc forwards at the speed shown.

Or:

- Press 'SLOW REV.' to play the disc backwards at the speed shown.

A set speed can be changed during play.

When playing at a different speed sound is muted.

You end playing at a different speed by pressing 'PLAY'; the disc then continues playing at normal speed. The selected speed change is however stored in the memory until the disc is stopped.

Searching for a particular passage

During play you can quickly locate a particular passage through alternate use of the '◀◀ SEARCH ▶▶' keys.

- Hold '◀◀ SEARCH' pressed to search towards the beginning.
- Hold 'SEARCH ▶▶' pressed to search towards the end.

Each time you release the key play begins again.

With **CD Video** and **LaserVision** discs and in the **video part of CD Video Singles** searching is always at the same speed; the sound is muted for this.

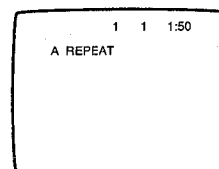
With **Compact Discs** and **Compact Disc Singles**, and in the **audio part of CD Video Singles**, on the other hand, searching is slow and with audible sound for the first three seconds, and only after that fast and without sound.

If you come to the beginning or end of the disc, or of the video or audio part of a CD Video Single, 'OUT OF RANGE' appears on the TV screen and 'Er' on the display. Search then stops to give you the opportunity to change 'SEARCH' keys.

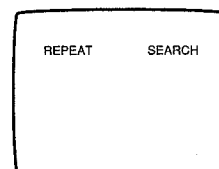
Repeating a passage

During play, you can repeat any part of the disc continuously by marking its beginning and end with the 'A/B' key.

- At the required starting point, press 'A/B'. On the display 'A/B' begins to flash and on the TV screen you see:



- At the required finishing point, press 'A/B' again. On the display 'A-B' lights continuously as a sign that the finishing point is also marked. The laser now goes back to the starting point of the passage. Until this is reached and play begins, the TV screen shows:



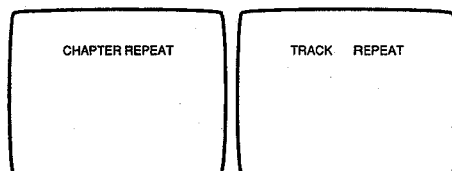
When the finishing point is reached, the laser jumps back again and 'REPEAT SEARCH' appears again until play begins once more.

This sequence continues until you press again on 'A/B' or on 'C', after which the 'A-B' indication goes out and the disc plays on normally.

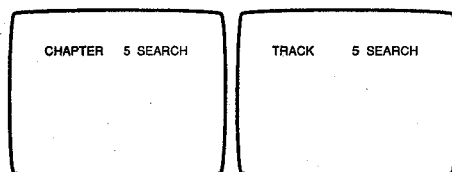
Note - It is also possible to mark a starting point only, to which you can always go back by pressing 'PLAY'.

Repeating a chapter or track

If you want to repeat a chapter or track, press 'REPEAT' before it finishes. On the display, the 'REPEAT' indication then lights, and on the TV screen 'CHAPTER REPEAT' or 'TRACK REPEAT' appears briefly.



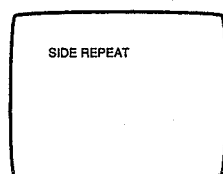
As soon as the chapter or track is finished, the laser jumps back to the beginning. Until play begins again, 'CHAPTER' or 'TRACK' flashes on the display, and the TV screen shows the number together with 'CHAPTER SEARCH' or 'TRACK SEARCH', e.g.:



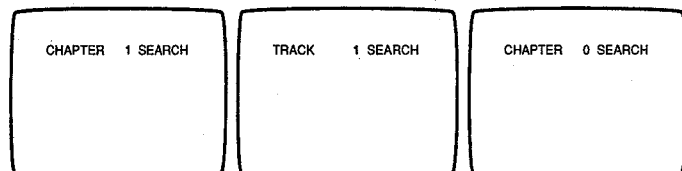
This sequence continues until you press 'REPEAT' three times or 'C' once, after which the 'REPEAT' indication goes out and the disc plays on normally.

Repeating the complete disc

If you want to play the complete disc again, you must press the 'REPEAT' key twice before play ends. On the display, 'REPEAT 1-SIDE' then lights, and on the TV screen 'SIDE REPEAT' appears briefly.



As soon as the end of the disc is reached, the laser jumps back to the beginning. Until play starts again, 'CHAPTER' or 'TRACK' flashes on the display, and the TV screen shows 'CHAPTER 1 SEARCH' or 'TRACK 1 SEARCH'. With discs not divided into chapters you see 'CHAPTER 0 SEARCH'.

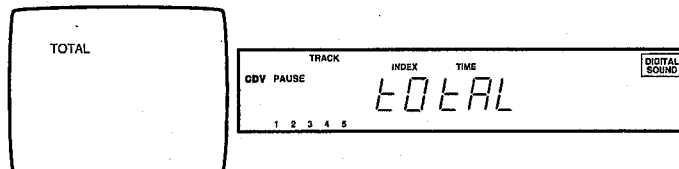


This sequence continues until you press 'REPEAT' twice or 'C' once - after which the disc plays on to the end - or until you stop the disc; the 'REPEAT 1-SIDE' indication goes out.

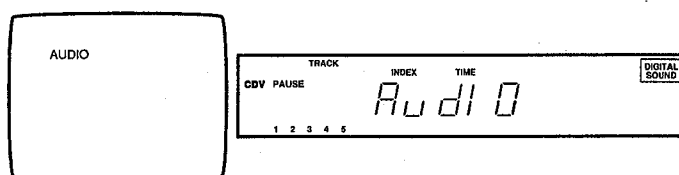
Playing part of a CD Video Single

With the 'MODE' key you can play only the audio or video part of a CD Video Single.

