

VIDEO CASSETTE RECORDER OWNER'S MANUAL

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



MODEL: S12HW

WELCOME TO LG

Thank you for buying this LG video cassette recorder Model S12HW.

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 4 to 6), 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 page 9).

Features

- HQ (High Quality) picture enhancement system that improves picture sharpness and detail
- Centre tape mechanism for high quality pictures
- Full function infrared remote control handset
- Programmable 60 channel memory with voltage synthesised tuner
- EPS (Easy Programming System) the channels will be preset and memorised automatically.
- 4 event/1 month programmable timer
- Digital Auto Tracking System

- NTSC Playback on PAL TV
- PAL/SECAM (B/G, D/K) Dual System
- Auto Power on and Play
- Automatic Rewind
- Logic & Jet Search
- Still & Frame advance
- Real Time Counter Display
- Quick Start function

INSTALLATION

Power

This Video Recorder operates on a mains supply of $100-240V^{\sim}$, 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 sources of intense heat.
- Avoid dusty or humid places.
- Avoid places with insufficient ventilation for proper heat dissipation. Do not block the ventilation holes at the top of the video recorder. Do not place the video recorder on the carpet because this will block the ventilation holes.
- Install the video recorder in a horizontal position only.
- Avoid locations subject to strong vibration.
- Do not place the video recorder near strong magnetic fields.
- Do not move the video recorder from a cold to a hot location or vice versa.

Moisture condensation

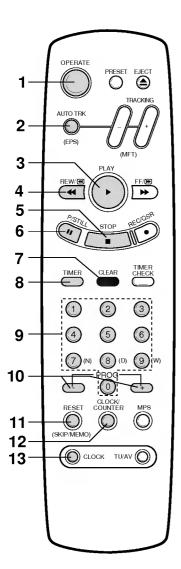
Under special conditions like moving your video recorder from a cold to a warm room, moisture condensation can build up on the head drum, one of the most crucial parts of the video recorder. In order to prevent in such case any damage to your video recorder HEAD DRUM, connect the video recorder power 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 warm room or from outdoors to inside your home.
- A cold room is heated quickly.
- The humidity is very high.

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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 AUTO TRACKING/EPS (Easy Programming System)

- To select automatic adjustment of the tracking (see p 19).
- To start the station search automatically during programme preset (see p 9).

3 PLAY

To play the tape (see p 12).

4 REWIND/REVIEW

To rewind the tape (see p 14).

To see reverse playback picture at high speed (see p 14).

5 STOP

To stop the tape.

6 P/STILL

Switches to still picture (see p 12), during recording to pause (see p 15).

7 CLEAR

To erase the information entered.

8 TIMER

Switch to programming timer (see p 17-18).

9 0 - 9 NUMERIC BUTTONS

- To select preset stations directly.
- These buttons are also used for setting the clock and programming the timer.

10 PROG (-/+)

Allows you to scan through memorized channels.

11 RESET/ (SKIP/MEMO)

- Used to reset the tape counter to 0:00:00.
- For clearing or storing the stations during programme preset.

12 CLOCK/COUNTER

To select between Clock and Tape Counter Display (see p 19).

13 CLOCK

Used to enter the clock setting mode (see p 11).

14 PRESET

For programme searching and storing (see p 9).

15 EJECT BUTTON

To eject a tape (see p 13).

16 TRACKING/ (MFT)

- For manual tracking (see p 19).
- For fine tuning the station during programme presetting (see p 9).

17 FAST FORWARD/CUE

To wind the tape forward (see p 14).

To see forward playback picture at high speed (see p 14).

18 REC/OSB

Used to record and set the QSR (Quick Set Recording) time (see p 16).

19 TIMER CHECK

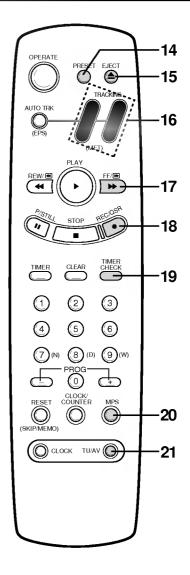
Used to check the timer programme (see p 18).

20 MPS (Manual Programming System)

For starting the station search manually during programme preset (see p 9).

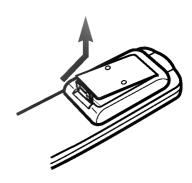
21 TU/AV

To select the input source of a recording (see p 15).

