

- 1 Set clock button
- 2 Clock display
- 3 Block 1 indicator
- 4 Block 2 indicator
- 5 Day indicator
- 6 Programme indicator
- 7 Programme display
- 8 Up (+) button
- 9 Store button
- 10 Down (–) button
- 11 Search button
- 12 Slow set (▶) button
- 13 Fast set (▶▶) button
- 14 Stop indicator
- 15 Start indicator
- 16 End button
- 17 Next (→) button
- 18 On/standby (⏻) switch
- 19 Call button
- 20 Record (●) button
- 21 Rewind (◀◀) button
- 22 Stop (⏹) button
- 23 Wind (▶▶) button
- 24 Play (▶) button
- 25 Eject (⏏) button
- 26 Tape counter reset button
- 27 Camera power indicator
- 28 Mode selector
- 29 Tape counter
- 30 Fast (⏏) button
- 31 Slow (◀) button
- 32 Still (⏏) button
- 33 Reverse (◀) button

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- 34** Audio (⊕) dubbing button
- a** Tuner/timer connection socket
- b** Antenna out (TV) socket
- c** Antenna in (TV) socket
- d** 30-40 control (30-40)
- e** AV SCART (AV) socket
- f** Audio DIN (DIN) connector
- g** Mains (~) socket

Introduction

The tuner/timer is designed to be used together with a separate portable video deck to provide you with one of the most sophisticated yet simple-to-use home video recorder systems available.

The tuner/timer allows you to specify two television programmes to be automatically recorded up to one month in advance, or every day at the same time. Timer memory is protected against mains failure for about 3 months. The unit also acts as the power supply and battery recharger for the separate video deck.

Your portable video deck is a versatile playback and recording unit. It will enable you to playback tapes on a TV set or monitor, or to record from a video camera (when you will find its battery operation offers complete mobility).

Using this book

This book contains instructions for using both the tuner/timer and the video deck. All the instructions in the book supplied with the deck are included here. Therefore, you do not need to refer to the video deck book at all. You can use this book instead.

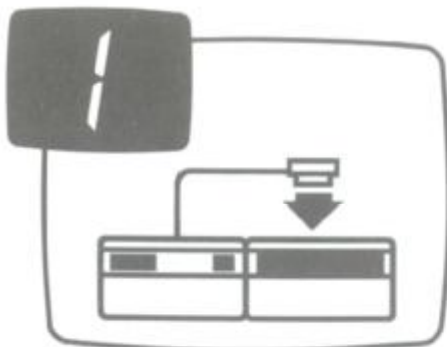
Usually your dealer will set up the deck and tuner/timer. If not, turn to Section 1 - Installation. Whatever your situation, it is suggested that you read Sections 2 and 3 thoroughly to familiarise yourself with your deck and tuner/timer's operation.

If something happens which you do not expect, or don't understand, refer to Section 7, Correction list.

Note on illustrations

All numbers in bold type **1, 2, 3** etc. refer to the main illustration on the folder/cover. The operation letters **A, B, C** etc., refer to the small illustrations on the folder/cover.

Installation



Your video deck needs no installation except when it is used in conjunction with a tuner/timer.

Usually, your dealer will install and set up the tuner/timer for you. If this has not been done, follow the instructions in this section.

Once the tuner/timer is installed, you can still use the TV set in the normal way.

Positioning

Do not place the tuner/timer directly on top of or underneath your TV set or video deck. The tuner/timer is designed to be placed beside a video deck. Ensure that there is at least 20 cm between the tuner/timer and the TV set, and that air can circulate freely through the ventilation openings at the back.

Connection

A Remove the antenna cable from your TV set and plug it into the Antenna in (⏏) socket **c** at the back of the tuner/timer.

B Take the antenna cable supplied and connect it from the Antenna out (⏏) socket **b** of the tuner/timer to the antenna socket of the TV set.

C When using the tuner/timer with a separate video deck, use the connector lead attached to the tuner/timer. Plug the end of this connector into the connector socket of the video deck **a**.

