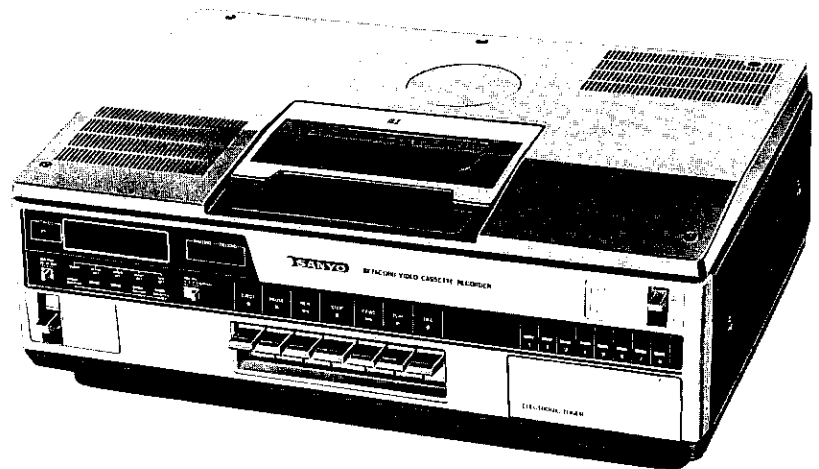


BCORD

SANYO
COLOUR VIDEO
CASSETTE RECORDER
MODEL VTC 9300PN
OWNER'S MANUAL



SANYO

CONGRATULATIONS. You are now the owner of one of the many fine products manufactured by Sanyo Electric Co., a world-wide leader in electronics. We take pride in our international reputation for product quality and industry proven performance.

This product has been carefully inspected to rigid quality control standards before shipment to you. We are sure you will find that with reasonable care it will provide you with years of reliable performance.

Considering the investment you have made, we know that you will want to obtain the full performance capability engineered into your new Sanyo product. Therefore, may we recommend that you read this owner's manual thoroughly before attempting to operate this instrument.

FEATURES

- * Popular BETA recording format
- * Three hours 15 minutes recording time with a compact video cassette L-750
- * Built-in preset VHF and UHF tuner
- * External input provisions for camera and microphone
- * Built-in digital timer for automatic recording
- * Incorporated combined CLOCK/TIMER/COUNTER display
- * Easy "one touch" push-button operation
- * Remote pause and programme editing control
- * Can be used with any TV receiver produced to local standards
- * Digital tape counter with "0000" position memory

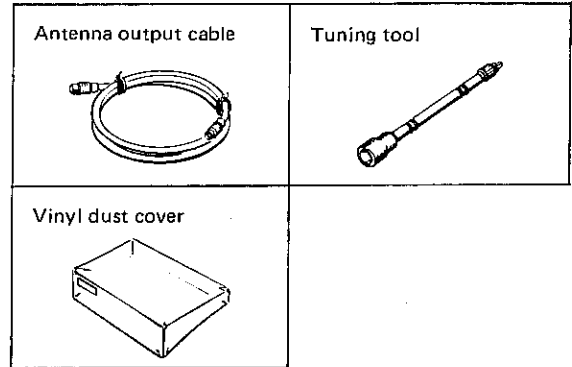
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ACCESSORIES SUPPLIED

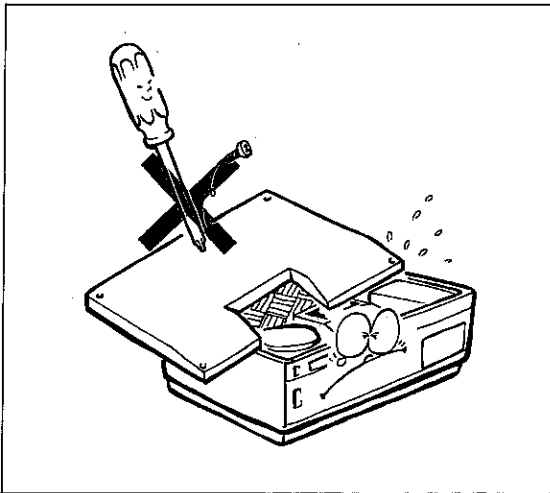
When unpacking your new video cassette recorder, please observe that the following standard accessories are included:

ACCESSORY	QTY.
RF converter, switchable, CH 3 or CH 4 (installed)	(1)
Antenna output cable	(1)
Vinyl dust cover	(1)
Owner's manual	(1)
Tuning tool	(1)
Video cassette, L-250	(1)
Remote pause control	(1)



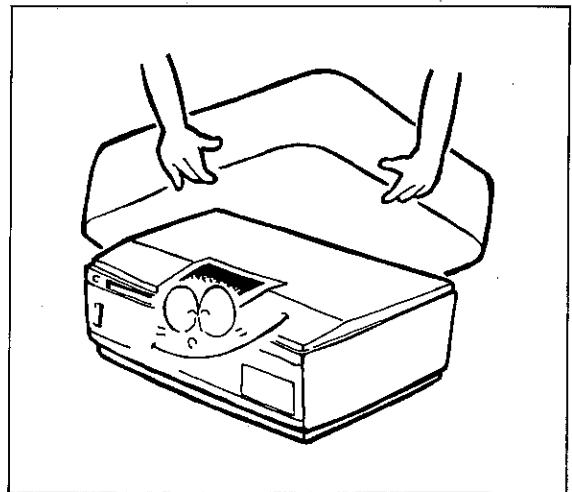
CAUTION

- * Only **B** video cassettes can be used with this recorder.
- * The unauthorised recording of television programs, video tapes, films and other such material may involve infringement of copyright or the rights of third parties.
- * Do not attempt to open the cabinet. There are no user serviceable parts inside. Refer all servicing to your Sanyo Authorized Dealer. **TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.**



- * Pick a convenient location for your video cassette recorder, but avoid using it in extremely hot, cold or dusty places. Allow for air circulation at bottom, top and back of unit. The rotary and stationary recording heads are also sensitive to magnetic fields. Take care not to place the recorder near motors, transformers or other equipment which generate strong magnetic fields. This product is designed for use in the horizontal position only.

- * When the recorder is not in use, it is recommended that any video cassette in the unit be ejected and all pushbuttons released. A vinyl dust cover is furnished as a standard accessory to protect your unit from dust and other contaminants.

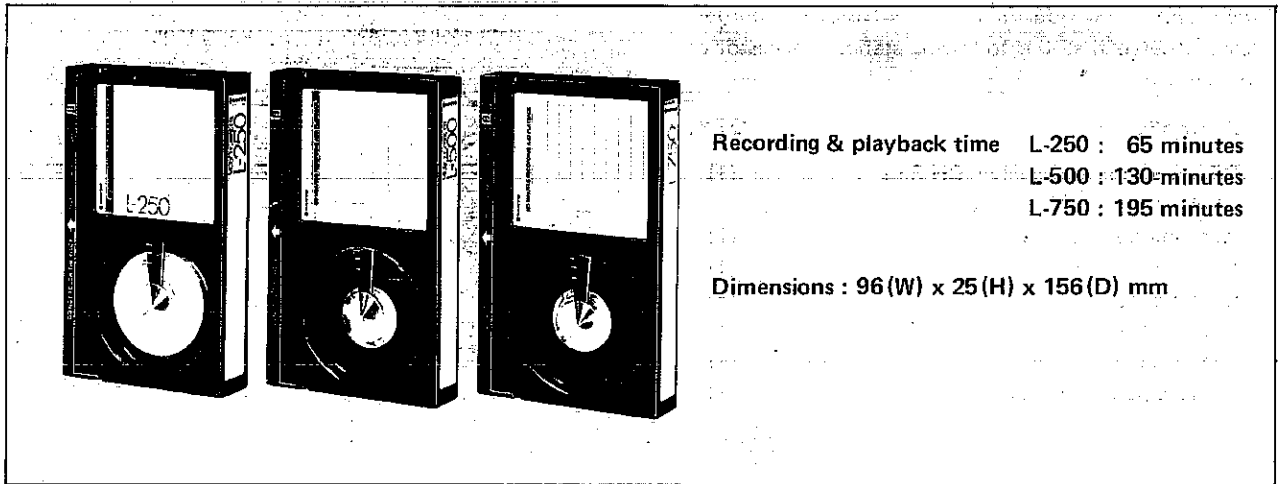


- * This product operates on 240 VAC, 50 Hz power. If the AC line voltage differs by more than $\pm 10\%$ of the rated figure, improper operation will result. In this case, use a variable transformer or voltage stabilizer.

FOR YOUR SAFETY

1. Insert this plug only into effectively earthed three-pin plug-socket outlet.
2. If any doubt exists regarding the earthing, consult a qualified electrician.
3. Extension cords, if used, must be three-core correctly wired.

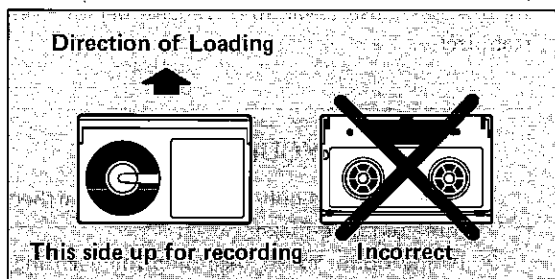
THE VIDEO CASSETTE AND ITS CARE



The Sanyo BETACORD Video Cassette is a precision engineered twin reel cassette containing high performance video recording tape. Designed for use with Sanyo BETACORD Video Cassette Recorder/Players, the BETACORD Cassette provides both the convenience of automatic tape loading and protection of valuable recorded contents. With reasonable care, you may expect many hours of high quality video programme enjoyment.

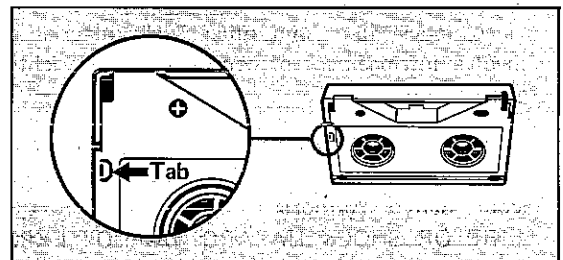
HOW TO USE THE BETACORD CASSETTE

- * Like an audio cassette, the BETACORD Cassette may be re-recorded many times. However, unlike an audio cassette, the BETACORD Cassette can be recorded in one direction only, since the full width of the video tape is used to record picture and sound.
- * To start the operation of your BETACORD Recorder, the cassette should be properly loaded in the recorder's Cassette Loading Door. Insert cassette, label side up, into Cassette Loading Door in the direction indicated by the arrow. Be sure that the cassette is seated in the Cassette Loading Door as far back as it will go, then close door by pushing it down firmly.



- * For your convenience, a set of index labels is included with the BETACORD Cassette. Placement of the labels is indicated on the label card.

- * To protect your valuable recordings from accidental erasure, remove the tab located on the back side of the cassette. To re-record, simply cover the opening from which the tab was removed with adhesive tape.