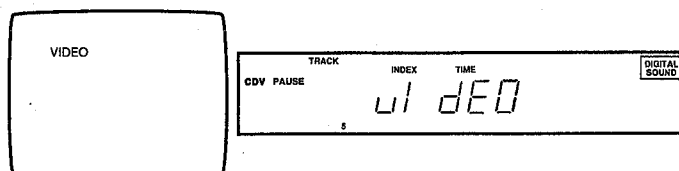
- Close the tray with 'PAUSE' and wait until 'PAUSE' appears on the TV screen.
- Press 'MODE'. To indicate that yet the complete disc will still be played, the TV screen and the display show for about 2 seconds:



- Press 'MODE' again within these 2 seconds. To indicate that the audio part will now be played, the TV screen and the display show for about 2 seconds:



- If you want the video part, press 'MODE' again within 2 seconds for the third time. The TV screen and the display now show for about 2 seconds:



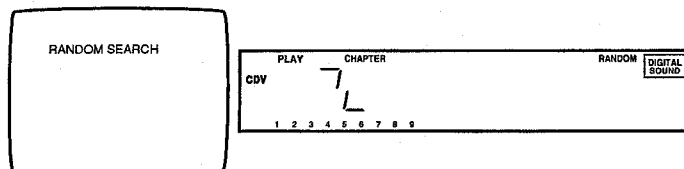
- When the desired part is selected, press 'PLAY' to start play.

Notes:

- If the indications disappear before you have been able to select, pressing 'MODE' once is sufficient to bring them back.
- Press 'MODE' once also if you want to check your selection during play.
- With NTSC-type CD Video Singles (such as are obtainable outside Europe), the audio part only is played automatically. If you load such a disc in the player, the TV screen shows 'NTSC DISC' briefly. You then know that you need not expect video pictures.
- The audio part of every CD Video Single can also be played on a Compact Disc player.

Playing a disc in random order

With a disc **having** a table of contents you can play all the tracks or chapters in a completely random order decided by the player. Close the tray with 'RANDOM'. After the disc has been read in the 'RANDOM' indication appears on the display and the player selects the chapter or track to be played first. Meantime the TV screen shows:



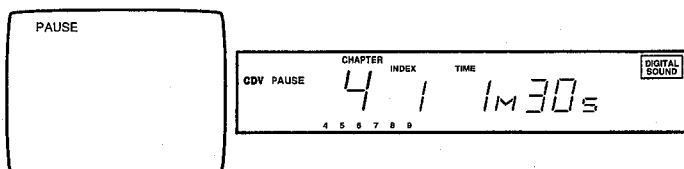
and on the display you see two figures whirl around. This is repeated every time that the player selects another track. When all chapters or tracks have been played the disc stops; the 'RANDOM' indication goes out.

Notes:

- With 'PREVIOUS' you can return to a previously played chapter or track, and with 'NEXT' select a completely random following one.
- Searching for a particular passage with 'SEARCH' is only possible within the chapter or track in play.
- By pressing 'REPEAT' **twice** you can also repeat random play. This still begins with the same chapter or track but further changes the sequence each time the disc is played.
- To end random play in the meantime, press 'RANDOM' again or press 'C'. The remaining tracks or chapters are then played in the normal sequence.

Interrupting play briefly/holding play at the start of a chapter, track or passage

If you want to interrupt play briefly, press 'PAUSE'. The sound is then muted, but the disc carries on spinning and 'PAUSE' appears on the TV screen and on the display, e.g.:

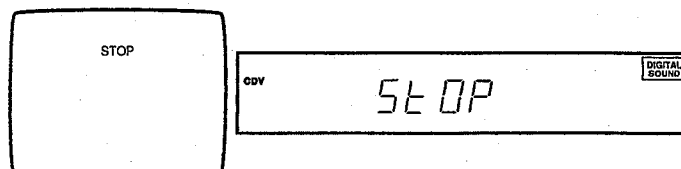


Press 'PLAY' or again 'PAUSE' to resume play. It then begins at the same point at which it was interrupted; the 'PAUSE' indications go out.

With all player functions, except searching for a particular passage with 'SEARCH', you can move the laser to the exact beginning or a disc, chapter, track or passage with the 'PAUSE' key and hold it there. To do this, you press 'PAUSE' immediately **after** giving the appropriate command. You can then start play at any time by pressing 'PLAY' or again 'PAUSE'.

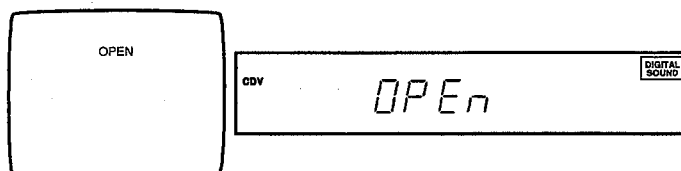
Stopping play

- Press 'STOP' if you want to end play but leave the disc in the tray. On the TV screen and the display appears:



As soon as the disc is stopped the TV screen and the display show the total number of chapters or tracks and the total playing time; the TV screen also indicates the type of disc. With a **CD Video disc** not having a table of contents or a **LaserVision disc**, you see only 'CD VIDEO' or 'LASERVISION DISC' respectively on the TV screen and the number of chapters and total playing time are not shown on the display.

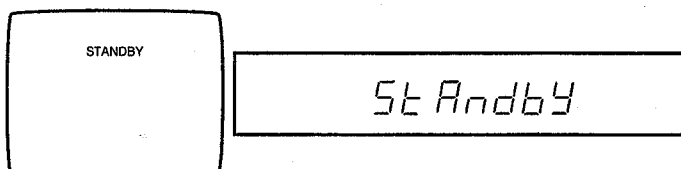
- Press 'OPEN/CLOSE' if you want to stop the disc and remove it. Until the disc is stopped and the tray is opened you see on the TV screen and on the display e.g.:



Return to 'stand by'

Press 'STAND BY' if you want to put the player in the 'stand by' condition. The TV screen then goes blank, the display goes out and the 'O' LED lights again.

