

TOSHIBA

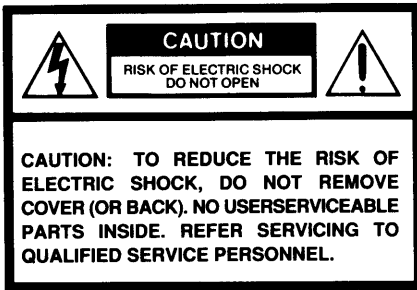
OWNER'S MANUAL

VHS Hi-Fi

Video Cassette Recorder

M-63





The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE. DANGEROUS HIGH VOLTAGES ARE PRESENT INSIDE THE ENCLOSURE. DO NOT OPEN THE CABINET. REFER SERVICING TO QUALIFIED PERSONNEL ONLY.

CAUTION: TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

USER-INSTALLER CAUTION: YOUR AUTHORITY TO OPERATE THIS FCC CERTIFIED EQUIPMENT COULD BE VOIDED IF YOU MAKE CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THIS PARTY RESPONSIBLE FOR COMPLIANCE TO PART 15 OF THE FCC RULES.

Note to CATV system installer:

This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

Copyright

It is permissible to record television programs, film, video tapes and other material only in the event that third party copyrights and other rights are not violated.

In the spaces provided below, record the Model and Serial No. located at the rear of your video cassette recorder.

Model No. _____ Serial No. _____

Retain this information for future reference.

IMPORTANT PRECAUTIONS

Save Original Packing Materials

The original shipping carton and packing materials will come in handy if you ever have to ship your VCR. For maximum protection, repack the set as it was originally packed at the factory.

Avoid Volatile Liquid

Do not use volatile liquids, such as an insect spray, near the unit.
Do not leave rubber or plastic products touching the unit for a long time. They will mar the finish.

Moisture Condensation

Never operate this unit immediately after moving it from a cold location to a warm location. When the VCR is exposed to such a change in temperature, moisture may condense on the cylinder inside it, one of its most crucial internal parts. The unit is equipped with an automatic moisture condensation prevention circuit designed to cope with this problem. It takes about TWO HOURS for this circuit to work with the power cord plugged in. Please do not use the VCR during this time.

Compatibility

This video cassette recorder (VCR) is compatible with any other VCR bearing the **VHS** mark. HQ VHS equipment is also compatible with existing, non-HQ VHS equipment.

Accessories

Antenna cable (1)
Remote control unit (1)
Batteries (AAA) (2)

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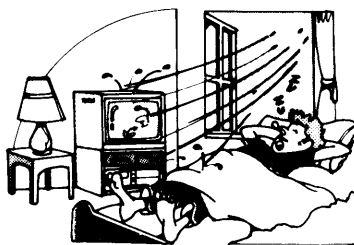
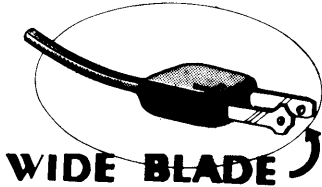
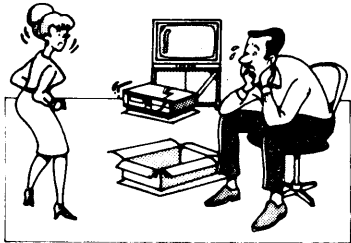
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IMPORTANT SAFEGUARDS

CAUTION: PLEASE READ AND OBSERVE ALL WARNINGS AND INSTRUCTIONS GIVEN IN THIS OWNER'S MANUAL AND THOSE MARKED ON THE UNIT. RETAIN THIS BOOKLET FOR FUTURE REFERENCE.

This set has been designed and manufactured to assure personal safety. However, improper use can result in electric shock or fire hazard. The safeguards incorporated in this unit will protect you if you observe the following procedures for installation, use and servicing. This unit is fully transistorized and does not contain any parts that can be repaired by the user.

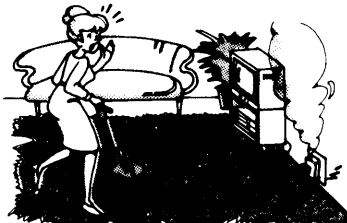
DO NOT REMOVE THE CABINET COVER, OR YOU MAY BE EXPOSED TO DANGEROUS VOLTAGES. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



1. After unpacking this video product, read the owner's manual carefully, and follow all the operating and other instructions.
2. This video product should be operated only from the type of power source indicated on the marking labels. If you are not sure of the type of power supply to your home, consult your sales person or your local power company. For video products intended to operate from battery power, or other sources, refer to the operating instructions.
3. This video product is equipped with a polarized alternating current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.
4. Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the video product and to protect it from overheating, and these openings must not be blocked or covered. The openings should never be blocked by placing the video product on a bed, sofa, rug or other similar surface. This video product should never be placed near or over a radiator or heat register. This video product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.
5. Do not expose this video product to rain or use near water. For example, near a bath tub, wash bowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool and the like.
6. Unplug the video product from wall outlet before cleaning. Use only a soft damp cloth and never use benzine, thinner or other solvents for cleaning.



7. Do not allow anything to rest on the power cord. Do not locate this video product where the cord will be walked on.

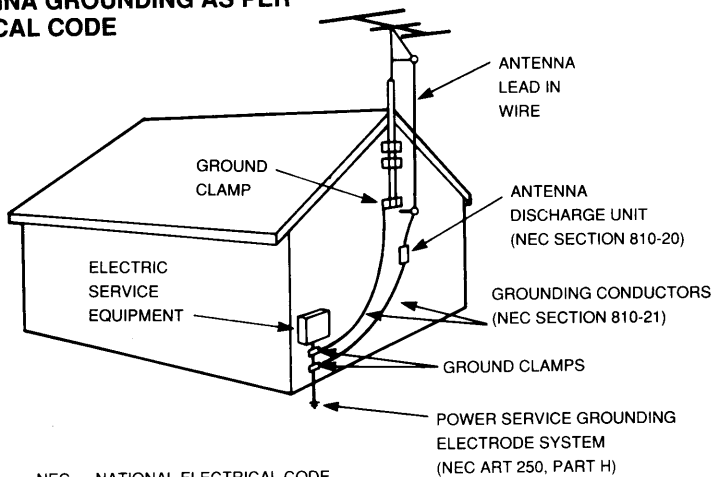


8. Do not overload wall outlets and extension cords as this can result in fire or electric shock.

9. If an outside antenna or cable system is connected to the video product, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Section 810 of the National Electrical Code, ANSI/NFPA 70, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.

- a. Use No. 10 AWG (5.3 mm²) copper, No. 8 AWG (8.4 mm²) aluminum, No. 17 AWG (1.0 mm²) copper-clad steel or bronze wire, or larger, as a ground wire.
- b. Secure antenna lead-in and ground wires to house with stand-off insulators spaced from 4-6 feet (1.22-1.83m) apart.
- c. Mount antenna discharge unit as close as possible to where lead-in enters house.
- d. Use jumper wire not smaller than No. 6 AWG (13.3 mm²) copper, or the equivalent, when a separate antenna-grounding electrode is used. See NEC section 810-21 (j).

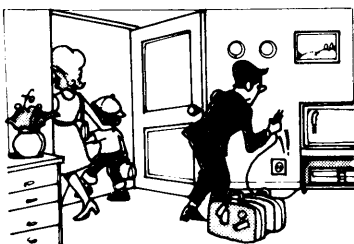
EXAMPLE OF ANTENNA GROUNDING AS PER NATIONAL ELECTRICAL CODE



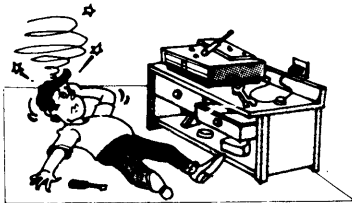
NEC — NATIONAL ELECTRICAL CODE

S2898A

10. An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.



11. For added protection for this video product receiver during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the video product due to lightning and power-line surges.



12. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.
13. Never push objects of any kind into this video product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the video product.
14. Do not use attachments not recommended by the video product manufacturer as they may cause hazards.
15. Do not place this video product on an unstable cart, stand, tripod, bracket, or table. The video product may fall, causing serious injury to a child or adult, and serious damage to the appliance. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the video product.
16. Unplug this video product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
 - A. When the power-supply cord or plug is damaged.
 - B. If liquid has been spilled, or objects have fallen into the video product.
 - C. If the video product has been exposed to rain or water.
 - D. If the video product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the video product to its normal operation.
 - E. If the video product has been dropped or the cabinet has been damaged.
 - F. When the video product exhibits a distinct change in performance.

Do not attempt to service this video product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

17. Upon completion of any service or repairs, request the service technicians assurance that only Factory Authorized Replacement Parts that have the same characteristics as the original parts were used, and that routine safety checks have been performed to determine that the video product is in safe operating condition. Unauthorized parts may result in fire, electrical shock, or other hazards.

FEATURES

High Quality Picture

The HQ (High Quality) system produces the superior VHS pictures.

High Quality Sound

- Hi-Fi sound with more than 90 dB dynamic range is produced by the VCR. You can also use the VCR as an audio deck.
- Stereo broadcast and MTS (Multichannel TV Sound) can be recorded on the video tape as they are.

Convenient Functions

Search Function (on-screen display)

You can easily locate a desired scene using the following functions.

Index search: Plays back the tape during fast-forward or rewind for about 5 seconds at each section where the index signal was registered.

Skip search: Fast forwards or rewinds the tape to the point with the specified index signal to start playback from there automatically.

Counter Function (on-screen display)

The tape counter indicates the elapsed or remaining time on the tape. By setting the counter, you can go back to the point where you wish to.

Linear time counter function: Shows the elapsed time on the tape in real time during recording, playback, etc.

Zero return function: Rewinds or fast forwards the tape to the point where the counter reads "0H00M00S" and stops the tape there.

Remaining time display function: Shows the remaining time on the tape in real time.

On-Screen Programming (OSP)

- The clock or timer recording programs can be easily set by the on-screen programming, using the remote control unit and the on-screen display.
- Up to 8 programs for recording within a year can be preset.
- The OTR (One Touch Recording) enables you to program the timer recording easily.
- The timer recording programs can be checked on the TV screen.

Auto Play

When a cassette without the safety tab is loaded, the following operations automatically start.

Auto playback: Plays back the tape automatically.

Auto rewind: Rewinds the tape automatically when the tape is played back to the end.

Auto Repeat

Playback is repeated 10 times from the beginning to the end of the tape.

Auto speed select

If the tape speed is set to AUTO in the timer program, the VCR checks the tape remaining time and the recording time during timer recording. If the tape remaining time is not long enough to record the program to the end, the VCR automatically changes the tape speed from the SP mode to the SLP mode.

Special Effects

Picture Search

Scans the programs in the fast forward or rewind mode, enabling you to monitor the picture.

Accel Search

When the FF or REW button is kept pressed during picture search, the search speed increases, enabling you to locate a desired scene very quickly.

Still Frame

Freezes the picture temporarily during playback.

Frame Advance

Plays back the tape frame by frame.

Slow Playback

Plays back the tape at 1/7th or 1/15th of the normal playback speed.

Simulcast Recording

Simultaneously records a TV program and its FM sound received through the audio equipment connected to the VCR on the sound track of the tape.

Others

- **181 Channel Compatible FS (Frequency Synthesized) Tuner**
The FS tuner automatically selects, with the highest accuracy, all receivable channels such as those for UHF, VHF and CATV.
- **Unified Remote Control Unit**
The supplied unified remote control unit allows TOSHIBA TV operation (except some TOSHIBA TVs).

INSTALLATION

TV Antenna and VCR Connections

To connect the VCR to a VHF or UHF antenna (Fig. 1), follow the steps below.

Remove the VHF and/or UHF cables from your TV terminals and reconnect them to the VCR terminals as shown in the diagrams below.

Note

For VHF or UHF connections, follow procedure ① if you have a 75 Ω (ohm) coaxial cable, and follow procedure ② if you have a 300 Ω (ohm) twin lead connector (i.e. use the 300-75 Ω transformer).

Fig. 1 VHF or UHF Reception Areas

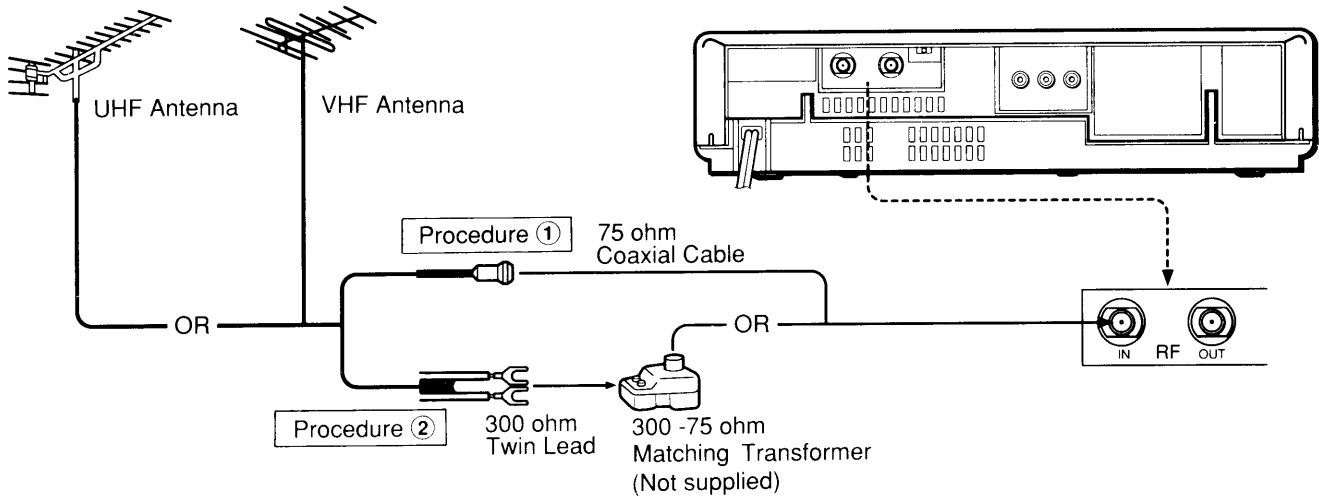
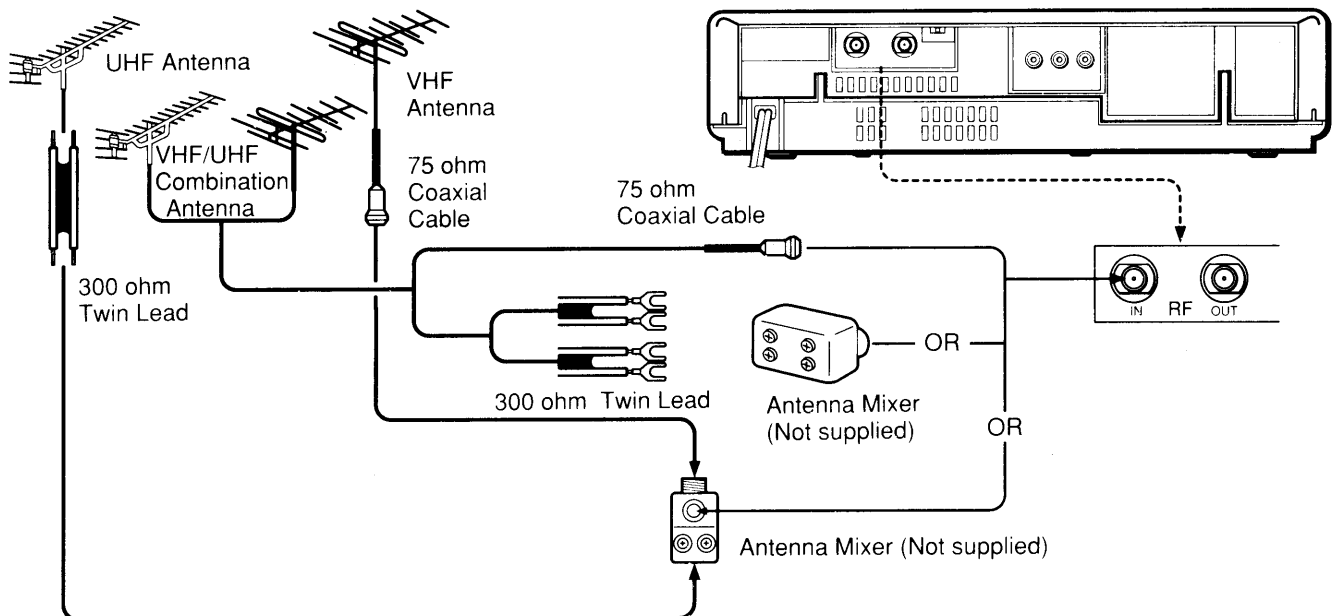