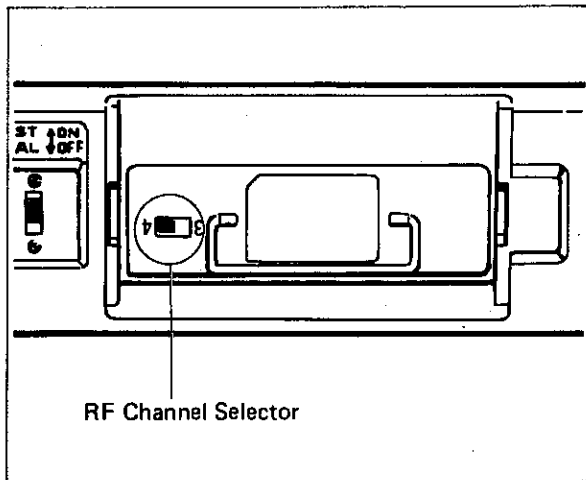
CARE OF THE BETACORD CASSETTE

- * Do not use or store the BETACORD Cassette in a hot or humid environment. Be especially careful not to expose it to direct sunlight, heating equipment or electrical devices which emit a strong magnetic field. If the cassette has been exposed to cold temperatures, it should be stored at room temperatures for at least one hour before use.
- * It is important that the protective tape shutter be kept closed at all times and that you do not touch the video tape, as the fingerprints may affect the operation of the video cassette recorder.
- * For maximum protection of the BETACORD Video Cassette against dust or accidental damage, it is suggested that the cassette always be stored in its protective jacket when not in use.
- * The BETACORD Video Cassette is a precision device. Do not attempt to disassemble the plastic case. This may result in a malfunction of the cassette and damage to the video cassette recorder. In the event of the cassette failing to function properly, repairs should be made only by Sanyo authorized service personnel.

INSTALLATION OF THE RF CONVERTER

The RF CONVERTER is supplied as a standard accessory to the Model VTC 9300PN Video Cassette Recorder. Designed as a plug-in module for easy installation, it converts the video and audio output signals of the recorder to an auxiliary modulated radio frequency (RF) output for viewing on any TV receiver produced to local standards.

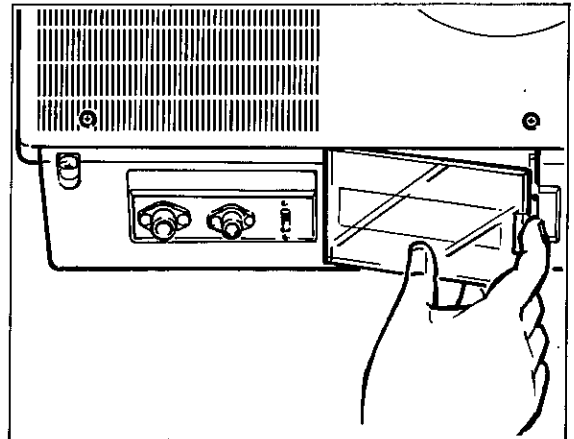
Reception of RF OUTPUT is available on either Channel 3 or Channel 4, depending on the setting of the RF Channel Selector. This selector should be set to the unused channel in your reception area.



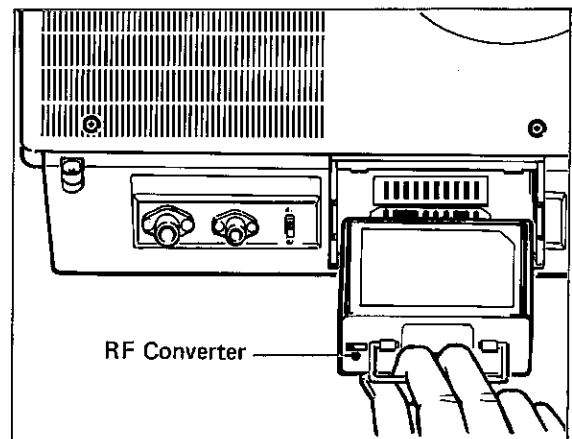
INSTALLATION

The RF CONVERTER should be installed in the special compartment provided on the back side of the recorder as follows:

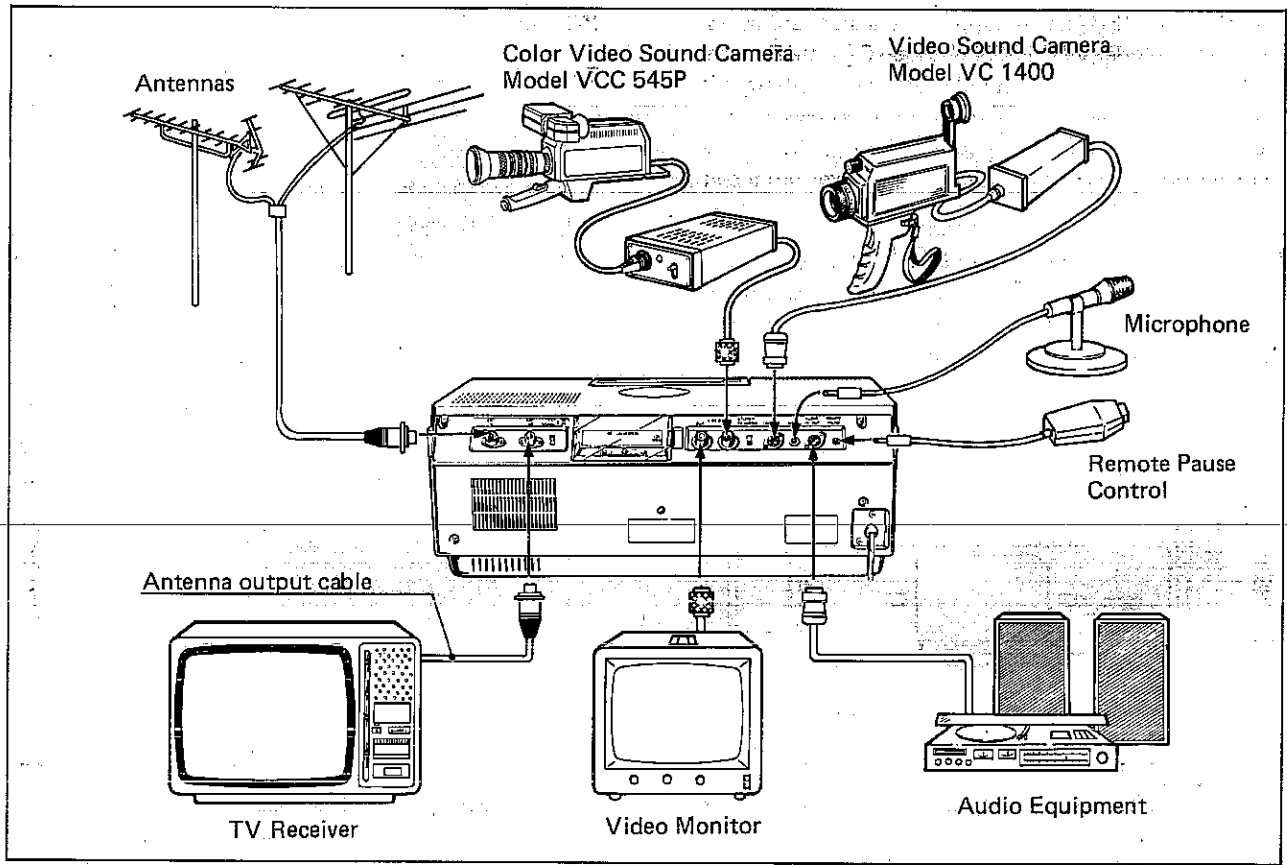
1. Remove the compartment cover.



2. Insert the RF converter into the compartment. Be sure that the converter is firmly seated in its mating socket at the bottom of the compartment.

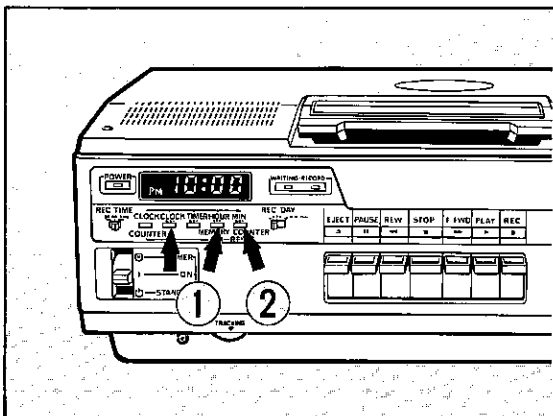


INSTALLATION AND CONNECTION OF THE RECORDER



SETTING THE CLOCK

1. When connecting the video recorder to the mains, the time display will start to flash "88:88".
2. While holding the CLOCK SET button, push HOUR SET button until the hour indicator reaches the correct hour. See note 1.
3. While pressing the CLOCK SET button, hold the MIN SET button until the MIN indicator reaches about ten minutes before the correct time of day. See note 1.
4. While pressing the CLOCK SET button, push the MIN SET button once for each minute until the indicator reaches the correct time. The clock will then begin to operate showing the precise time of day.
5. The setting of the clock can be performed at any time, the CLOCK/COUNTER button has to be preset, if necessary, for time indication.



Note 1:

The hour and min indicator changes automatically when the HOUR and MIN SET buttons are pressed for more than 2 seconds. The hour and min indication will change by 1 digit every time these knobs are pressed.

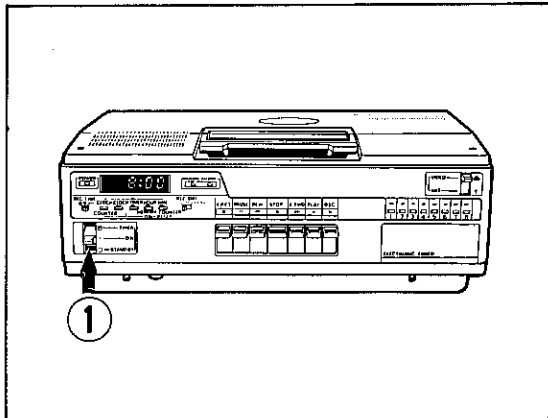
Note 2:

If AC power to the recorder has been interrupted, the digital display will flash to indicate that the clock time is no longer accurate. Should this occur, it will be necessary to reset the clock time.