Note - If the player is stopped for 10 minutes without receiving a command, it returns to the 'stand by' condition automatically. If the tray was left open, it is then closed and the TV screen and the display show:



PROGRAMMING

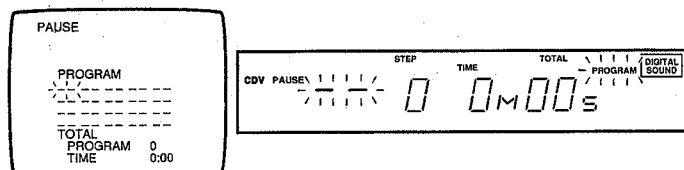
By storing the numbers of desired chapters or tracks in the form of a programme in the memory of the player, you can play those chapters or tracks only, instead of the whole disc.

A programme can contain a maximum of 20 numbers. You can decide the sequence in which the numbers are stored for yourself, and if you wish, you can programme the same number more than once.

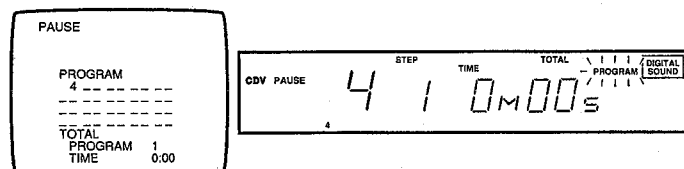
Although programming is possible with an open tray, it is better to have the disc read in first by closing the tray with 'PAUSE'. As well as the total number of stored chapters or tracks, the playing time of the programme is then also displayed immediately with discs **having** a table of contents, and a number that does not appear on the disc is not accepted.

Storing a programme

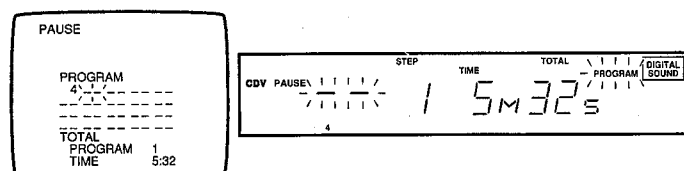
- Close the tray with 'PAUSE' and wait until 'PAUSE' appears on the TV screen.
- Press 'PROG'. The TV screen and the display show:



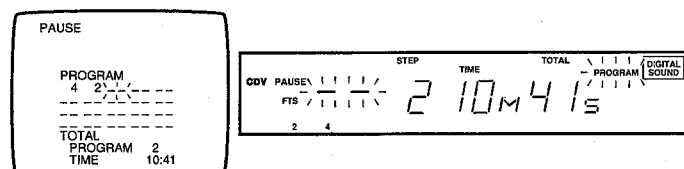
- With the numeric keys '1-0', key in the first desired number, e.g. '4'. The TV screen and the display show:



After 1 sec the number is stored automatically: on the TV screen it changes colour and the next pair of dashes flash; on the display it appears on the number indicator '1-20' and the flashing dashes reappear. At the same time the playing time of the chapter or track appears on the TV screen and on the display, e.g.:



- Key in the numbers of the remaining desired chapters or tracks in succession, but wait each time until the previous number is stored. Each time you key in a number, the total after 'PROGRAM' and under 'STEP' is increased by one. When the number is stored, it is added to the number indicator '1-20' and the playing time of the chapter or track is added to the displayed playing time, e.g.:



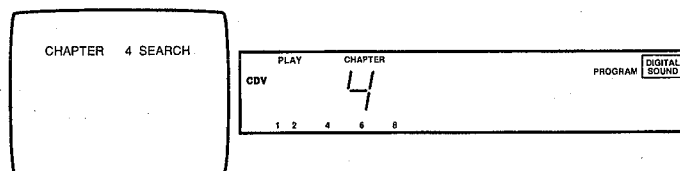
With a **CD Video disc having no table of contents**, the playing time of the programme is not displayed, and with a **LaserVision disc** the 'TOTAL', 'PROGRAM' and 'TIME' indications, in their entirety, do not appear on the TV screen.

Notes:

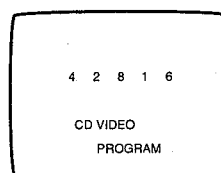
- You can reduce the waiting time between storing the numbers by pressing 'S' immediately after keying in a number.
- You can correct a mistake in keying in a number, as long as it is not yet stored, by pressing 'C'. The TV screen then shows '??' and the display '— —' until you key in another number.
- You can correct an incorrect number already stored by pressing 'S' until it begins to flash on the TV screen and appears on the display, and then keying in the correct number.
- If you key in a number that does not appear on the disc, 'OUT OF RANGE' appears on the TV screen and 'Er' on the display. The TV screen then shows '??' and the display '— —' until you key in a correct number. With a disc **not** having a table of contents no warnings appear and a non-existent number will be accepted.
- To remove or change a number afterwards, press 'S' until it begins to flash on the TV screen and appears on the display. You can then **remove** the number by pressing 'C' **twice**, or **change** it by keying in another number. If you want to continue further with programming, you must then press 'S' until the TV screen and the display again display flashing dashes, otherwise you can leave the programme as it stands.

Playing the programme

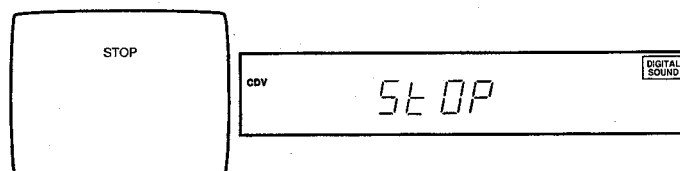
Press 'PLAY' to start play. All programme information now disappears from the screen. On the display the 'PROGRAM' indication lights continuously and from the programme information only the numbers on the number indicator '1-20' remain. Until play begins the TV screen and the display indicate that the player is searching for the first number in the programme, e.g.:



If desired, you can follow the progress of the programme on the TV screen as well as on the display. To do this you press 'DISPLAY' until the review screen appears. E.g.:



When all the numbers in the programme have been played the disc is stopped. On the TV screen and the display appears:



The TV screen then shows the type of disc you have played. With a disc **having** a table of contents you see also its total number of chapters or tracks and total playing time appear on the TV screen and on the display.