D Check that your supply voltage is the same as that given on the type plate at the rear of the tuner/timer. Take the mains lead provided and connect it from the mains socket of the tuner/timer **g** to the mains supply. The Clock display **2** will flash with a steady rhythm.

Important: (For U.K. only) If you have to fit a new mains plug, proceed as follows.

The blue wire in the mains lead must be connected to the Neutral terminal of the plug, which is marked "N" or coloured black.

The brown wire in the mains lead must be connected to the Live terminal of the plug, which is marked "L" or coloured red.

If the mains plug (or adapter) contains a fuse, this should have a value of 3 A. Alternatively, if another type of plug is used, the fuse at the distribution board should not be greater than 5 A.

Setting the clock

If you are installing the tuner/timer for the first time, or if there has been a power failure, the Clock display **2** will flash with a steady rhythm. In this case, you must reset the clock, by following steps **E** to **G**.

E Press the Set clock button **1**. The Clock display **2** will flash.

F Set the correct time. Use the Fast (▶▶) button **13** to move the time shown on the Clock display **2** forward fast; when you get close to the correct time, use the Slow (▶) button **12** to move slowly forward to the exact time. If you accidentally run past the correct time, you must go forward again until you get to the correct time.

As a short-cut, pressing both Fast (▶▶) and Slow (▶) buttons together sets the clock to 12:00, which is midday.


G When you reach the correct time, press the End button **16**. The Clock display **2** will stop flashing, and show the time.

Tuning the TV set to the tuner/timer

First ensure that a video deck is connected to the tuner/timer by means of the attached cable.

H Switch on your TV set.

I Press the Play (▶) button **24** of the video deck with no cassette in the holder.

J Most modern TV sets have a number of pre-selector buttons used to select TV stations. One of these should be reserved for video recordings; refer to the TV Instructions for Use to determine which pre-selector to choose. Tune this pre-selector until the TV set shows a picture which has this black and white pattern: . This should be around channel 37 UHF.

In some areas, there may be interference from a TV station broadcasting around channel 37, which will cause picture or sound disturbance. In this case, use a small screwdriver to turn the 30-40 control **d** on the back of the tuner/timer a 1/4 turn and re-tune your TV set. If the disturbance is not completely gone, repeat the procedure until all disturbance is gone.

AV connection

K If your TV is equipped with an AV (audio-video) socket (check in the TV-instructions for use), and you connect the tuner/timer and TV set via their AV sockets, picture quality is improved.

Instructions on how to select AV mode are given in the TV instructions for use.

A range of AV cables is available; see your dealer for the most suitable.

Searching for a TV station

You can store up to fifteen TV stations in the tuner/timer's memory. These station numbers will be used later to specify which TV station is to be recorded.

L Make sure the TV set is switched on and press the TV pre-selector which is reserved for video recording.

M Press Eject (⏏) button **25** to open the cassette holder.

N Take an unprotected cassette and push it into the cassette holder, with the index label facing you. It will be caught and held by the holder.

O Press Record (●) button **20**. The cassette holder will close.

P Press the Search button **11** using the point of a pencil. The tuner/timer will search across the wave bands for a television station. The Programme display **7** will show the number of the waveband being searched; this is indicated by a dot behind the number. (VHF I: 1, VHF III: 3, UHF:4).

Q When a TV station has been found, the Programme display **7** flashes a number between 0 and 15. The TV set shows the programme being broadcast.

If the picture on the TV is very poor, the TV station is too weak to be received properly. In this case, repeat from step **P**.

Note: if you want to stop the search press On/standby (⏏) button **18**.

Storing a TV station

R To check which TV station has been found, compare the picture with the stations on your TV set.

S Use the Up (+) button **8** and the Down (-) button **10** to change the number shown on the Programme display **7** to the number you wish to store this TV station under.

The numbers on the Programme display repeat from 0, 1, ... 15, 0, 1, ... and so on. If you press the Up (+) or Down (-) button once, the number on the Programme display changes by one, up or down. If you hold a button down, the number changes rapidly.