Fig. 2 Combined VHF/UHF Reception Areas



VCR and TV Connections

Connection to TV Antenna terminals

Fig.1 VHF (75 ohm/300 ohm) or VHF (75 ohm) terminal connection

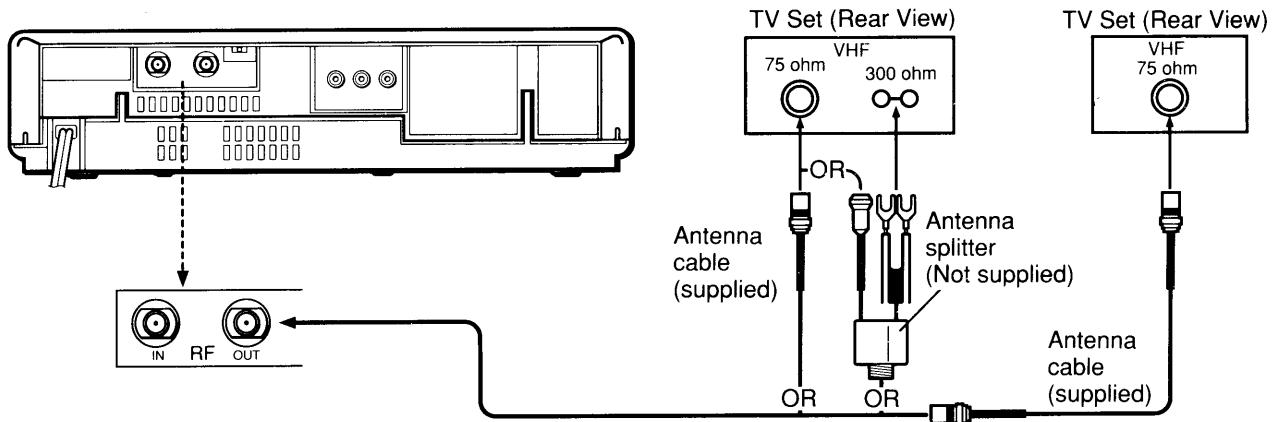
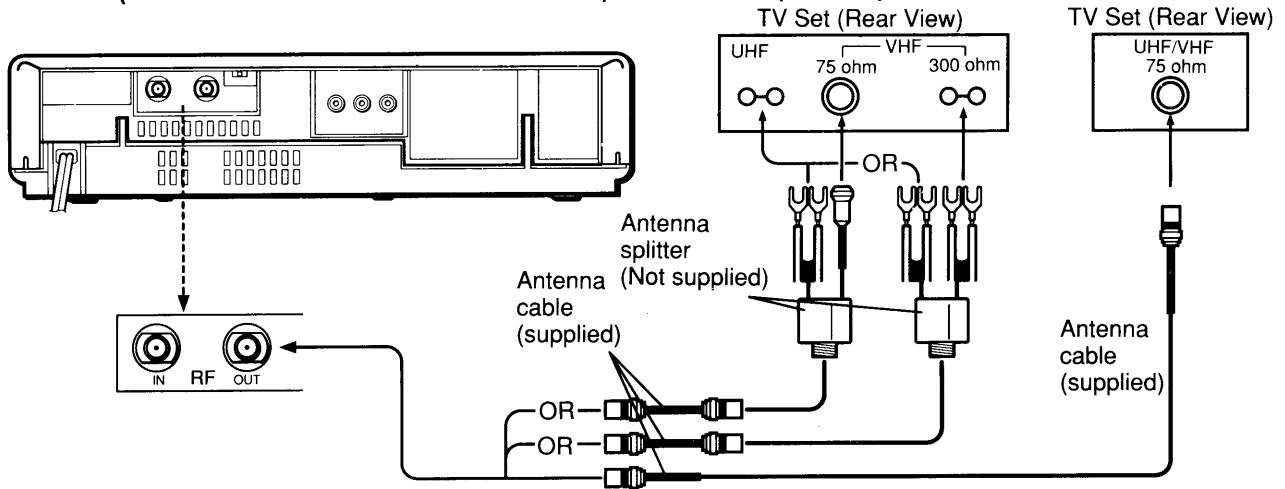


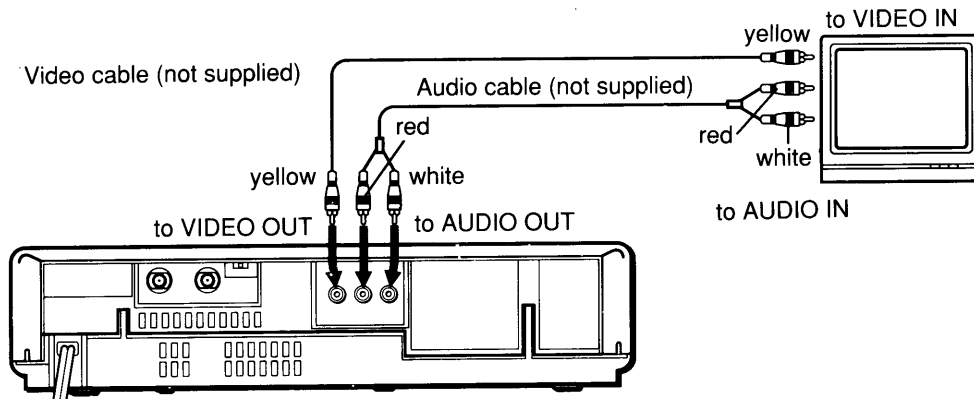
Fig.2 VHF/UHF (75 ohm/300 ohm or 300 ohm/300 ohm) or VHF/UHF (75 ohm) terminal connection



Note

Antenna Splitter/Mixer (VHF/UHF) is available from your local electronics store.

Connection to TV with "VIDEO IN" and "AUDIO IN" Connectors



INSTALLATION

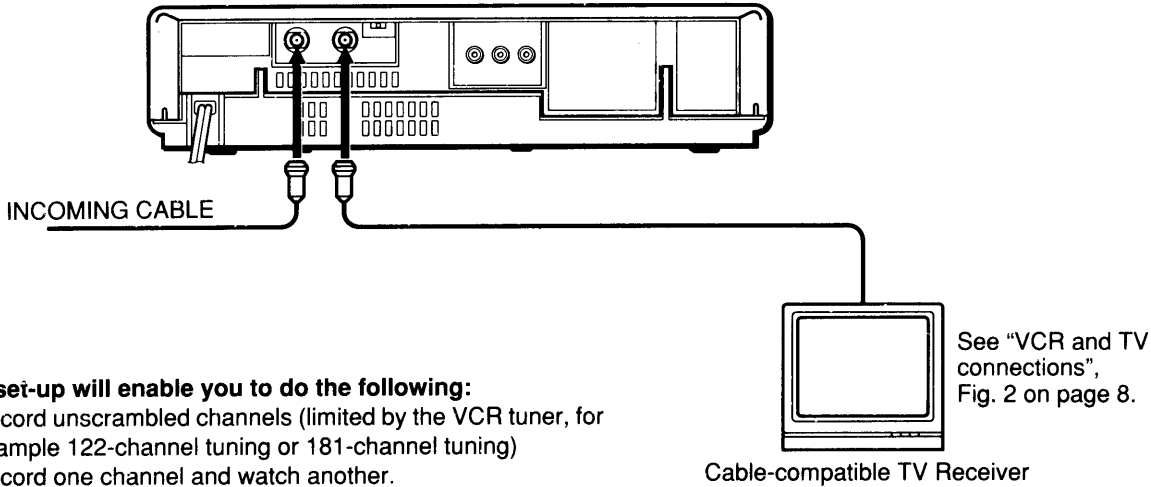
INSTALLATION

CATV Connections

There are several different systems of cable television at present. Therefore, there may be times when you use this VCR with one of these cable TV services.

We recommend that you consult your cable TV company to make sure that the cable is connected properly to match the cable TV system you want to watch.

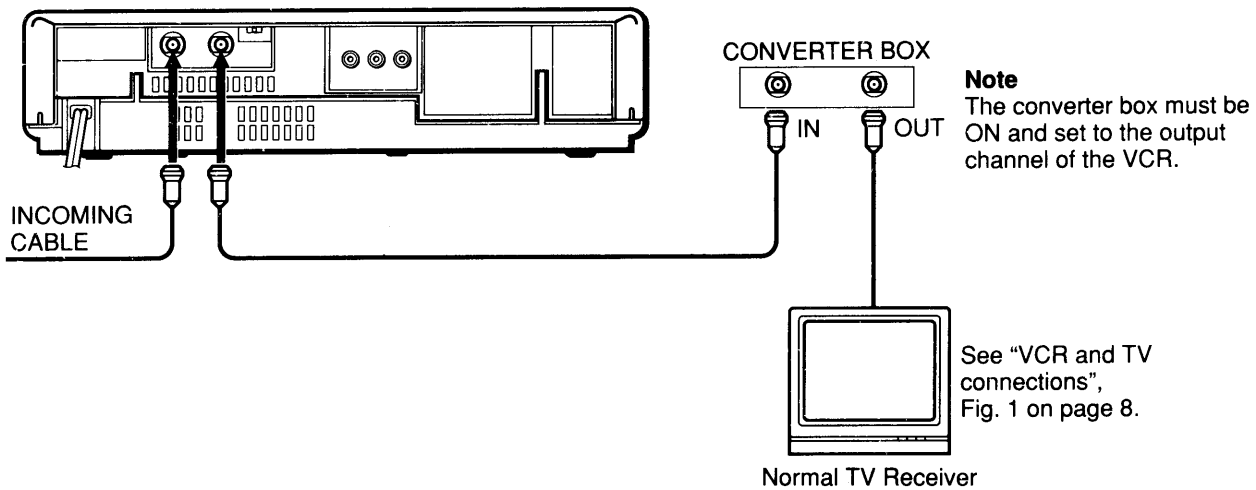
To record and watch unscrambled channels



This set-up will enable you to do the following:

- Record unscrambled channels (limited by the VCR tuner, for example 122-channel tuning or 181-channel tuning)
- Record one channel and watch another.
- Use the programmable timer.

To record an unscrambled channel and watch another channel (scrambled or unscrambled)



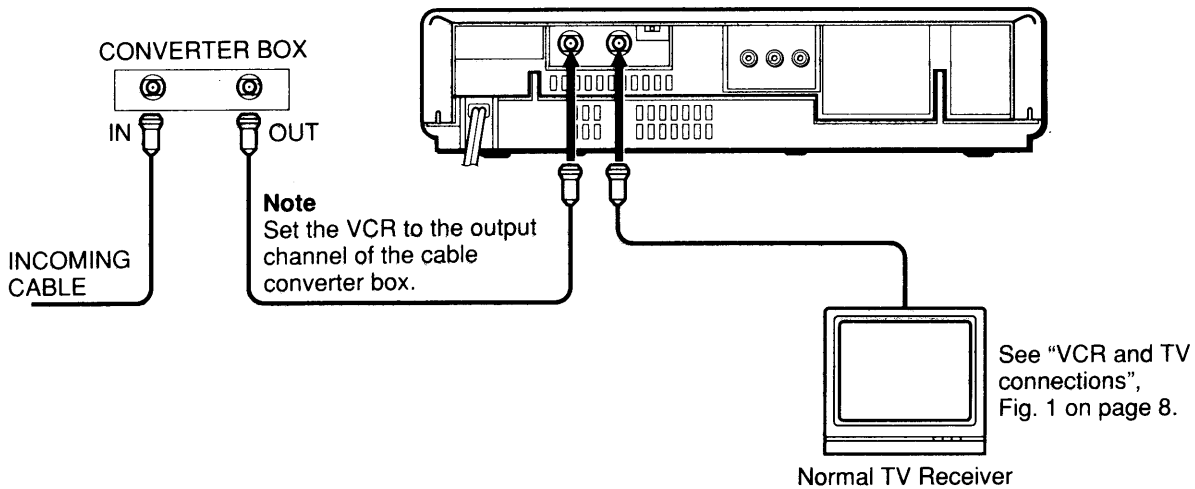
This set-up will enable you to do the following:

- Record unscrambled cable channels (limited by the VCR tuner, for example 122-channel tuning or 181-channel tuning).
- Record one channel and watch another.
- Use a programmable timer to record a cable signal.

Notes

- This set-up will not allow you to record scrambled channels.
- During playback or when using the VCR tuner (TV/VCR switch in VCR position), the converter box must be set to channel 3 to 4.
- When the TV/VCR switch is set to the TV position, the converter box can tune into any available channel.

To record and watch the same channel (unscrambled or scrambled)



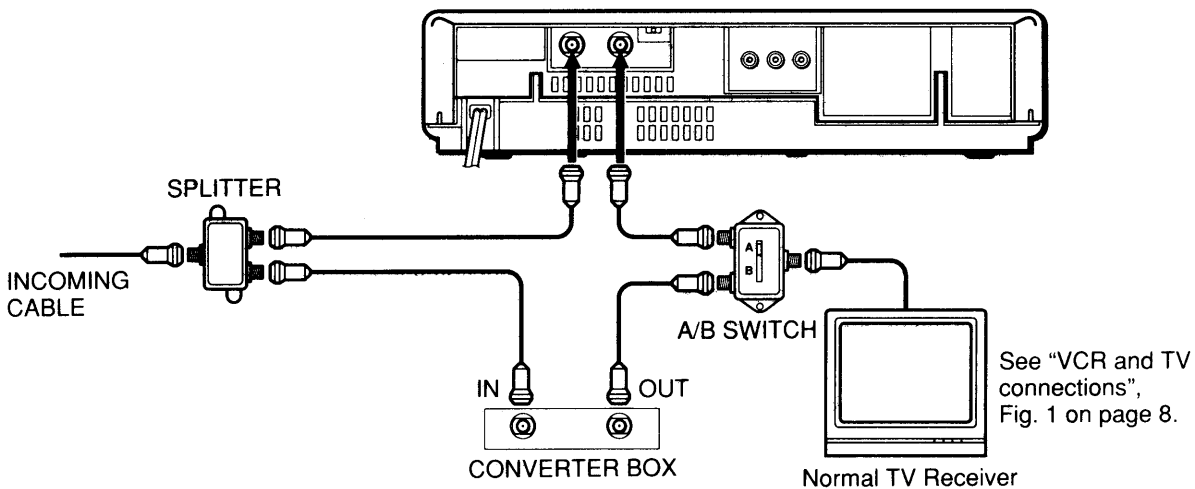
This set-up will enable you to do the following:

- Record all available cable channels through the converter box.
- Use the programmable timer or record only the channel selected at the converter box.

Note

This set-up will not allow you to record one channel and watch another.

To record an unscrambled channel and watch unscrambled or scrambled channels



This set-up will enable you to do the following:

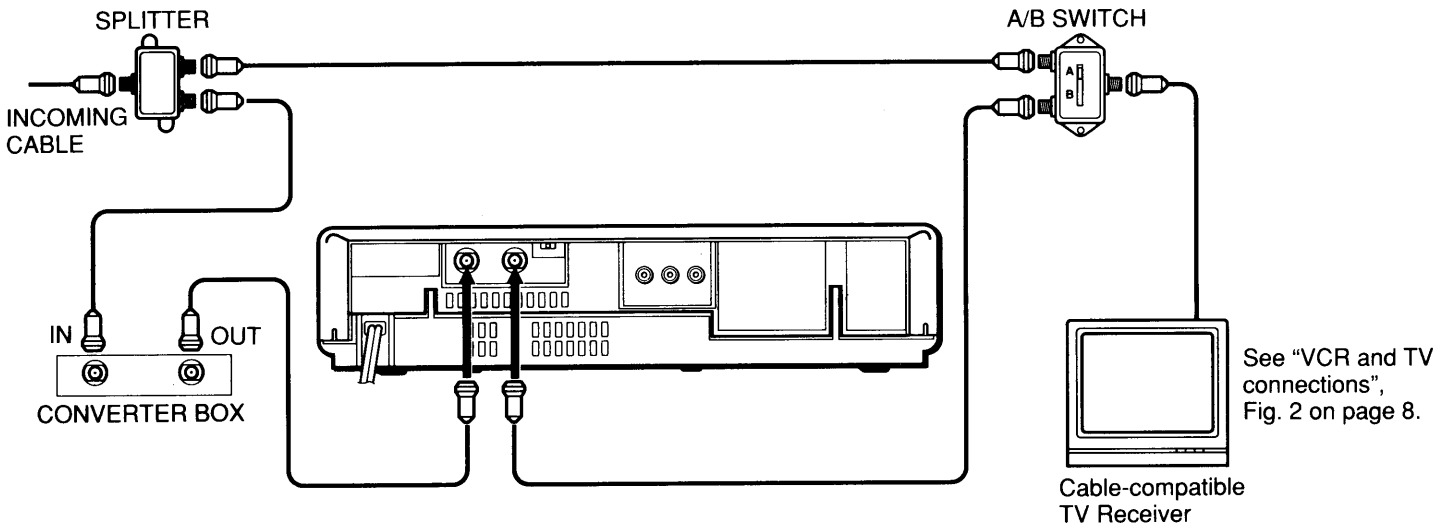
- Record an unscrambled cable channel.
- Monitor all cable channels from the converter box when the A/B switch is in "B" position.
- Watch one channel and record another.
- Use the VCR remote control unit when the A/B switch is in "A" position.
- Use a programmable timer to record a cable signal.

