



VIDEO CASSETTE RECORDER **OWNER'S MANUAL**

Before connecting, operating or adjusting this product,
please read this instruction booklet carefully and completely.



Thank you for buying this video cassette recorder Model T49HW.

Before using your video recorder you need to be familiar with the names of some of the buttons on the remote control handset (see OPERATING THE VIDEO RECORDER, pages 5 to 7), and you need to set up the video recorder so that it can receive the TV stations in your area and so that your TV set can receive pictures from it (see pages 11 to 12).

Features

- HQ (High Quality) picture enhancement system that improves picture sharpness and detail
- Centre tape mechanism for high quality pictures
- Full function infra-red remote control handset
- Programmable 40 channel memory with voltage synthesised tuner
- ACMS (Automatic Channel Memory System) - the channels will be preset and memorized automatically.
- 8 event/1 month programmable timer
- Double speed playback
- Auto Power on and Play
- LP - Long Play - recording and playback
- Automatic Rewind
- Shuttle Controls
- Logic & Jet Search
- VISS - VHS Index Search System
- Child Lock
- Auto Head Cleaner
- Fine still, Frame advance & Variable Slow functions
- Real Time Counter & Remaining tape time display
- Quick Start function
- Digital Auto Tracking System
- NTSC playback function
- PAL B/G & SECAM D/K Dual System

INSTALLATION

Power

This Video Recorder operates on a mains supply of 100-240V~, 50 Hz.

Service

Never remove the cover of the video recorder. There are no user serviceable parts inside. If it does not operate properly, unplug it and contact your dealer.

Precautions

For safe operation and satisfactory performance of your video recorder, keep the following in mind when selecting a place for its installation.

● Shield it from direct sunlight and keep it away from

Moisture condensation

Under special conditions like moving your video recorder from a cold to a warm room, moisture condensation can build up on the head drum, one of the most crucial parts of the video recorder. In order to prevent in such case any damage to your video recorder HEAD DRUM, connect the video recorder power cord to the AC line, press the OPERATE button on and allow at least 2 hours for the video recorder to dry out.

CONDENSATION IS LIKELY TO OCCUR WHEN:

- The video recorder is moved from a cold room to a

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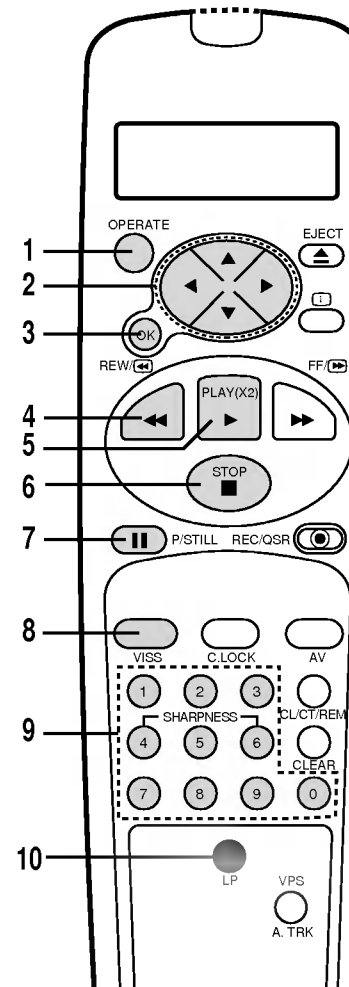
The Remote Control Handset

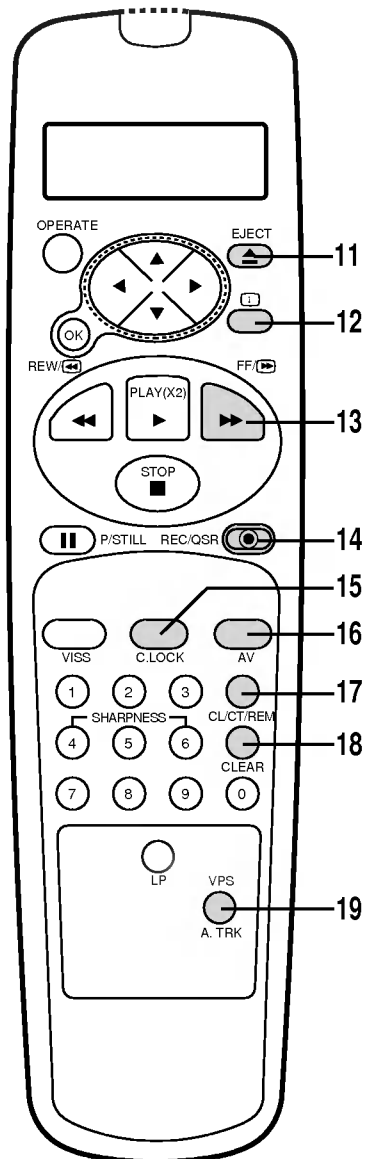
This video recorder is designed so that almost all of its functions can be controlled from the REMOTE CONTROL HANDSET. This must have a "line of sight" to the sensor on the front of the video recorder. It must be within an angle of 30 degrees either side of the centre. The maximum operating distance is about 7.5m (25 feet).

Some functions can also be controlled with the controls on the FRONT PANEL of the video recorder.

- 1 OPERATE**
To switch the video recorder on and off.
- 2 CURSORS (▲▼◀▶)**
 - ▲▼: ● During OSD menu, for moving the cursor, selection bar up or down.
 - Switches one channel programme up or down.
 - During playback, tracking control.
 - During still playback, adjusting vertical tremble.
 - ◀▶: ● During OSD menu, for moving the cursor to the left or right.
 - Adjust the playback speed (See p 19).

The cursor "◀" button can be used to clear a data.
- 3 OK**
 - Confirms menu selection (see p 10).
 - Calls the on screen display (see p 24).
- 4 REWIND/REVIEW**
To rewind the tape (see p 18).
To see reverse playback picture at high speed (see p 18).
- 5 PLAY(X2)**
To play the tape (see p 16).
To play the tape at double speed (see p 17).
- 6 STOP**
To stop the tape.
- 7 P/STILL**
Switches to still picture (see p 19), during recording to pause (see p 20).
- 8 VISS**
To activate the VISS (VHS INDEX SEARCH SYSTEM) (see p 26).



**11 EJECT BUTTON**

To eject a tape (see p 17).

12 i

To display the on screen display (OSD) menu (see p 10).

13 FAST FORWARD/CUE

To wind the tape forward (see p 18).

To see forward playback picture at high speed (see p 18).

14 REC/QSR

Used to record and set the QSR (Quick Set Recording) time (see p 21).

15 CHILD. LOCK

To turn the CHILD LOCK function on/off (see p 27).

16 AUDIO/VIDEO MODE

To select the input source of a recording (see p 7).

17 CLOCK/TAPE COUNTER/TAPE REMAINING

To switch the display on the front panel of the video recorder between the current time, the tape counter and the amount of tape remaining (in hours and minutes) (see p 25).

This function will only operate when a tape is loaded.

18 CLEAR

To reset the tape counter to zero (see p 25).