If possible, store the TV stations under the same numbers as are used on your TV pre-selectors. For example, if you want to call this station 1, use the Up (+) and Down (-) buttons until the Programme display shows "1".

Do not store a TV station under number 0, since this is reserved for AV input.

If you store another TV station under a number that is already used, this new one will be stored, and the old TV station will no longer be stored.

T Press the Store button **9**, using the point of a pencil. The TV station is stored.

Repeat steps **P** to **T** until you have stored all the TV stations you want.

Cassettes



The following blank cassettes are available for use with your video deck:

VCC120 (2 x 1 hour)
VCC240 (2 x 2 hours)
VCC360 (2 x 3 hours)
VCC480 (2 x 4 hours).

Inserting and removing cassettes

A Press Eject (⏏) button **25** to open the cassette holder.

B Place the cassette in the cassette holder with the index label facing you and the side you wish to use on top. Push the cassette into the holder until it is caught.

Do not try to close the cassette holder by hand; it will not stay shut.

The cassette holder closes when any tape button is pressed, or when the VCR automatically switches to standby after 8 minutes.

C To remove the cassette, press Eject (⏏) button **25**. The cassette holder opens and you can take the cassette out by pushing it gently to release it from the holder.

Storing cassettes

When not in use, keep the cassettes in their cases at room temperature, away from bright sunlight, loudspeakers, transformers and magnets.

Recording and re-recording

Always note down the start and finish readings on the Tape counter **29** when you record a cassette; you can write this on the index card. When you record on a cassette, any previous recording on that part of the tape is erased.

Protecting recorded cassettes

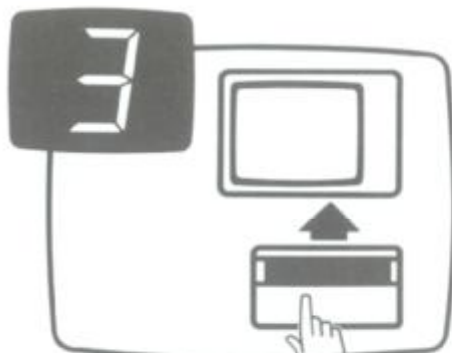
D You can protect the recording on side 1 of a cassette by turning the lefthand switch fully to the right as shown. The red part of the switch will then be visible, indicating that the recording on that side of the tape has been protected against erasure or re-recording.

To protect side 2, turn the cassette over and turn the lefthand switch fully to the right. You can make a cassette unprotected again by turning the appropriate switch back so that the black part is visible once more.

Important

You are not allowed to record television programmes if this infringes copyright or other rights of third parties.

Operating and Controls



When you press any of the tape transport buttons, the video deck switches on, closes the cassette holder and starts to play, record, rewind, etc., depending upon the button pressed. All controls (except Eject) have a coloured indicator that lights whenever the function is carried out. You can press any tape transport button after any other without pressing the Stop button in between, without harming the cassette or the video deck.

A Mode selector 28

The video deck can be used in three modes, selected with this switch.

- "Tuner-mains" mode is used when the deck is connected to a tuner/timer unit. You can then playback, record TV programmes and use the unattended recording facilities of the tuner/timer. To select this mode, set the Mode selector 28 to its leftmost position.

- "Camera-mains" mode is used for mains supply when recording with a video camera. For this mode, the Mode selector should be in its middle position, as described in Section 6.

- "Camera-battery" mode is used for battery supply when recording with a video camera. For this mode, the Mode selector should be in its rightmost position, as described in Section 6.

B Eject (⏏) 25

Pressing this button makes the cassette holder open. For more details, see Section 2.

The cassette holder closes when any tape button is pressed, or automatically after 8 minutes.

C Play (▶) 24

When pressed, the cassette is played. If no cassette has been loaded the black and white pattern is shown on the TV set (see Section 1, step J).

D Wind (⏮) 23 and Rewind (⏪) 21

Pressing either of these buttons makes the tape wind forward or backwards at high speed. When the beginning or end of the tape is reached, the wind or rewind function automatically switches to stop.