RECORDING TV PROGRAMMES

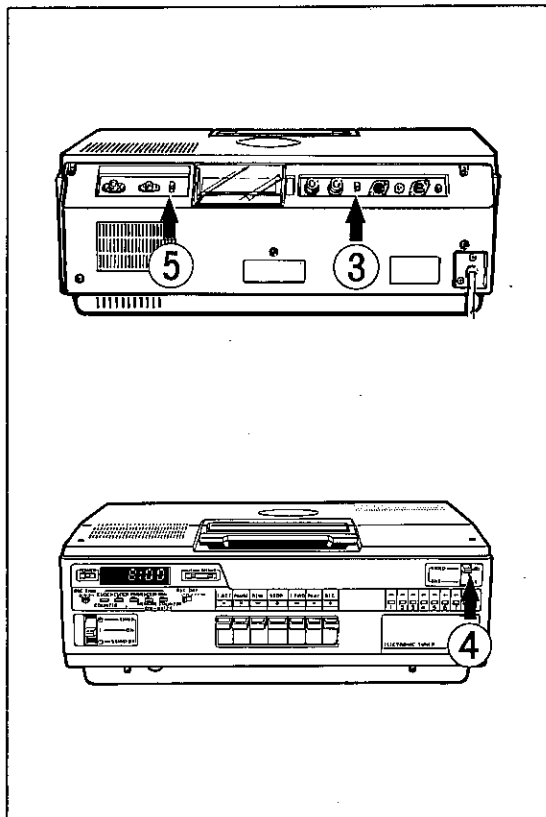
A. POWER SWITCH ON

1. Set power switch to "ON" position.
2. Observe that POWER indicator illuminates.



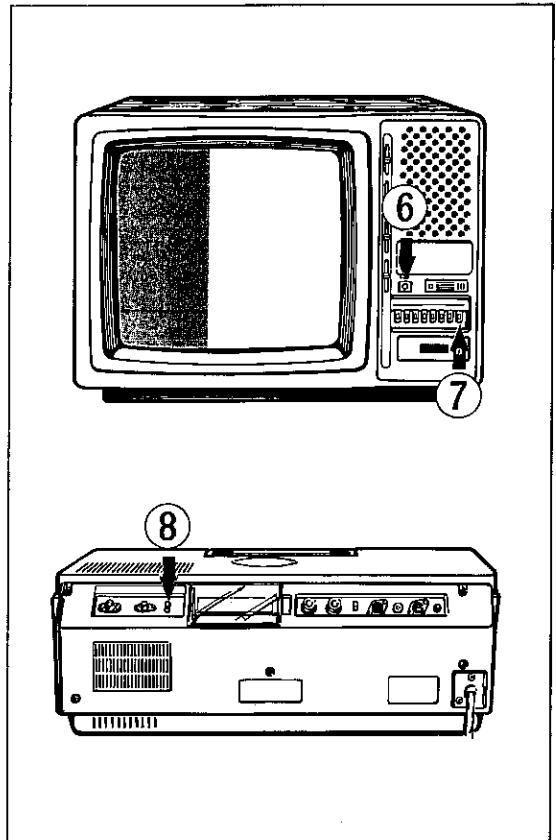
B. CHECK THE SWITCHES

3. TUNER/CAMERA switch "TUNER"
4. VIDEO/ANT switch "VIDEO"
5. TEST SIGNAL switch "ON"



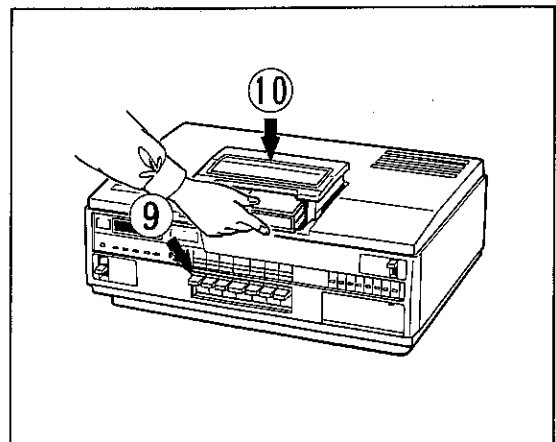
C. SET THE TV RECEIVER

6. Set power switch to "ON" position.
7. At first set the TV channel (CH 3 or CH 4) that corresponds to the RF Channel Selector setting and carefully adjust the channel to get the black and white test signal pattern on the TV screen.
8. TEST SIGNAL switch to "OFF" position.



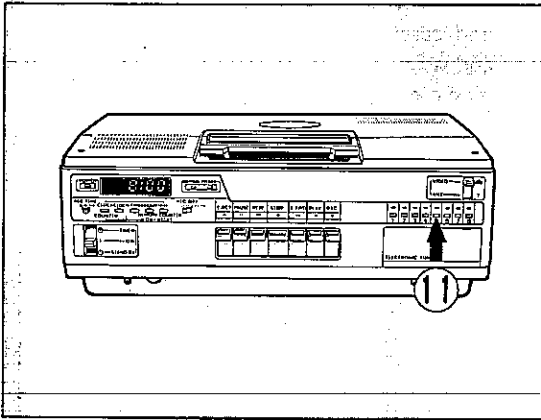
D. LOADING CASSETTE TAPE

9. Push EJECT key.
10. Insert a video cassette into cassette loading door and close door. Tape automatically loads.



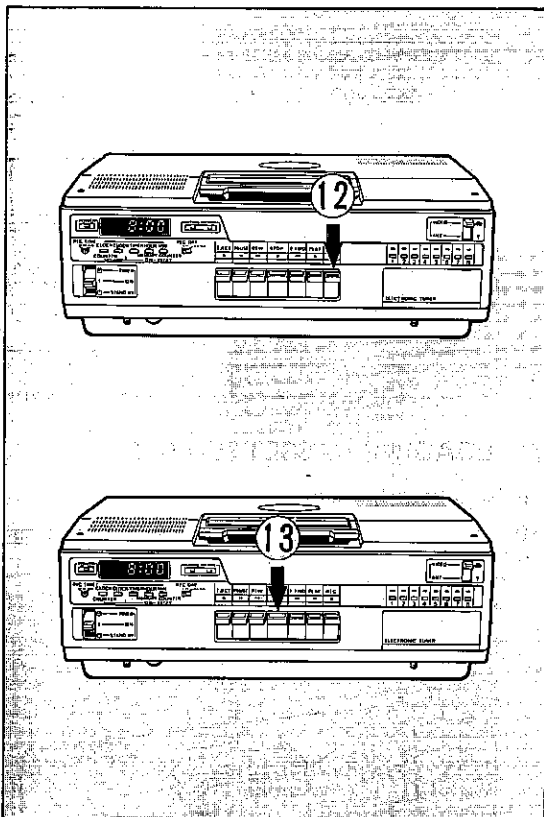
E. PROGRAMME MONITORING

11. Using the recorder's built-in tuner, adjust the TV channel to be recorded.



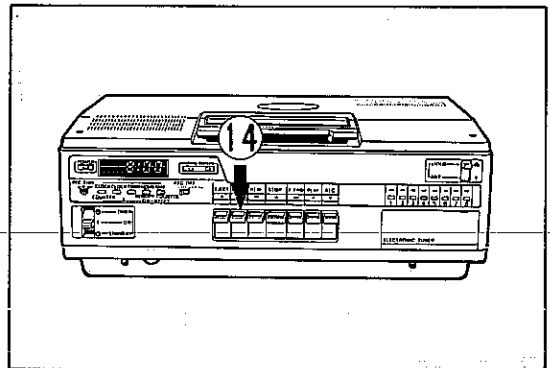
F. RECORDING

12. Push REC key to start recording.
13. Push STOP key to end recording.



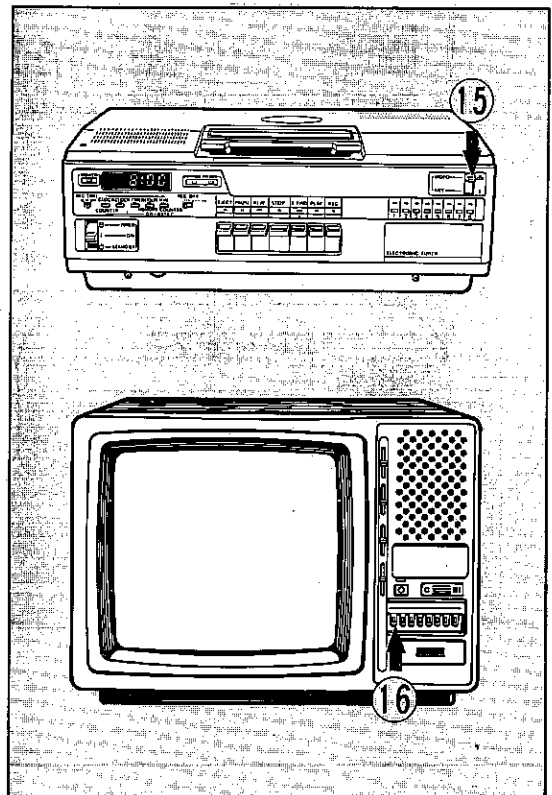
G. PROGRAMME EDITING

14. To edit out unwanted programme material during recording, push the PAUSE (or REMOTE pause) key. Observe that the WAITING indicator flashes to indicate "pause". Please note that the PAUSE key should not remain pressed more than 3 minutes in order to avoid unnecessary tape wearing. Push the PAUSE key again to resume recording.



H. VIEWING ANOTHER TV CHANNEL WHILE RECORDING FROM THE VIDEO RECORDER'S TUNER

15. Set the VIDEO/ANT switch to "ANT". Please note that the recording of programme from the video recorder's tuner is in no way affected.
16. Tune the TV receiver to the desired channel.

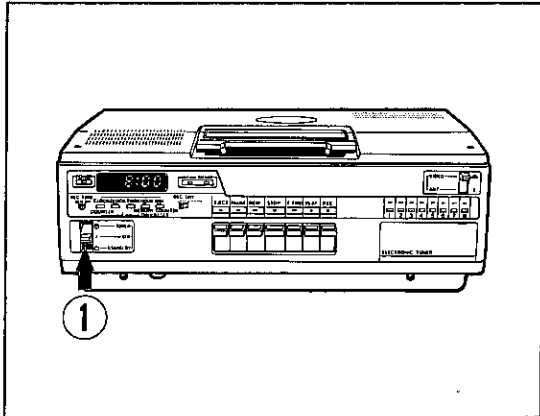


RECORDING WITH VIDEO CAMERA

* For best results, it is recommended that a camera with an internal 2:1 interlace should be used for video recording. For example SANYO VCC 545P, VC1400.

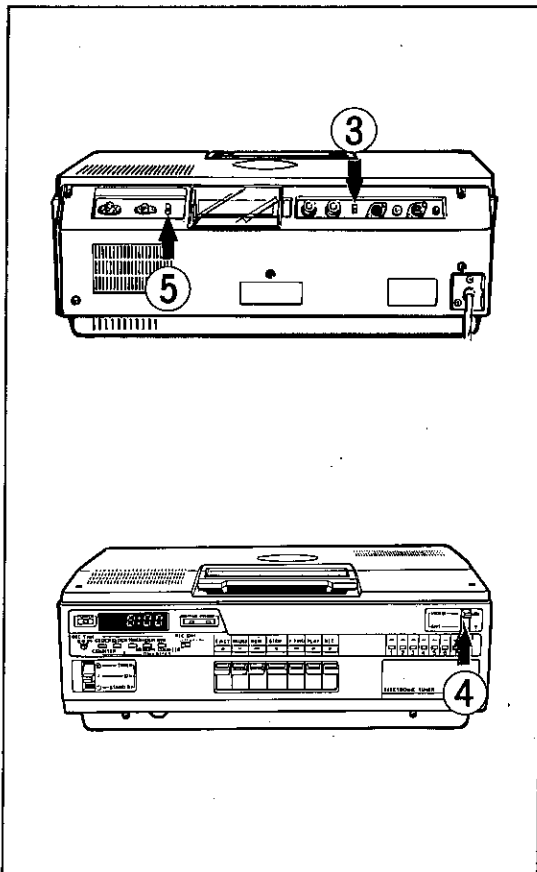
A. POWER SWITCH ON

1. Set power switch to "ON" position.
2. Observe that POWER indicator illuminates.



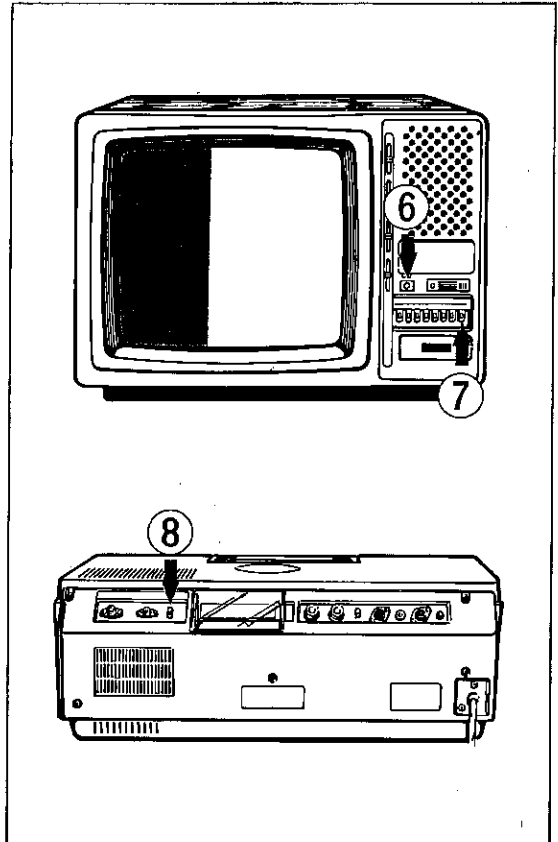
B. CHECK THE SWITCHES

3. TUNER/CAMERA switch "CAMERA"
4. VIDEO/ANT switch "VIDEO"
5. TEST SIGNAL switch "ON"



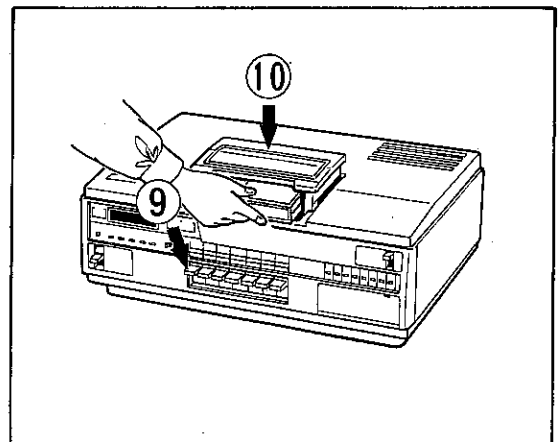
C. SET THE TV RECEIVER

6. Set power switch to "ON" position.
7. At first set the TV channel (CH 3 or CH 4) that corresponds to the RF Channel Selector setting and carefully adjust the channel to get the black and white test signal pattern on the TV screen.
8. TEST SIGNAL switch to "OFF" position.