Notes

- This set-up will not allow you to record scrambled channels.
- Select the channel to watch on the converter.
- Set the TV channel selector to the output channel of the converter and VCR.

INSTALLATION

**To record and watch the same channel (scrambled or unscrambled)
To record one unscrambled channel and watch another unscrambled channel**



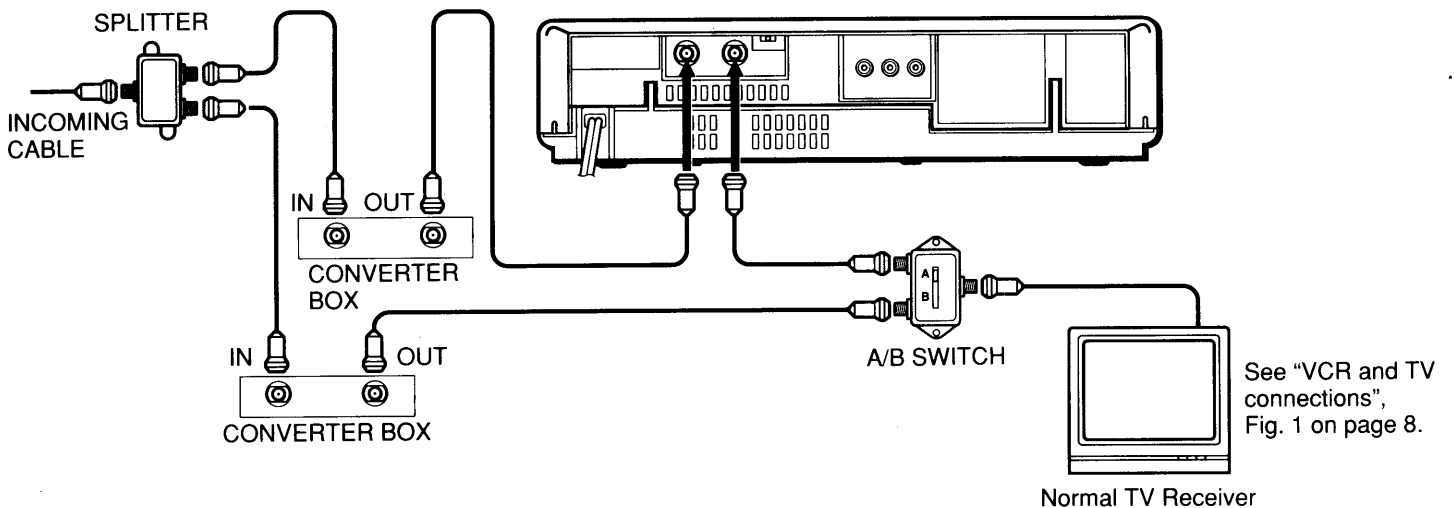
This set-up will enable you to do the following:

- Record all cable channels from the converter box.
- Record one scrambled channel and watch another unscrambled channel.
- Use the TV remote control unit when the A/B switch is in the "A" position.
- Use the programmable timer to record only the channel selected on the converter box. (The converter box power must be ON.)

Notes

- Set the VCR channel selector to the output channel of the converter.
- Select the channel to be recorded on the converter.
- Set the TV channel selector to the output channel of the VCR (3 or 4).

To record and watch a scrambled or unscrambled channel



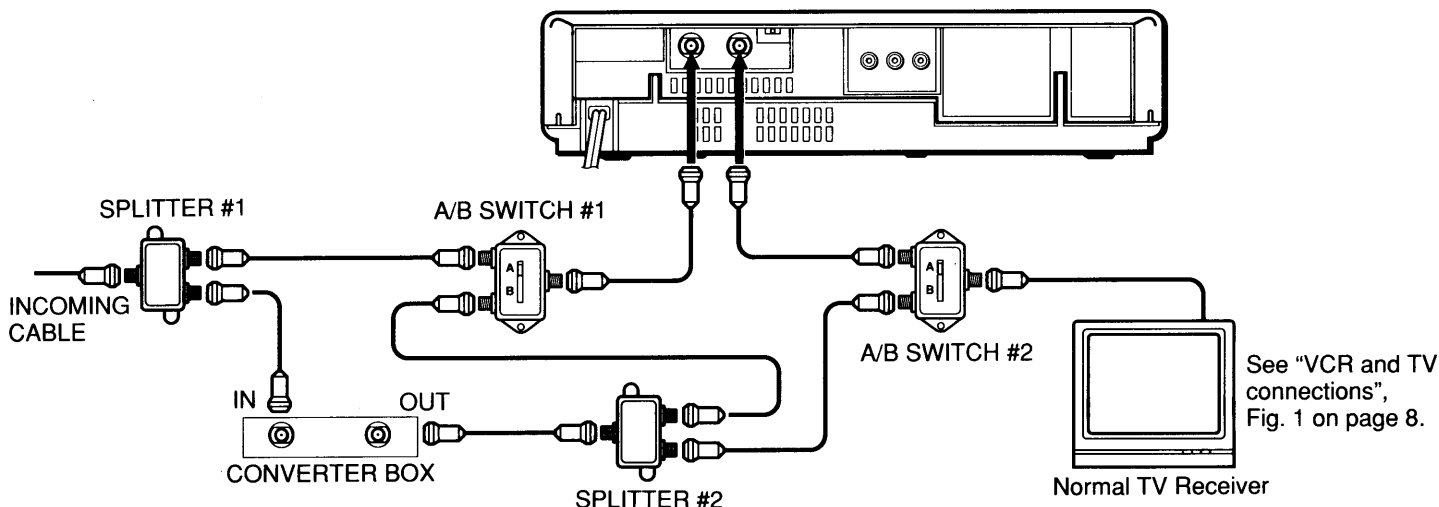
This set-up will enable you to do the following:

- Record any cable channel.
- Record one channel and watch another.
- Use the programmable timer to record only the channel selected at the converter box.

Notes

- Set the TV channel selector to the output channel of the VCR and the converter box (3 or 4).
- Set the VCR channel selector to the output channel of converter box.

To record and watch the same channel (scrambled or unscrambled)
To record one unscrambled channel and watch another unscrambled channel



See "VCR and TV connections", Fig. 1 on page 8.

This set-up will enable you to do the following:

- Record an unscrambled cable channel (A/B switch #1 in "A" position).
- Record all cable channels from the converter box (through splitter #2 and A/B switch #1 in the "B" position).
- Record one channel while watching another.
- Use the programmable timer when A/B switch #1 is in the "A" position.

Notes

- Set the VCR and TV channel selector to the output of the converter.
- Select the channel to record at the converter.

"Unscrambled" Cable Channels

Cable companies usually include "Unscrambled" channels in their basic subscription price. Depending on the tuning capability of your TV (how many cable channels your TV is capable of turning to) you may not need a cable converter box (supplied by the cable company) to view "unscrambled" cable channels on your TV set.

"Scrambled" Channels

Extra (optional) pay cable channels, like HBO and Cinemax in some localities, are often "scrambled" by the cable company. To view these channels on your TV, you must use the cable converter (decoder) box supplied by the cable company.

Cable Converter Box (supplied by Cable Company)

Until recently, all television and VCR receivers were equipped with 68 channel tuners capable of tuning the 12 standard VHF channels (2-13) and the 56 UHF channels (14-69). Since cable television systems do not use the UHF band, once they began expanding beyond 12 channel capacity (some cable companies transmit up to 100 channels) some form of converter became necessary to enable their subscribers to tune in the additional channels. This "cable converter box" rebroadcasts the programs

to your TV set or VCR on one designated channel, usually Channel 2, 3, or 4. When you use a converter box, you will normally change channels using the channel selector on the box. Some cable converters have built-in decoders that translate "scrambled" pay TV channels (i.e.HBO) so they can be used by your TV set.

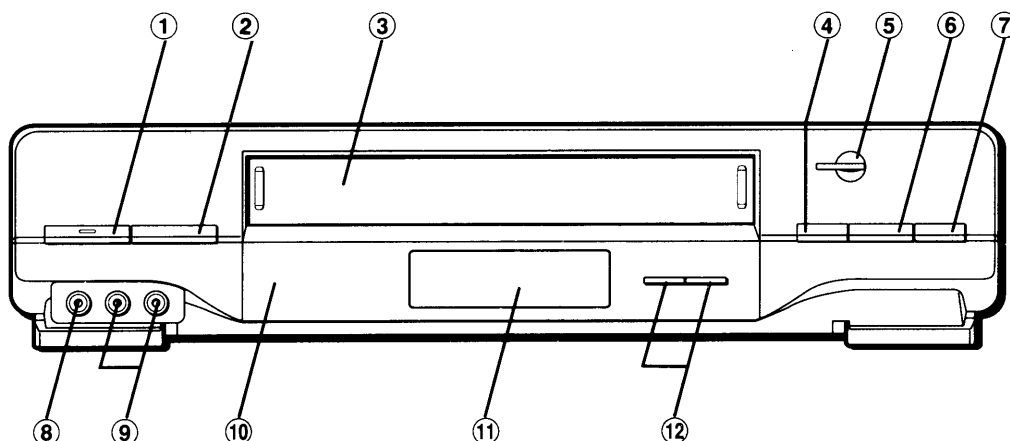
Cable Compatible

Either the TV or VCR, when the cable is connected, can tune to unscrambled cable channels, without the use of a cable converter box. There is a limitation to the tuning mechanism of the TV or VCR. This is usually as 105 channel tuning, 117 channel tuning, 133 channel tuning.

Frequency Conversion

Simply means the ability to change one frequency to another (e.g. when Channel 7 is selected, the converter box takes the Channel 7 information and outputs this on Channel 3 frequency; when channel 11 information and outputs this on Channel 3 frequency.) The converter box and the VCR use this principle of frequency conversion.

FRONT PANEL



① POWER button and indicator

To turn on/off the unit.
The power is automatically turned on when a cassette is inserted into the compartment (Auto Power On).

② EJECT/STOP button (■ / ■)

Press this button to stop the tape.
To eject the cassette, press this button in the stop mode.

③ Cassette compartment

When a cassette is loaded, the power is automatically turned on.
When a pre-recorded cassette (without safety tab) is loaded, the power is automatically turned on to start playback (Auto Play function).

④ REW button (◀◀)

- To rewind the tape during the stop, fast-forward or reverse picture search mode.
- To operate the reverse picture search during the playback, slow, still, frame advance or forward picture search mode.

⑤ REC button

To start recording.

⑥ PLAY button (▶)

To start playback.

⑦ FF button (▶▶)

- To fast forward the tape during the stop, rewind or forward picture search mode.
- To operate the forward picture search during the playback, slow, still, frame advance or reverse picture search mode.

⑧ VIDEO IN jack

To record from an external video source, connect to the video output jack of an external video source such as a VCP, VCR or TV set.

⑨ AUDIO IN jacks (R, L)

To record from an external audio source, connect to the audio output jacks of an external audio source such as a VCR, VCP, audio equipment or TV set.

⑩ Infrared remote control receiver

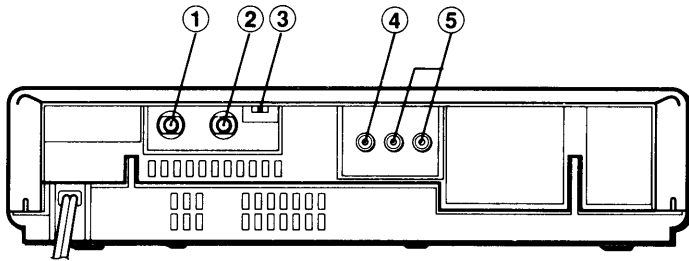
Picks up infrared light commands from the remote control unit.

⑪ Multidisplay

⑫ CHANNEL buttons (▼, ▲)

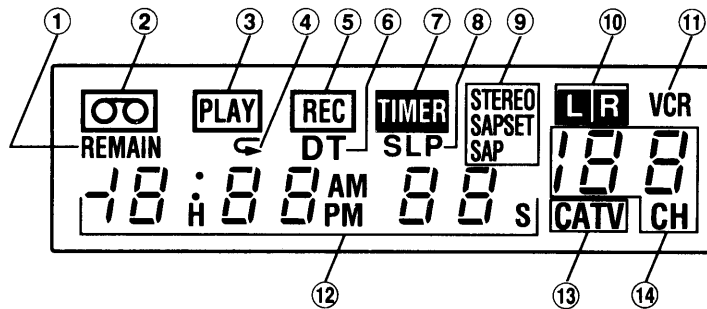
Press the ▼ button for sequential selection in the lower direction.
Press the ▲ button for sequential selection in the upper direction.

REAR PANEL



- ① **RF IN terminal**
Connect to the VHF antenna, UHF antenna or cable TV terminal.
- ② **RF OUT terminal**
Connect to the VHF or VHF/UHF input terminal of a TV.
- ③ **Output channel selector**
Select 3CH or 4CH, whichever is unused in your area, to transmit the signal from the VCR to the TV.
- ④ **VIDEO OUT jack**
Connect to the video input jack of a VCR or TV set.
- ⑤ **AUDIO OUT jacks (R, L)**
Connect to the audio input jack of a TV or external audio equipment.

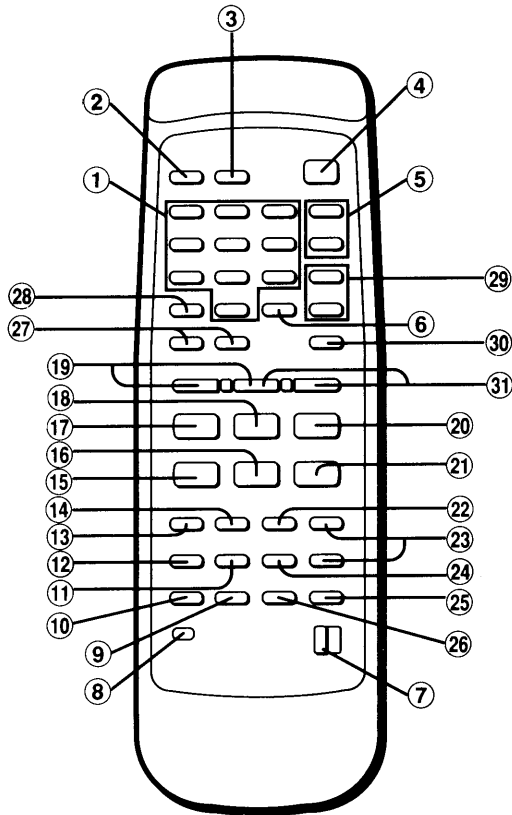
MULTIDISPLAY



- ① **REMAIN indicator**
Blinks or lights when the tape remaining time is displayed.
- ② **Cassette indicator**
Lights when a cassette is loaded, even when the power is off.
Blinks when a cassette is being inserted or ejected.
- ③ **PLAY indicator**
Lights in the playback mode.
- ④ **Repeat indicator**
Lights when AUTO REPEAT is selected on the SET UP screen.
- ⑤ **REC indicator**
Lights in the recording mode.
- ⑥ **DT (digital tracking) indicator**
Lights when the auto tracking mode is selected with the DIGITAL TRACKING button on the remote control unit.
- ⑦ **TIMER indicator**
Lights when the TIMER buttons on the remote control unit are pressed.
- ⑧ **Tape speed indicator (SP/SLP)**
SP: Lights in the SP mode.
SLP: Lights in the SLP mode.
- ⑨ **STEREO/SAPSET/SAP indicators**
STEREO: Lights when stereo broadcasting is received.
SAPSET: Lights when SAP (second audio program) SET is set to ON on the SET UP screen.
SAP: Lights when SAP broadcasting is received.
- ⑩ **L/R (left/right channel) indicator**
Lights when the AUDIO SELECT button on the remote control unit is pressed.
- ⑪ **VCR indicator**
Lights when the VCR mode is selected with the TV/VCR button on the remote control unit.
- ⑫ **Multifunctional indicator**
Indicates the clock, tape remaining time and linear counter display.
- ⑬ **CATV indicator**
Lights when the CATV mode is selected with the TV/CATV button on the remote control unit.
- ⑭ **Channel indicator**
Indicates the channel number currently watched or recorded.