E Stop (⏏) 22

When this button is pressed, the tape stops. Pressing this button twice switches the video deck off.

F Fast (⏭) 30

When this button is pressed the tape is played back at a higher speed.

G Slow (⏩) 31

Pressing this button makes the tape playback in slow motion.

H Still (⏮) 32

When this button is pressed, a still picture is shown, with no sound. Every time you press this button, the tape moves forward 1/5th second of normal playing speed and a new still picture is shown.

Note: The still function automatically switches off after about 8 minutes.

I Reverse (⏮) 33

When this button is pressed, the tape is played backwards at normal speed.

J Tape counter 29 and Tape counter reset 26

The Tape counter 29 gives an indication of the amount of tape played. It is reset to "0" automatically at the beginning of a cassette, or manually by pressing the Tape counter reset button 26.

K Audio dubbing (⏮) 34

When this button is pressed you can dub sound over the existing sound track as described in Section 6.

L Record (●) 20

Press this button to start recording. When the end of the tape is reached during recording the cassette holder opens automatically as described in Section 4.

Playback of a cassette

There are three possibilities for watching a pre-recorded cassette on your TV set. You can use the video deck:

- a with a separate tuner/timer
- b with an external modulator
- c directly via an AV cable (if you have a TV set with an AV connector).

Tuner/Timer

If you are using the video deck with a separate tuner/timer unit, connect the tuner/timer to the deck and switch the tuner/timer on. This is described in Section 1, step C.

M Set the Mode selector 28 to its leftmost position ("tuner-mains"). The Tape counter 29 will display "0".

Now follow steps R to X.

External modulator

If you are using an external modulator, connect the modulator to the deck, and tune the TV. These steps are described in the modulator Instructions for Use.

N Set the Mode selector 28 to its rightmost position ("camera-battery"). The Tape Counter 29 will display "0".

Now follow steps R to X.

AV cable

O Connect the AV connector on your TV set to the lefthand side of the tuner/timer connection socket a on the back of the video deck, using an AV cable. Your dealer will be able to supply you with the correct cable.

P Set the Mode selector 28 to its rightmost position ("camera-battery"). The Tape counter 29 will display "0".

Q Switch on your TV set and select AV mode as described in the TV Instructions for Use.

Now follow steps S to X.

R Switch on your TV set and select the pre-selector reserved for video recording.

S Press the Eject (⏏) button 25. The cassette holder will open.

T Take the pre-recorded cassette out of its case. Place the cassette in the holder, with the title label facing you and the side with the programme to the top.

Push the cassette into the holder until it is caught at the back.

Note: Do not close the cassette holder by hand; it will not stay closed.

Wind or rewind the cassette, if necessary.

U Press Play (▶) button **24**. The cassette starts running and the programme will be shown on your TV set.

When the cassette reaches the end, the video deck switches to the standby condition after approximately 8 minutes. The cassette holder remains closed.

V Press Eject (⏏) button **25**. The cassette holder will open.

W You can remove the cassette by pressing it to release the catch at the back.

X To close the cassette holder press Stop (⏏) button **22**.

Attended recording of TV programmes



This method allows you to record a TV programme while you are present. The video deck and tuner/timer should be connected as described in Section 1, step **C**.

A Set the Mode selector switch **28** to its leftmost position ("tuner-mains").

B Load an unprotected cassette in the cassette holder and wind or rewind as necessary.

C Switch the tuner/timer on if necessary, by pressing the On/standby (⏻) switch **18**. The Programme display **7** shows the number of the TV station (allocated during installation) which the tuner/timer is receiving.

If your TV set is switched on and the pre-selector reserved for video recording is selected the programme received will be shown on the TV screen.

D If this is not the TV station from which you want to record, press the Up (+) button **8** or Down (–) button **10** until the Programme display **7** shows the correct number.

If you press the Up (+) or Down (–) button once, the number on the Programme display changes by one, up or down. If you hold a button down, the number changes rapidly.