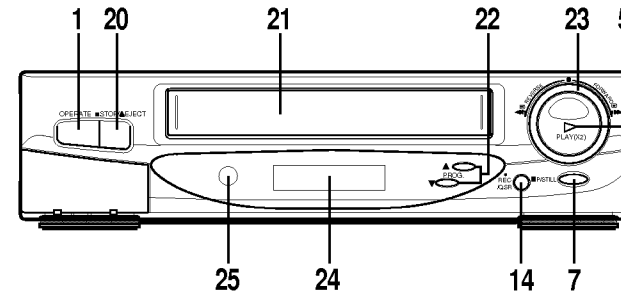
19 AUTOMATIC TRACKING

To select automatic adjustment of the tracking (see p 25).

OPERATING THE VIDEO RECORDER

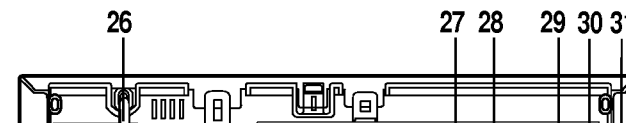
The front of the Video Recorder

- 1 OPERATE BUTTON**
To switch the video recorder on and off.
- 20 STOP/EJECT**
To stop the tape, or eject it from the video recorder (see p 17).
- 21 VIDEO CASSETTE COMPARTMENT**
When a cassette is inserted loading is completed automatically.
NOTE: Power is turned on automatically when a video cassette is loaded. If the cassette has the record tab removed, the video will automatically begin to play the tape.
- 22 CHANNEL PROGRAMME SELECTORS (▲/▼)**
Allows you to scan through memorized channels.
- 23 SHUTTLE RING**
Turn to start rewind or fast forward in the stop mode.
- 5 PLAY (x2)**
- 7 P/STILL**
- 14 REC/QSR**
- 24 MULTI FUNCTION DISPLAY**
Display of time, tape counter, tape remaining or other information about the status of the video recorder.
- 25 REMOTE CONTROL SENSOR**
To receive the signals from the remote control handset.



The back of the Video Recorder

- 26 MAINS LEAD**
- 27 AUDIO/VIDEO IN/OUT TERMINALS**
To connect the video recorder to your TV set or to another video recorder (see p 28). For recording from AUDIO/VIDEO IN select "AV" with the "AV" button (see p 20).
- 28 SYSTEM SELECT SWITCH (K & G)**
Set to the SECAM D/K(K) or PAL B/G(G) position, depending on the type of PAL



INSTALLING YOUR VIDEO RECORDER

Important !

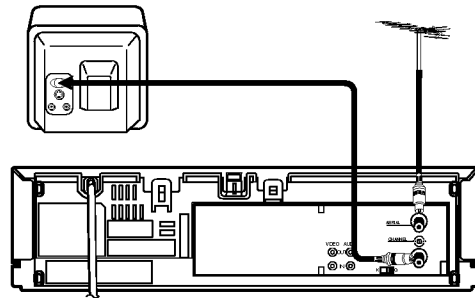
BEFORE YOU USE YOUR VIDEO RECORDER YOU MUST:

- 1** Connect the video recorder to your TV aerial and TV set. (described later on this page).
- 2** Set the tuner channels so that the video recorder can receive TV signals (see p 11 to 12).
When this has been done, the setting up of the video recorder is complete.

Connecting the video recorder to your TV

AERIAL/RF CONNECTION

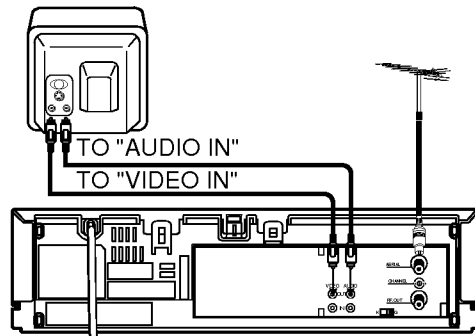
- 1** Disconnect the aerial from your TV set and plug it into the socket marked "AERIAL" at the back of the video recorder.
- 2** Use the coaxial cable supplied to connect the aerial terminal on your TV set to the socket marked "RF. OUT" at the back of the video recorder.
- 3** Plug the video recorder into a mains wall socket.



A/V CONNECTION

This video recorder and your TV set can also be connected with a RCA cable (AV cable) (obtainable from a TV dealer). This connection ensures the highest picture/sound quality.

- 1** Connect the video recorder to the TV as shown diagram.
- 2** Press the video recorder OPERATE button to "ON".
- 3** Turn on the TV set and select the video position.



Your TV set receives the video recorder signal like another TV station. So you have to select a programme number for the video recorder.

Take care to select this programme number, whenever you control the video recorder, or watch a recording. Only if you have selected this programme number, which we call video programme number, you will see the picture from the video recorder on the screen.

If you connect a monitor or a TV set equipped with audio and video terminals, this adjustment will not necessary. Consult the operating instructions of your TV set.

Connect the video recorder as described in the section on Connections (see on previous page).

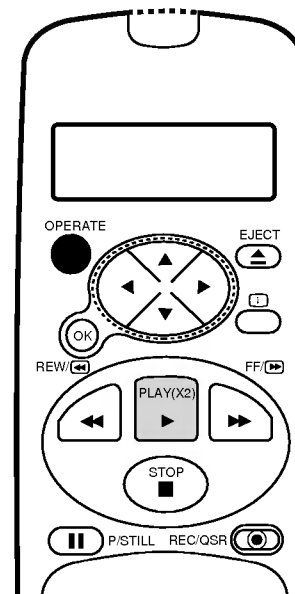
Setting the output channel of the video recorder

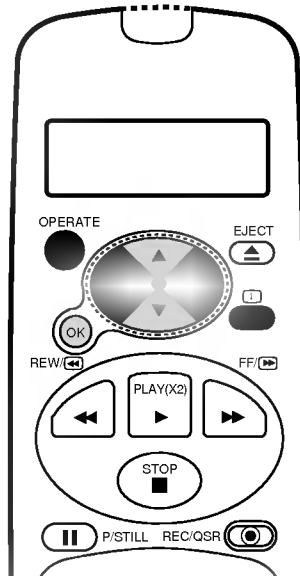
1 SETTING THE VIDEO CHANNEL WITH PLAYBACK

- 1 The output channel of the video recorder is set at UHF channel 36.
- 2 Turn on the TV set and the video recorder.
- 3 Play any video cassette tape on your video recorder.
- 4 Select the correct channel (36) on your TV set. And then you will see the picture being played in video recorder.
(Note - You will need to look at the instruction manual for your TV set if you do not know how to do this.)

2 SETTING THE VIDEO CHANNEL WITH OSD (ON SCREEN DISPLAY)

- 1 Turn on the TV set and the video recorder.
- 2 Repeat above No. 4. And then you will see a blue background picture on the TV screen.
- 3 Store this channel in an unused programme number on your TV set.





A number of the features of this video recorder can be set and altered using the handset with On Screen Displays (menus) on the TV screen.

The Main menu

- 1 Switch on your TV set and video recorder by pressing the "OPERATE" button.
- 2 Press the "i" button to display the Main menu.
- 3 Press the cursor ▲ and ▼ buttons to select the desired menu and press the "OK" button.