REMOTE CONTROL UNIT

The buttons that are not followed by explanations have the same functions as the buttons similarly marked on the VCR.



- ⑦ **VCR/TV selector**
To select the equipment to be operated by this remote control unit.
Set to VCR to operate this VCR.
- ⑧ **CH (channel) MEMORY button**
Used for special channel selection.
- ⑨ **TV/VCR button**
To select the VCR tuner or TV tuner for reception.
Set to VCR (with the VCR indicator on the multidisplay lit) to watch the program being recorded.
Set to TV (with the VCR indicator not lit) to watch the normal TV programs or watch a TV program while recording another program with the VCR.

Playback and Recording Operating Part

- ⑩ **EJECT button**
To eject a cassette from the compartment.
- ⑪ **ZERO RETURN button**
To return the tape to the desired point (0H00M00S) assigned by pressing the RESET button.
- ⑫ **COUNTER RESET button**
To reset the tape counter to zero.
- ⑬ **FRAME button (II ►)**
 - Press the button once in the still mode to operate the frame feeding function.
 - Keep the button pressed in the still mode to operate the 1/30 times slow-motion playback.
- ⑭ **SLOW button**
To slow the picture to 1/7th or 1/15th of its normal playback speed. The two speeds change each time the button is pressed.
- ⑮ **STOP button (■)**
- ⑯ **PAUSE/STILL button (II)**
- ⑰ **REW button (◀◀)**
- ⑱ **PLAY button (►)**
- ⑲ **REC buttons (●)**
- ⑳ **FF button (►►)**
- ㉑ **INDEX button**
 - To activate the index search or skip search.
 - To mark an index signal.
- ㉒ **SP/SLP button**
To select the recording tape speed, SP or SLP.
- ㉓ **TRACKING buttons (^ / v)**
To adjust the tracking manually.
- ㉔ **REMAIN/COUNTER button**
To switch the clock, tape counter and tape remaining time indications.
- ㉕ **DIGITAL TRACKING button**
To adjust the tracking automatically.
- ㉖ **AUDIO SELECT button**
To select the audio source.

Buttons for VCR operation

To operate this VCR, be sure to set the VCR/TV selector ⑦ to VCR.

Preparation Operating Part

- ① **Number buttons (1 – 0)**
 - To select the channels directly.
When selecting channels 1 through 9, press the 0 button and then the desired channel number button.
 - Used for setting the clock or the programs in the OSP mode.
 - Used for operating the skip search.
- ② **INPUT SELECT button**
To select the source to be recorded.
- ③ **TV/CATV button**
To select the TV or cable TV mode.
- ④ **POWER button**
- ⑤ **CHANNEL (^ PM/ v AM) buttons**
 - Used for sequential channel selection in the upper or lower direction.
 - To select AM or PM when setting the time in the OSP mode.
- ⑥ **100 button**
To select channel 100 or more.

OSP Operating Part

- ②⑦ **OTR ON/OFF buttons**
To set the recording ON/OFF times for one touch timer recording.
- ②⑧ **DISPLAY button**
To turn on/off the on-screen display (tape operation mode, clock, counter, channel number, etc.).
- ②⑨ **SHIFT/VOL buttons**
To shift the blinking position to the item you want to set when setting the channel, date, tape speed or recording ON/OFF time.
- ③⑩ **PROG. button**
To switch the OSP mode on and off.
- ③① **TIMER buttons**
Used for the end procedure for setting the timer programs.

Buttons for TV Operation

The following buttons can be used for operating TOSHIBA TVs. To operate the TV, set the VCR/TV selector ⑦ to TV.

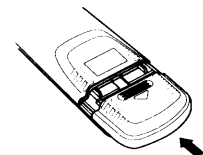
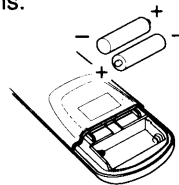
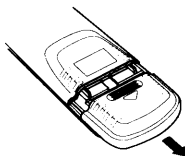
- ① **Channel buttons (1-0)**
To select the channels directly.
When selecting channels 1 through 9, press the 0 button and then the desired channel number button.
- ② **INPUT SELECT button**
To select an external source, such as a VCR.
- ④ **POWER button**
- ⑤ **CHANNEL (▲/▼) buttons**
Used for sequential channel selection in the upper or lower direction.
- ⑥ **100 button**
To select channel 100 or more.
- ⑦ **VCR/TV selector**
To operate TVs, set to TV.
- ②⑨ **SHIFT/VOL buttons**
To adjust the sound level.

CAUTION

Some TOSHIBA TVs can not be operated by this remote control unit. In such a case, operate the TV with its own remote control unit.

Battery installation

- 1 Remove the battery compartment lid on the rear of the unit.
- 2 Install 2 batteries ("AAA" size) into the unit.
Carefully install the batteries to match the polarity diagrams.
- 3 Close the battery compartment lid.



Notes on batteries

- Battery life is about 1 year. (The life depends on the condition of use.)
- Replace both batteries when an operation is unstable or disabled.
- Remove the batteries when the remote control unit will not be used for a long time to safeguard against leaking battery acid.
- Do not dispose of the batteries into fire.

Notes on handling the remote control unit

- For correct operation, press the buttons on the remote control unit at intervals of at least 1 second.
- Keep the unit away from heat and humidity and sources of electrical shock.
- Be careful not to drop or shock the remote control unit.
- Be careful not to spill water on the remote control unit or place it on anything wet.
- Do not take the remote control unit apart.

Operating range

The remote control unit must have a "line of sight" to the infrared remote sensor on the front of the VTR. It must be within an angle of 30° on either side of the center.

When you use the remote control unit while aiming it at the front side of the VCR, the maximum operating distance is about 7m (within 30° of either side of the center, the effective operating distance is approximately 5m).

SETTING THE VCR OUTPUT CHANNEL

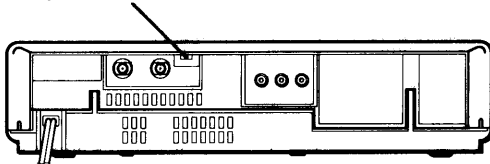
Set the output channel selector on the rear panel to the vacant channel in your area, 3CH or 4CH.

Insert a screwdriver into the slot and slide the output channel selector to 3CH or 4CH.

Notes

- When you have a cable TV, select the channel which gives you the best reception.
- To play back a tape, set the TV to the same channel as the VCR output channel selector (3 or 4).

Output channel selector



USING THE TV/VCR BUTTON (on the remote control unit)

Use this button to select the TV mode or VCR mode

TV Mode (using the TV tuner)

- 1 Turn on the TV. There is no need to turn on the VCR.
- 2 Select the desired channel using the channel select buttons on the TV.

Note

If the VCR is on and the "VCR" indicator lights on the multidisplay, press the *TV/VCR* button so that the indicator goes off.

VCR Mode (using the VCR tuner)

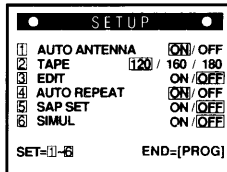
- 1 Turn on the TV and select the VCR output channel, 3CH or 4CH.
- 2 Set the *VCR/TV* selector on the remote control unit to VCR.
- 3 Turn on the VCR.
The power indicator lights up.
- 4 Set the VCR to the VCR mode with the *TV/VCR* button.
The "VCR" indicator will light on the multidisplay.
- 5 Select the desired channel with the *CHANNEL* \wedge/\vee buttons on the VCR or the number buttons on the remote control unit.
The program of the selected channel will appear on the TV screen.

SET UP SCREEN

The SET UP screen is used for setting AUTO ANTENNA, TAPE, EDIT, AUTO REPEAT, SAP SET and SIMUL.

To display the SET UP screen, perform the following steps.

- 1 Press the *PROG.* button on the remote control unit to display the MENU screen.
- 2 Press the 2 button on the remote control unit to display the SET UP screen.



- 3 Set the following items respectively.
 - 1 AUTO ANTENNA : see below.
 - 2 TAPE : see page 27.
 - 3 EDIT : see page 42.
 - 4 AUTO REPEAT : see page 25.
 - 5 SAP SET : see page 38.
 - 6 SIMUL : see page 40.

Notes

- If a cassette is not inserted into the VCR, number 4 will not appear on the TV screen.

- 4 Press the *PROG.* button twice after setting to return to the normal TV screen.

AUTO ANTENNA

When watching the TV programs via the TV tuner after playback, set the VCR to the TV mode using the TV/VCR button. If you have a TV with the audio/video terminals and use the auto antenna system, the mode setting is not necessary.

Auto Antenna Setting

- 1 Set the *VCR/TV* selector on the remote control unit to VCR.
- 2 Turn on the VCR.
- 3 Press the *PROG.* button on the remote control unit so that the MENU screen appears.
- 4 Press the 2 button so that the SET UP screen appears.

- 5 Press the 1 button to set AUTO ANTENNA to **ON**.
 - To receive a TV broadcast via the TV tuner after playback, set AUTO ANTENNA to **OFF**. If the "VCR" indicator lights on the multidisplay, press the *TV/VCR* button to turn off the indicator.

Now the auto antenna setting is completed.

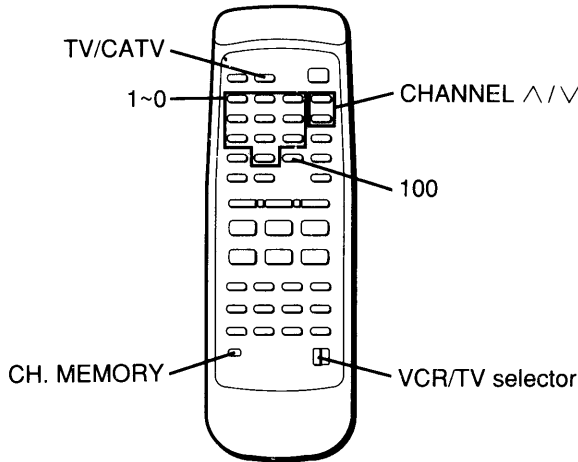
- 6 Press the *PROG.* button twice to return the TV to the normal screen.

Note

If your TV does not have audio/video terminals, set AUTO ANTENNA to "ON" at step 5.

OPERATING THE FS TUNER

This VCR has an FS (Frequency Synthesized) tuner and is designed to receive TV and CATV signals.



Before operation, make sure that the *VCR/TV* selector on the remote control unit is set to *VCR*.

Selecting the CATV Signals

Press the *TV/CATV* button to display the *CATV* indicator on the multidisplay. The unit selects *CATV* signals automatically. To return to the *TV* mode, press the button again so that the *CATV* indicator goes out.

Channel Selection

Using the channel buttons

To select channels 1 through 9

Two methods are available.

Example: to select channel 4

- Press the *4* button. Channel 4 will be selected after approx. 2 seconds.
- Press the *0* and *4* buttons. Channel 4 will be selected immediately.

To select channels 10 through 99

Example: to select channel 35

Press the *3* and *5* buttons.

- If the *5* button is not pressed within 2 seconds, channel 3 will be selected.

To select channel 100 or more

Example: to select channel 125

Press the *100* button, then the *2* and *5* buttons within 2 seconds

Using the CHANNEL ^/v buttons

Press the *CHANNEL ^* button to select the upper channels or the *CHANNEL v* button to select the lower channels.

In the *TV* mode, channels 2 to 69 are selected each time the button is pressed.

In the *CATV* mode, channels 1 to 125 are selected each time the button is pressed.

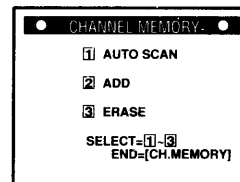
The channel steps up or down and stops at the next active channel. It will not stop at inactive channels.

Special Channel Selection

Presetting the active channels

Use this function to preset the active channels only. The preset channels can be easily selected using the *CHANNEL ^ / v* buttons.

- 1 Press the *CH. MEMORY* button.
The *CHANNEL MEMORY* screen appears on the *TV* screen.



- 2 Press the *1* button to select *AUTO SCAN*.
"AUTO SCAN" is displayed on the *TV* screen and the *VCR* automatically scans channels 1 to 125. While scanning, the *VCR* stores the active *TV* channels on your area in the memory and skips inactive channels. Scanning will stop when the *VCR* has scanned through all the channels.

Adding a channel in the memory

- 1 Select the channel to be added using the *1* to *0* buttons. (Do not use the *CHANNEL ^ / v* buttons.)
- 2 Press the *CH. MEMORY* button.
The *CHANNEL MEMORY* screen appears on the *TV* screen.
- 3 Press the *2* button to select *ADD*.
"CHANNEL ADD" blinks and the channel number which was added is shown on the *TV* screen and then the indication disappears.

Erasing a channel from the memory

- 1 Select the channel to be erased.
- 2 Press the *CH. MEMORY* button.
The *CHANNEL MEMORY* screen appears on the *TV* screen.
- 3 Press the *3* button to select *ERASE*.
"CHANNEL ERASE" blinks and the channel number to be erased is shown on the *TV* screen and then the indication disappears.

OPERATING THE FS TUNER

Channel Reference Chart

Number on the VCR		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Corresponding channel number	TV	-	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	CATV STD (HRC/IRC)	1(A-8)	2	3	4	5 (A-7)	6 (A-6)	7	8	9	10	11	12	13	A	B	C

17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	AA	BB	CC	DD	EE	FF	GG	HH	II

46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71		93	94
46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	-	-		-	-
JJ	KK	LL	MM	NN	OO	PP	QQ	RR	SS	TT	UU	VV	WW	XX	YY	ZZ	AAA	BBB	65	66	67	68	69	70	71		93	94

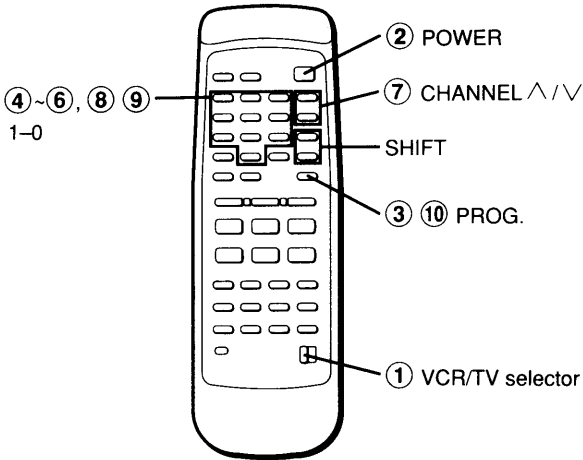
95	96	97	98	99	100	101	102	103	104	105	106		121	122	123	124	125
-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-
A-5	A-4	A-3	A-2	A-1	100	101	102	103	104	105	106		121	122	123	124	125

CATV signals

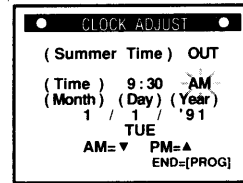
- STD (standard) cable TV signals
- HRC (Harmonic Related Carriers) cable TV signals
- IRC (Incremental Related Carriers) cable TV signals
IRC is also called ICC (Incremental Coherent Carriers).
- PHRC (Pivoted Harmonically Related Carriers) cable TV signals
- MPC (Multi Pivoted Carriers) cable TV signals

SETTING THE CLOCK

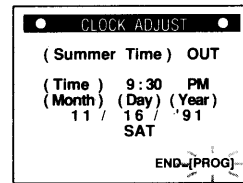
Clock setting is a basic operation. If 12:00 blinks on the multidisplay when the VCR is first connected to an AC power source or after a power failure, clock setting is necessary.



- ⑥ To set the hour and minutes, press the 0, 9, 3 and 0 buttons. (Pressing 0 is necessary.)



- ⑦ To select PM, press the CHANNEL ^ (PM) button.
 ⑧ To set the month and day, press the 1, 1, 1 and 6 buttons.
 ⑨ To set the year, press the 9 and 1 buttons.



Now the clock setting is completed.

Note

The day of the week is automatically set according to the built-in calendar.