E When the TV programme starts, press Record (●) button **20**, and recording begins.

F When the programme has finished, press Stop (⏏) button **22** to stop recording, or Eject (⏏) **25** to unload the cassette.

You do not have to have your TV set switched on. However, if it is on, you can change it to another channel without interfering with the programme being recorded.

Tuner/timer and TV connected by AV cable

If the tuner/timer and TV are connected via their AV sockets, you can make an attended recording in the following way (see Section 1 step **K** for AV connection).

G With the TV switched on and tuned to a TV channel, the tuner/timer switched on and a cassette loaded in the video deck; select station 0 using the Up (+) or Down (–) buttons **8** and **10**.

H Press Record (●) button **20**. The programme now received by your TV is recorded. If you change stations on your TV, the recording changes too.

Unattended recording of TV programmes



You can pre-programme the tuner/timer unit to switch on the video deck at a particular time, record a TV programme and then switch to standby. Your TV set need not be switched on or tuned to the channel you want to record.

The video deck and tuner/timer should be connected as described in Section 1 step C.

Note: The unattended recording will only be made if, at the time it is due to take place, the tuner/timer is in standby and connected to the video deck.

Checking the clock

Before programming the tuner/timer, check that the Clock display 2 shows the correct time. The time is shown in 24 hour form; for example, nine minutes past five in the afternoon is shown as 17:09. If adjustment is required, follow Section 1 steps E to G.

Programming an unattended recording

Details of the TV programmes to be automatically recorded are stored in a "block". There are two blocks available, so you can program the tuner/timer to record two different TV programmes.

Each block has a Block indicator (3 and 4) which is lit if that block has already been pre-programmed.

A Press the Call button 19. The number of a free block (1 or 2) will appear on the Clock display 2.

If neither block is free (both Block indicators 3 and 4 are lit), the Clock display will show "—". If you wish, you can replace the details in one of the blocks with the new programme details. To do this, follow steps K to M.

If both blocks are free, both Block indicators will be unlit. You can select the block you want by pressing the Slow (⏮) button 12.

B Press the Next (→) button 17. The Start indicator 15 lights up and the Clock display 2 shows the last start time programmed.

C Use the Fast (⏭) or Slow (⏮) buttons 13 or 12 as described in Section 1 step F to set Clock display to the time at which you want to start recording.

D Press the Next (→) button 17 again. The Stop indicator 14 lights up and the Clock display 2 shows the same time as the start time you have just set.

E Use the Fast (⏭) or Slow (⏮) buttons 13 or 12 as described in Section 1 step F to set the Clock display 2 to the time at which you want recording to finish.

As a short-cut, if you run past the desired stop time, pressing the Fast (⏭) and Slow (⏮) buttons together takes the time back to the programmed start time.

F Press the Next (→) button 17 once more. The Day indicator 5 lights up and the Clock display 2 shows "0".

G Pressing the Slow (⏮) button 12 will make the Clock display run through the day numbers 1, 2, ... 29, 30, 00, 0, 1, 2, ... and so on. 0 corresponds to today, 1 to tomorrow, 30 to 30 days away, and so on. 00 means every day.

Pressing the Fast (⏭) button 13 will make the Clock display run through the day numbers rapidly; it will stop at 00. Programming this as day number means that the recording will be made at the same time every day until the block is cleared.

As a short cut, pressing both Fast (⏭) and Slow (⏮) buttons together sets the day number shown to 0.

Press the Fast (⏭) or Slow (⏮) buttons until the Clock display shows the day on which you want to make the recording. For example, if you want to record the day after tomorrow, press these buttons until "2" appears on the display.

H Press the Next (→) button 17 again. The Programme indicator 6 lights up and the Clock display 2 shows the TV station number last programmed in the block.

I Pressing the Fast (⏭) or Slow (⏮) buttons 13 or 12 will make the Clock display 2 run through the station numbers 0, 1, 2, 15, 0, 1, 2 and so on. Press these buttons to select the station from which you want to record.

Note: Station number 0 selects AV input.