NOTE - After using the menus press the "i" button to remove menus from the TV screen.

TIMER PROGRAMME

Used to record a programme with the timer (see p 22).

TV STATION TABLE

Used to view stored TV stations or to set TV station information manually (see p 12).

ACMS

Used for automatic setting of the TV stations (see p 11).

CLOCK SET

To set the clock manually (see p 15).

SET-UP

- **SYSTEM (AUTO → PAL → MESECAM)**
Select the colour system used for playback and recording (see p 21).
- **OSD (On Screen Display)**
Switches the on screen display OFF or ON (see p 24).
- **TAPE SELECT**
Used to select the tape length so that remaining tape time display is correct.
E180: Use for E-180, E-260 and E-300 tapes.
E240: Use for E-210 and E-240 tapes.
- **LANGUAGE**
Allows you to select the language of the on screen display. Select the language you prefer by pressing the "OK" button several times. You can select between English, and French.



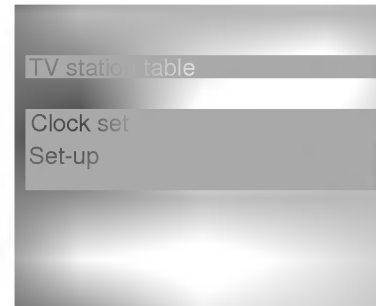
Up to 40 TV stations (40 channels) can be stored in the memory of this video recorder. These can be set automatically or manually.

Automatic tuning

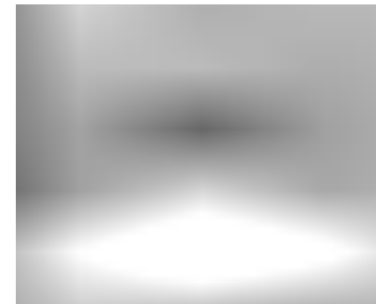
To carry out Automatic tuning:

- 1** Turn on the TV and the video recorder (with the "OPERATE" button).
- 2** Press the "i" button on the video recorder handset. The menu will appear on the TV screen.
- 3** Use the cursor ▲ and ▼ buttons to select "ACMS".
- 4** Press the "OK" button.
- 5** Press the "OK" button to start the automatic storing of the channels of the TV stations in your area.
- 6** Automatic channel tuning has been completed when the "TV station table" menu appears on the TV screen.
- 7** Press the "i" button to remove the menus from the TV screen.

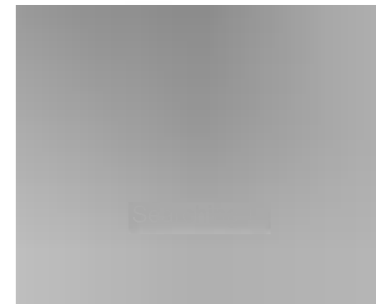
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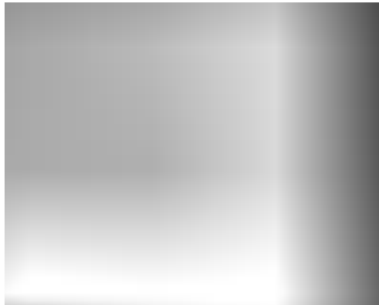
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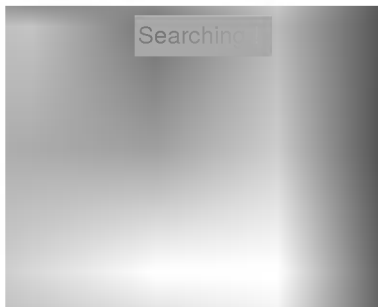
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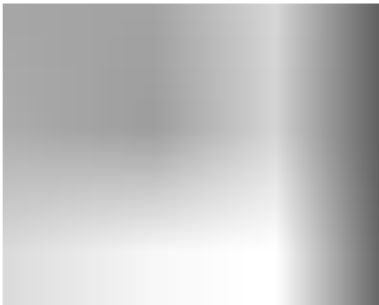
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4



5



Manual tuning

TV station Channel numbers and Station names can be stored manually.

To carry out manual tuning:

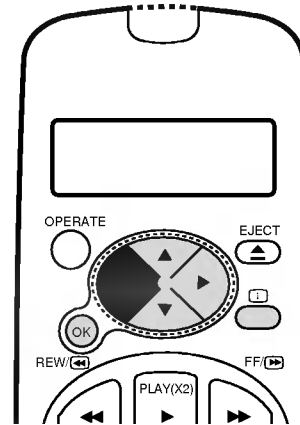
- 1 Press the "i" button on the video recorder handset. The menu will appear on the TV screen.
- 2 Use the cursor ▼ button to select "TV station table" and press the "OK" button.
- 3 Use the cursor ▲ and ▼ buttons to search the programme number that you want to tune and press the "OK" button.
- 4 Press the cursor ▲ button to start manual station tuning.
 - Searching will stop when it locates a station.
 - To further stations, press the cursor ▲ button.
 - If you want to stop the station search, press the "OK" button.
- 5 Press the cursor ▼ button to input the station name manually.
 - 1) Enter the first letter of the station name by repeatedly pressing the cursor ▲ and ▼ buttons.
 - 2) Now move the cursor with the ► to the next position and write in the next letter of the station name.
 - For corrections move back and forth with the ◀ and ► buttons.
 - 3) When you have the station name as required press the "OK" button. The "TV station table" menu will be displayed.

Note: If you don't want to change the station name, press the "i" button instead of "OK" button.
- 6 Store other stations, missing or incorrect station names using steps 3 to 5.
- 7 End the station storing by pressing the "i" button.

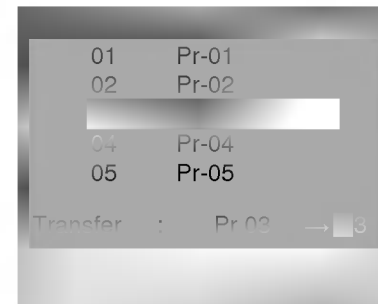
Changing the programme order of the "TV station table" menu

If you want to move the order of the TV stations you can easily do so as follows:

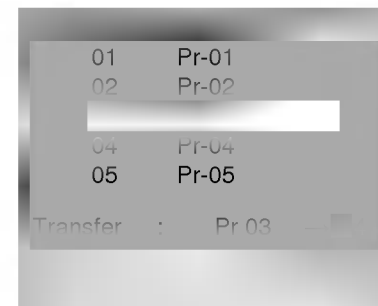
- 1** Press the "i" button on the video recorder handset. The menu will appear on the TV screen.
- 2** Select "TV station table" with the cursor ▲ and ▼ buttons and press the "OK" button.
- 3** Move the cursor down or up with the cursor ▲ and ▼ buttons to select the programme that you want to transfer to another position in the menu (for example "Pr No. 03").
- 4** Use the cursor ► button.
- 5** Use the number buttons to enter the programme number to which you wish to transfer the selected programme (for example Pr No. 04")
- 6** Press the "OK" button.
The selected station will be moved to the new programme number.
- 7** Move other stations, if you wish, by repeating steps 3 to 6.
- 8** Press the "i" button to remove the menus from the TV screen.