- ⑩ Press the PROG. button.
 Now the clock starts.
 The TV screen returns to the MENU screen.

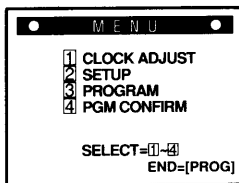
To return to the normal TV screen, press the PROG. button.

Note

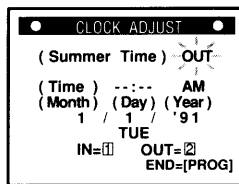
- When correcting the clock after setting, select CLOCK ADJUST in the MENU screen and perform steps ⑤ to ⑩.
- When correcting during clock setting, use the SHIFT buttons so that the item to be corrected blinks. Then correct the blinking item using the CHANNEL ^/V buttons or the 1 to 0 buttons.
- The multidisplay automatically becomes darker from 10:00PM to 5:59AM when the VCR is turned off.
- Use the summer (daylight saving) time at the effective time.

Example: To set the clock to 9:30PM (standard time) on November 16, 1991

- ① Set the VCR/TV selector to VCR.
 ② Press the POWER button.
 ③ Press the PROG. button.
 The MENU screen appears on the TV screen.

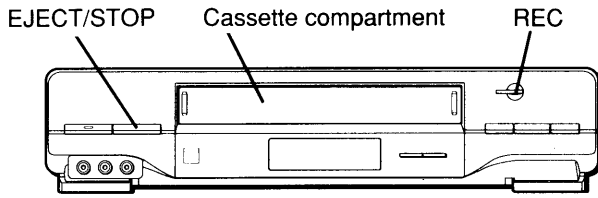


- ④ To select the CLOCK ADJUST screen, press the 1 button.



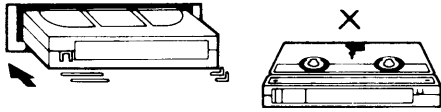
- ⑤ To select the standard time (OUT), press the 2 button.
 To select the summer (daylight saving) time (IN), press the 1 button.

LOADING AND UNLOADING A VIDEO CASSETTE



Loading a Cassette

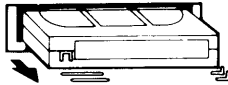
Insert a cassette into the cassette compartment with the window side facing upward. Push until the cassette is pulled into place. The power is automatically turned on when the cassette is inserted. (Auto Power On function)



- When the cassette indicator  lights up on the multidisplay, loading is completed.

Unloading a Cassette

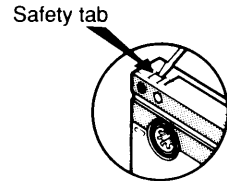
Press the *EJECT/STOP* button when the tape is in stop mode. The cassette will be ejected.



Safety Tab

Preventing erasure of the recorded program

If the safety tab is removed from the cassette, recording cannot be performed even if the *REC* button is pressed. To prevent accidental erasure, remove the safety tab with a screwdriver.



Recording on the tape without the safety tab

Cover the tab hole with adhesive tape.



Notes

- Do not insert your hand or any foreign object into the compartment. This may result in injury or damage. Take special care of children to avoid accidents.
- The cassette indicator lights whenever a cassette is inside the compartment, even if the power is turned off.
- The cassette indicator flashes when a cassette is being loaded or removed.

USE OF THE VIDEO CASSETTE

Only the video cassettes with the **VHS** mark can be used with this VCR.

Unlike the audio cassettes, only one side of a video cassette can be recorded on.

Tape Speed

Recording

The tape can be recorded at two different speeds, SP (Standard Play recorded at 3.34cm/sec.) or SLP (Super Long Play recorded at 1.11cm/sec.).

The SLP mode is more economical than the SP mode because its recording time is three times longer.

The SP mode, however, allows you to record or play back a tape with better quality than in the SLP mode.

Playback

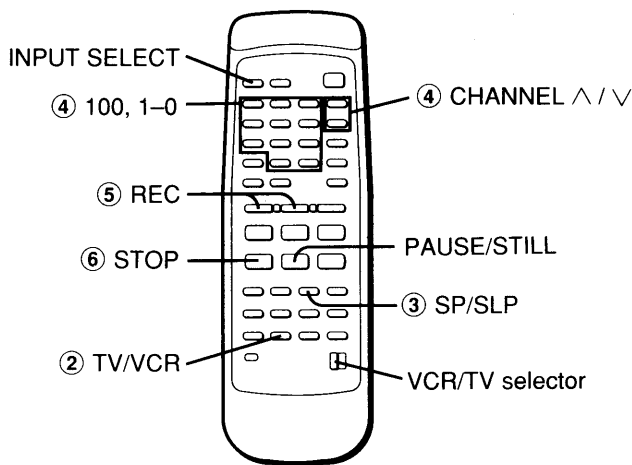
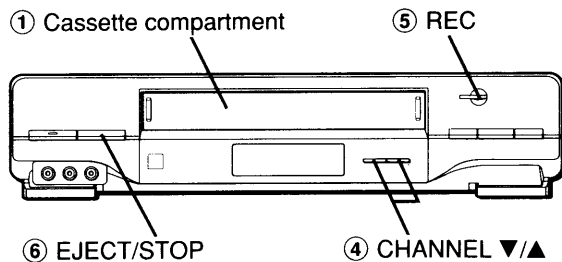
There are three possible speeds for playback, SP, LP and SLP. The appropriate speed will be automatically selected by the VCR.

Recording time

Video cassette Recording mode	Video cassette				
	T-180	T-160	T-120	T-60	T-30
SLP	540 min	480 min	360 min	180 min	90 min
SP	180 min	160 min	120 min	60 min	30 min

RECORDING

Basic Manual Recording



Preparation

- Set the *VCR/TV* selector to *VCR*.
- Press the *INPUT SELECT* button to receive the TV channel. Each time the *INPUT SELECT* button is pressed, the input source is selected in sequence with the channel number (TV channel reception mode), or "L" indicator (line mode) on the multidisplay.

Operation

- ① Load a cassette with the safety tab. The VCR is automatically turned on.
- ② Press the *TV/VCR* button so that the VCR indicator lights up.
- ③ Press the *SP/SLP* button to select the recording tape speed.
- ④ Press the *CHANNEL* buttons or the number buttons to select the desired channel.
- ⑤ Press the *REC* button on the VCR, or simultaneously press the *REC* buttons on the remote control unit.
- ⑥ Press the *EJECT/STOP* button on the VCR or the *STOP* button on the remote control unit to stop recording.

Watching Another TV Program While Recording

- 1 Press the *TV/VCR* button on the remote control unit to select the TV mode. The VCR indicator will go out.
- 2 Select the desired channel using the channel select buttons on the TV.
- 3 Press the *TV/VCR* button when the TV program is finished. The VCR indicator will light up.
- 4 Set the TV channel to 3 or 4 according to the setting of the output channel selector.

Skipping Unnecessary Scenes or Editing a Tape

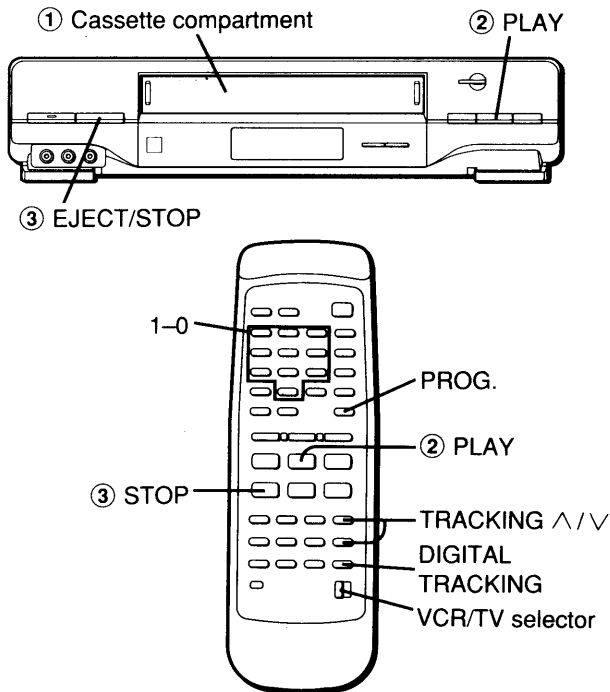
To stop recording momentarily, press the *PAUSE/STILL* button on the remote control unit.
To resume recording, press the *PAUSE/STILL* button again.

Notes

- Basic manual recording is possible only in the *SP* or *SLP* mode.
- If the VCR is in the pause mode for more than 10 minutes, it automatically enters the stop mode to protect the tape.
- To change the TV channels during recording, press the *PAUSE/STILL* button first.
- The pictures may be distorted around where the *PAUSE/STILL* button is used. This is not a malfunction.

PLAYBACK

Basic Playback



- ① Load the recorded cassette in the cassette compartment. The VCR is automatically turned on.
 - When a cassette without the safety tab is loaded, the auto play function operates to start playback automatically.
- ② Press the **PLAY** button. Playback starts.
- ③ Press the **EJECT/STOP** button on the VCR or the **STOP** button on the remote control unit to stop playback.

Note

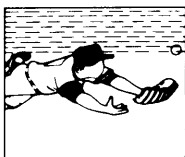
Basic playback is possible in all three modes, SP, LP and SLP.

Adjusting the Tracking

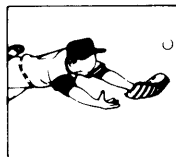
Manual tracking

Tracking adjustment is needed when the noise bars (as lines) appear on the TV screen during playback.

Press the **TRACKING** \wedge/\vee buttons on the remote control unit to move the noise bars.



A picture with noise bars



A picture adjusted with the **TRACKING** \wedge/\vee buttons

Digital auto tracking adjustment

When the **DIGITAL TRACKING** button is pressed and the DT indicator is displayed on the multidisplay, the tracking is automatically adjusted during playback.

The DT indicator blinks during tracking adjustment and lights after adjustment.

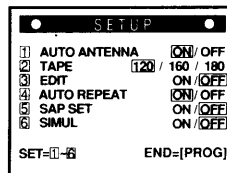
Normally set to this auto tracking adjustment mode.

Auto Repeat

The VCR can repeat playback from the beginning to the end of the tape 10 times.

Before operation, make sure that the **VCR/TV** selector is set to VCR.

- 1 Load a cassette.
- 2 Press the **PROG.** button so that the MENU screen appears on the TV screen.
- 3 To select SET UP, press the 2 button.
- 4 To set AUTO REPEAT to ON, press 4 button. The \leftarrow indicator lights up on the multidisplay.



- 5 Press the **PROG.** button twice. The TV screen returns to the normal screen.
- 6 Press the **PLAY** button. Playback will start. When the tape reaches its end during playback, the tape will rewind to the beginning and playback will resume. After playback and rewind are repeated 9 times, the tape will automatically rewind to the beginning and change to the playback mode, then the auto repeat function stops.

Notes

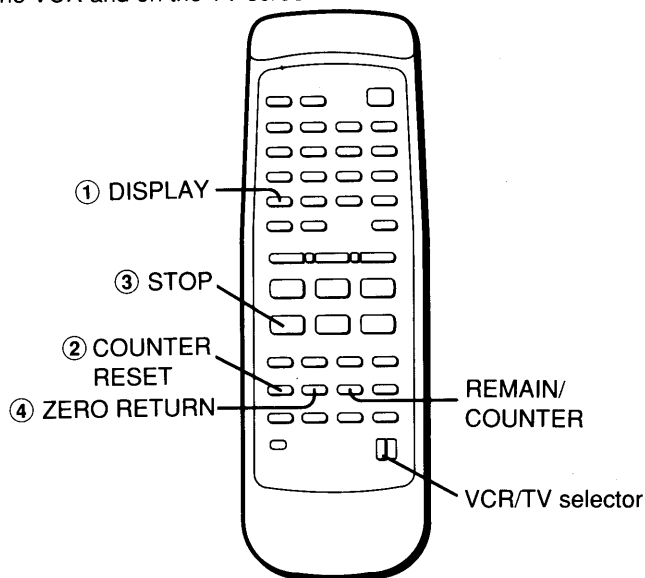
- When the **REC** button or the **EJECT/STOP** (or **EJECT**) button is pressed in the auto repeat mode, the auto repeat mode is canceled.
- When the power is turned off, the auto repeat mode is canceled.

COUNTER FUNCTION

Linear Time Counter Function

Since the VCR employs a linear time counter, it can indicate the tape elapsed time to the second.

The linear time counter can be displayed on the multidisplay on the VCR and on the TV screen.



Before operation, make sure that the *VCR/TV* selector is set to *VCR*.

To display the counter on the multidisplay

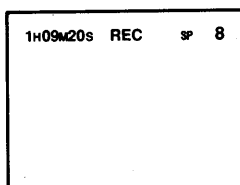
Load a video cassette tape.

If the clock is displayed on the multidisplay, it will change to the counter when the tape starts running in any operation mode.

To display the counter on the TV screen

Load a video cassette tape and press the *DISPLAY* button.

If the clock is displayed on the TV screen, it will change to the counter when the tape starts running in any operation mode.



- To display the counter only, press the *DISPLAY* button again.
- To return the TV to the normal screen, press the *DISPLAY* button twice.

To reset the counter to 0H00M00S

Press the *COUNTER RESET* button.

The counter is reset to zero and the previous counter reading is deleted from the memory.

If you start recording or playback with the counter reset to zero, later you can locate the recording/playback start point on the tape easily by searching for the counter zero point.

To change the counter display to the clock

Press the *REMAIN/COUNTER* button.

Pressing it once changes the display to the remaining time, and pressing it twice to the clock.

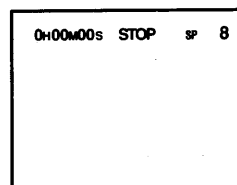
Notes

- When the cassette is ejected, the counter is reset to 0H00M00S.
- The counter reading does not change at a non-recorded section of the tape.

Zero Return Function

The zero return function enables you to stop the tape around the counter reading "0H00M00S" during rewind or fast-forward.

- ① Press the *DISPLAY* button if you want to display the counter on the TV screen.
- ② During recording or playback, press the *COUNTER RESET* button at a scene you want to watch again. The counter reading changes to "0H00M00S".
- ③ Press the *STOP* button when the recording or playback is completed.
- ④ Press the *ZERO RETURN* button. The tape is rewound to around the counter reading "0H00M00S" or fast-forwarded to that position if it has been rewound beyond "0H00M00S", and stops.



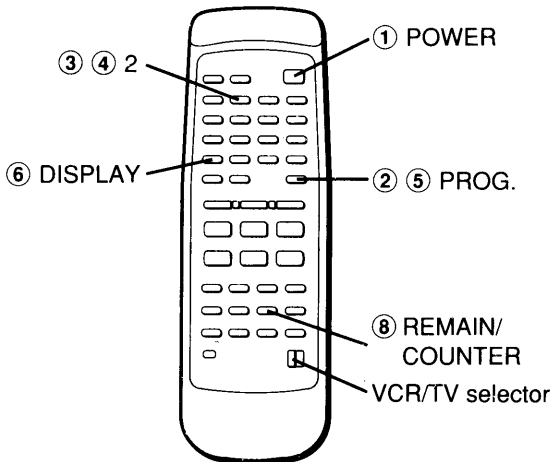
Note

The VCR does not stop exactly at the counter reading zero (0H00M00S), but stops around zero depending on the tape you use.

COUNTER FUNCTION

Remaining Tape Display Function

This function displays the tape remaining time on the multidisplay and TV screen.



Before operation, make sure that the *VCR/TV* selector is set to *VCR*.

- ① Press the *POWER* button to turn on the VCR.

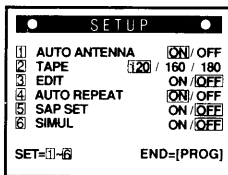
Tape setting

- ② Press the *PROG.* button to display the MENU screen.
- ③ Press the *2* button to select the SET UP screen.
- ④ Press the *2* button to select the tape to be used.

120 : when using a T-120 tape or shorter

160 : when using a T-140 or T-160 tape

180 : when using a T-180



- ⑤ Press the *PROG.* button twice to return the TV to the normal screen.

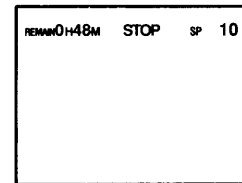
Calculation

- ⑥ Press the *DISPLAY* button for the display on the TV screen.
- ⑦ Load the cassette into the cassette compartment.
 - If the cassette safety tab is removed, playback starts automatically and the counter is displayed.
- ⑧ Press the *REMAIN/COUNTER* button to select "REMAIN". Each time the button is pressed, the display changes as follows:

Clock → Counter → Remaining time (REMAIN)

The remaining time is displayed. If calculation is not completed, "REMAIN H M" blinks during calculation.