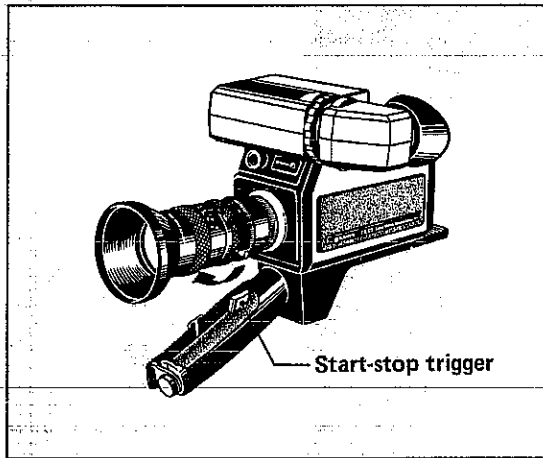
D. LOADING CASSETTE TAPE

9. Push EJECT key.
10. Insert a video cassette into cassette loading door and close door. Tape automatically loads.



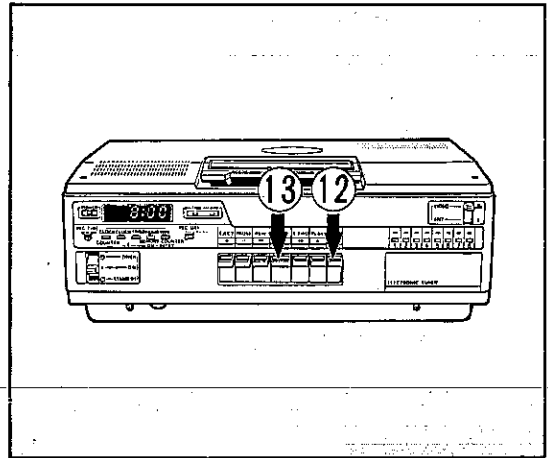
E. MONITORING

11. Adjust camera lens to obtain a proper picture.



F. RECORDING

12. Push REC key to start recording.
13. Push STOP key to end recording.

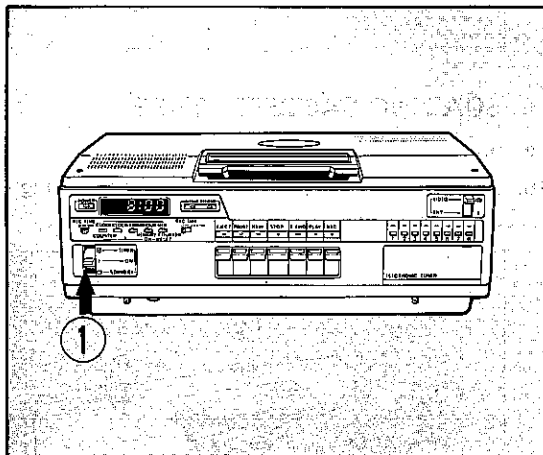


Note: When using the SANYO model VCC 545P VIDEO SOUND CAMERA, its built-in start-stop trigger may conveniently be used to remotely control the recorder's PAUSE function.

PLAYBACK OF A PRE-RECORDED CASSETTE

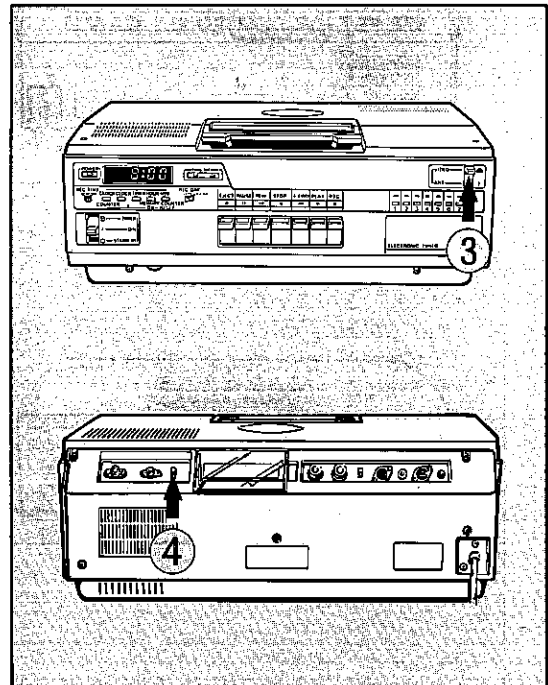
A. POWER SWITCH ON

1. Set power switch to "ON" position.
2. Observe that POWER indicator illuminates.



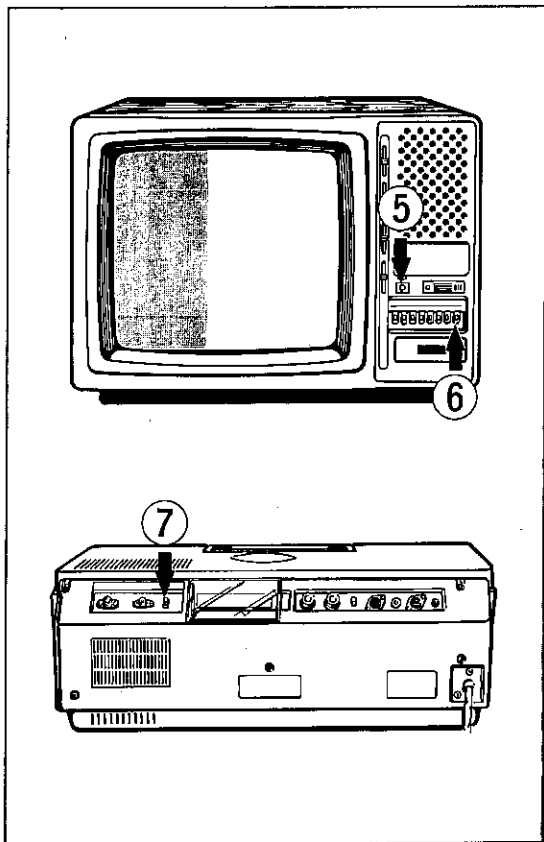
B. CHECK THE SWITCHES

3. VIDEO/ANT switch "VIDEO"
4. TEST SIGNAL switch "ON"



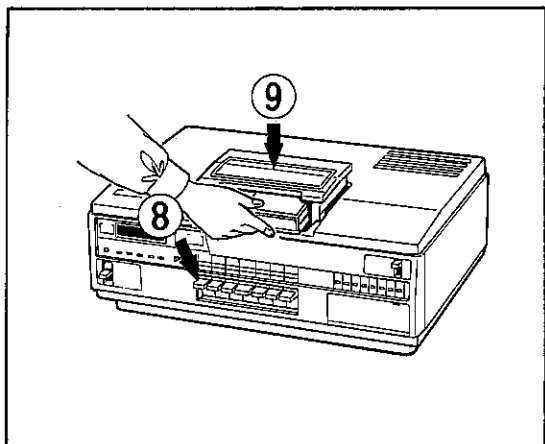
C. SET THE TV RECEIVER

5. Set power switch to "ON" position.
6. At first set the TV channel (CH 3 or CH 4) that corresponds to the RF Channel Selector setting and carefully adjust the channel to get the black and white test signal pattern on the TV screen.
7. TEST SIGNAL switch to "OFF" position.



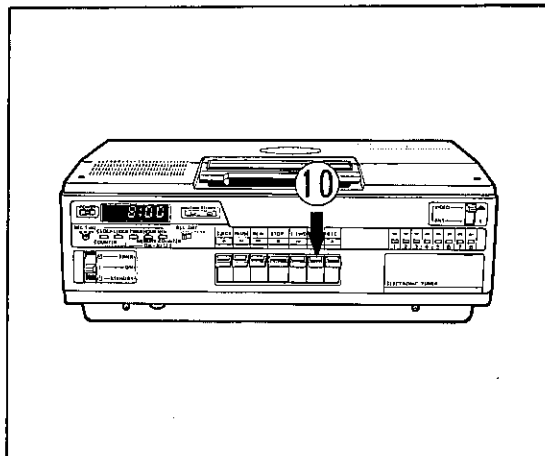
D. LOADING CASSETTE TAPE

8. Push EJECT key.
9. Insert pre-recorded cassette into loading door and close door. Tape automatically loads.



E. PLAYBACK VIEWING

10. Push PLAY key.



F. TRACKING ADJUSTMENT

11. Adjustment of video head tracking is normally required only when playing back video cassettes recorded on another recorder. Mistracking is indicated when a narrow band of horizontal noise appears in the picture as shown in the illustration. In this case, a perfect noise-free picture may be obtained by rotating the tracking control to the right or left as required. When video cassettes are recorded and played back on the same machine, the tracking control should be kept in the mid (notch) position for optimum picture quality.

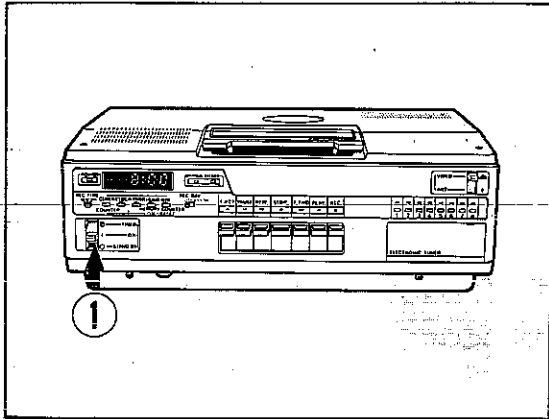


RECORDING WITH BUILT-IN VIDEO TIMER

For maximum recording flexibility, the Model VTC 9300PN features a built-in electronic recording timer. This special convenience feature permits unattended, fully automatic recording of a pre-selected TV programme during your absence up to 72 hrs ahead.