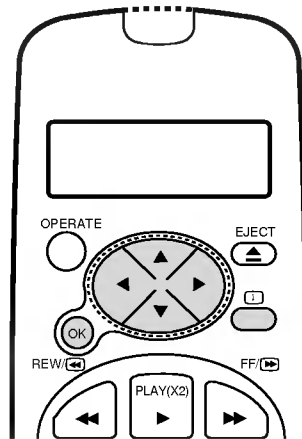
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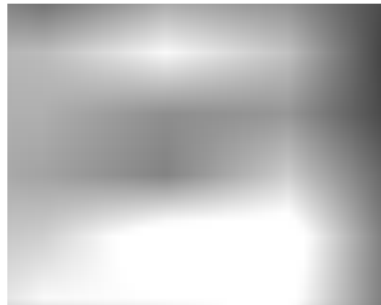
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6



2



4

Pr	No.	Station
	01	Pr-01
	02	Pr-02
	04	Pr-04
	05	Pr-05

Clearing stations from the "TV stations" menu

If you want to clear a TV station from the video recorder's store you can easily do so as follows:

- 1 Press the "i" button on the video recorder handset. The Main menu will appear on the TV screen.
- 2 Select "TV station table" and press the "OK" button to select.
- 3 Move the cursor down or up with the cursor ▲ or ▼ button to select the programme that you want to clear. (for example station "Pr - 03")
- 4 Press the "◀" button to delete. After a short while, the selected station will be cleared.
- 5 Clear other stations, if you wish, by repeating steps 3 and 4.
- 6 Press the "i" button to remove the menus from the TV screen.

Fine tuning

If the picture quality is poor, because TV reception is weak, it might be improved by manually tuning the video recorder as follows:

- 1 Press the "i" button on the video recorder handset. The Main menu will appear on the TV screen.
- 2 Select "TV station table" and press the "OK" button to select.
- 3 Move the cursor down or up with the cursor ▲ or ▼ button to select the programme that you want to fine tune.
- 4 Press the "OK" button.
- 5 Adjust for the best quality picture and sound with the cursor ◀ and ▶ buttons.
- 6 Press the "i" button twice to remove the menus from the TV screen.

Setting the video recorder's clock

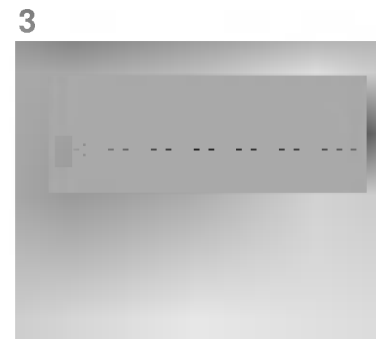
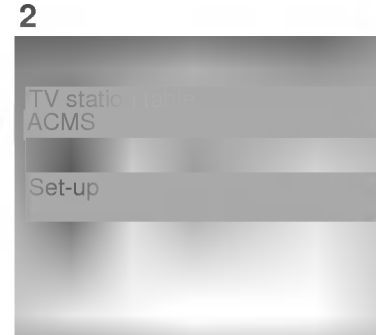
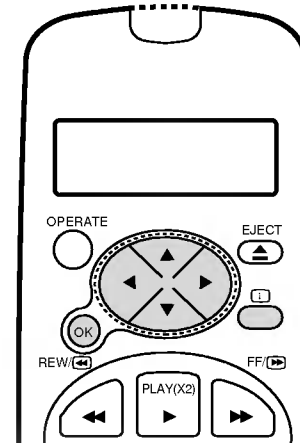
This video recorder is equipped with a built in clock which can be seen in the display at any time. After the first connection or after power failure you have to set in the following way:

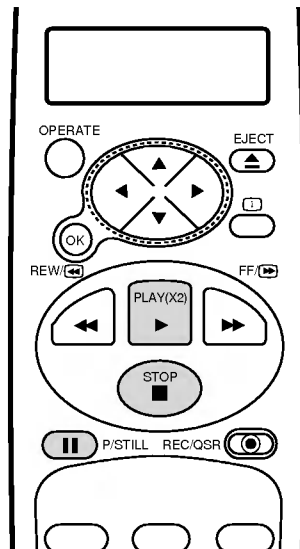
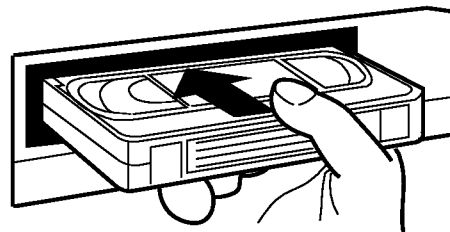
- 1** Press the "i" button. The Main menu appears on the TV screen.
- 2** Select "Clock set" with the cursor ▲ and ▼ buttons.
- 3** Press the "OK" button.
- 4** Use the number buttons to enter or alter the Hours, Minutes, Day, Month and Year (using the 24 hour clock). The day of the week will appear automatically when you have entered the date.

NOTE: Enter 1 as 01, 2 as 02 etc.

- Correct errors during inputting with cursor ◀ and ▶ buttons.

- 5** Press the "i" button to remove the menus from the TV screen.
The set time will appear on the video recorder's Display.





NOTE - Loading and unloading of a video cassette is only possible when the video recorder is plugged into a power source.

Loading a video cassette

- 1 Turn on your TV set and video recorder.
- 2 Insert the cassette into the video recorder with the window side up and the arrow pointing away from you. Do not attempt to insert a cassette which is upside down or back to front.

GENTLY PRESS THE MIDDLE OF THE TAPE.

Video cassette loaded indicator - The $\odot\odot$ symbol is shown on the video recorder's display when there is a video cassette loaded in the video recorder.

Automatic switch - on - The video recorder is automatically switched on when a video cassette is inserted.

It is not necessary to switch on the video recorder, by pressing the "OPERATE" button, before inserting a video cassette.

Normal playback

- 1 Press the "PLAY ($\times 2$)" button to start playing a tape (called Normal playback). "PLAY" will appear for a few seconds on the TV screen.

Automatic tracking - The video recorder will automatically adjust the tracking to give the best quality picture. A.TRK will appear on the video recorder's display while it is doing this.

Standard Play (SP) or Long Play (LP) tape -

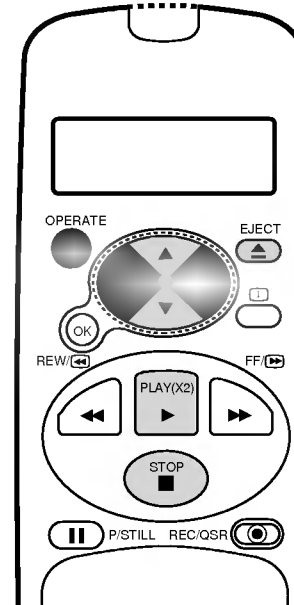
The video recorder will automatically recognise whether the tape has been recorded at normal speed (SP) or half-speed (Long Play - LP), and play it back at the correct speed. If it is a long play tape LP will be shown on the video recorder's display.

Automatic playback - If the video cassette has had its safety tab removed, so that it cannot be erased, then the video recorder will automatically start playing the tape.