Example: when the remaining time is 48 minutes and the tape is in stop mode



- To return the TV to the normal screen, press the *DISPLAY* button twice.

Notes

- The displayed remaining time is approximate time.
- During recording, the remaining time is calculated depending on the recording speed selected with the *SP/SLP* button, *SP* or *SLP*.
- During playback, the remaining time is calculated depending on the playback mode (*SP*, *LP* or *SLP* mode).

AUTO SEARCH

Registering Index Signals

You can easily locate the desired program using the index signal registered on the tape.

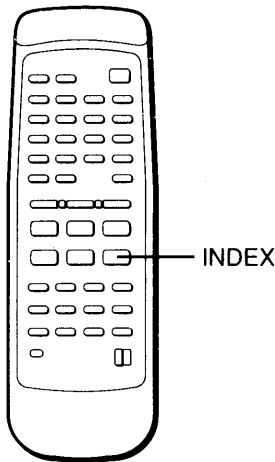
Registering the index signals automatically

The index signal is automatically registered when a recording starts.

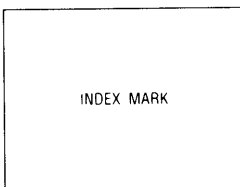
Auto register can be one touch timer or timer recording start.

Registering the index signals manually

During recording, the index signals can be manually registered at the desired points on the tape using the remote control unit.



Press the *INDEX* button during recording. "INDEX MARK" will blink on the TV screen.

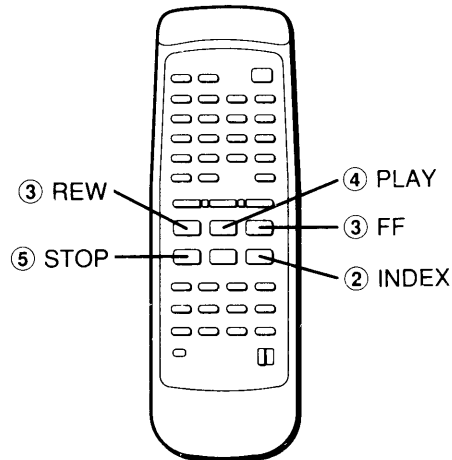


Notes

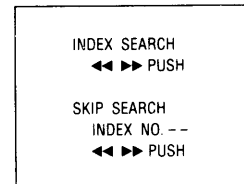
- When registering or erasing the index signal on the tape recorded with another VCR, the picture may be distorted.
- When registering more than 2 index signals, certain intervals are required: more than 1 minute in the SP mode and more than 3 minutes in the SLP mode.
- The index signal is not recorded automatically when a recording starts by releasing the recording pause mode.

Index Search

This function plays back around the portion which the index signal is registered on the tape for about 5 seconds while fast forwarding or rewinding. This function is operable using the remote control unit.



- ① Load a cassette with the index signals.
- ② Press the *INDEX* button in the stop or playback mode. (In the stop mode, display a TV program on the TV screen.)



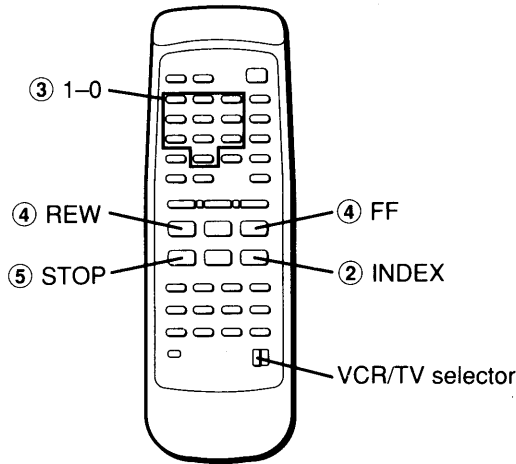
- ③ Press the *FF* or *REW* button within 10 seconds. "INDEX SEARCH" is displayed on the TV screen. The VCR fast forwards or rewinds the tape while playing back around the portion where the index signals are registered for 5 seconds. The index search is repeated until the tape reaches its end or beginning.
- ④ Press the *PLAY* button when the desired program is searched. "INDEX SEARCH" will disappear from the TV screen.
 - If the *PLAY* button is not pressed, the fast forward or rewind mode is resumed to search the next index signal.
- ⑤ Press the *STOP* button to stop playback.

Notes

- To stop the index search, press the *PLAY* button.
- The index signal registered on the beginning of the tape cannot be detected.

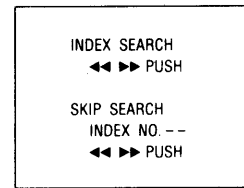
Skip Search

This function fast forwards or rewinds the tape to the point with the selected index signal to start playback from there. The index signal can be selected with the number buttons on the remote control unit.

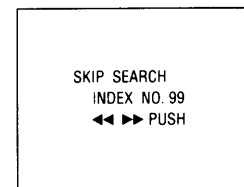


Before operation, make sure that the *VCR/TV* selector is set to *VCR*.

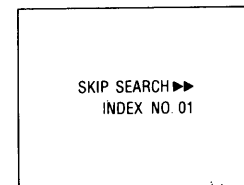
- ① Load a cassette with the index signals.
- ② Press the *INDEX* button in the stop or playback mode. (In the stop mode, display a TV program on the TV screen.)



- ③ Press the number buttons to select the desired index number within 10 seconds. (For numbering the index signals, see below.)
The index number is displayed on the TV screen.



- ④ Within 10 seconds, press the *FF* button if the desired index signal is in the forward direction or the *REW* button if it is in the backward direction.

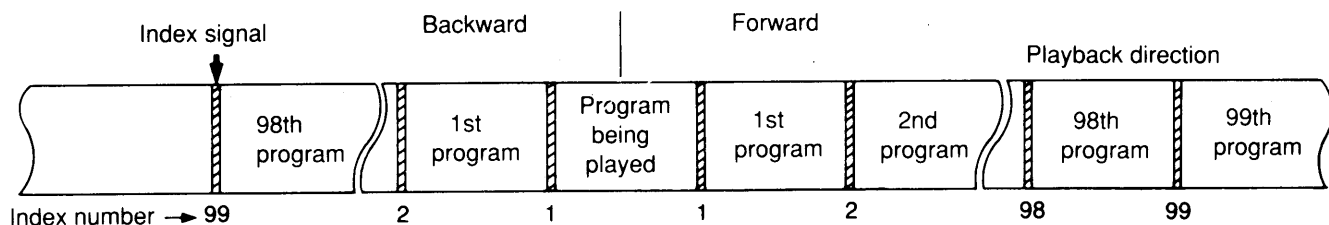


When the VCR detects the selected index signal, it automatically enters the playback mode.

- ⑤ Press the *STOP* button to stop playback.

Numbering the Index Signals

Up to 99 index signals backward and forward can be selected for the skip search.



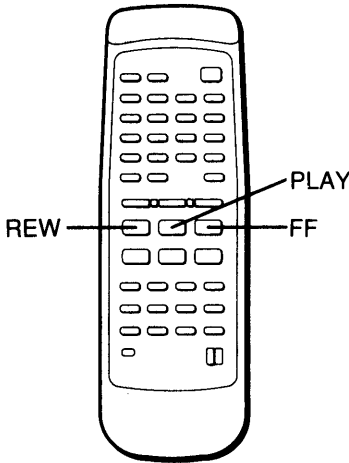
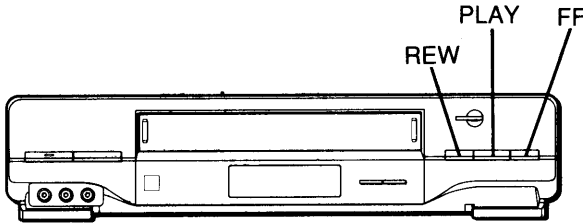
Notes

- To stop the skip search, press the *PLAY* or *STOP* button.
- The skip search may not be operated for the 1st program.
- Each time an index signal is skipped, the index numbers reduce by one.

SPECIAL EFFECTS

Picture Search

This function allows you to quickly locate a particular scene or segment on the tape while monitoring the playback picture in the fast forward or rewind mode.



ACCEL. search

When keeping the *FF* or *REW* button pressed during playback, the searching speed will be accelerated to 7 times (in the SP mode) or 21 times (in the SLP mode) the normal speed.

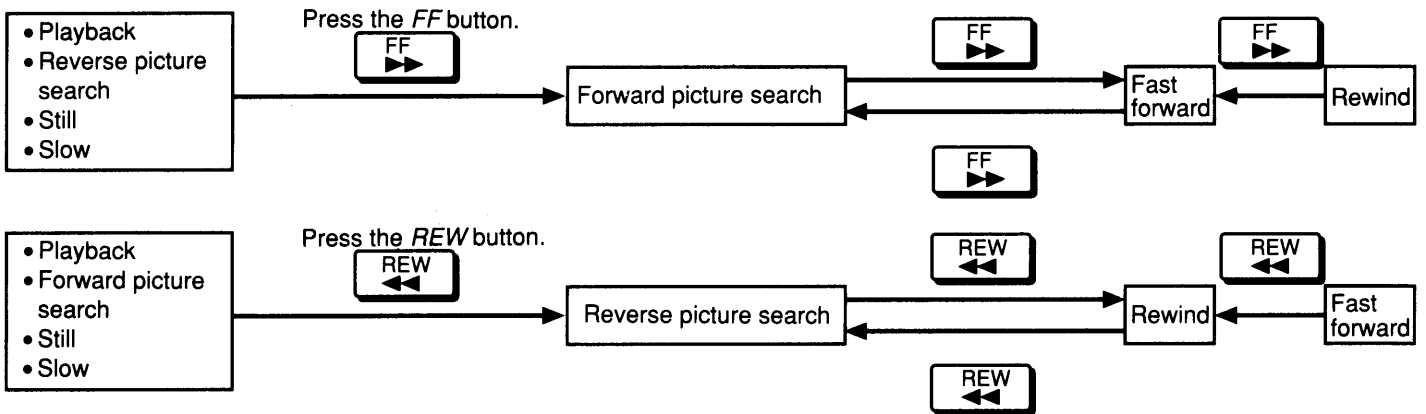
Forward picture search

Press the *FF* button during playback. The tape will fast forward at 5 times the normal playback speed. To return to the normal playback, press the *PLAY* button.

Reverse picture search

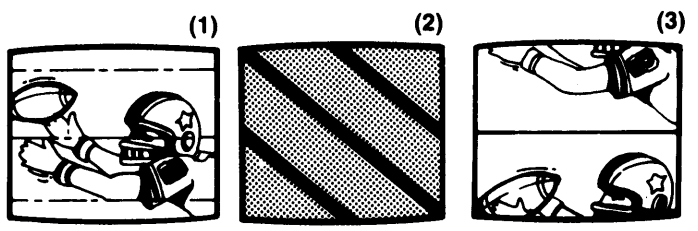
Press the *REW* button during playback. The tape will rewind at 5 times the normal playback speed. To return to the normal playback, press the *PLAY* button.

The forward or reverse picture search can be performed not only in the playback mode but also the following modes: fast forward, rewind, forward or reverse picture search, still and slow modes. Each time the *FF* or *REW* button is pressed, the mode is selected in the following sequence.

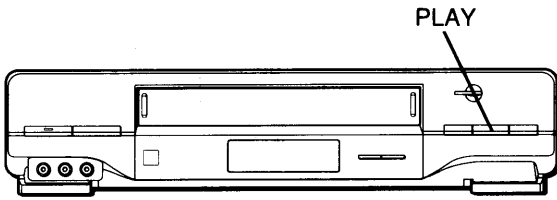


Note

During picture search the sound is muted and the horizontal noise bars appear on the TV screen as shown in Figure (1). This is normal. If the noise patterns appear as shown in Figures (2) and (3), adjust the horizontal/vertical controls on your TV.

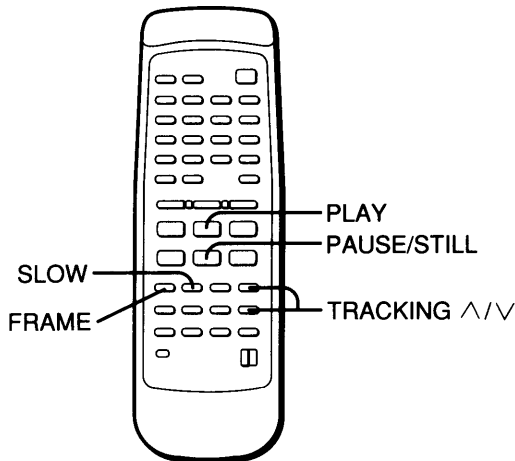


OPERATION



Frame Advance

- 1 Press the *PAUSE/STILL* button during playback.
The picture will be frozen.
- 2 Press the *FRAME* button while the picture is frozen.
The picture will advance by one frame each time the button is pressed.
Keep the *FRAME* button pressed to play back the tape at 1/30th the normal speed.
- 3 To return to the normal playback, press the *PAUSE/STILL* button again.



Slow Playback

This function has two variations : 1/7th and 1/15th the normal speed.

Press the *SLOW* button during playback.

The picture will move at 1/7th the normal speed.

If the button is pressed again, the speed changes to 1/15th the normal speed.

To return to the normal playback, the *PLAY* button again.

Notes

- The slow playback is automatically canceled after 5 minutes to return to the normal playback.
- If noise bars appear on the TV screen in the slow mode during the auto tracking mode, adjust the tracking for the clearest picture using the *TRACKING* \wedge / \vee buttons.
- If noise bars appear in the still or frame advance mode during the auto tracking mode, set the VCR to the slow mode, then adjust the tracking. The *TRACKING* \wedge / \vee buttons work only in the slow mode.
- Noise bars may not disappear completely even by adjusting the tracking.

Still

This function enables you to freeze a picture so that you can watch the important scenes closely.

Press the *PAUSE/STILL* button during playback to freeze the picture.

To return to the normal playback, press the *PAUSE/STILL* button again.

Notes

- The still mode is automatically canceled after about 5 minutes to return to the normal playback.
- If the picture is vertically unstable in the still mode, adjust the tracking using the *TRACKING* \wedge / \vee buttons.



A picture with noise bars



A picture adjusted with the *TRACKING* \wedge / \vee buttons

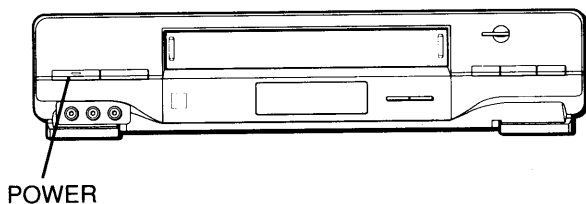
TIMER RECORDING

One Touch Timer Recording

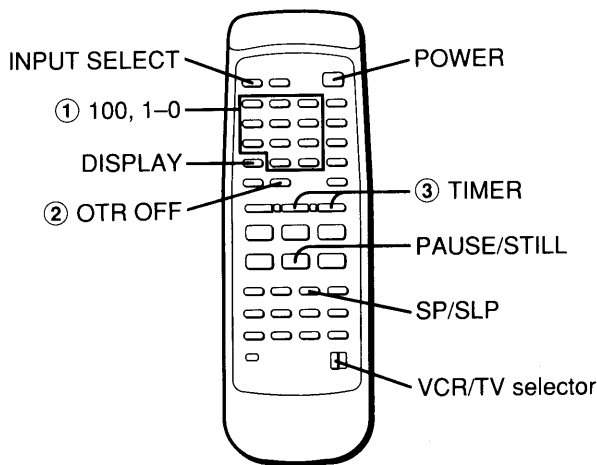
One touch timer function allows you to program the VCR to record the TV programs immediately or within 24 hours from the present time. One touch timer recording is performed only when the power is on.

Recording immediately for max. 4 hours in 30 minute units

This function is convenient when you want to begin recording immediately.



POWER



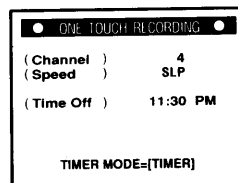
Example: to record channel 4 in the SLP mode from now (10:05PM) until 11:30PM

Preparation

- Turn on the TV.
- Make sure that the *VCR/TV* selector is set to VCR.
- Check that the current time is correct. (See page 22.)
- Load a cassette with the safety tab.
(Press the *POWER* button if the power is off with a cassette.)
- Press the *DISPLAY* button to select the OSD mode.
- Press the *SP/SLP* button to select the SLP mode.
- Make sure that a TV channel number (for example: "8CH") is displayed on the TV screen.
(To display the TV channel, press the *INPUT SELECT* button.)