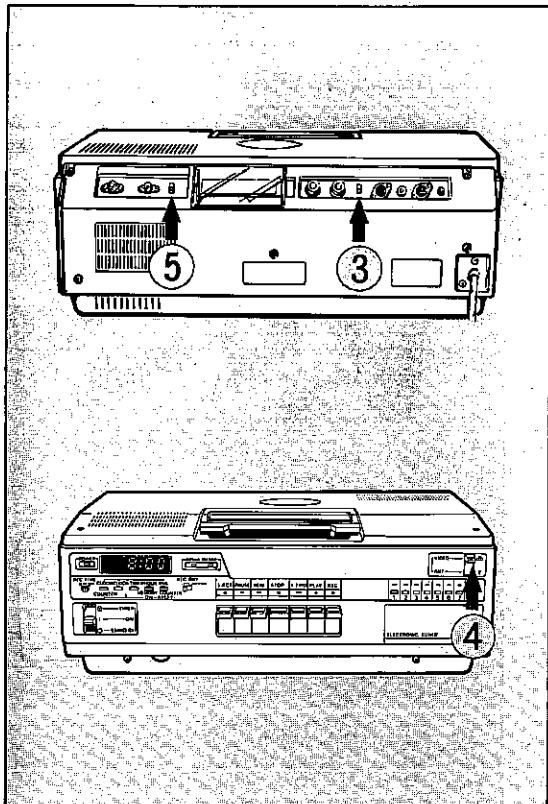
A. POWER SWITCH ON

1. Set power switch to "ON" position.
2. Observe that POWER indicator illuminates.



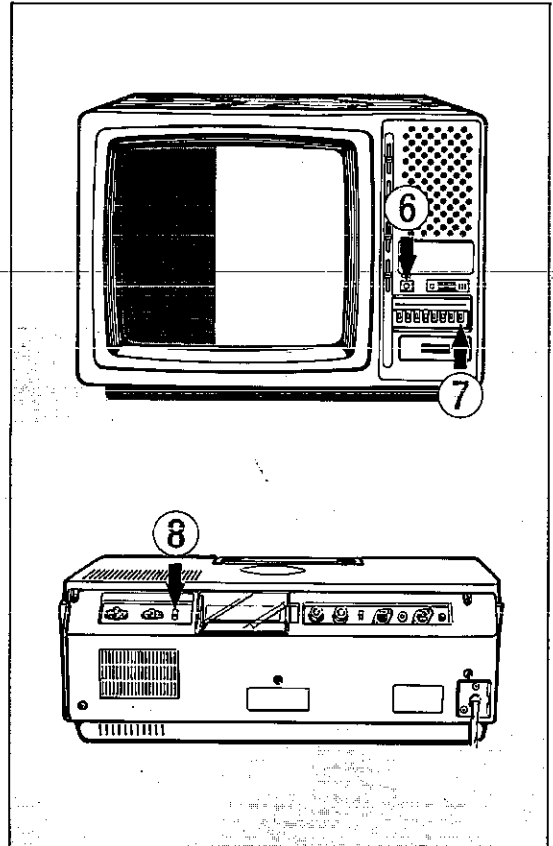
B. CHECK THE SWITCHES

3. TUNER/CAMERA switch "TUNER"
4. VIDEO/ANT switch "VIDEO"
5. TEST SIGNAL switch "ON"



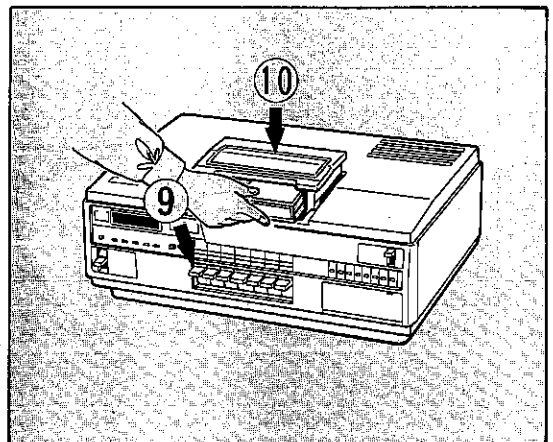
C. SET THE TV RECEIVER

6. Set power switch to "ON" position.
7. At first set the TV channel (CH 3 or CH 4) that corresponds to the RF Channel Selector setting and carefully adjust the channel to get the black and white test signal pattern on the TV screen.
8. TEST SIGNAL switch to "OFF" position.



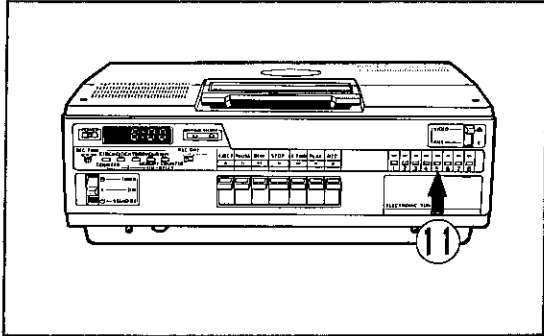
D. LOADING CASSETTE TAPE

9. Push EJECT key.
10. Insert a video cassette into cassette loading door and close door. Tape automatically loads.



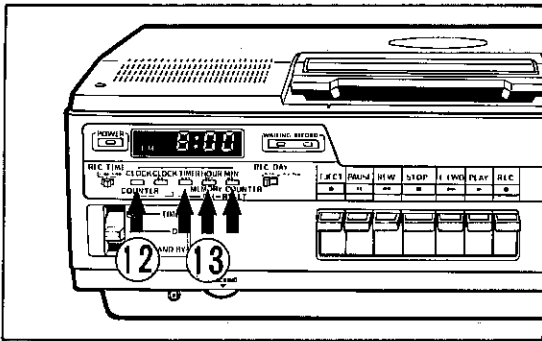
E. PROGRAMME MONITORING

- Using the recorder's built-in tuner, adjust the TV channel to be recorded.

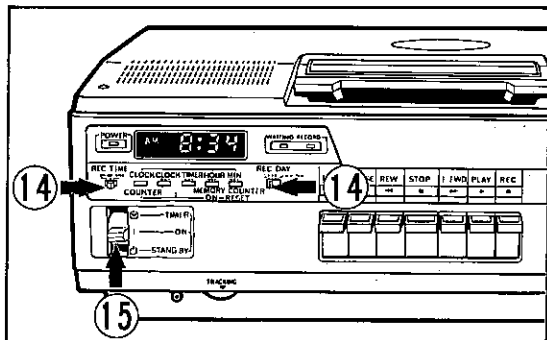


F. SETTING THE RECORDING START TIME

- Press the CLOCK/COUNTER button for time display if necessary. Usually this operation is not necessary as the time is automatically displayed when sliding the power switch to STAND-BY.
- While pressing the "TIMER SET" button, push "HOUR SET" or "MIN SET" button until the digital display reaches the desired recording start time.

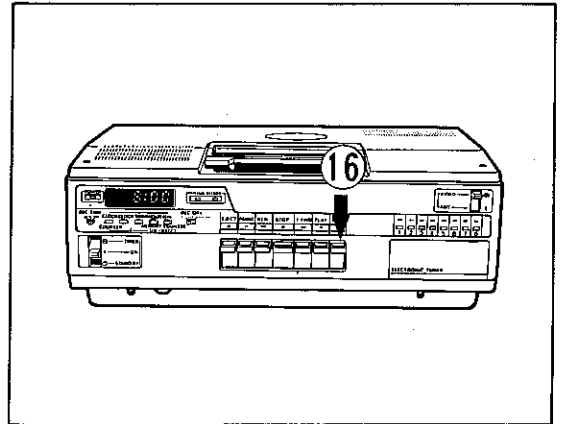


- Set the REC DAY selector and REC TIME selector to the scheduled day of programme and its expected recording time length, with the REC TIME selector positioned at 30, 60 min, or tape end.
- Set power switch to "TIMER" position. Observe that "WAITING" indicator illuminates and that "POWER" indicator goes out.

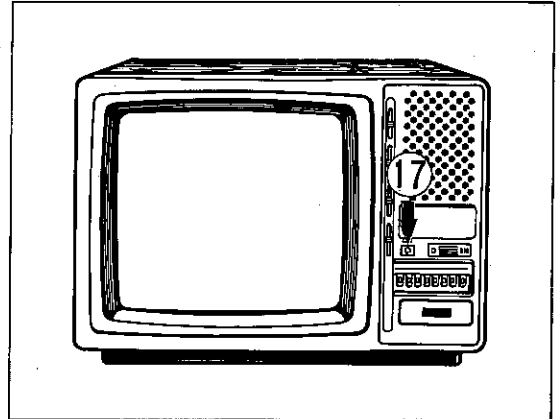


G. PREPARATION OF RECORDING

- Push REC key. Recorder will automatically turn on and start recording when the clock time reaches the preset recording start time. Recording will continue during the selected recording time length (30, 60 minutes) or tape end, and the recorder will automatically switch-off.



- Please note that the TV programme to be recorded will be received by the recorder's built-in tuner, and to save energy, your TV receiver should be turned off before leaving the recorder unattended.



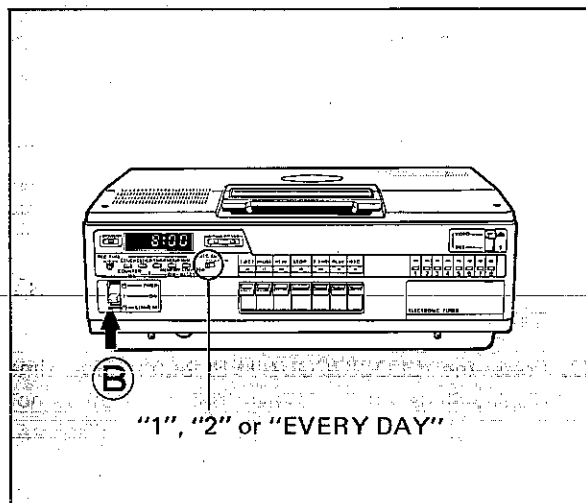
AUTOMATIC TERMINATION OF RECORDING OR PLAYBACK

Under certain circumstances, such as when retiring for the night, it may be convenient to start the recording function manually and set the recorder to automatically switch-off at the end of the tape. This automatic end-of-tape switch-off feature may also be used in the playback mode if it is necessary to leave the recorder unattended during playback of a pre-recorded programme.

AUTOMATIC TERMINATION OF RECORDING

- A. Refer to the section titled "RECORDING TV PROGRAMMES" and follow all procedures.
- B. Set the POWER switch to the "TIMER" position. Recording will continue to the preset REC TIME length or the end of tape, at which time the recorder will automatically switch-off. If the remaining tape length is shorter than the preset recording time length, the recorder will switch-off at the end of the tape.

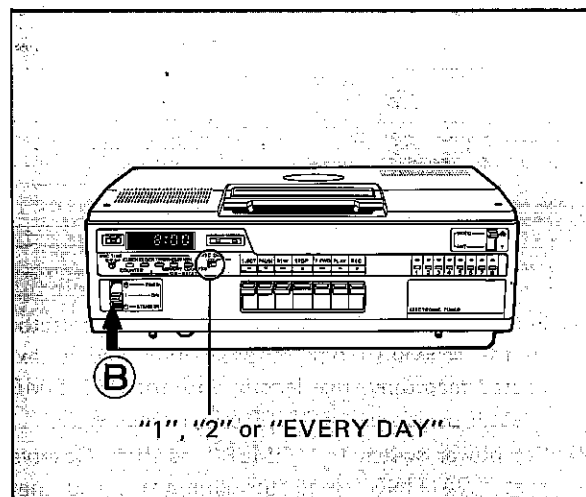
Note: If the REC DAY selector is at position "3", the REC key will be ejected as soon as the power switch is set to timer. In order to avoid it, push the REC DAY selector to any other position "1", "2" or "EVERY DAY".