The programme remains stored, however, as long as you leave the tray closed. If you wish, therefore, you can start it again by pressing 'PROG' and 'PLAY'. The same applies if you have stopped play during the programme.

Notes:

- During play you can still add to or change the programme. To do this you must first press 'PROG', then make the addition or change, and finally press 'PLAY' again. The programme will then start again at the beginning.
- If with a disc **having no** table of contents, 'OUT OF RANGE' appears on the TV screen and 'Er' on the display, you have stored a non-existent number. A fruitless search for such a number will be made before it is automatically removed from the programme.
- Moving to another chapter or track in the programme is only possible with 'NEXT' or 'PREVIOUS'. Moving to a specific time, searching for a particular passage and repeating a passage can only be done within the chapter or track being played. Beginning at a specific chapter or track, or a specific time, is not possible, nor is moving to or beginning at a specific frame. There are no restrictions on the remaining functions.

Saving favourite selections ('FTS' = 'Favourite Track Selections')

When a programme from a disc **having** a table of contents contains the chapters or tracks that you prefer to play, you can store it permanently in the 'FTS' memory. In this way you can call up and play such a favourite selection at any desired time. In the meantime, it is still possible to play the whole disc, or to compile another, temporary programme from it.

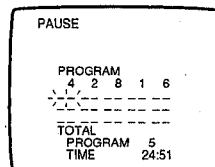
Each disc in the 'FTS' memory gets a sequence number which is displayed automatically on the TV screen and the display. 112 numbers are available for allocation; the number of favourite selections you can store, however, depends on their content, and also whether you give titles to your selections or discs at the same time. (In this connection see also 'Composing Titles'.)

So that you can mark the sleeves or holders of the discs from which you have stored favourite selections, a sheet of numbered, self-adhesive stickers is supplied with your player. It also contains some unnumbered stickers so that any mistakes can be corrected.

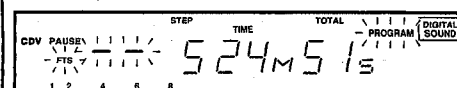
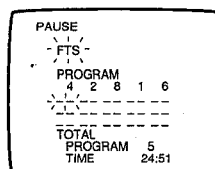
Caution! - No more than **4 seconds** must elapse between pressing the 'FTS' key and the next key you need to use, otherwise the 'FTS' indications disappear and you must reactivate the function by pressing 'FTS' again.

Storing a favourite selection

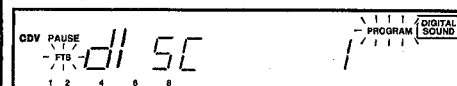
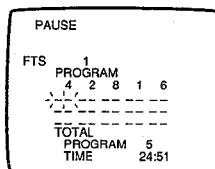
- Store the desired programme as described under 'Storing a programme', e.g.:



- Press 'FTS'. On the TV screen and on the display, the 'FTS' indication begins to flash.



- Press 'S'. Until the selection is stored, 'FTS' continues to flash on the display and the TV screen and the display show the sequence number allocated to the disc:



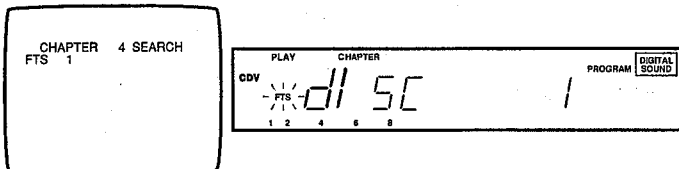
- Fix the sticker with this number to the disc sleeve or holder.

Notes:

- If 'NOT POSSIBLE' or 'OUT OF RANGE' appears on the TV screen and 'Er' on the display after you have pressed 'S', then no programme has yet been stored or the disc has **no** table of contents.
- You can store another programme from the disc at any time. The previous selection is then automatically erased, but the disc keeps its already allocated number.
- When the 'FTS' memory is full, the TV screen shows 'INSUFFICIENT MEMORY' when you press 'S'. You will then have to erase one or more old selections before you can store a new one. See 'Erasing a favourite selection'.

Playing a favourite selection

- Load the disc in the tray.
- Press 'FTS' and then 'PLAY'. After the disc has been read in, the sequence number appears on the TV screen and 'FTS' flashes by its side; at the same time the TV screen indicates that the player is searching for the first number of the selection. On the display the sequence number appears and 'FTS' also flashes; the number indicator '1-20' shows the number of the selection. E.g.:



When the first number is found, the sequence number disappears and 'FTS' lights continuously on the display. Play then proceeds as described under 'Playing the programme'. If desired, you can start the selection again by pressing 'FTS' and 'PLAY'.

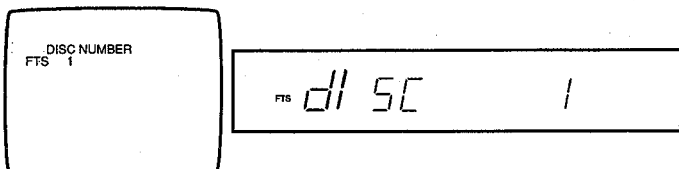
Notes:

- When a favourite selection from a disc is stored, this is henceforward indicated after read-in by the brief appearance of its sequence number and the flashing of 'FTS', regardless of how you have closed the tray. At any desired moment you can call up the selection by pressing 'FTS' and 'PLAY'.
- Conversely, you press 'FTS' and 'STOP' if you want to end the play of a selection in order to continue playing the disc normally.
- In playing a favourite selection the same limitations apply for particular functions as with playing a programme.

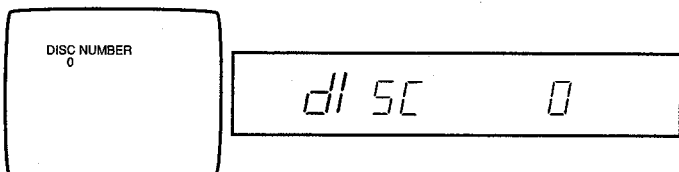
Erasing a favourite selection

The disc does not need to be in the tray for this, but its sequence number must be brought up on the TV screen and on the display.