J Press the End button 16. The Clock display 2 shows the current time again.

The details of recording times and station required are now stored in the block and the corresponding Block indicator 3 or 4 lights up.

The Block indicator only goes out after the recording has been made, although the details remain stored for later reference, but de-activated.

Note 1: Ensure that, at the time when the recording is due to start, the tuner/timer is connected to the video deck, an unprotected cassette is loaded and that the Mode selector 28 is in its leftmost position ("tuner-mains").

Note 2: If you are using the video deck manually at a time when an unattended recording is due to take place, manual operation takes priority, so the pre-programmed recording will not take place, and the block will be cleared.

Checking or changing block details

You can check or alter the details of a block by following steps K to M.

K Press the Call button 19. Press the Slow (⏮) button 12 until the number of the block you wish to check or change, appears on the Clock display 2.

L Press the Next (→) button 17. The Start indicator 15 lights up and the Clock display 2 shows the start time of the recording.

Pressing the Next (→) button repeatedly will display the stop time, day, channel number, start time, stop time, ... and so on, on the Clock display.

You can change any of the details as they appear on the Clock display using the Fast (⏭) and Slow (⏮) buttons 13 and 12 as described in steps C to I.

M When you have finished checking or changing the block details, press the End button 16. The Clock display 2 shows the current time again.

Clearing a block

If you want to completely clear the details from a block, follow steps N to Q.

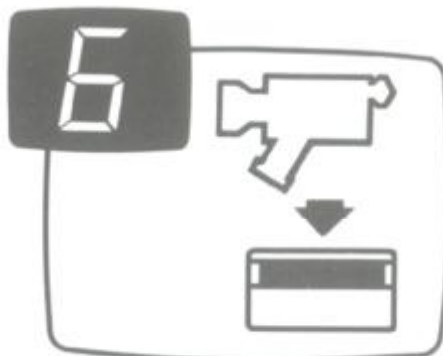
N Press the Call button 19. Press the Slow (⏮) button 12 until the number of the block you wish to clear appears on the Clock display 2.

O Press the Next (→) button 17. The Start indicator 15 lights up.

P Press the Fast (⏭) and Slow (⏮) buttons 13 and 12 together. The Clock display 2 will show 12:00.

Q Press the End button **16**. The Block indicator **3** or **4** of the cleared block will go out. The Clock display **2** shows the current time again.

Recording with a camera



You can make your own video recording using a video camera. Your dealer can advise you which camera models are suitable. The video deck can be carried and used in any position **except upside down**.

For information on cassettes, refer to Section 2.

A Set up the camera as described in the camera Instructions for Use. Connect the camera lead to the camera socket at the side of the video deck.

You can use the camera microphone to record sound at the same time as you make the video recording.

B Load an unprotected cassette in the cassette holder.

Recording outdoors

The video deck need not be connected to a separate tuner/timer unit; it is then easily portable. Power for the video deck and camera is then provided by the video deck battery.

C Set the Mode selector **28** to its rightmost position ("camera-battery"). When the camera is switched on, the Camera power indicator **27** should light. If the Camera power indicator flashes, the battery voltage is too low and must be recharged or replaced as described later in this section.

Now follow steps **E** and **F**.

Recording indoors

The video deck and camera can be powered from the mains. In this case, connect the video deck to the tuner/timer unit as described in Section 1 step **C**. Switch the tuner/timer on.

First, follow steps **A** and **B** above.

D Set the Mode selector **28** to its right most position ("camera"). The camera power indicator **27** will light up to indicate that there is a supply voltage for the camera.

E Press the camera trigger, or the Record (●) button **20**. The cassette holder closes and recording begins.

F To finish recording, release the camera trigger, or press Stop (⏏) button **22**.

Note 1: Automatic assembly

If you release the camera trigger or press the Stop (⏏) button, the tape will partly rewind and stop. If you then press the camera trigger or the Record (●) button **20** again, the new recording will automatically link up with the previous one without disturbing stripes, noise bands, etc. If, however, the video deck has meanwhile been switched off (or is at standby), the automatic assembly will not function.