- 2 Short interruptions of the playback up to 5 minutes can be made with the "PAUSE/STILL" button. Continue playback by pressing the "PLAY(X2)" button.

Double speed playback

- 1 Press the "PLAY (×2)" button during normal playback. The tape will play back at double speed and without sound.
- 2 Distortions in the picture can be eliminated by changing the tracking with the cursor "▲ and ▼" buttons.
- 3 Press the "PLAY (×2)" button to return to playback at normal speed
- 4 End the playback with "STOP" button.



Unloading a video cassette

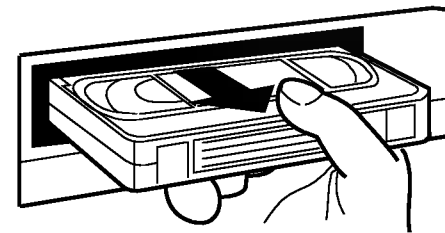
Press the "EJECT" button, on either the handset or the front panel of the video recorder.

The cassette compartment will open and the video cassette will be partially ejected.

"EJECT" will appear for a few seconds on the TV screen.

It is not necessary to switch on the video recorder, by pressing the "OPERATE" button before ejecting a video cassette.

NOTE - It is advisable to remove a video cassette from the video recorder when not in use. Rewind and unload it.



Types of video cassette

Use VHS tapes in this video recorder.

On SP (standard play) the maximum record and playback time is that given on the video cassette.

For example E-180 will record/play back for 180 minutes.

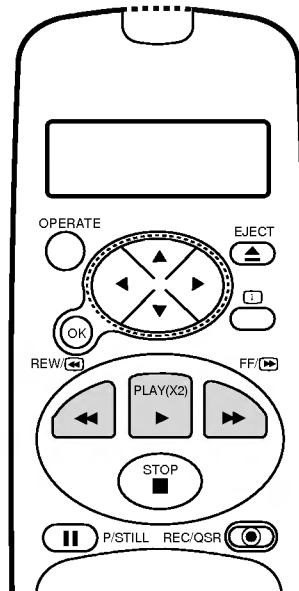
On LP (long play) the maximum record and playback time is twice that given on the video cassette

(PAL & MESECAM)

VIDEO CASSETTE LENGTH	MAXIMUM RECORD/PLAYBACK TIME	
	SP	LP
E-240	240Min.	480Min.
E-180	180Min.	360Min.
E-120	120Min.	240Min.
E-60	60Min.	120Min.

(NTSC)

VIDEO CASSETTE LENGTH	MAXIMUM RECORD/PLAYBACK TIME
E-240	480Min.
E-180	360Min.
E-120	240Min.
E-60	120Min.



This video recorder will allow you to rapidly wind a tape forwards or backwards, search a cassette tape.

Fast forward (FF)

Pressing the fast forward ("FF") button with the tape on stop, will rapidly wind the tape forward. "FF" will appear for a few seconds on the TV screen.

Rewind (REW)

Pressing the rewind ("REW") button with the tape on stop, will rapidly wind the tape backwards. "REW" will appear for a few seconds on the TV screen.

REMARK:

First time using FF/REW after inserting the tape, the video recorder will use about 20-30 seconds to find the remain time before the fast forwarding or rewinding can begin.

LOGIC search

If you hold down either of the search buttons ("FF" or "REW") during fast forwarding or rewinding the tape, the picture will be seen at about 7 times the normal playback speed. This enables you to see where you are on the tape. When you release the button the video recorder continues fast forward or rewind.

Picture search - CUE & REVIEW

You can also quickly carry out a visual search for a desired section on a tape using the CUE and REVIEW functions.

During playing back press either the fast forward ("FF") or rewind ("REW") button.

The tape will be played forward or backwards at about 7 times the normal playback speed. When the desired point on the tape has been reached press the "PLAY (x2)" button and the video recorder will continue to play back the tape at the normal speed.

Picture search will only continue for about 3 minutes, after which the video recorder will return to normal playback mode.

JET search

Still picture playback

You can playback and advance a still picture as follows:

- 1 Press the P/STILL button during playing back. You see a still picture on the TV screen.
- 2 You can remove the vertical tremble with the cursor "▲" and "▼" buttons.
- 3 You can advance the still picture by pressing the P/STILL button. By repeatedly pressing this button the picture advances one frame at a time.
- 4 To switch off the still picture, press the "PLAY (×2)", or the "STOP" buttons.

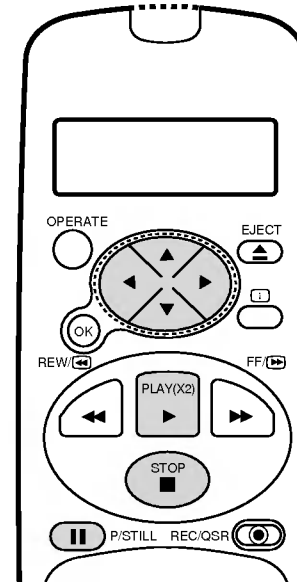
Slow motion playback, Shuttle

This video recorder is equipped with a slow motion and shuttle features.

- 1 During playing back or still picture press the cursor ◀ or ▶ button.
- 2 You can reach the following playback speeds: fast review, review, -3Xplay, -play, -1/6 slow, -1/16 slow, -1/32 slow, still, 1/32 slow, 1/16 slow, 1/6 slow, play, 2Xplay, cue, fast cue.
- 3 If distortions can be seen in the picture, remove them with the cursor "▲" and "▼" buttons.
- 4 To switch off the slow motion, press the desired function, e.g. playback, search, still picture or stop.

The slow motion playback will only continue for about 3 minutes, after which the video recorder will return to normal playback mode, to avoid damage of the tape.

When using the special playback effects (double playback, logic, picture and jet search, still and slow motion playback) with a tape recorded in LP, there will be a loss of colour and there may be noise bars on the picture.



Introduction to the recording features

There are a variety of recording modes available to you on this video recorder.

- 1 You may record immediately (a programme you may be watching).
- 2 You may record immediately for a set period of time of up to 9 hours. This is called Quick Set Recording (QSR). The video recorder will automatically turn itself off at the end of the QSR (see p 21).
- 3 You may record at a later time (up to 1 month from the present) using the built-in timer. Up to 8 of these automatic recordings may be set at the same time - provided, of course, that there is sufficient time on the video cassette.

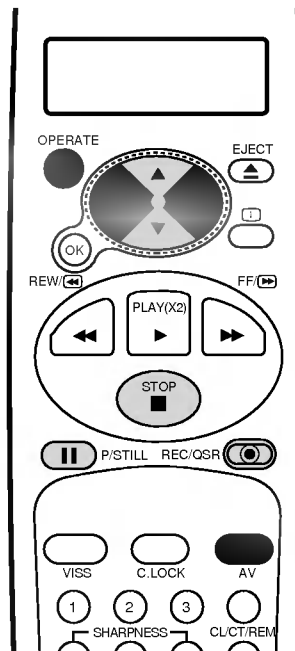
NOTE - Ensure that the safety tab has not been removed from the video cassette on which you wish to record.