AUTOMATIC TERMINATION OF PLAYBACK

- A. Refer to the section titled "PLAYBACK OF A PRE-RECORDED CASSETTE" and follow all procedures.
- B. Set the POWER switch to the "TIMER" position. Playback will continue to the preset REC TIME length or the end of the tape, at which time the recorder will automatically switch-off.

Note: If the REC DAY selector is at position "3", the PLAY key will be ejected as soon as the power switch is set to timer. In order to avoid it, push the REC DAY selector to any other position "1", "2" or "EVERY DAY".

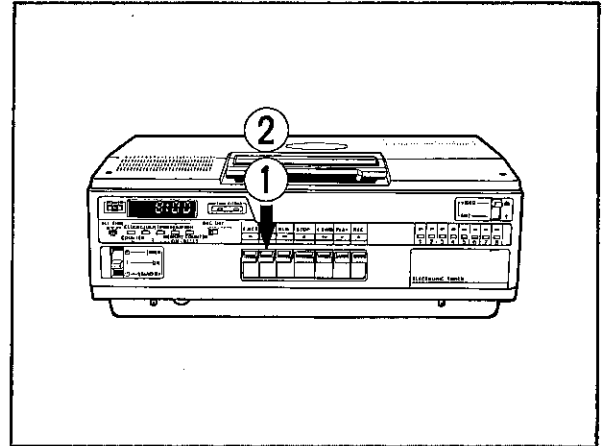


EDITING PROGRAMME MATERIALS

A. EDITING DURING RECORDING

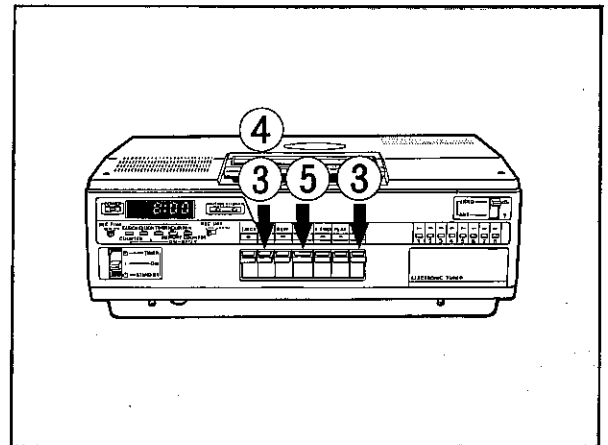
1. To edit out unwanted programme material during recording push the PAUSE key. Observe that the "WAITING" indicator flashes to indicate "pause". Please note that the PAUSE key should not remain pressed more than 3 minutes in order to avoid unnecessary tape wearing.
2. To resume recording, push the PAUSE key again.

Note: The REMOTE PAUSE CONTROL may also be used for recording editing.



B. ADDING NEW MATERIAL TO A PRE-RECORDED CASSETTE

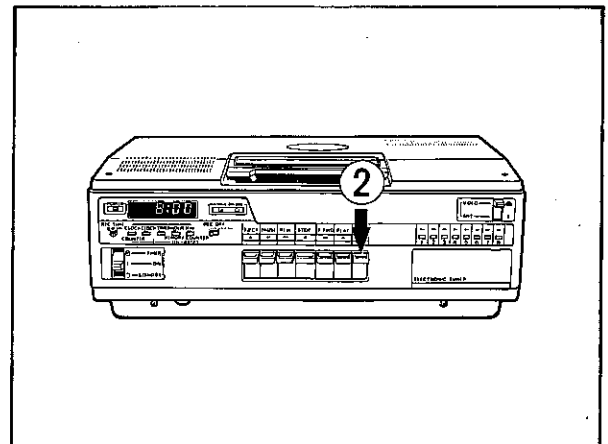
1. Check to see that the tab covering the recording prevention hole has not been removed. If it has, cover the hole with adhesive tape.
2. Operate the recorder in the playback mode as outlined in the section titled "PLAYBACK OF A PRE-RECORDED CASSETTE".
3. At the precise point on the tape where you wish to add the new material, push the PAUSE key then push the REC key.
4. To start recording, release the PAUSE key by pushing it again.
5. To stop recording, push the STOP key.



TAPE ERASING

During the recording process, all video and audio information is automatically erased prior to the actual recording of the new video and audio programme. Therefore, to erase a tape, the following procedure will be effective:

1. Be sure that there are no connections to the CAMERA connector, VIDEO INPUT connector, AUDIO IN/OUT connector and MIC jack.
2. Operate the recorder in the RECORD mode as outlined in the section titled "RECORDING WITH VIDEO CAMERA".
3. Since there are no inputs, the tape will be erased and no new video or audio information will be recorded.



MAINTENANCE

The VTC 9300PN is a precision instrument and, treated with care, will provide years of satisfactory performance. However, in the event of difficulties, the owner is advised not to attempt to make repairs or open the cabinet. Servicing should always be referred to your Sanyo Authorized Dealer.

TROUBLE SHOOTING

The Model VTC 9300PN is a highly sophisticated instrument. It is shipped from the Sanyo factory after having been checked and adjusted under the most rigid quality control and inspection system. Should problems develop, check the following points and take necessary corrective measures.

INSERTING OR REMOVING THE CASSETTE

Symptom	Cause	Check Point & Correction
EJECT key does not operate when pushed.	* Recorder is operating in recording, playback, fast-forward or rewind mode.	* Stop tape by pushing STOP key. Then EJECT key can be pressed.
Cassette Loading Door does not open by pressing EJECT key.	* Power switch is in "STAND BY" or "TIMER" position. * AC line power to the recorder has been interrupted.	* Set power switch to "ON". * Check to see that AC power cord is plugged in.
Cassette cannot be inserted into recorder.	* Cassette is reversed.	* Load cassette in direction indicated by arrow on cassette.

RECORDING TV PROGRAMMES

Symptom	Cause	Check Point & Correction
No picture on TV screen.	* TUNER/CAMERA switch is set to "CAMERA" position. * TV channel selector is not set to VCR operating channel. * VIDEO/ANT switch is set to "ANT" position.	* Set switch to "TUNER" position. * Set TV channel selector to VCR operating channel (3 or 4). * Set switch to "VIDEO" position.
A picture appears on TV screen but is not clear.	* Off the air reception on the VTR is poor. * Reception on the TV receiver is poor.	* Adjust tuning knob on VTR to obtain the best picture. * Adjust tuning controls of TV receiver to obtain the best picture.
A picture appears on TV screen but there is no sound.	* Microphone connected to "MIC" jack.	* When recording off the air, remove microphone.
REC key does not operate when pushed.	* Accidental erasure tab has been removed from cassette.	* Stick a piece of cellophane tape over prevention hole.
REC key does not lock.	* The auto-stop device is actuated. * Moisture condensation on head drum; WAITING indicator on.	* Rewind the tape. * Wait until WAITING indicator goes out.

RECORDING WITH VIDEO CAMERA

Symptom	Cause	Check Point & Correction
Camera picture does not appear on TV screen.	<ul style="list-style-type: none"> * TUNER/CAMERA switch is set to "TUNER" position. * TV channel selector is not set to VCR operating channel. * VIDEO/ANT switch is set to "ANT" position. 	<ul style="list-style-type: none"> * Set switch to "CAMERA" position. * Set TV channel selector to VCR operating channel (3 or 4). * Set switch to "VIDEO" position.
A picture appears on TV screen but is not clear.	<ul style="list-style-type: none"> * Reception on the TV receiver is poor. * Lens iris not open sufficiently. * Not enough light. 	<ul style="list-style-type: none"> * Adjust tuning controls of TV receiver to obtain the best picture. * Adjust iris. * Increase illumination.
REC key does not operate when pushed.	<ul style="list-style-type: none"> * Accidental erasure tab has been removed from cassette. 	<ul style="list-style-type: none"> * Stick a piece of cellophane tape over prevention hole.
REC key does not lock.	<ul style="list-style-type: none"> * The auto-stop device is actuated. * Moisture condensation on head drum; WAITING indicator on. 	<ul style="list-style-type: none"> * Rewind the tape. * Wait until WAITING indicator goes out.

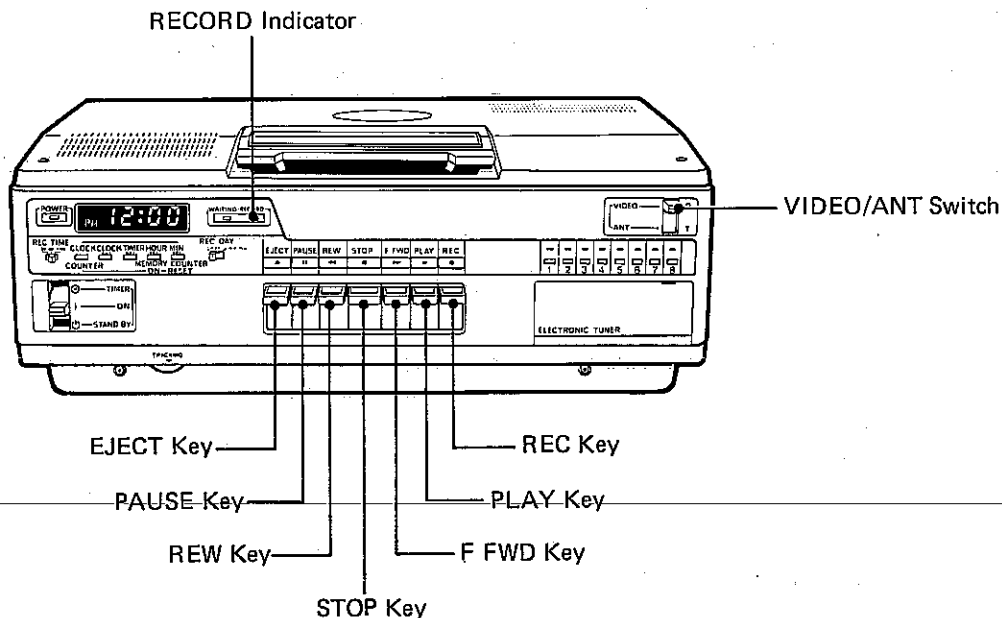
PLAYBACK OF PRE-RECORDED CASSETTE

Symptom	Cause	Check Point & Correction
No picture appears on TV receiver screen when PLAY key is pressed.	<ul style="list-style-type: none"> * TV channel selector is not set to VCR operating channel. * VIDEO/ANT switch is set to "ANT" position. 	<ul style="list-style-type: none"> * Set TV channel selector to VCR operating channel (3 or 4). * Set switch to "VIDEO" position.
No picture, but audio is clear.	<ul style="list-style-type: none"> * Dust and dirt on video heads. 	<ul style="list-style-type: none"> * Take unit to Sanyo Authorized Dealer.
Noise interferes with playback picture.	<ul style="list-style-type: none"> * Reception on the TV receiver is poor. * Misadjustment of tracking control. * Dust and dirt on video heads. 	<ul style="list-style-type: none"> * Adjust tuning controls of TV receiver to obtain the best picture. * Adjust tracking control. * Take unit to Sanyo Authorized Dealer.
PLAY key does not lock.	<ul style="list-style-type: none"> * The auto-stop device is actuated. * Moisture condensation on head drum; WAITING indicator on. 	<ul style="list-style-type: none"> * Rewind the tape. * Wait until WAITING indicator goes out.