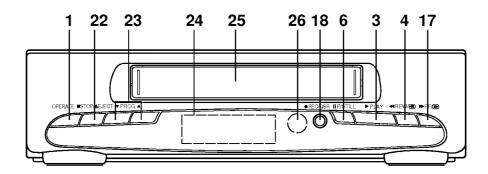


The wireless remote control is powered by two "AAA" size batteries.

- 1 Remove the battery compartment lid. (Lift it up while pressing the tap forward.)
- 2 Load the new batteries with their polarities (⊕ and ⊝) aligned properly and replace the lid.



The front of the Video Recorder



1 OPERATE BUTTON

To switch the video recorder on and off.

22 STOP/EJECT

To stop the tape, or eject it from the video recorder (see p 13).

23 CHANNEL PROGRAMME SELECTORS (▼/▲)

Allows you to scan through memorized channels.

24 MULTI FUNCTION DISPLAY

Display of time, tape counter or other information about the status of the video recorder.

25 VIDEO CASSETTE COMPARTMENT

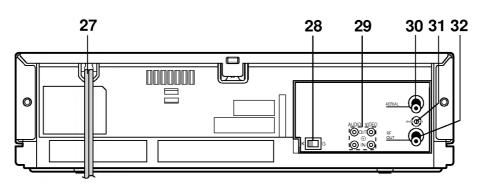
When a cassette is inserted loading is completed automatically.

26 REMOTE CONTROL SENSOR

To receive the signals from the remote control handset.

- 18 REC/QSR
- 6 P/STILL
- 3 PLAY
- 4 REWIND/REVIEW
- 17 FAST FORWARD/CUE

The back of the Video Recorder



27 MAINS LEAD

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 colour system used for TV broadcasts in your area.

29 AUDIO/VIDEO IN/OUT TERMINALS

To connect the video recorder to your TV set or to another video recorder (see p 21).

For recording from AUDIO/VIDEO select "AV" with the AV button (see p 15).

30 AERIAL INPUT

Connect the external aerial to this terminal.

31 VIDEO CHANNEL CONTROL

To select the video channel between 30 and 40 (with a screw driver) (see p 8).

32 RF. OUT

Connect this terminal to the AERIAL terminal on the back of the TV, using the coaxial RF cable (supplied).

Important!

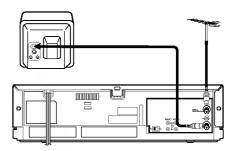
BEFORE YOU USE YOUR VIDEO RECORDER YOU MUST:

- Connect the video recorder to your TV aerial and TV set. (described later on this page).
- Set the tuner channels so that the video recorder can receive TV signals (see p 9).
 When this has been done, the setting up of the video recorder is complete.

Connecting the video recorder to your TV

AERIAL/RF CONNECTIONS

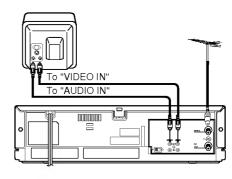
- Disconnect the aerial from your TV set and plug it into the socket marked "AERIAL" at the back of the video recorder.
- Use the coaxial cable supplied to connect the aerial terminal on your TV set to the socket marked "RF OUT" at the back of the video recorder.
- 3 Plug the video recorder into a mains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

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 2 recorder.
- Play any video cassette tape on your video recorder.
- 4 Select the correct 2 channel (36) on your TV set.

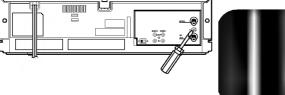
SETTING THE VIDEO CHANNE WITH NUMERIC BUTTONS

Turn on the TV set and the video recorder. Select the correct channel (36) on your TV set.

Store this channel in an unused programme numb 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.)



CHANGING THE TRANSMITTER CHANNEL

If channel 36 is already occupied at your TV set, or if the picture is distorted, you

can change the transmitter channel of the video recorder.

Select an undistorted channel between 30 and 40 on your TV set and store it. Use a small screwdriver to turn slowly the CHANNEL control on the rear of the video recorder, until you are satisfied with the picture quality.

Up to 60 TV stations (60 channels) can be stored in the memory of this video recorder. These can be set automatically or manually.

EPS (Easy Programming System) tuning

To carry out EPS tuning:

- 1 Turn on the TV and the video recorder (with the "OPERATE" button).
- 2 Press the "PRESET" button to enter the channel preset mode.
- 3 Press the "EPS" button.