To record

- 1 Switch on the TV set and video recorder.
- 2 Insert a video cassette with the window side up, and the arrow pointing away from you, or if a video cassette is already loaded switch on the video recorder by pressing the "OPERATE" button.
- 3 Select the programme channel with the number buttons or cursor "▲" and "▼" buttons.
- 4 Select LP with the "LP" button, if you want to record in long play mode.
- 5 Press the "REC/QSR" button to start recording. "RECORD" will appear for a few seconds on the TV screen. "VISS MARK" will appear on the video recorder's display.

The recording is being marked by the VISS (VHS Index Search System) function. This will enable you to quickly find the recording at a later date.

- 6 If you want to avoid recording unwanted scenes press the "P/STILL" button. "RECP" will appear for a few seconds on the TV screen. To continue recording press the "P/STILL" button again.
- 7 Press the "STOP" button to stop recording. "STOP" will



RECORDING ONE TV PROGRAMME WHILE WATCHING ANOTHER

You can record one programme while watching another by selecting the channel you watch on your TV set.

- 1 Start a recording by following steps 1 to 5 on previous page.
- 2 Select the TV station you want to watch with the programme channel selector on your TV set.

Immediate timer (QSR)

When making a recording you can set your video recorder to stop after a set period of time.

- 1 Press the "REC/QSR" button to start a recording.
- 2 Press the "REC/QSR" button several times until the desired recording time is shown on the video recorder's Display.

Each time you press this button the QSR time will be extended by 30 minutes. The maximum time that can be set is 9 hours.

When the QSR recording have been completed, the video recorder will stop and switch itself off.

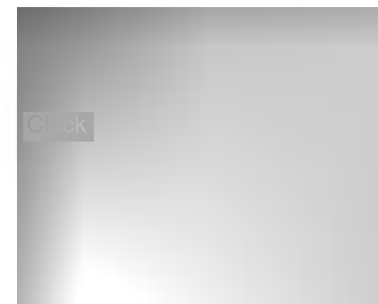
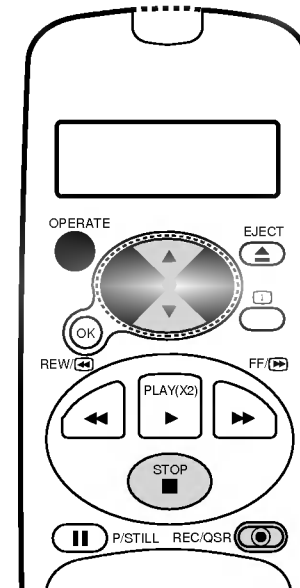
- 3 To cancel a QSR recording, press the "STOP" or the "OPERATE" button.

Selection of the colour system

Because your video recorder is equipped with dual colour standard, you can play and record in PAL B/G and SECAM D/K. During playback your video recorder detects the recorded colour system automatically. Only if there are colour problems with very weak recordings, you should select the colour system manually:

You should select the colour system manually:

- 1 Press the "i" button.
- 2 Select the "Set-up" and press the "OK" button.
- 3 Select "System" with ▲ and ▼ buttons.
- 4 Use the "OK" button to switch between:



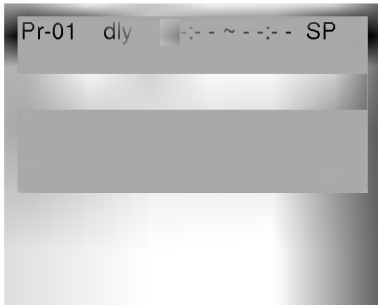
3



4



5



Recorder timer programming using the On Screen Displays

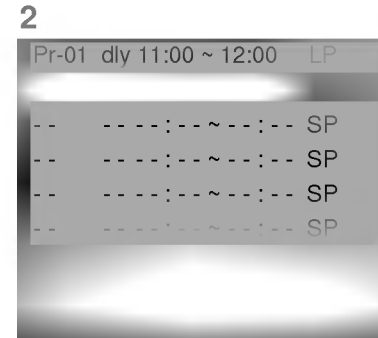
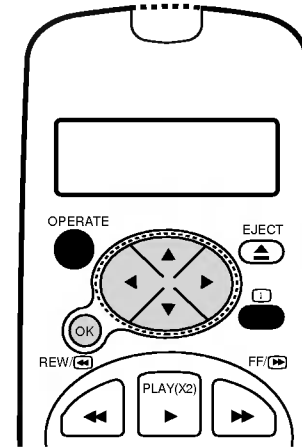
The timer allows you to record broadcasts automatically. Up to 8 recordings within one month can be programmed at the same time.

- 1 Press the "i" button, select "Timer programme" with the cursor ▲, ▼ buttons and press the "OK" button.
- 2 Press the "OK" button to enter the timer programming mode.
- 3 Select the programme number that you wish to record using the number buttons.
Programme number and dates 1 must be entered as 01, 2 as 02 etc.
 - If you want to record from the AUDIO/VIDEO IN terminals, press the "AV" button to "AV" .
 - If the want to change the record mode, press the "LP" button.
LP: for Long play
SP: for Standard play
- 4 Enter the day using the number buttons.
If you want to change recording type:
 - 1) press the "OK" button.
 - **Daily**: for daily recordings from Monday to Friday.
 - **Weekly** (SUN to SAT): for a weekly repeated recording .
 - 2) Select the recording type with the cursor ▲ and ▼ buttons and select it with the "OK" button.
- 5 Enter the start and end times using the number buttons.
 - For setting programme times you must use the 24 hour clock.
 - Errors can be corrected with the ◀ and ▶ buttons.
- 6 Finish your timer inputs with the "i" button.
A menu of the timer programmes set into the video recorder will be displayed on the TV screen.

Checking and clearing stored timer programmes.

The stored timer programmes can easily be viewed on the TV screen, and can also be cleared if not wanted.

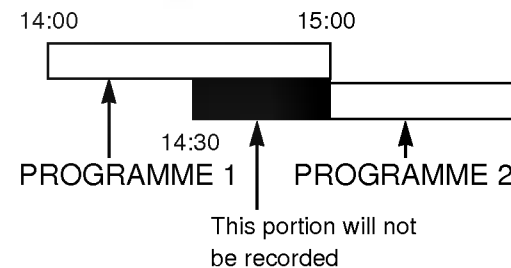
- 1 Press the "i" button.
The Main menu appears on the screen.
- 2 Select "Timer programme" with the cursor ▲ and ▼ buttons and press "OK" button. The timer programmes list will be displayed on the TV screen.
- 3 If you wish to clear any of the programmes on the list, select it with the cursor ▲ and ▼ buttons, and press the "◀" button to clear.
- 4 If you wish to change any of the data for any of the programmes on the list, select it with the cursor ▲ and ▼ buttons, and press the "OK" button. The timer menu will be displayed. Change the data as described on previous page.
- 5 Press the "i" button to remove the menus from the TV screen.



Overlapping timer programmes.

When timer programmes overlap, the programme which is already recording continues to its scheduled end time. Hence the beginning of the second programme will not be recorded.

NOTE - If you wish to stop a timer recording which has already been starting, press the "OPERATE" button on the front of the video.