- Press 'FTS' and then press 'NEXT' until the sequence number to be erased appears, e.g.:



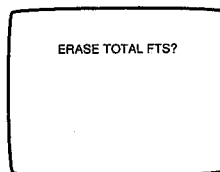
- Then press 'C' immediately. Until the selection is erased, the TV screen and the display show:



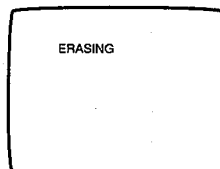
Note - The title stored for a selection is not erased together with the selection, but must if desired be erased separately. See 'Erasing a title'.

Erasing all favourite selections together

- Press 'FTS' and then 'REPEAT'. On the TV screen appears the question:



- Then press 'C' immediately. Until the whole 'FTS' memory is erased, the TV screen shows:



After that 'DISC NUMBER 0' and 'dISC 0' appear briefly on the TV screen and on the display respectively.

Caution!

- When all selections are erased, all titles are erased too.
- The total erasure of the 'FTS' memory can take some time. You must, however, wait until the end before you set the player to standby if required, otherwise you will upset the memory.

Composing titles

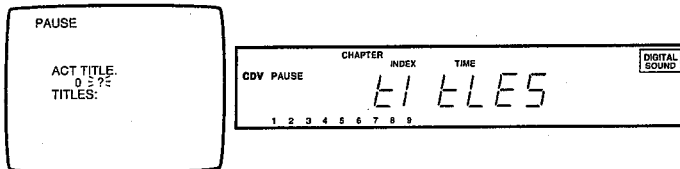
To a disc **having** a table of contents you can give a title related to the complete disc or to the favourite selection you have compiled from it. Such a title is henceforward displayed for a short time on the TV screen after the disc has been read in. All the time the disc is playing you can also show it by pressing 'DISPLAY' until the review screen appears.

Each disc with a title gets a sequence number from the 'FTS' memory, which after read-in is shown on the TV screen together with the title and on the display following 'd/SC'. If a favourite selection has already been stored from the disc, it however keeps the sequence number of that selection.

A title can contain a maximum of 16 letters, numbers and spaces, collectively called characters. The number of titles you can store depends not only on their length, but also on the number and the content of the stored selections.

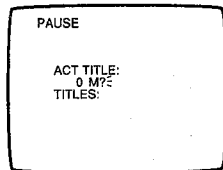
Storing a title for a disc or a favourite selection

- Close the tray with 'PAUSE' and wait until 'PAUSE' appears on the TV screen.
- Or:
- After storing the favourite selection, press 'PROG' to remove the programme from the TV screen.
- Press 'TITLE'. The TV screen and the display show:



With a favourite selection you see the sequence number of the disc instead of '0'.

- Press 'NEXT'. Instead of the question mark, an A starts to flash as the first of the characters you can select with the help of 'NEXT' and 'PREV.'. These are, successively, the letters A-Z, the numbers 0-9 and the symbol ' ' (=space), which are coupled together in an endless loop.
- Press 'NEXT' until the first desired character, e.g. M, appears, and then press 'S'. The M is now stored: it stops flashing and changes colour; the question mark returns again.



- With 'NEXT' or 'PREV.' select the remaining desired characters in turn, storing each one with 'S'.
- When the title is ready, press 'TITLE' again. The title information on the TV screen and the 'titles' indication on the display disappear to show that the title is stored.

Notes:

- You can **change** a faulty stored character either at once or later by pressing 'S' until it begins to flash again and then storing the correct character. To **remove** a character you likewise press 'S' until it starts to flash again and then press 'C'. In both cases you then need to press 'S' again until the question mark reappears only if you still wish to add further characters to the title, otherwise you can store it as it stands.
- When storing a title the disc may be also playing or stopped.

- When a title is stored for a disc, a selection compiled later from the disc gets the same title and sequence number.
- If 'NOT POSSIBLE' appears on the TV screen and 'Er' on the display after you have pressed 'NEXT', then the disc has **no** table of contents. You must then press 'TITLE' to remove the title indications from the TV screen and the display.
- If 'INSUFFICIENT MEMORY' appears on the TV screen, the memory is full and you will have to erase one or more old titles before you can store a new one. See 'Erasing a title'. Erasing favourite selections also re-creates memory space for titles.

Checking the stored titles

With the storage of each successive title, the titles that the memory already contains are shown under 'TITLES'. After the fifth title is stored, however, no additions are made to this list. Thus you still see the first five titles, irrespective of the number that you store after them.

However, you can display all the titles in the memory on the TV screen at any time you choose.

For this press 'FTS' and then press 'NEXT' as many times as is needed until all the titles have appeared under 'DISC NUMBER'. Each title is prefixed by its sequence number (and by 'FTS' when it relates to a favourite selection), and appears for approximately 4 seconds. You can go back to an already displayed title with 'PREV.'.

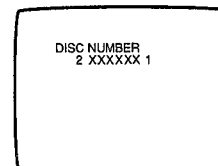
Notes:

- If title indications are displayed on the TV screen, you must remove these by pressing 'TITLE' before you press 'FTS'.
- Titles and favourite selections are put into the same memory. That is why you also see appear, prefixed by 'FTS', the sequence numbers of selections for which no title is stored.

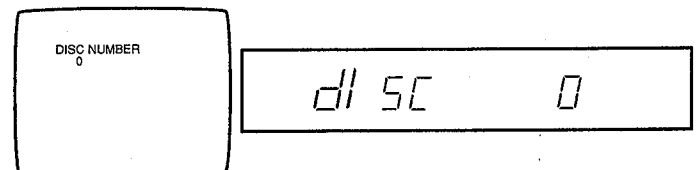
Erasing a title

The disc does not need to be in the tray for this, but the title must be brought up on the TV screen.

- Press 'FTS' and then press 'NEXT' until the title to be erased appears with its sequence number, e.g.:



- Then press 'TITLE' immediately. Until the title is erased, the TV screen and the display show:



Note - The favourite selection relating to a title is not erased together with the title, but must if desired be erased separately. See 'Erasing a favourite selection'.