When a channel is tuned, the active broadcast channel is stored in memory of the tuner automatically.

The channel position number is increased in sequence and tuning will commence for next station.

NOTE:

EPS tuning will stop when all the active broadcast channels have been searched.

4 Press the "PRESET" button to return to the normal mode.



TV station channel numbers can be stored manually. To carry out MPS tuning:

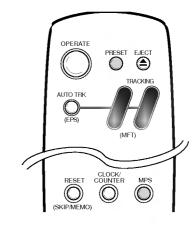
- **1** Press the "PRESET" button to enter the channel preset mode.
- 2 Press the "PROG" buttons (-/+) or Numeric buttons (0 to 9) to select the Channel Position number that you want to tune.

Channel Positions from 1 to 60 appear succesively (for example, 10).

- **3** Press the "MPS" button once.
 - Searching commences. Searching will stop when it has located a channel.

Continue to press the "MPS" button until the desired channel appears. When a channel is tuned, the active broadcast channel is stored in memory of the tuner automatically.

- To set other channel, repeat the steps 2-3 above.
- 4 If the reception signal is weak, manual fine tuning might improve the image. Adjust the image with two buttons TRACKING/(MFT) (-/+) to an optimum.
- When you have finished, press the "PRESET" button to return to the normal mode. The clock and channel position number will appear on the video recorder's display.



(EPS tuning)

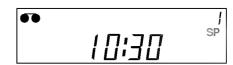
2



3



4



(MPS tuning)

2

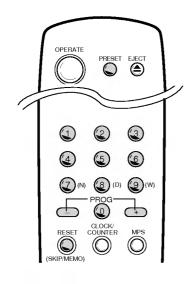


3



5





Skipping stations

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

- **1** Press the "PRESET" button to enter the preset mode.
- Press the "PROG" (-/+) buttons or Numeric buttons (0 to 9) for the Channel position to be skipped (for example, 11).
- **3** Press the "SKIP/MEMO" button. The Channel position number will flicker on the video recorder's display. The station is erased.
 - If you want to restore the erased channel, press the "SKIP/ MEMO" button once again.
 - To skip other channels, repeat the steps 2-3.
- 4 Press the "PRESET" button to return to the normal mode.



2



3



4



Selecting stored TV stations

Stored TV stations can be selected in either of two ways.

- **1** Use the PROG (-/+) buttons to move from one station to another.
- 2 Enter the programme number with the Numeric buttons, to select a station directly. You can enter the stations 1 to 9 with the one digit only. The channel will be selected at once.

Setting the video recorder's clock

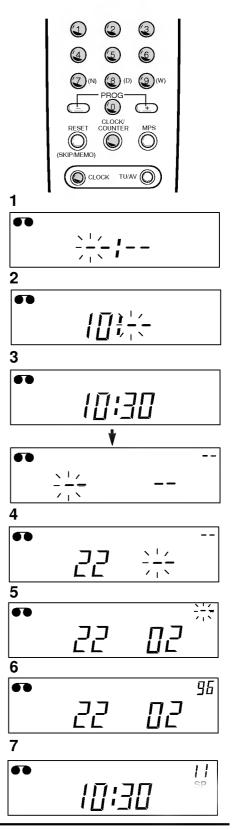
Whenever the video recorder is reconnected to the mains or after a power cut flashing "--:--" appears in the Display to tell you that the clock needs resetting.

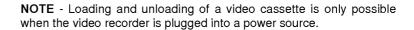
- 1 Press the "CLOCK/COUNTER" button. Four segments will be displayed. The hour display starts flashing.
- Press the Numeric buttons (0 to 9) to set the current hour, in our example this is 10, the minute segment starts flashing.
- **3** Press the Numeric buttons (0 to 9) to set the current minutes figure (30), the date prompt will then appear.
- 4 The flashing display to the left of the segment represents the day. Set this using the Numeric buttons, in our example 22.
- 5 The next flashing prompt is for the month which you also enter using the Numeric buttons, in our example 02.
- **6** After entering "22 02" you are prompted for the year which starts to flash. Set this using the Numeric buttons, in our example 96.
- **7** Press the "CLOCK/COUNTER" button. At the video recorder, the set time will appear on the video recorder's display.

How to confirm the time!