OTHER FEATURES

Introduction

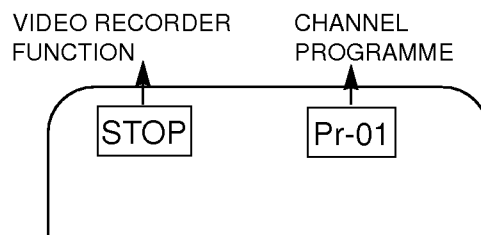
This video recorder has a number of other features which make it easier and more convenient to use. Some of these are described in this section of the manual. Later sections describe the connection of the video recorder to other equipment.

The features described here are:

- 1 The On Screen Display of the time or tape remain or tape counter, date, programme channel and operation mode of the video recorder.
- 2 The Digital Tape Counter and Remaining Tape Time indicator.
- 3 The Memory Stop facility that can be used during rewind to stop the tape at a preset point.
- 4 The VISS (VHS Index Search System) to help you find the beginning of each recording on a video tape easily and quickly.
- 5 The tracking control that optimises the picture quality.
- 6 The Automatic Playback facility which plays back a tape, rewinds and ejects it and switches off the video recorder.
- 7 Automatic Memory Power Shut Off when a video cassette is rewound.
- 8 Automatic Switch Off when the TV station stops broadcasting.
- 9 A Child Lock facility so that the video recorder can be controlled only from the handset.

On Screen Display of the time or tape counter, date, programme channel and operation mode of the video recorder.

When the "OK" button is pressed, a display occurs on the TV screen of the current time or the tape counter or the remaining tape time, the date, year and day of the week, the programme channel and the operation mode of the video recorder. After three seconds this display will disappear, if the "OK" button is pressed twice in quick succession the clock display will remain



Digital Tape Counter/Remaining Tape Time

The Digital Tape Counter and Remaining Tape Time can be displayed on the video recorder's display instead of the time by repeatedly pressing the "CL/CT/REM" button.

The Digital Tape Counter gives you the relative positions of recordings on the tape. If you set the counter to 0:00:00 at the beginning of a tape, you can note the counter reading at the beginning of each separate recording.

To set the counter to 0:00:00 press the "CLEAR" button.

The Remaining Tape Time, gives the time remaining on the tape in the mode currently set (i.e. standard play (SP) or long play (LP)).

The memory stop facility

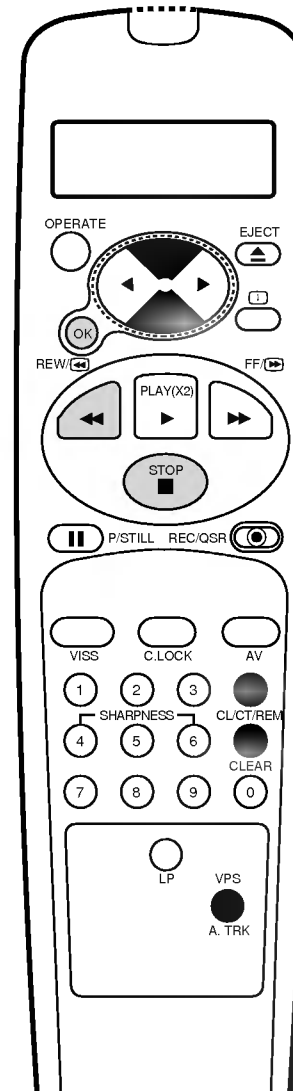
Memory Stop automatically stops a tape when the tape counter is 0:00:00. This feature may be used to return the tape to a preselected position immediately after making a recording, or to repeatedly playback a portion of a tape.

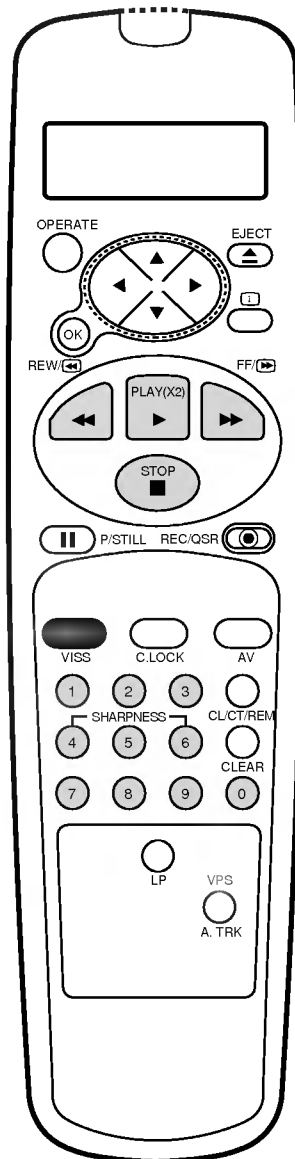
- 1 Press the "CL/CT/REM" button to set the display to the counter.
- 2 Before playback or recording, press the "CLEAR" button. The counter will read 0:00:00.
- 3 Begin the playback or recording. The tape counter gives the actual time in hours, minutes and seconds.
- 4 Press the "STOP" button when playback or recording is complete.
- 5 Press the "REW" button. The tape will rewind and automatically stop when the counter returns to 0:00:00.

Tracking Controls

Tracking distortions show up as streaks or an unstable picture. This video recorder can set the tracking automatically. You can also set the tracking manually if you need to do so.

Automatic tracking - The automatic tracking adjusts the tracking to playback a tape with the optimum picture quality. As soon as you start to playback a tape the tracking will be adjusted if necessary.





The VHS Index Search System (VISS)

VISS allows you to find the beginning of each recording on a tape easily and quickly. The video recorder automatically puts an index mark on the tape whenever you start a recording, and the VISS searches for these index marks.

AUTOMATIC VISS MARKING

At the beginning of each recording, a VISS mark is recorded automatically on the tape. This is indicated by VISS MARK appears on the video recorder's display.

VISS SCANNING

A VISS scan gives you a quick overview of the recordings on the video cassette.

To carry out a VISS scan:

- 1 Insert the video cassette.
- 2 Whilst the video recorder is on stop press the "VISS" button.
- 3 Press the "FF" or "REW" button to fast forward or rewind the tape.
- 4 The tape winds on to the next VISS mark, switches to playback for a short time, so that you can view the tape at that point, and then winds on to the next VISS mark.
- 5 You can switch off the VISS scan at any time by pressing the "PLAY(X2)" button or "STOP" button.

VISS SEARCHING

A VISS search is very similar to a VISS scan. Here you enter the desired mark with the number buttons. For example, if you want to find the fifth mark after (on fast forward) or before (on rewind) the present tape position, you enter 05. The VISS marks are not numbered, but the video recorder counts the marks during the winding and will switch to playback as soon as the entered number is reached.

To carry out a VISS search:

- 1 Insert the video cassette.
- 2 Whilst the video recorder is on stop press the "VISS"

Automatic Playback

Automatic Playback is a very convenient automatic action of this video recorder. It occurs whenever you insert into the video recorder a video cassette from which the safety tab has been removed (e.g. a video cassette which you have hired).

Automatic Playback carries out the following procedures:
 It automatically switches on the video recorder's power and starts to playback the tape.
 At the end of the tape, it automatically rewinds.
 The tape is ejected automatically.
 The video recorder switches itself off.