Operation

- 1 Press the 4 button to select channel 4.
- 2 Press the *OTR OFF* button.
The ONE TOUCH RECORDING screen appears.
To set the OFF time, press the button by one step within 9 seconds.
When the button is
Pressed once : 10:30PM.
Pressed twice : 11:00PM.
Pressed 3 times : 11:30PM.
The OFF time is set.



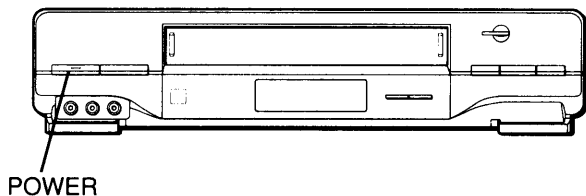
- 3 Press the *TIMER* buttons simultaneously.
The ONE TOUCH RECORDING screen disappears and recording starts.
 - The multidisplay indicates the tape counter with the **REC** and **TIMER** indicators lit.
 - When recording is completed, the VCR automatically turns off.

Notes

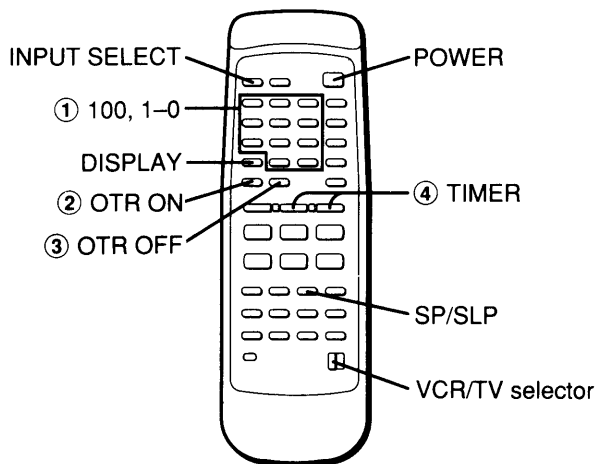
- Press the *OTR OFF* or *TIMER* buttons within 9 seconds following the previous step. Otherwise, one touch timer recording is canceled.
- During one touch timer recording, the *PAUSE/STILL* button does not work.
- During one touch timer recording, the recording time cannot be changed.
- To cancel one touch timer recording, press the *TIMER* buttons.
- One touch timer recording will start from any mode. The picture is distorted for about 10 seconds when the VCR enters the one touch timer recording mode.
- When one touch timer recording and programmed timer recording are overlapped, one touch timer recording has priority.

Recording within 24 hours

This function is convenient when you want to record within 24 hours and have no time to set the programmable timer on the day.



POWER



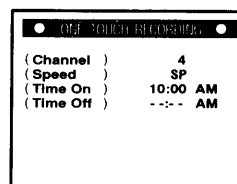
Example: to record channel 4 from 10:00AM to 11:00AM in the SP mode (current time : 7:10AM)

Preparation

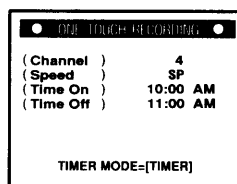
- Turn on the TV.
- Make sure that the *VCR/TV* selector is set to VCR.
- Check that the current time is correct. (See page 22.)
- Load a cassette with the safety tab.
(Press the *POWER* button if the power is off with a cassette.)
- Press the *DISPLAY* button to select the OSD mode.
- Press the *SP/SLP* button to select the SP mode.
- Make sure that a TV channel number (for example: "8CH") is displayed on the TV screen.
(To display the TV channel, press the *INPUT SELECT* button.)

Operation

- ① Press the 4 button to select channel 4.
- ② Press the *OTR ON* button.
The ONE TOUCH RECORDING screen appears.
To set the ON time, press the button by one step within 9 seconds.
When the button is
Pressed once : 7:30AM.
Pressed twice : 8:00AM.
.....
Press 6 times : 10:00AM.
The ON time is preset.



- ③ Press the *OTR OFF* button.
To set the OFF time, press the button by one step within 9 seconds.
Press twice to record until 11:00AM.
The OFF time is preset.



- ④ Press the *TIMER* buttons simultaneously.
The VCR enters the timer standby mode.
 - The TV screen has no picture.
 - The multidisplay displays the **TIMER** indicator.
Recording will start at the set time.

TIMER RECORDING

Programmable Timer Recording

The programmable timer allows you to record up to 8 different programs over one year. This function is convenient when you are away from home or when you are busy. All you have to do is to set the timer to the desired day, time and channel for recording. The following timer programs are available:

- **Once program:** to execute recording once within one year
- **Daily program:** to execute recording at the same time Monday through Friday
- **Weekly program:** to execute recording at the same time on the same day every week

Setting outline

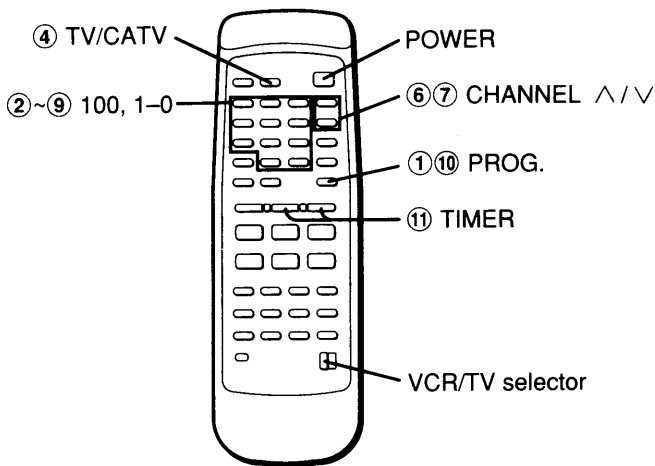
Select the desired timer program on the MENU screen and perform the following steps continuously, following the blinking position. (The next position blinks after finishing each step.)

Preparation

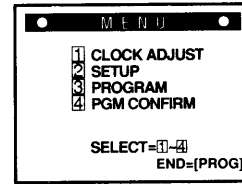
- Turn on the TV.
- Check that the current time is correct. (See page 22.)
- Load a cassette with the safety tab. (Press the *POWER* button if the power is off with a cassette.)
- Make sure that the *VCR/TV* selector on the remote control unit is set to *VCR*.

Operation

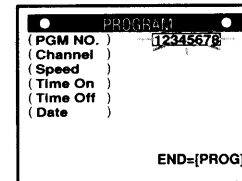
Example: to record CATV channel 125 in the SP mode from 9:02PM to 10:50PM on November 20, 1991 on program No. 2 (once program) when the current time is 10:00 PM on November 16, 1991.



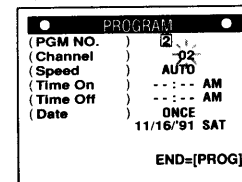
- ① Press the *PROG.* button so that the MENU screen appears on the TV screen.



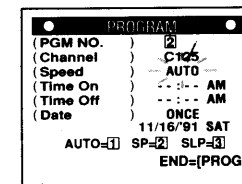
- ② To select PROGRAM, press the 3 button. The PROGRAM screen appears with "1 2 3 4 5 6 7 8" blinking.



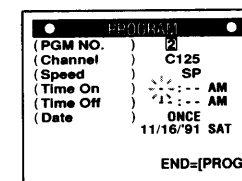
- ③ To select program number 2, press the 2 button.



- ④ To select CATV channel 125, press the *TV/CATV* button, then *100*, *2* and *5* buttons.

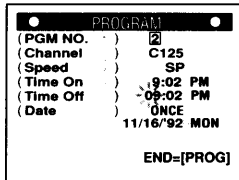


- ⑤ To select the tape speed SP, press the 2 button.



OPERATION

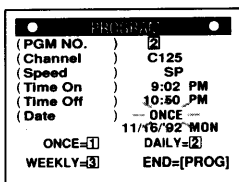
- ⑥ To set the ON time, press the 0, 9, 0, 2 and \wedge /PM buttons.



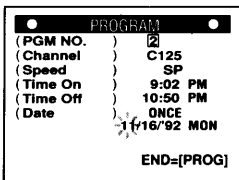
Note

When you set an earlier time than the current time as the ON time (ex. 9:02PM when the current time is 10:00PM), the next year is displayed automatically. (The above illustration shows "92".) It will revert to the current year in step ⑨.

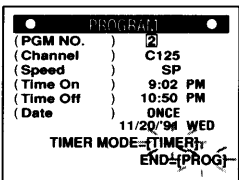
- ⑦ To set the OFF time, press the 1, 0, 5, 0 and \wedge /PM buttons.



- ⑧ To select the ONCE program, press the 1 button.



- ⑨ To set the date, press the 1, 1, 2 and 0 buttons.



- ⑩ Press the *PROG.* button.
Setting program No.2 is completed and the MENU screen is resumed.

If you want to set another timer recording programs, follow steps ② to ⑩.

- ⑪ Press the *TIMER* buttons simultaneously.
The power will be turned off and the VCR enters the timer standby mode.
The recording will automatically start at the set time.

Auto Speed Select

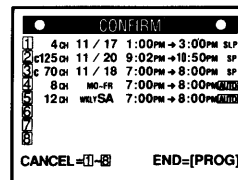
If the tape length may not be long enough for timer recording in the SP mode, set the recording speed to AUTO at step ⑤ above. Recording starts in the SP mode and the VCR automatically selects the tape speed to record the program to the end. If the tape length is not long enough, the tape speed automatically changes from the SP mode to the SLP mode.

Notes

- Make sure to select TAPE 120, 160 or 180 from the SET UP screen according to the tape used.
- When the SLP mode is selected and the tape length is not enough to record the program to the end, the program cannot be recorded to the end.
- The image will be distorted when playing back the part where the recording mode was switched over from the SP mode to SLP mode with the Auto speed select method.

Confirming the Programmed Contents

- 1 Press the *PROG.* button so that the MENU screen appears.
- 2 To select the CONFIRM screen, press the 4 button.



- 3 Press the *PROG.* button again when you finish confirming.

Canceling the Programmed Contents

- 1 Press the *PROG.* button so that the MENU screen appears.
- 2 To select the CONFIRM screen, press the 4 button.
- 3 Select the program number to be canceled.
The selected program data are canceled.
- 4 Press the *PROG.* button again.

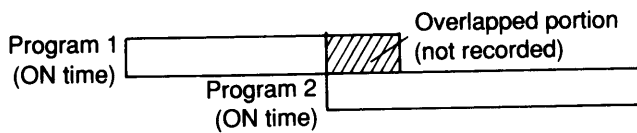
TIMER RECORDING

Error Indication

- When a cassette with the safety tab is loaded without setting the timer recording and the *TIMER* buttons are pressed, the "E" indication will appear on the multidisplay and "SET YOUR PROGRAM" will appear on the TV screen. Recording will not be performed.
- When the *TIMER* buttons are pressed without a cassette or with a cassette without the safety tab, "CHECK CASSETTE" will appear on the TV screen. Then, the cassette will come out.

Overlap of the Programs

If two programs set for timer recording overlap, the recording ON time of program 2 has priority over the recording OFF time of program 1.



Power Failure During Timer Recording

- When a power failure has occurred, "12:00AM" blinks on the multidisplay. Since the programmed contents have been cleared, reset the clock and timer recording.
- When a power has failed for a short time, the colon (:) used for the current time display blinks. The programmed contents are not affected. Reset the clock.

Normal Playback and Recording in the Timer Standby Mode

Normal playback and recording are possible in the timer standby mode (with the *TIMER* indicator lit on the multidisplay).

- 1 Set the *VCR/TV* selector to *VCR*.
- 2 Press the *TIMER* buttons to turn off the *TIMER* indicator.
- 3 Press the *POWER* button to turn on the *VCR*.
- 4 Follow the procedure for normal playback or recording.
- 5 Press the *TIMER* buttons again after playback or recording. The *VCR* returns to the timer standby mode.

Note

Finish normal use of the *VCR* before the preset timer start time, since the timer does not work if the *VCR* is not in the timer standby mode.

Changing the Programmed Contents

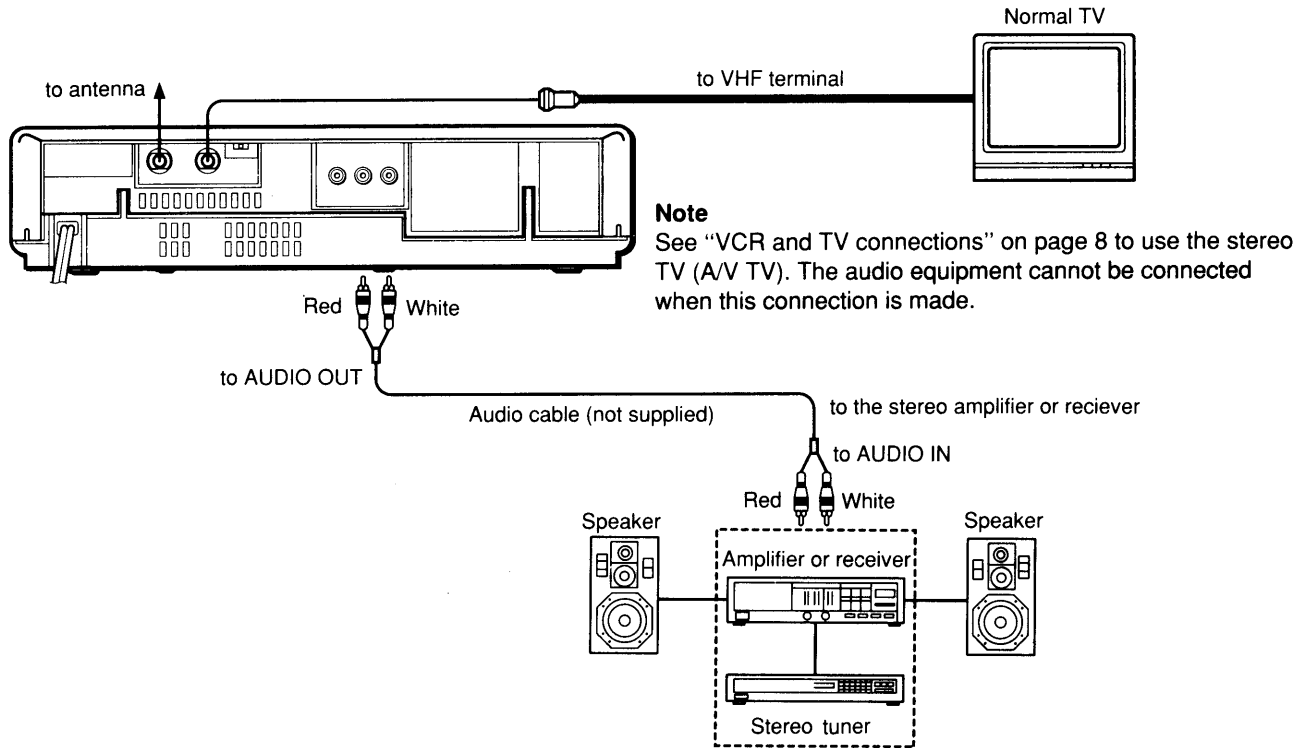
- 1 Set the *VCR/TV* selector to *VCR*.
- 2 Press the *TIMER* buttons to cancel the timer standby mode.
- 3 Press the *POWER* button to turn on the *VCR*.
- 4 Press the *PROG.* button to display the *MENU* screen.
- 5 Correct the contents following steps ③ to ⑨ for "Programmable Timer Recording".
- 6 Press the *PROG.* button.
- 7 Press the *TIMER* buttons again to reenter the timer standby mode.

Notes

- When a cassette without the safety tab is loaded and the *TIMER* buttons are pressed, it will be automatically ejected.
- The auto rewind function does not operate when the tape reaches the end during timer recording.
- During timer recording, the pause mode cannot be selected.
- When once timer recording is completed, the programmed contents are cleared.

SPECIAL OPERATIONS

Connection for the MTS



Notes

- Be sure to turn off the power before making any connections.
- Adjust the volume so that no loud sound suddenly comes out. Otherwise, the speakers may be damaged.
- Make sure to turn off the power of the amplifier before plugging or unplugging the power cord of the VCR. Otherwise, the speakers may be damaged.

MTS (Multichannel TV Sound)

You can enjoy the multichannel TV sound while viewing a monaural sound TV, using the stereo amplifier and speakers.