DIGITAL DISPLAY

Symptom	Cause	Check Point & Correction
Digital display is flashing.	<ul style="list-style-type: none"> * Power interrupted. * Power cord was momentarily removed and again plugged-in. 	<ul style="list-style-type: none"> * Reset time according to instructions.
HOUR SET or MIN Set button does not operate.	<ul style="list-style-type: none"> * CLOCK SET or TIME SET button is not depressed. 	<ul style="list-style-type: none"> * While depressing CLOCK SET or TIMER SET button, push HOUR SET or MIN SET button.
Recorder does not start at preset record start time.	<ul style="list-style-type: none"> * Missetting of REC DAY selector. 	<ul style="list-style-type: none"> * Reset REC DAY selector.

IDENTIFICATION AND OPERATION OF CONTROLS (A)



EJECT Key

Opens cassette loading door to permit loading and unloading of cassettes. EJECT key may be actuated in the STOP mode only. Cassettes may be ejected at anytime during the programme without rewinding for cassette change.

PAUSE Key

This push/push control stops the tape transport in the record mode for easy programme editing and in the playback mode for temporary interruption of playback. Push to stop the tape transport, push again to release. "WAITING" indicator lamp flashes to provide a positive indication of pause. To prevent damage to the precision video tape, the pause function should not be used for more than 3 minutes at a time. For convenience, the pause function may also be remotely controlled using the REMOTE PAUSE CONTROL. At playback mode, a still picture appears when the PAUSE key is pressed. Please remember the 3 minutes.

Note: A switching bar pattern will usually appear in pause mode.

REW Key

Provides high speed tape rewind. 5 minutes is required for full end-to-end rewind of the tape using L-750 cassette. REW key may be actuated from the STOP mode only.

STOP Key

Cancels all operating modes and releases all transport keys. At PLAY or REC mode the STOP key must be actuated before pressing EJECT, F FWD, or REW keys.

F FWD Key

Provides high speed tape advance for fast location of programme. F FWD key may be actuated from the STOP mode only.

PLAY Key

Press this key down to start playback. Be sure "VIDEO /ANT" switch is in the "VIDEO" position and the TV set's channel selector is turned to channel 3 or 4 depending on the RF Channel Selector setting.

REC Key

When actuated, permits the video and audio programme to be recorded. The "PLAY" key need not be actuated to start the tape transport.

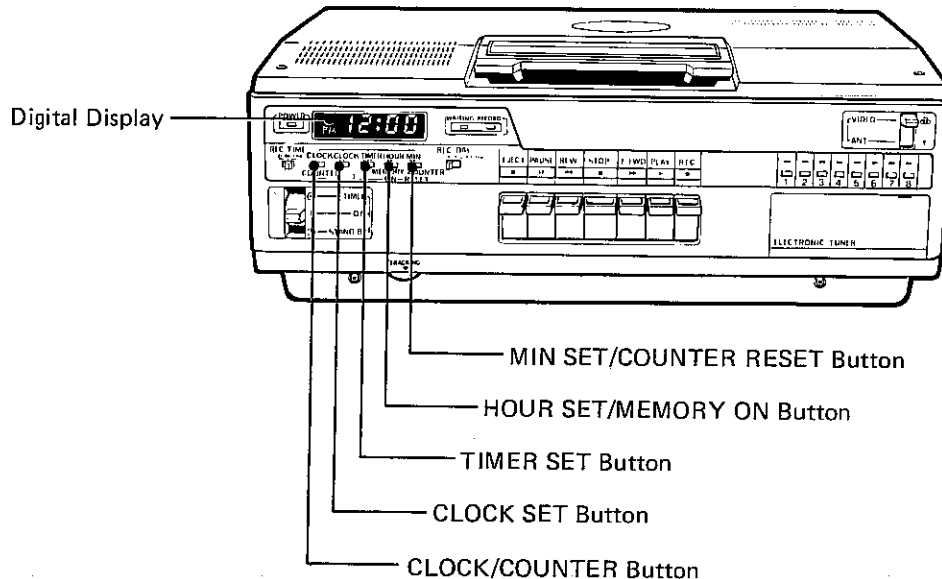
RECORD Indicator

Illuminates to indicate that the recorder is in the "record" mode when the REC (video and sound recording) key is activated.

VIDEO/ANT Switch

Selects the programme for viewing on your TV. "VIDEO" position supplies a signal to your TV on channel 3 or 4, depending on setting of RF CONVERTER Channel Selector. With "PLAY" key pressed, the recorded tape programme is supplied to the TV. With the "REC" key pressed, the TV will display the programme as it is being recorded. "ANT" position is used for normal operation of the TV when the VCR is not being used. This position also allows you to record one channel while watching another.

IDENTIFICATION AND OPERATION OF CONTROLS (B)



Digital Display

Pushing CLOCK/COUNTER button, you may select the digital display as a clock (AM/PM 1:00–12:59) or a counter (00 00 – 99 99). When the "MEMORY ON" button is pressed during counter display, "M" is illuminated on the left side of the counter.

MIN SET/COUNTER RESET Button

While pressing CLOCK SET or TIMER SET button, push lightly the MIN SET button one time, then the clock or timer indicator will move by one minute. Keeping the "MIN SET" button pressed, the display will change with a speed of 10 minutes per second.

Whenever the COUNTER RESET button is pressed during the counter display, the counter figures are reset to "0000".

CLOCK/COUNTER Button

The clock timer doubles as an accurate electronic counter with memory. You may select the display as a clock or a counter. When the power switch is turned to TIMER or STAND BY, the indicator shows automatically clock time. The counter can only be displayed in ON position. Push the CLOCK/COUNTER button once, and the indicator will change clock to counter, push twice and it will display the clock time again.

TIMER SET Button

Set the timer to the scheduled time of the programme. While pressing the TIMER SET button, push HOUR SET or MIN SET button until indicator reaches the desired time.

CLOCK SET Button

When the mains lead is connected, digits "88:88" will appear and dots begin to flash on the timer indicator. First, set the clock time precisely by pressing the CLOCK SET button in combination with pressing HOUR SET or MIN SET buttons.

HOUR SET/MEMORY ON Button

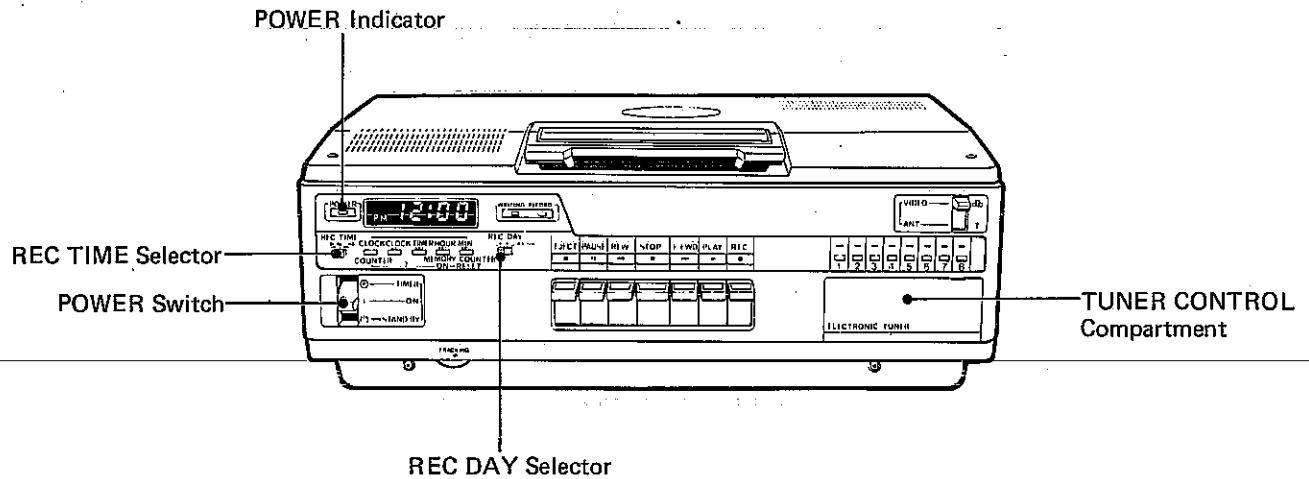
While pressing CLOCK SET or TIMER SET button, push lightly the HOUR SET button one time, then the clock or timer indicator will move by one hour. Keeping the "HOUR SET" button pressed, the display will change with a speed of three hours per second.

When the "MEMORY ON" button is pressed during counter display, "M" is indicated on the left side of the counter and it memorizes the tape position of "0000".

During rewinding, the tape stops and the REW key is released automatically at the point where the tape reaches "0000".

To rewind the tape further than "0000", press the "REW" key again.

IDENTIFICATION AND OPERATION OF CONTROLS (C)



POWER Indicator

Illuminates when the POWER switch is in the "ON" position.

POWER Switch

This three position switch provides a selection of either manual secondary power on/off control or automatic secondary power control using the built-in recording timer.

Position	Function
"STAND BY"	Power continuously "OFF" except display
"ON"	Power continuously "ON"
"TIMER"	Automatic timed power "ON" and/or automatic end-of-tape "OFF".

REC DAY Selector

You can select a recording start date up to three days in advance.

- "1" When you want to record any programmes within 24 hours from the timer setting, you may set this switch to "1" position.
- "2" When you want to record any programmes on 2nd day (between 24 hours to 48 hours from timer setting), you may set this switch to "2" position.
- "3" When you want to record any programmes on 3rd day (between 48 hours to 72 hours from the timer setting), you may set this switch to "3" position.

"EVERY DAY"

If you want to record a programme everyday continuously on a tape, like Daily News, you may set this switch to "EVERY DAY". Then, the recorder automatically starts recording with the timer on the same time everyday, and after passing the record time (30 or 60 minutes), it automatically stops. On the next day, the recorder starts to record at the same time. These functions will be repeated until the tape comes to an end.

REC TIME Selector

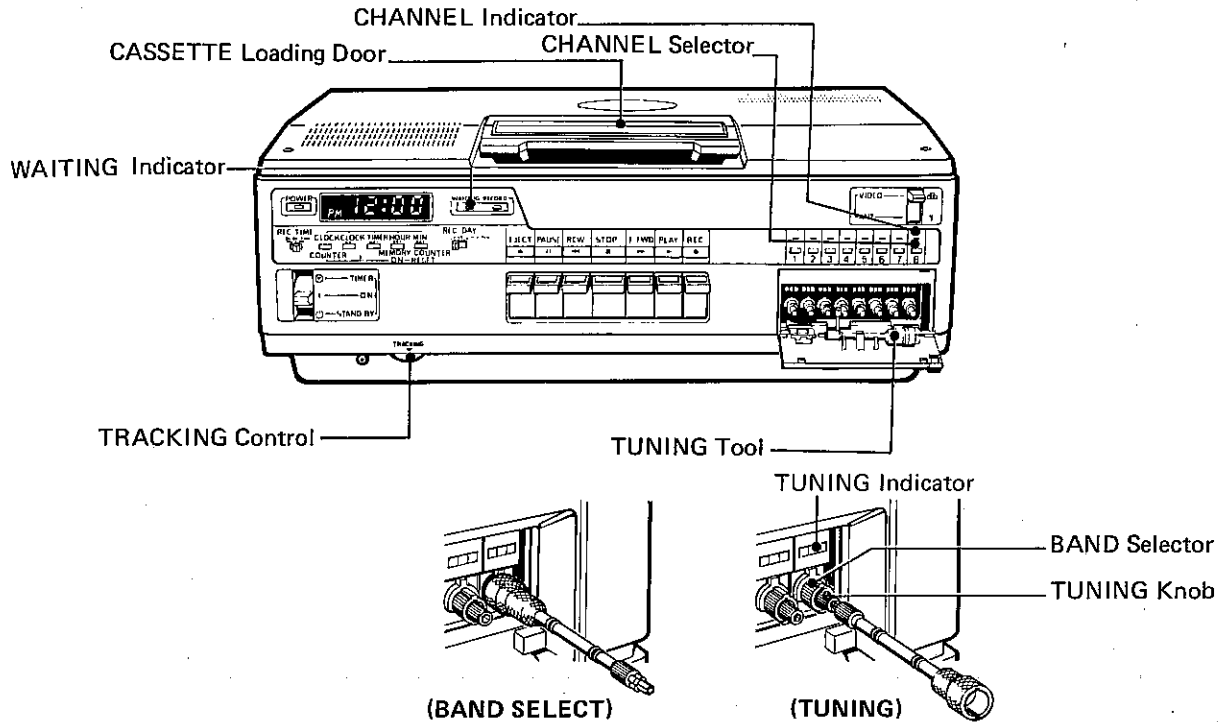
In the case of timer recording, you can select the recording time length according to the length of the programme to be recorded.