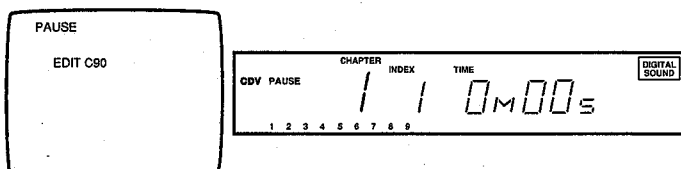
Replacing a title

You can replace an existing title with a new one by adjusting the title displayed under 'ACT TITLE:' character by character. As a rule, however, it will be easier to erase the existing title first. When a new title is stored the disc retains the originally allocated sequence number.

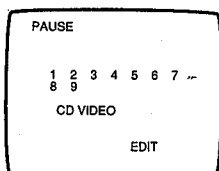
Recording with a fixed playing time

If, when making a sound recording from a disc with a table of contents, you use the 'EDIT' key, the player decides how many of the chapters or tracks fit on one blank side of a C90 cassette. After they have been played, a pause is automatically put on for reversing or changing the cassette in order to record the remaining chapters or tracks. In this way, recording of only part of a chapter or track because the tape has already run out is avoided.

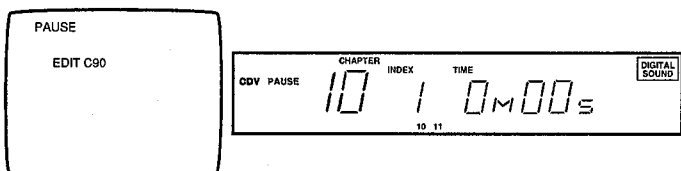
● Load the disc in the tray and close it with 'EDIT'. After the disc has been read in, the TV screen shows 'EDIT C90' for about 5 seconds and the player automatically goes into pause at the beginning of the first chapter or track. On the display, the number indicator '1-20' shows the numbers of the chapters or tracks that can be recorded, e.g.:



You can also show these numbers on the TV screen by pressing '3' until the review screen appears.



● Press 'PLAY' to start play. When the chapters or tracks have been played, 'EDIT C90' appears again and the player again goes into pause. The number indicator '1-20' displays the numbers of the remaining chapters or tracks, e.g.:



- Reverse or change the cassette.
- Press 'PLAY' to resume play.

Notes:

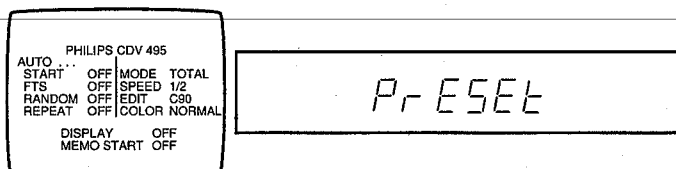
- The playing time of a C90 cassette is stored as standard in the player memory. To use C60 or C120 cassettes you can change the stored playing time temporarily or permanently; see 'Personal preference settings'. For C60 cassettes the chapters or tracks of a disc more than 60 minutes long are divided into three sections; at the end of the second section the player goes into pause again for the recording of the third.
- To record a programme using 'EDIT', you must press 'EDIT' after it has been stored.
- A favourite selection can be recorded with 'EDIT' if you press 'FTS' and 'PLAY', wait until play begins and then press 'PROG' and 'EDIT'.
- While recording is going on you can only use the 'STOP', 'OPEN/CLOSE' and 'DISPLAY' keys. With the last of these, apart from the elapsed playing time, only the remaining playing time of each chapter or track or the review screen can be called up. If you accidentally press another key, the 'EDIT C90' usually appears as a reminder on the screen.

Personal preference settings

By making use of the facility to store personal preference settings you can:

- have a number of functions carried out automatically;
- change data stored in the memory;
- select another background colour for the TV screen;
- select which playing time information will be displayed after the disc has been read in;
- add an extra facility to the 'PLAY' key.

You see which preference setting you can store when you hold the '3' key pressed for 2 seconds. The TV screen and the display then show:



'OFF', 'TOTAL', '1/2', 'C90' and 'NORMAL' show the settings made in the factory. By pressing 'NEXT' you can select another setting. For 'OFF', that is 'ON', with the other indications you have more choice. You can see the effect of the various changes in the following review:

'AUTO START ON'

After switching on the power supply of the audio/video installation, the disc in the tray is played automatically.

'AUTO FTS ON'

The favourite selection from each disc is played without your needing to press 'FTS'.

'AUTO RANDOM ON'

The chapters or tracks of every disc with a table of contents are played in random order without your needing to press 'RANDOM'.

'AUTO REPEAT ON'

Every disc is repeated without your needing to press 'REPEAT'.

'MODE AUDIO or VIDEO'

AUDIO: from every CD Video Single only the audio part is played.
VIDEO: from every CD Video Single only the video part is played.

'SPEED 1/1, 2/1, 4/1, 8/1, 3 SEC, 1 SEC, 1/16, 1/8 or 1/4'

Changes the speed at which an Active Play disc is played forwards or backwards after pressing 'SLOW FWD' or 'SLOW REV'.

'EDIT C120 or C60'

Stores the playing time of C120 or C60 cassettes.

'COLOR BLACK, BLUE, GREEN, CYAN, RED, MAGENT or YELLOW'

Changes the various TV screen background colours to the displayed colour.

'DISPLAY ON, REMAIN or LEGEND'

ON: the number and playing time information that the display shows during play of a CD Video disc or the video part of a CD Video Single also appears on the TV screen.

REMAIN: The display immediately shows the remaining playing time of each chapter or track; the TV screen shows number, index number and elapsed playing time of each chapter or track, and also its remaining playing time. With discs not having a table of contents the chapter number and the elapsed playing time of the disc or the frame numbers are shown on both the TV screen and the display.

LEGEND: the display immediately shows the number of remaining chapters or tracks and the remaining playing time of the disc; on the TV the review screen appears.

'MEMO START ON'

If you end play with the 'STOP' key but leave the disc in the tray, play restarts at the point where it was interrupted when you press 'PLAY'. The TV screen shows 'MEMO START' and the display 'StArt M'.