Press the "CLOCK/COUNTER" button to confirm the current time. Then the day, month and year will appear on the video recorder's Display.

NOTE: While timer recording mode, you can't adjust the clock.





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 " • " 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" button to start playing a tape (called Normal playback). " > " will appear 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.

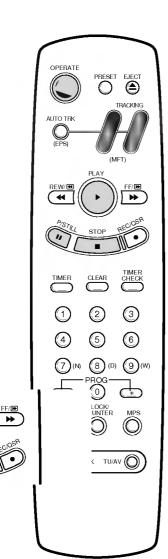
- 2 Short interruptions of the playback up to 5 minutes can be made with the "P/STILL" button. Continue playback by pressing the "PLAY" button.
- 3 End the playback with STOP button.
 - If the end of the tape is reached, the video recorder stops automatically, rewinds, stops, ejects the tape and switched off

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 "TRACKING/MFT (-/+)" 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", or the "STOP" buttons.





USING THE VIDEO RECORDER TO PLAY BACK A TAPE

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.

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.

For example T-120 will play back for 120 minutes.



(PAL TAPES)

VIDEO CASSETTE LENGTH	MAX. RECORD/ PLAYBACK TIME
E-240	240 Min.
E-180	180 Min.
E-120	120 Min.
E-60	60 Min.

(NTSC TAPES)

VIDEO CASSETTE LENGTH	MAXIMUM PLAYBACK TIME
T-160	160 Min.
T-120	120 Min.
T-60	60 Min.

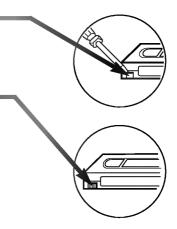
Accidental erasure prevention -

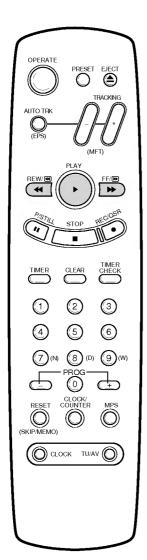
If you do not wish to record on a tape, and hence erase what is already recorded on it, then remove the safety tab on the back edge of the video cassette.

Cover the hole with cellophane tape -

It is possible to record on a video cassette from which the safety tab has been removed by covering the hole with cellophane tape.

Refer to the instructions included with the video cassette for more information.





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. ">>> " will appear video recorder's display.

Rewind (REW)

Pressing the rewind ("REW") button with the tape on stop, will rapidly wind the tape backwards. "◀◀ " will appear video recorder's display.

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" 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

If during picture search you hold down either of the search buttons ("FF" or "REW") for more than 1 second the picture will be played at about 11 times the normal playback speed. When the desired point on the tape has been reached, release the search button and the video recorder will continue to playback the tape at the normal speed.

NOTE - During a visual search, jet search or still playback, the sound is muted and there may be some "noise streaks" on the TV screen.

Introduction to the recording features

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

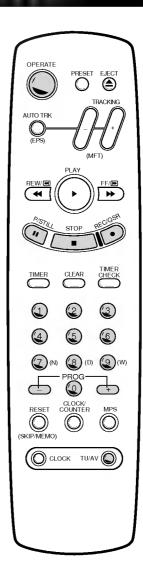
- 1 You may record immediately (a programme you may be watching).
- You may record immediately for a set period of time of up to 9 hours. This is called Quick Set Recording (QSR). The video recorder will automatically turn itself off at the end of the QSR (see p 16).
- You may record at a later time (up to 1 month from the present) using the built-in timer. Up to 4 of these automatic recordings may be set at the same time -provided, of course, that there is sufficient time on the video cassette.

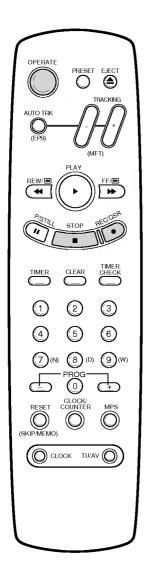
NOTE - Ensure that the safety tab has not been removed from the video cassette on which you wish to record.

To record

- 1 Turn 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 turn on the video recorder by pressing the "OPERATE" button.
- 3 Select the programme channel with the number buttons or "PROG (-/+)" buttons.
 - **NOTE** If you want to record from the AUDIO/VIDEO IN terminals on the back of the video recorder, press the "TU/AV" button to the "AV" mode. "AV " will appear video recorder's display.
- Press the "REC/QSR" button to start recording. "O" will appear video recorder's display.
- If you want to avoid recording unwanted scenes press the "P/STILL" button. "IIO" will appear video recorder's display.