Note 2: Saving battery power

Pressing Stop (⏏) button **22** twice switches off the major part of the deck's electronics, which saves battery power. The Tape counter memory and camera, however, remain powered. To switch the deck off completely, set the Mode selector **28** to its leftmost position.

Unattended recording with a camera

You can pre-programme the tuner/timer to switch the video deck on and record from a camera.

To do this, follow steps **A** to **M** in Section 5, and in step **I**, select station **0** (AV input). Ensure that, at the time the unattended recording is due to be made, the camera is connected to the video deck and the deck is connected to the tuner/timer (follow steps **A**, **B** and **D** above).

Audio dubbing

This facility allows you to record your own sound track onto a previously made recording. The new sound track replaces any existing soundtrack.

Connect the video deck to the tuner/timer unit as described in Section 1 step **C**. Switch on your TV set and select the preselector for video recording.

G Set the Mode selector **28** to its leftmost position ("tuner-mains").

H Connect an external microphone or other sound source via a pre-amplifier to the AV (AV) socket **e** or to the Audio (A) connector **f**. To prevent sound mixing, only one of the two connections should be used.

(If using the AV input, use the Up (+) or Down (-) buttons **8** and **10**, to select station **0**).

I Load the cassette and wind or rewind to the start of the programme you want to audio-dub.

Press Play (▶) button **24** to start playback on your TV set; then press the Audio dubbing (⊕) button **34**, whenever you want to dub over a part of the sound track. To stop audio dubbing press the Stop (⏏) button **22**, or Play (▶) button **24** again.

Note: For more precise audio dubbing, use the Still (⏏) button **32** instead of Stop (⏏).

Battery

Rechargeable batteries are available to fit the video deck and provide a power supply when the deck is not connected to the tuner/timer.

J If the tuner/timer is connected to the video deck and switched to standby, the battery in the deck is automatically recharged. The recharging will be interrupted if the tuner/timer is switched on.

K To change the battery, slide the battery cover upwards, disconnecting the battery connector and pulling out the battery. Insert a charged battery; connect the battery connector and close the cover.

An optional battery pack can be connected directly at the socket on the side of the recorder.

Alternatively, an external mains unit can be connected to the socket. Your dealer will supply more details of the batteries, battery charger and external mains unit.

DO charge the battery pack before each use.

DO use only recommended chargers (SBC 5570; SBC 5571).

DO use only between 0 and 40 °C.

DON'T short-circuit over discharge the battery pack.

DON'T expose the battery pack to fire.

DON'T use the battery pack for equipment other than that specified.

DON'T charge in a hermetically sealed container.

DON'T use other battery packs than recommended (SBC 5572).

Correction list



If, while setting up or operating the tuner/timer or video deck, something happens which you do not understand, look through this list.

Event

Recording or playback not possible.

Recording not possible.

Camera power indicator **27** flashes

Cassette holder opens automatically when attempting to record or audio-dub.

Clock display **2** flashes.

Pre-programme "Block" display flashes a number on and off.

No picture is obtained while tuning TV set to tuner/timer.

Recording quality poor.

Poor or no sound/picture on recorded cassette.

Record function cannot be switched off.

Audio dubbing does not function correctly.

Possible Cause

- a** The tuner/timer is not connected to the video deck or there has been a mains failure.
- b** End of tape reached.

Video camera not connected properly or faulty.

Battery power too low.

- a** No cassette inserted.
- b** Cassette side is protected.
- c** End of tape reached.

There has been a mains failure or the tuner/timer has been disconnected.

Unattended recording cannot be carried out because tuner/timer is being operated manually.

Tuner/timer has automatically switched itself off.

- a** Weak transmitter signal.
- b** Cassette stored incorrectly.

- a** Cassette stored incorrectly.
- b** TV pre-selector reserved for tuner/timer not tuned exactly.

Camera trigger switch activated.

Incorrect connection between sound source and video deck.