Automatic Memory Power Shut-Off

This feature of the video recorder enables you to initiate switching off the video recorder during tape rewind. Hence you do not have to wait until a tape has rewound before you can switch the video recorder off.

To activate Automatic Memory Power Shut Off press the "OPERATE" button during tape rewind. The tape will rewind to the beginning and the video recorder will switch itself off.

Pressing any of the control buttons (e.g. "OPERATE" or "PLAY(×2)") after setting Automatic Memory Power Shut Off will cancel it.

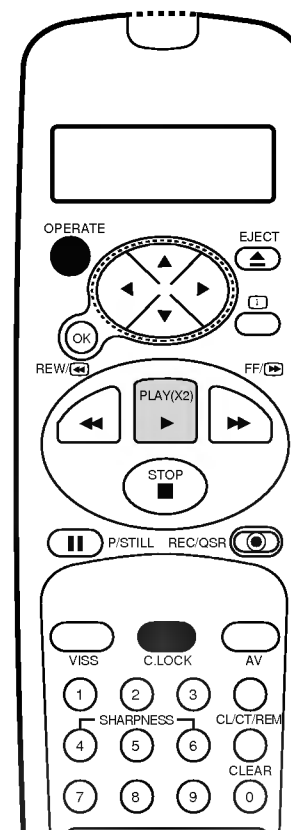
Automatic Switch Off

The video recorder will turn itself off after 8 minutes when not receiving a TV signal. This will occur when TV broadcasts have finished.

The Child Lock

The control buttons on the front of the video recorder are inoperative. The video recorder can be controlled only from the handset.

- 1 Press the "C.LOCK" button. "🔑" appears on the video recorder's Display.
 The control buttons on the front of the video recorder are inoperative (except for STOP/EJECT). The video



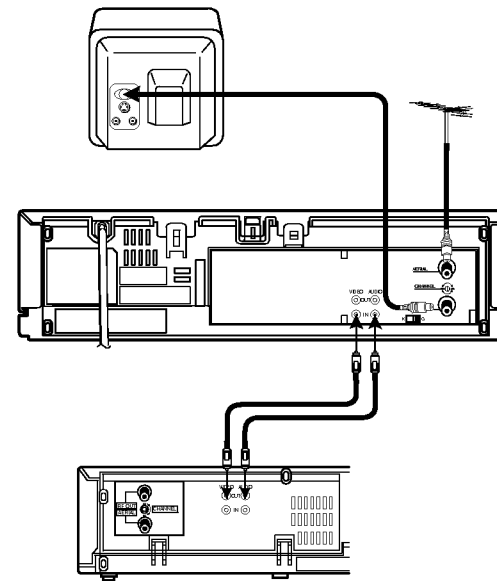
With this video recorder you can make recordings from an external source, such as copying from another video recorder or camcorder.

To do this you will need an RCA (AV cable).

- 1** Connect the VIDEO OUT cable of the playing video recorder to the VIDEO IN terminal on the recording video recorder.
- 2** Connect the AUDIO OUT cable of the playing video recorder to AUDIO IN terminal on the recording video recorder.
- 3** Insert an empty cassette into this video recorder and if you are copying another tape insert it into the second video recorder.
- 4** Set the "AV" mode for recording video recorder with the "AV" button on the remote control. "AV" indicator will be displayed on the display.
- 5** Set the tape speed with the LP button at the recording video recorder.
- 6** Start the playback at the playing video recorder and then start the record with the REC/QSR button on the remote control or at the video recorder.
- 7** Short interruptions can be made with the P/STILL button on the video recorder, e.g. to cut scenes.
To continue recording, press this button again.
- 8** End copying with the STOP button and turn all devices off.

COPYRIGHT LAW

Unauthorized recordings of copyrighted television programmes, films, video cassettes and other materials infringe the right of copyright owners and be contrary to copyright laws.



SPECIFICATIONS

GENERAL

Power	: 100-240V~, 50Hz.
Power consumption	: Approx. 20 watts
Video recording system	: Double azimuth 4 heads, helical scanning system
Tape speed	: 23.39 mm/sec (SP mode)/11.69 mm/sec (LP mode)
Tape format	: Tape width 1/2" (12.7 mm high density VHS tape)
Maximum recording time	: 4 hours in SP mode/8 hours in LP mode (with E-240 tape)
Rewind time	: Approx. 150 sec. (with E-180 tape)
Dimensions (W x H x D)	: 14.2" x 3.5" x 11.9" (360 x 88 x 303 mm)
Weight	: 9.7lbs. (4.4 kg)
Operating temperature	: 41 °F-95 °F (5 °C-35 °C)
Operating humidity	: Less than 80 %
Timer	: 24 hours display type

VIDEO

Television system	: CCIR standard (625 lines, 50 fields) PAL/SECAM colour signal
Recording format	: PAL/MESECAM
RF reception	: PAL/SECAM (B/G, D/K)
RF OUT	: PAL G/SECAM K
Input level	: VIDEO IN (RCA type) 1.0 Vp-p, 75 ohm, unbalanced
Output level	: VIDEO OUT (RCA type) 1.0 Vp-p, 75 ohm, unbalanced
Signal to noise ratio	: More than 43 dB
RF modulator	: UHF channels 30-40 (adjustable)

AUDIO

Input level	: AUDIO IN (RCA type) -7.8 dBm, more than 47 Kohm
Output level	: AUDIO OUT (RCA type) -5 dBm, less than 1 Kohm
Audio track	: Mono track
Audio frequency response	: 100 Hz-10 kHz (-5/+3)
Audio signal to noise ratio	: More than 43 dB

※ Design and specifications are subject to change without notice.

BEFORE CALLING FOR SERVICE ...

Please check to see if any problem which you may have with your video recorder is described here before taking it for service or calling a service engineer.

Problem	Possible solution?
No mains power to the video recorder	<ul style="list-style-type: none">• Is the video recorder plugged into the mains?• Is the mains supply on and switched on?
TV programmes cannot be recorded	<ul style="list-style-type: none">• Can you get a picture on the TV screen? If are not the aerial and RF lead connected?• Are the TV channels properly tuned in?• Has the safety tab been removed from the video cassette to prevent recording?
A timer recording does not take place	<ul style="list-style-type: none">• Is OPERATE off? (Is the Timer symbol showing in the display?)• Were the recording start and end times set correctly?• Are the timer settings in the timer menu?• Was the power interrupted after setting the timer? If so the time setting will be erased and timer recordings will not take place.
AUTO PLAY does not work	<ul style="list-style-type: none">• Has the safety tab been removed from the video cassette?
There is no picture on playback, or it is noisy and streaky	<ul style="list-style-type: none">• Are the TV channels properly tuned in?• Try another video cassette.• Is the TV set tuned to the RF output channel of the video recorder?• Try a different RF output channel on the video recorder.• Are the TV channels properly tuned in?• Can you minimise the noise bars to an acceptable level with the "A.TRK" or "▲ and ▼" buttons?
The top of the playback picture is unstable	<ul style="list-style-type: none">• Is the video cassette damaged? Try another one.• Adjust the horizontal hold control on you TV set.
Video cassettes cannot be inserted	<ul style="list-style-type: none">• Is the cassette compartment empty?• Are you trying to insert the cassette the right way round?