Storing your personal preference settings

You store your personal preference settings in the memory with 'PP' if they are to remain in force permanently, and with '□' if they are to apply temporarily. The settings stored with '□' are erased as soon as the player is put in 'stand by'; those stored with 'PP' are only cancelled if you put the player in transport mode.

You can best call up the review of the settings from the 'stand by' condition or when the player is in the stop condition.

- To call up the review hold '□' pressed for 2 seconds.
- Press 'S' until the setting you want to change begins to flash.
- Press 'NEXT' until the desired selection appears.
- Press 'S' again to store your choice. The altered line changes colour and stops flashing.
- Press 'PP' or '□'. The review on the TV screen and the 'PrESEt' indication on the display disappear to confirm that the preference setting is stored.

Notes

- If you want to change several settings simultaneously, press 'PP' or '□' only when all the changes are made.
- You can make further temporary changes to preference settings stored with 'PP', which you store with '□'. Such changes are not only cancelled when the player is put in 'stand by', but also when you press 'PP' without the review of the settings being on the screen.

Listening via a headphone

- Connect a headphone with a 6.3 mm jack and an impedance between 8 and 2000 ohms to the 'PHONES' socket.
- Adjust the sound level with the 'VOLUME' knob.

ADDITIONAL INFORMATION

Care of the discs

Although both sides of a disc are protected by a special coating, it is still advisable to treat the discs with care:

- Never leave discs lying around, put them back in their holders immediately after use.
 - Never write on the printed side of a Compact Disc or a CD Video Single!
 - Do not attach any stickers to a disc.
 - Keep the playing surface(s) of a disc clean. Use a soft lint-free cloth and always wipe the disc in a straight line from centre to edge. You may breathe lightly on the disc first.
- Cleaning set SBC 3540, available separately, is a useful accessory for cleaning your Compact Discs and CD Video Singles. It contains a protective support, a special disc cleaning cloth and a bottle of cleaning fluid.

Warning - Cleaning agents for conventional records are not suitable for cleaning your discs. Nor may detergents or abrasive cleaning agents be used.

Player cleaning

A chamois leather slightly moistened with water is sufficient for cleaning the cabinet of the player. Do not use cleaning agents containing alcohol, spirits, ammonia or abrasives. The disc tray should be kept free of dust with a dry cloth.

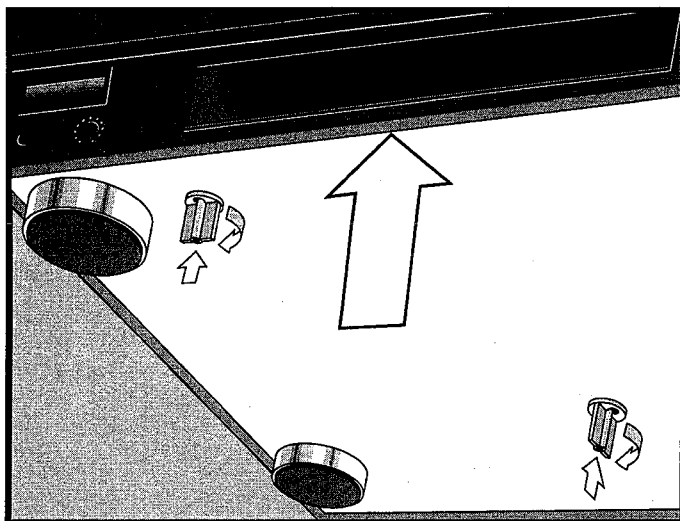
Transporting the player

When the player is to be transported, the tray must be put into the transport condition while the player is switched on. Then you must re-fit the two transit clamps.

- Take the transit clamps out of the recesses in the rear of the player.
- **Hold in** the 'DISPLAY' and '◀◀ SEARCH' keys and simultaneously press the 'STAND BY' key. To show that the tray is now in the transport condition, the display shows the indication:

TRANSPORT

- Return the player to the 'stand by' condition by pressing 'STAND BY'.
- Remove the mains plug from the wall socket and disconnect all cables.
- Do not turn the player upside-down, but raise it on the front sufficiently to insert the transit clamps in their holes and screw them tight.



Technical data

Digital audio specifications (typical) (20 Hz to 20 kHz unless otherwise stated)

- Number of channels: 2
- Frequency range: 20 Hz-20 kHz
- Amplitude linearity: ± 0.1 dB
- Phase linearity: ± 0.5 degrees
- Signal to noise ratio: > 100 dB
- Dynamic range: > 96 dB
- Channel separation: > 96 dB (1 kHz)
- Total harmonic distortion: $< 0.003\%$ (1 kHz)
- Wow and flutter: quartz control precision
- Digital/analogue conversion: quadruple (176.4 kHz) oversampling with digital filter and twin 16-bit D/A converters
- Error correction system: Cross-Interleaved Reed-Solomon Code (CIRC)

Optical read-out element (laser pick-up)

- Laser type: semiconductor AlGaAs
- Wavelength: 780 nm

Video specifications

- System: PAL
- Signal to noise ratio: > 48 dB
- Horizontal resolution: 440 lines

Connections

- Audio output: $2 V_{rms}$ typical at 10 kohm
- RGB output (Euroconnector): $0.7 V_{pp}$, 75 ohm
- CVBS output (Euroconnector): $1 V_{pp}$, 75 ohm
- CVBS output (cinch): $1 V_{pp}$, 75 ohm
- RF output: 75 ohm
- Antenna input: 75 ohm
- Digital output: $0.5 V_{pp}$, 75 ohm
- Remote control in/out: $2 V_{pp}$ at 2.2 kohm
- Headphone (6.3 mm socket): 8-2000 ohm