Correction

- a** Reconnect deck and tuner/timer; reconnect to mains. Set clock on tuner/timer.
- b** Rewind, turn cassette over, or use another cassette.

Check connection or see your dealer.

Replace battery or connect a standby battery.

- a** Insert cassette.
- b** Insert an unprotected cassette.
- c** Insert another cassette.

Re-connect to mains. Set clock.

If you wish to carry out unattended recording, switch the tuner/timer to Standby.

Switch on.

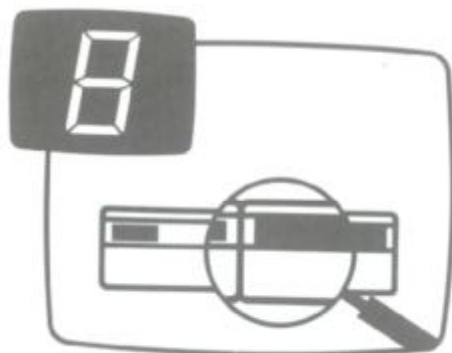
- a** See your dealer.
- b** Use another cassette, and store it correctly (See Section 2).

- a** Use another cassette, and store it correctly (See Section 2).
- b** Return TV pre-selector as in Section 1.

Release camera trigger.

See your dealer.

Technical Data



Tuner/Timer

General

Mains voltage	110, 130, 220, 240 V \pm 10%
Frequency	48 to 62 Hz
Power consumption	43 W incl. portable deck, excl. camera
Ambient temperature	+ 10 to 35 °C
Humidity	15 to 80% RH
Dimensions	274 x 219 x 115 mm incl. feet
Weight	4 kg approx.
Number of programmes (transmitters)	15 + Ext (SCART)
Number of pre-programmable blocks	2
Number of days in advance	up to 30, or every day.

Video

Input via SCART plug	1 Vp-p \pm 3 dB, 75 ohm at nom. mod. depth
Output	1 Vp-p \pm 3 dB, 75 ohm at nom. mod. depth
RF output signal	4.3 mV + 0 dB, - 3 dB

Audio

Input via 5-pole DIN plug	0.2 to 2 Vrms
via SCART plug	0.5 Vrms \pm 3 dB
Output via 5-pole DIN plug	1 Vrms + 3 dB
via SCART plug	0.5 Vrms \pm 3 dB (only in connection with video deck)

Video deck

General

Battery: voltage	12 V
Type	lead/acid. Recharge time: 2 hours for 90% capacity
Camera supply: voltage	12 V nominal
Current	max. 800 mA
External supply voltage	11 to 12.6 V
Uninterrupted recording time with camera	1 hour approx (depending on type of camera).
Wind/rewind time	< 200 s typical with VCC480
Ambient temperature	+ 5 to 40 °C
Humidity	30 to 80% RH
Dimensions	274 x 219 x 117 mm incl. feet
Weight	4.6 kg excl. batt. & cassette

Video

Input signal	0.2 V to 1 Vrms at camera input
Output signal	1 Vp-p, 75 ohm \pm 1.2 dB
Resolution	3.1 MHz (– 26 dB)
Signal/noise ratio	typically 47 dB acc. to CCIR 421-2 annex III (> 44 dB)

Audio

Input signal	0.07 to 0.5 Vrms
Output signal	1 Vrms \pm 3 dB
Audio frequency response	40 to 10 000 Hz (– 6 dB)
Signal/noise ratio	> 50 dB weighted acc. DIN 45500
Wow and flutter	< 0.3% acc. DIN 45507
Harmonic distortion	< 5%

Data subject to change without notice.

Video 2000 Maintenance Cassette

In normal circumstances, your VCR will give perfect picture quality without requiring maintenance. However, depending on the environment, some dust may get into the tape transport or on the heads, affecting the picture quality. If this happens, the special non-abrasive Video 2000 Maintenance Cassette should be used to remove the dust. The Video 2000 Maintenance Cassette is available from your supplier; follow the instructions provided with the cassette.

These products comply with the Radio interference requirements of the Council Directive of 4 November 1976 76/889/EEC.