 To continue recording press the "P/STILL" button again.
- **6** Press the "STOP" button to stop recording. "O" disappears on the video 'recorder's display.





RECORDING ONE TV PROGRAMME WHILE WATCHING ANOTHER

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

- **1** Start a recording by following steps 1 to 4 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.

The timer allows you to record broadcasts automatically. Up to 4 recordings within one month can be programmed at the same time.

Things to know before starting

- If you try to set the programme timer before setting the clock, the clock set mode appears on the video recorder's display. Set the time and date before proceeding.
- The buttons for programming the timer are on the remote control unit.
- You can correct an error in the programme any time before the last step by pressing the "CLEAR" button repeatedly until the digit to be corrected flashes and then by entering the corrections.

Recorder timer programming using the Video Recorder's Display

For example:

Let us assume you want to record a one hour TV broadcast starting at 13:30 on 22th February 1996 (Programme position 2). The current date is 15 February 1996. Your four possible future recording sessions are stored in memory under four different programme numbers. The session in our sample is going to be saved as programme number 1.

- **1** Press the "TIMER" button to initiate the timer programming procedure. The timer number will appear momentarily.
- 2 A flashing display will prompt you to enter the programme position.
- **3** Enter the programme position you want using the Numeric buttons. The display will prompt you to select the recording types.

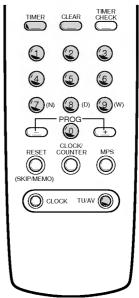
NOTE:

If you want to record from the "AUDIO/VIDEO IN" terminals input socket, set the "TU/AV" button to "AV" position. "AV" indicator will appear on the video recorder's display.

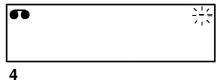
- 4 Select the recording type you want using the Numeric buttons. "7" for Normal, "8" for Daily, "9" for Weekly recording type.
 - N (Normal): One time recording of a single programme
 - D (Daily): For daily recordings from Monday to Friday
 - W (Weekly): For a weekly repeated recording

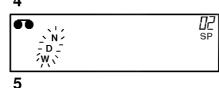
The display will prompt you to enter the recording start time. The hour display will flash.

- 5 Enter the hours using the Numeric buttons, (in our example, 13). The minutes display will flash.
- **6** Enter the minutes using the Numeric buttons, (in our example, 30). The display will prompt you to enter the recording stop time, the hour will flash.
- 7 Enter the hours using the Numeric buttons, (in our example, 14). The minutes display will flash.





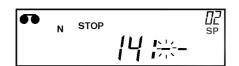




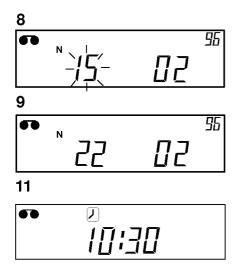
START SP

6

N STOP
SP



PROGRAMMING THE VIDEO RECORDER TIMER



- **8** Enter the minutes for the stop time using the Numeric buttons, (in our example, 30). The display will prompt you to enter the date of the recording session. The day display will appear.
- **9** Enter the day using the Numeric buttons, (in our example, 22).
- 10 Press the "TIMER" button to enter your programme.
- 11 Press the "OPERATE" button to OFF.

 The Timer symbol " " should appear. The video recorder will turn ON itself at programmed time and record the desired programme.

Important!

Make sure you insert a cassette with a safety tab in place. If you insert a cassette without safety tab, the cassette will be ejected from the video cassette recorder.

Checking the stored timer programmes

The video recorder does need to be switched on for you to check the stored timer programmes.

- 1 Press the "TIMER CHECK" button.
 The video recorder will display the first of the 4 programme numbers.
- 2 Soon afterwards the video recorder will start to display the stored timer programme data in sequence for the first programme number to last programme number and then it will return to the normal display (clock and channel position) automatically.

Clearing the stored timer programmes

The stored timer programmes can be cleared if not wanted.

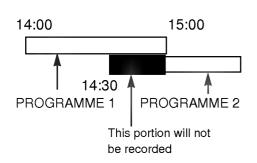
- **1** Press the "TIMER CHECK" button until the programme number you want to clear appears.
- **2** Press the "CLEAR" button. This programme data has been erased.