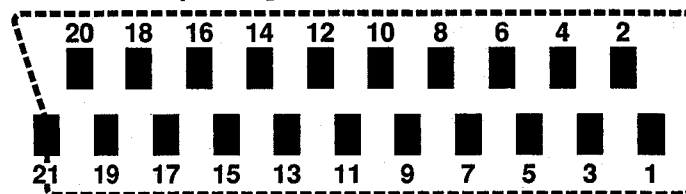
Power supply

- Mains voltage and frequency: see the type plate at the rear of the player
- Power consumption: 55 W approx; 8 W in 'stand by'
- Safety requirements: IEC 65

Cabinet

- Material and finish: metal/ABS, brushed front
- Dimensions (w x h x d):
With tray closed: 420 x 110 x 410 mm approx.
With tray open: 420 x 110 x 630 mm approx.
- Weight: 10 kg approx

Euroconnector pin assignments



- Pin 1: audio out (right)
- Pin 2: not connected
- Pin 3: audio out (left)
- Pin 4: audio earth
- Pin 5: blue earth
- Pin 6: not connected
- Pin 7: blue out
- Pin 8: player status
- Pin 9: green earth
- Pin 10: not connected
- Pin 11: green out
- Pin 12: not connected
- Pin 13: red earth
- Pin 14: not connected
- Pin 15: red out
- Pin 16: not connected
- Pin 17: CVBS earth
- Pin 18: RGB status earth
- Pin 19: CVBS out/RGB synch
- Pin 20: not connected
- Pin 21: socket earth

The right is reserved to change data if necessary

This CD Video player complies with radio interference requirements as laid down in EC regulations.

FAULTS AND THEIR LIKELY CAUSES

Although the greatest care has been taken in the manufacture of this CD Video player, the possibility remains that faults could appear during use, or that the player fails to function to your complete satisfaction.

The cause will, however, certainly not always be found in the player itself. External factors, and the fact that it takes time to become accustomed to the whole concept of the new product and the new discs, can also play a role.

To save you unnecessary calls on your dealer or our Service Organisation, we have compiled a list of possible faults, and their likely causes. If you do not succeed in solving the problem by using the list, stop your investigation. Disconnect the mains plug and contact your dealer.

Under no circumstances should you open up the player; this will invalidate your rights under the guarantee.

1. The 'I/O' LED on the display is not lit although the player is connected to the mains.

- The mains plug is not fully inserted - either into the player, or into the wall power socket.
- There is no mains supply at the wall socket. Check the socket with another piece of electrical equipment.

2. The tray does not open.

- The transit clamps have not been removed. See under 'Removing the transit clamps'.
- The player has no power supply. Check if the display is lit.
- The microprocessor has not received the command properly. Press 'STAND BY', and then try closing the tray again.
- The tray drive is not functioning. You cannot rectify this yourself.

3. The tray does not close.

- The mains supply has been interrupted. Check if the display is lit.
- The microprocessor in the player has not received the command properly. Press 'STAND BY', and then try closing the tray again.
- The tray drive is not functioning. You cannot rectify this yourself.

4. After closing the tray, 'NO DISC' appears on the TV screen.

- A Compact Disc or CD Video Singles is lying title downwards, or there is no disc in the tray.
- The disc is dirty. See if cleaning the disc, or using another, clean disc clears the fault.
- The disc is defective. Try another disc and see if that clears the fault.
- There is an unwanted object in the disc tray.

5. The disc is being played (the display shows a chapter or track number, and a changing time or frame number indication), but you are getting no picture and/or sound.

- The TV set and/or amplifier are not switched on.
- The TV set and/or amplifier are not set for CD Video playback.
- The cable connections to TV set and/or amplifier are not plugged in correctly.
- The input to which the CD Video player is connected on either the TV set or the amplifier is defective. Check if another input is working.
- The headphone is not plugged in, or the 'VOLUME' control is set to zero.
- With 'PP' you have selected play of the audio or video part only of a CD Video Single.
- A LaserVision disc is loaded in the tray of your CDV 495.

6. The sound is poor or distorted, or you can only hear one channel.

- The player is not connected to the correct input to the amplifier. This should be the 'CD', 'AUX', 'TUNER' or 'TAPE IN' connection, but **not** the 'PHONO' input.
- The connection cable is not correctly plugged in.
- The disc is dirty or badly scratched. Try cleaning the disc or using another clean, scratch-free disc.
- The headphone jack is not properly plugged in.
- There is an unwanted object in the disc tray.

7. Programming is not working.

- The disc is dirty or badly scratched. Try cleaning the disc or using another clean, scratch-free disc.
- The microprocessor has not processed the commands properly. Press 'STAND BY', switch the player on again and re-programme.
- The programming sequence is not being followed correctly. Re-programme, carefully following the instructions under 'Storing a programme'.
- The programme memory is full - 20 chapters or tracks are already stored.
- You have tried to store a favourite selection from a disc without a table of contents.

8. The player does not react to the commands from the remote control handset.

- You are not aiming accurately enough at the 'IR REMOTE SENSOR' on the player.
- You are too far away from the player.
- The batteries in the handset require replacing.
- The 'IR REMOTE SENSOR' is obstructed and not receiving the signals.

9. The disc is playing, but the picture quality is poor, or unstable.

- The connection to the TV set is faulty. Check the connecting cable.
- The TV set is incorrectly tuned to the frequency of the player.

10. Special effects (still picture, slow, reverse, fast) do not function. 'CAV ONLY' appears on the TV screen and 'Er CAV' on the display.

- Check if you are using an Active Play disc. Special effects only work with Active Play discs.

11. The player sticks at one point on the disc.

- Press the 'SEARCH ►►' key to jump over the affected part of the disc. If the disc then functions correctly, stop the player and check for dirt or fingerprints on the disc. Clean the disc if necessary.

12. The following faults can be caused by the same circumstances:

- **Playback does not begin with the first chapter or track number of the disc or of the programme, but with another.**
- **Playback stops before the end of the disc or the programme.**
- The microprocessor has not processed the command correctly. Check if pressing 'STAND BY' followed by 'PLAY' clears the fault.
- The disc is dirty or badly scratched. See if cleaning the disc or using another, clean or scratch-free or almost scratch-free disc clears the fault.
- The disc is defective. Try another disc and see if that clears the fault.
- There is an unwanted object in the disc tray.