- "30" The recorder will begin recording at the preset turn-on time and switch-off automatically after 30 minutes.
- "60" The recorder will switch-off after 60 minutes from the preset turn-on time of the timer recording.
- "END" The recorder will switch-off at the tape end.

TUNER CONTROL Compartment

The AFT (Automatic Fine Tuning) circuit of the tuner is automatically switched-off when the door is opened to allow the tuning operation. After tuning the channel, close the door firmly, then the AFT is switched on to ensure best possible reception.

IDENTIFICATION AND OPERATION OF CONTROLS (D)



WAITING Indicator

Illuminates to indicate certain operating conditions which will either prevent or interrupt normal recording or playback of a cassette.

CONDITION	WAITING INDICATOR
* Tape Loading or Unloading	Momentary on
* Pause Mode	Flashing
* Excess Moisture	Permanently
* Before TIMER Recording	Permanently
* After automatic termination of Record or Playback	Permanently

CASSETTE Loading Door

Accepts a video cassette for automatic tape loading. To open the door for cassette loading, push EJECT key. The cassette should be inserted into the door in the direction indicated by the arrow on the cassette. Cassette should be seated in the cassette door as far back as it will go and the door closed by pushing it down firmly. Approximately 4 seconds are required for tape loading during which time the "WAITING" indicator will illuminate.

CHANNEL Indicator

The indicator lamp lets you know which channel you are recording or viewing.

CHANNEL Selector

8 different TV stations can be tuned and individually recalled by pressing the channel selector knobs.

TUNING Indicator

Each channel band is indicated. Turning the tuning knob, the tuning indicator moves accordingly.

BAND Selector

Allows to select the desired band:

- I: Channel 0 to Channel 5
- III: Channel 5A to Channel 11
- U: Channel 21 to Channel 68

TUNING Knob

When the corresponding channel selector has been pressed, the desired TV station can be tuned.

TUNING Tool

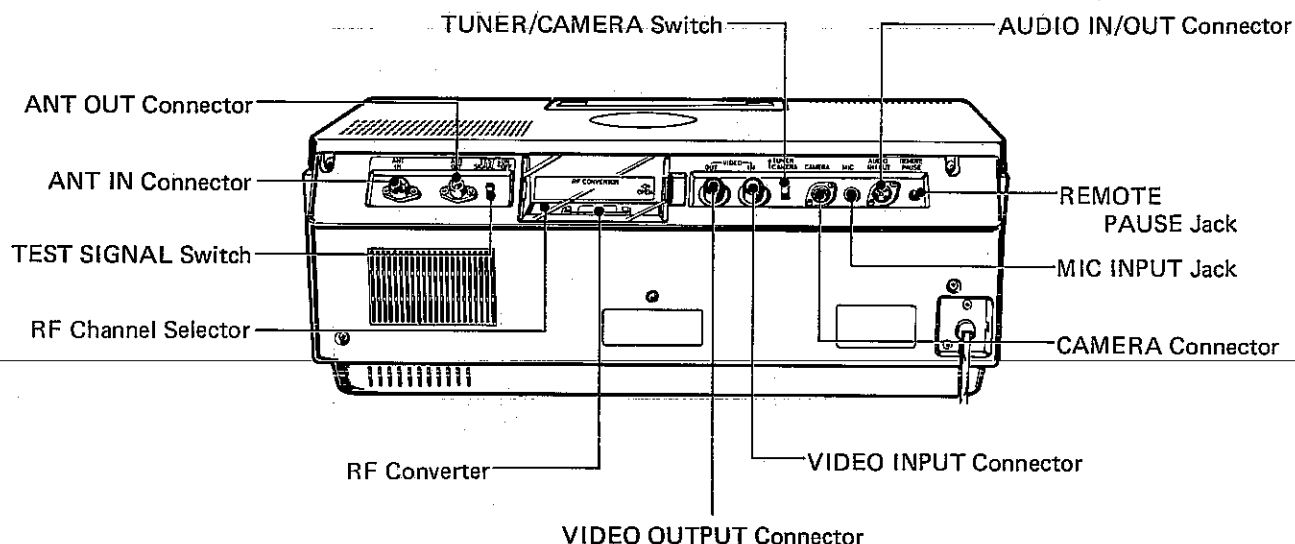
The provided tuning tool makes it easy to select the required band and adjust the tuning knob.

TRACKING Control

Normally used only when playing back a cassette recorded on another recorder, this control provides a compatibility adjustment of video head tracking for noise-free pictures. Should tracking noise (a narrow horizontal noise pattern across the picture) be observed, adjust tracking by rotating the Tracking Control to the right or left.

The Tracking Control should be kept in the mid (notch) position when playing back cassettes recorded on the same machine.

IDENTIFICATION AND OPERATION OF CONTROLS (E)



RF Converter

The RF Converter is provided in this compartment. It converts video and audio signals to an aerial TV signal for reception on a TV receiver which is produced to local standards.

RF Channel Selector

Reception of RF OUTPUT is available on either Channel 3 or Channel 4, depending on the setting of the RF Channel Selector. This selector should be set to the unused channel in your reception area.

ANT IN Connector

Aerial lead from Antenna should be connected to this 75 ohm input.

ANT OUT Connector

75 ohm connector cable should be connected to this output. The opposite end of the cable is connected to the Antenna input of the television. (Standard Accessory)

TEST SIGNAL Switch

Turn the test signal switch to "ON" position, a black and white pattern is displayed on the TV screen. Adjust the channel tuning of the TV receiver until the best pattern appears.

CAMERA Connector

Connect the SANYO VC 1400 Video Camera (optional) to the CAMERA connector.

VIDEO INPUT Connector

This connector accepts a standard 1.0 volt p-p, 75 ohm video signal from a camera or other video source for recording. Use a coaxial cable with a PL-259 type plug for this connection. The VIDEO INPUT connector can be used when the TUNER/CAMERA switch is turned to the CAMERA position. The VIDEO INPUT connector and the CAMERA connector cannot be connected at the same time as both inputs are parallel.

VIDEO OUTPUT Connector

The video signal being recorded or played back is available at this connector for monitoring. The output level is 1.0 volt p-p into 75 ohms. Use a coaxial cable with a PL-259 type plug for this connection.

REMOTE PAUSE Jack

A REMOTE PAUSE CONTROL including 6m cable is a standard accessory of this recorder. To extend control of the recorder's pause function to a remote location, plug the REMOTE PAUSE CONTROL into this connector. Push the remote PAUSE button to stop the tape transport, push again to release. WAITING indicator flashes to show the pause function.

AUDIO IN/OUT Connector

By connecting a tape recorder, record player etc. with a 5P DIN cable to the AUDIO IN/OUT connector, you can record or playback audio programmes.

TUNER/CAMERA Switch

Provides convenient selection of the video and audio sources to be recorded:

TUNER: Video and audio from the tuner section.

CAMERA: External video and audio input from CAMERA Connector or VIDEO INPUT Connector and AUDIO IN/OUT Connector or MIC INPUT Jack.

MIC INPUT Jack

Use this mini-jack connector for connection of a microphone. Microphone should be high impedance for best results.

Note: When a microphone is connected, its input automatically has priority over the other sources. Be sure to disconnect the microphone when you wish to record from the other sources.

BETA-FORMAT VIDEO CASSETTE RECORDER SPECIFICATIONS

SPECIFICATIONS

Television system	CCIR B,G/PAL standard colour TV
Recording system	Rotary two head helical scan system
Tape speed	18.73 mm/S
Recording time	3 hours 15 minutes with L-750 cassette
Tape loading	Automatic loading (U-type)
Video cassettes	L-250, L-500 and L-750
	Dimensions 96 (W) x 25 (H) x 156 (D)mm
Tuner	8 soft touch varactor tuner
Tuner input	Channel 0-5, 5A-11, 21-68
RF converter	Built-in VHF converter (A UHF converter is available on special order.)
Converter output	On channel 3 or 4 (switchable)
Timer	Built-in digital timer, AM/PM 12 hours, green display, including every-day function
Rec time selector	30 min., 60 min., or tape end
Tape counter	4 figures display electronic counter
Tape rewind memory	Available by push-button — Stops at 0000
Fast forward time	5 min. with L-750 cassette
Rewind time	5 min. with L-750 cassette
Remote control	Remote PAUSE available
Controls	
Tape transport	EJECT, PAUSE, REW, STOP, F FWD, PLAY, REC. keys
Power switch	TIMER/POWER ON/STAND BY lever, sw
Tracking	TRACKING mid position notch, VR
Timer/counter	CLOCK/COUNTER push button
	TIMER SET push button
	1, 2, 3 days and EVERY-DAY slide sw
	CLOCK SET push button
	HOUR/MEMORY ON push button
	MIN/COUNTER RESET push button
	REC TIME 30, 60, END slide sw
Tuner selection	8 positions soft touch sensor
Channel adjustment	VHF I 0-5
	VHF III 5A-11
	UHF U 21-68 rotary sws and VRs
Antenna switch	VIDEO/ANT lever sw
Input selection	TUNER/CAMERA slide sw
RF converter	CHANNEL SELECTOR 3 or 4 (switchable) slide sw
Terminals	
Microphone	MIC 3.5 mmφ jack
Antenna input	ANT IN DIN female
Antenna output	ANT OUT DIN male

Video input	VIDEO IN	PL 259
Video output	VIDEO OUT	PL 259
Remote pause	REMOTE PAUSE	2.5 mm ϕ jack
Audio input/output	AUDIO	DIN 5p

Indicators


POWER	red LED
REC	red LED
WAITING	red LED
Tuner selection	red LED

Electrical characteristics

Video output level	1 \pm 0.2 Vpp
Video output impedance	75 \pm 5 ohms
Audio output level	-6 dB
Video input level	0.5 - 2Vpp
Video input impedance	75 \pm 5 ohms
Audio input level	MIC - 60 dB CAMERA - 10 dB DIN - 20 dB
Audio input impedance	MIC high TV high CAMERA high DIN high
Video S/N	More than 42 dB
Audio S/N	More than 40 dB
Horizontal Resolution	Colour 270 lines B/W 300 lines
Audio bandwidth	50 Hz - 7 KHz

Other characteristics

Wow and flutter	Less than 0.2%
Loading time	Less than 4 sec.
Unloading	Less than 4 sec.
Power requirement	AC 240V + 10%, -10% 50Hz
Dimensions	504 (W) x 195 (H) x 400 (D) mm
Weight	19.2 Kg

The power switch of this set is connected in the secondary circuit and does not disconnect the set from AC-power even if the switch is in off ( position) as long as the AC cord is connected to an AC line.



SANYO ELECTRIC CO., LTD.
OSAKA, JAPAN

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(Australia)

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