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 started, press the "OPERATE" button on the front of the video.





Digital Tape Counter

The Digital Tape Counter can be displayed on the video recorder's display instead of the time by repeatedly pressing the "CLOCK/COUNTER" 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 "RESET" button.

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 "CLOCK/COUNTER" button to set the display to the counter.
- **2** Before playback or recording, press the "RESET" button. The counter will read 0:00:00.
- 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.
- 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.

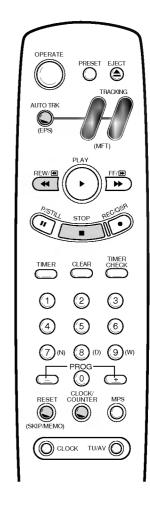
Automatic tracking - The automatic tracking adjusts the tracking to playback a tape with the optimum picture quality. As soon as you start to playback a tape the tracking will be adjusted if necessary.

A.TRK is shown on the video recorder's display.

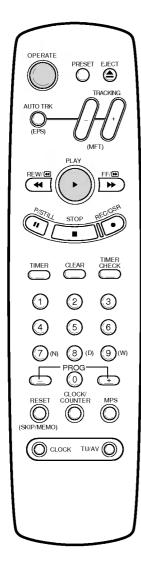
Manual tracking - If the quality of the recording is poor, or if the tapes are damaged, the automatic tracking will not be able to work correctly. In these cases you will have to remove tracking distortions manually.

You can adjust the tracking during playback with the "TRACKING/MFT (-/+)" buttons. Press them repeatedly until the distortions have been eliminated.

You can switch on the automatic tracking again after using the manual tracking feature by pressing the "AUTO TRK" button. When you change a video cassette, the automatic tracking will always be switched on again.







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 with switch itself off.

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

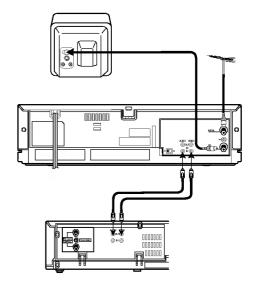
Automatic Switch Off

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

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 a 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 "TU/AV" button on the remote control.
 - "AV" indicator will be displayed on the display.
- 5 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.
- Short interruptions can be made with the P/STILL button on the video recorder, e.g. to cut scenes copy.

 To continue recording, press this button again.
- 7 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 : $100-240V \sim$, 50Hz. Power consumption : Approx. 18 watts

Video recording system : Rotary 2 heads, helical scanning system

Tape speed : 23.39 mm/sec

Tape format : Tape width 1/2" (12.7 mm high density VHS tape)

Maximum recording time : 4 hours (with E-240 tape)

Rewind time : Approx. 150 sec. (with E-180 tape) Dimensions (W \times H \times D) : 14.2" \times 3.5" \times 11.4" (360 \times 88 \times 290 mm)

Weight : 9.04lbs. (4.1 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 (-6/+3 dB)

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	Is the video recorder plugged into the mains?
	Is the mains supply on and switched on?
TV programmes cannot be recorded	 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	 Is OPERATE off? (Is the Timer symbol showing in the display?) Were the recording start and end times set correctly? 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	Has the safety tab been removed from the video cassette?
There is no picture on playback, or it is noisy and streaky	 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. Can you minimise the noise bars to an acceptable level with the "AUTO TRK" or "TRACKING/MFT(-/+)" buttons?
The top of the playback picture is unstable	Is the video cassette damaged? Try another one.Adjust the horizontal hold control on you TV set.
Video cassettes cannot be inserted	 Is the cassette compartment empty? Are you trying to insert the cassette the right way round?

Video Head Cleaning

- If the picture playback may becomes blurred or interrupted even though the TV programme received is clear. This does not mean that the recorded programme has been erased.
 Dirt accumulation on the head after long periods of use can cause these problems.
- If high quality video tapes are used in this video recorder, the video heads should not normally require cleaning however, it is possible that the heads may become clogged when playing an old or damaged tape. If the image on your screen resembles the picture on the left, while playing back a tape, the heads may require cleaning.
- To clean the heads, obtain a head cleaning tape from your local video dealer. Be sure to follow the instructions that come with the cleaning tape, as excessive use can shorten head life.



P/N 3834RP0002K