SAP (Second Audio Program)

The SAP permits reception of dual audio broadcasting. For example: The standard audio program is transmitted in English and the second in Spanish.

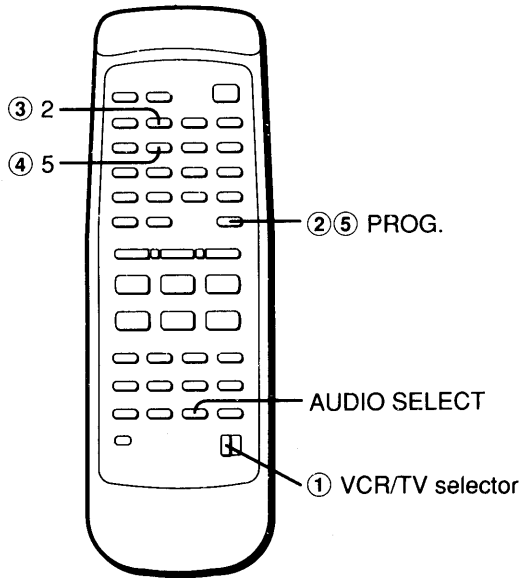
Multidisplay

STEREO: Lights when a stereo program is received.
SAP: Lights when the second audio program is received.
SAPSET: Lights when SAP SET is set to ON on the SET UP screen.

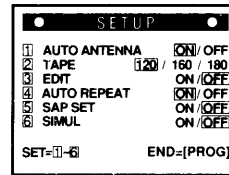
SPECIAL OPERATIONS

Recording the SAP and/or Stereo Broadcasts

You can record the SAP and/or stereo broadcasts with this unit.



- ① Set the *VCR/TV* selector to VCR.
- ② Press the *PROG.* button to display the MENU screen.
- ③ Press the 2 button to display the SET UP screen.
- ④ Press the 5 button to set SAP SET to ON.
Each time the 5 button is pressed, ON or OFF is selected alternately.



- ⑤ Press the *PROG.* button twice to set the TV to the normal screen.
- ⑥ Perform the basic manual recording operation on page 24.

Setting the SAP

Type of broadcast	Indicator		SAP SET [ON] or [OFF] on the SET UP screen	Contents of recorded sound		
	SAP	STEREO		Normal sound track (Mono)	Hi-Fi sound track	
					L	R
Regular (monaural audio)	OFF	OFF	[ON] or [OFF]	MONO	MONO	MONO
Stereo	OFF	ON	[ON] or [OFF]	MONO (MIXED)	STEREO	
Regular+SAP	ON	OFF	[ON]	MONO	MONO	SAP
			[OFF]	MONO	MONO	MONO
Stereo+SAP	ON	ON	[ON]	MONO	MONO	SAP
			[OFF]	MONO (MIXED)	STEREO	

OPERATION

Playing the SAP and/or Stereo Broadcasts

You can play the SAP and/or stereo broadcasts with this unit.
Press the *AUDIO SELECT* button to select the desired sound so that the **L** **R** indicators on the multidisplay turn on or off.
Then, perform the basic playback operation on page 25.

Setting the SAP and/or stereo sound

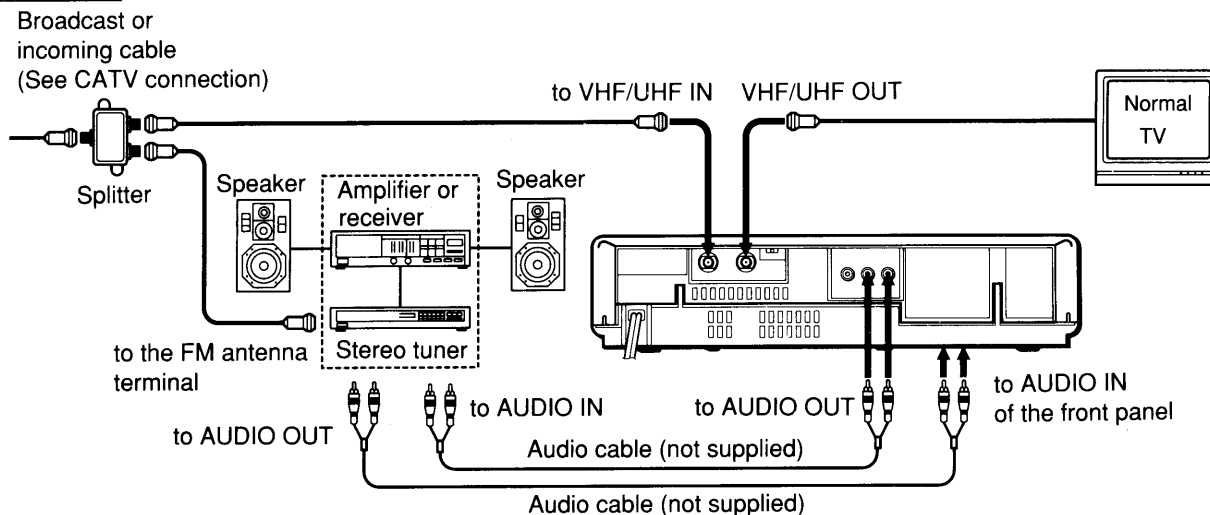
Desired sound	L R indicators on the multidisplay	Sound through line output
SAP sound	R(right) is ON.	SAP
Stereo sound	Both R (right) and L (left) are ON.	Stereo

Note

When the TV is connected to RF OUT of the VCR, the sound is monaural.

Simulcast Recording

Connection



Note

See "VCR and TV connections" on page 8 to use the stereo TV (A/V TV). The stereo tuner and the VCR should also be connected when this connection is made.

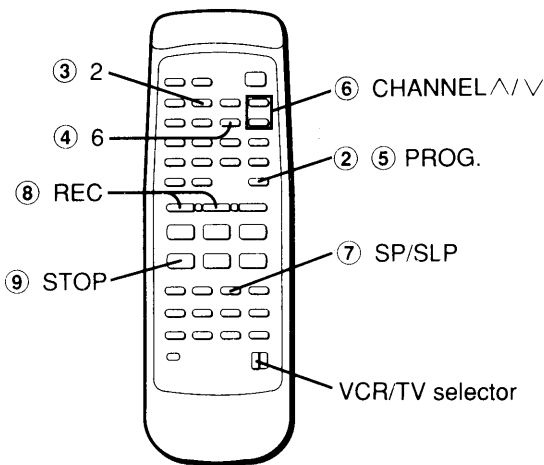
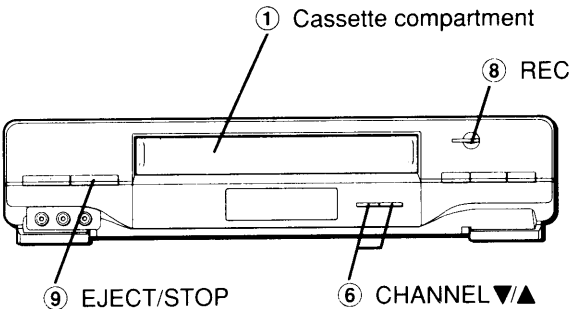
Notes

- If the VCR is placed near a tuner or radio, noise may occur when receiving the AM program. In such a case, separate it from any tuner or radio.
- Since the tapes recorded with hi-fi equipment have a wide dynamic range, adjust the volume so that no sudden sound damages the speakers.
- Be sure to turn off the power of the amplifier before plugging or unplugging the power cord of the VCR. Otherwise, the speakers may be damaged.
- Be sure to turn off the power before making any connections.

SPECIAL OPERATIONS

Simulcast Recording

When a TV program such as MTV, HBO or MAX is being simulcast in FM stereo, the VCR can also record the simulcast sound with the FM stereo tuner or receiver onto the hi-fi sound or normal sound track.

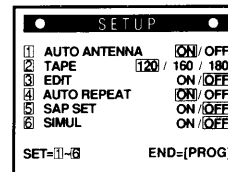


Preparation

- 1 Turn on the FM stereo tuner or receiver and tune to the station for the simulcast program.
- 2 Turn on the TV and select 3CH or 4CH according to the output channel selector at the rear.
- 3 Set the VCR/TV selector to VCR.

Operation

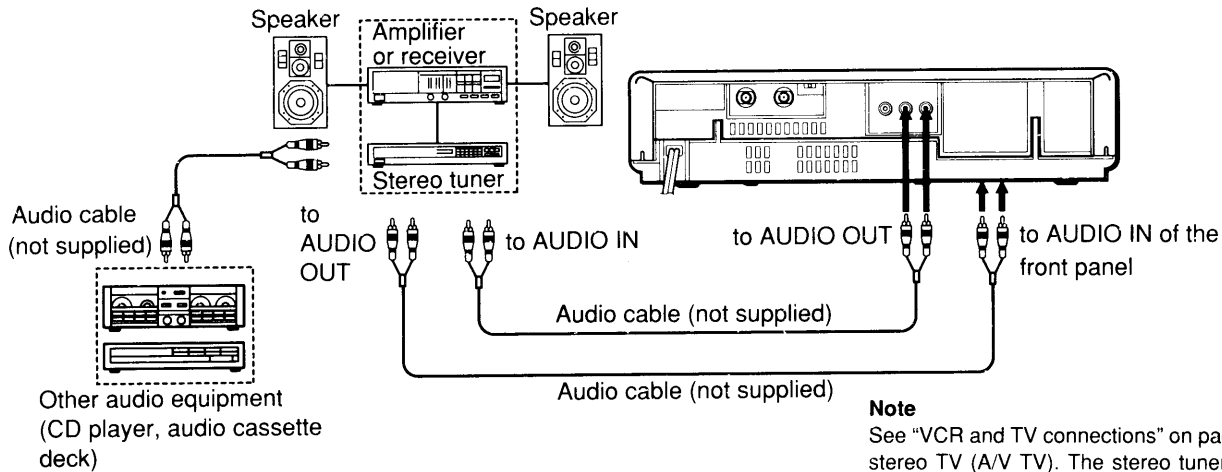
- 1 Load a cassette.
The VCR automatically turns on.
- 2 Press the *PROG.* button to display the MENU screen.
- 3 Press the 2 button to display the SET UP screen.
- 4 Press the 6 button to set SIMUL to ON.
Each time the 6 button is pressed, ON or OFF is selected alternately.



- 5 Press the *PROG.* button twice to set the TV to the normal screen.
- 6 Press the *CHANNEL* buttons to select the desired channel.
- 7 Press the *SP/SLP* button to select SP or SLP.
- 8 Press the *REC* button on the VCR or simultaneously press the *REC* buttons on the remote control unit.
- 9 Press the *EJECT/STOP* button on the VCR or the *STOP* button on the remote control unit to stop recording.

SPECIAL OPERATIONS

Audio Equipment Connection



Note

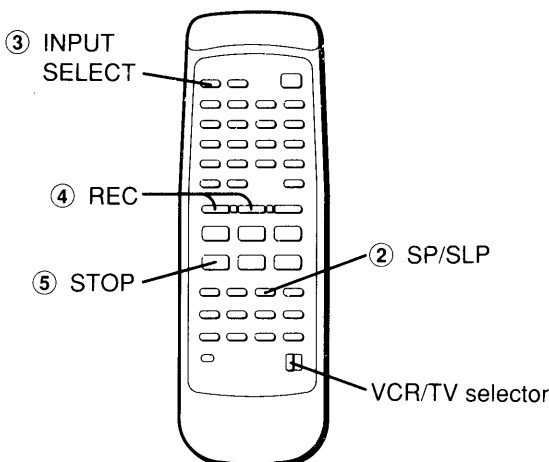
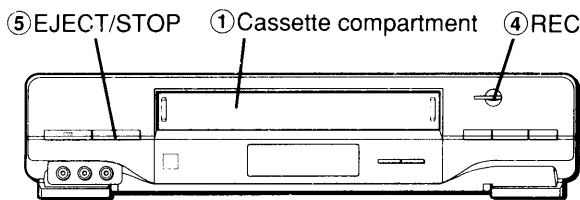
See "VCR and TV connections" on page 8 to use the stereo TV (A/V TV). The stereo tuner and the VCR should also be connected when this connection is made.

Notes

- If the VCR is placed near a tuner or radio, noise may occur when receiving the AM program. In such a case, separate it from any tuner or radio.
- Adjust the volume to avoid a sudden loud sound which may damage the speakers.
- Be sure to turn off the power of the amplifier before plugging or unplugging the power cord of the VCR. Otherwise, the speakers may be damaged.
- Be sure to turn off the power before making any connections.
- When an external audio equipment is connected only to L of the AUDIO IN jacks, the same sound is recorded on both L and R on the hi-fi track.

Audio Hi-Fi Recording

The VCR can be also used as an audio tape recorder for hi-fi long recording (for example, max. 8 hours in the SLP mode with a T-160 cassette).



Preparation

- Receive the broadcast to be recorded in the FM tuner.
- Make sure that the *VCR/TV* selector is set to VCR.

Operation

- ① Load a cassette with the safety tab.
- ② Press the *SP/SLP* button to select the recording tape speed, SP or SLP.
- ③ Press the *INPUT SELECT* button to display "L" on the multidisplay.
- ④ Press the *REC* button on the VCR or simultaneously press the *REC* buttons on the remote control unit. Recording will begin. Set the audio equipment to the playback mode at the same time.
- ⑤ Press the *EJECT/STOP* button on the VCR or the *STOP* button on the remote control unit to stop recording.

Note

You can record with better audio quality in the SP mode.

SPECIAL OPERATIONS

Copying the VCR Recording

You can dub the tape for editing by connecting this VCR to another VCR.

- Make sure that the *VCR/TV* selector is set to VCR.

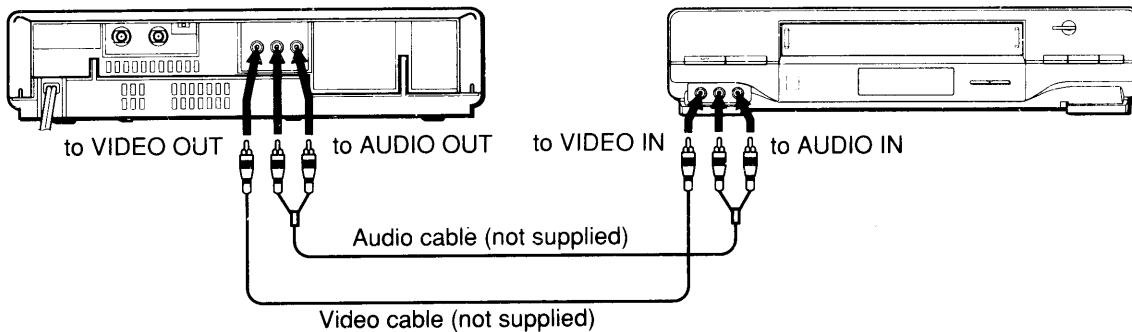
Using this VCR for playback (See page 25.)

- 1 This VCR:** Set EDIT to ON on the SET UP screen. (See below.)
- 2 VCR for recording:** Press the record button, then the pause button to enter the recording pause mode.
- 3 This VCR:** Press the *PLAY* button to start playback.
- 4 VCR for recording:** Cancel the recording pause mode to start recording.
- 5 Both VCRs:** Press the stop button of each VCR to stop recording.
Copying is completed.

Using this VCR for recording (See page 24.)

- 1 VCR for playback:** Select the edit mode, if possible.
- 2 This VCR:** Press the *REC* button, then the *PAUSE/STILL* button to enter the recording pause mode.
- 3 VCR for playback:** Press the play button to start playback.
- 4 This VCR:** Press the *PAUSE/STILL* button again to cancel the recording pause mode and to start recording.
- 5 Both VCRs:** Press the stop button of each VCR to stop recording.
 - For recording, press the *INPUT SELECT* button so that the "L" indicator lights on the multidisplay.

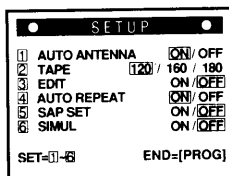
Connection



Note

When you use two TOSHIBA VCRs for recording and playback, keep the VCRs away each other so that both are not operated simultaneously by the remote control unit.

EDIT function



- 1 Press the *PROG.* button.
- 2 Press the 2 button to display the SET UP screen.
- 3 Press the 3 button to set EDIT to ON.
- 4 Press the *PROG.* button twice to set the TV to the normal screen.

Notes

- Be sure to set EDIT to OFF when dubbing is completed. If EDIT remains ON during playback, the picture quality is not good.
- In general, the picture quality deteriorates somewhat in the dubbed tapes. It is best to use the SP mode.

WARNING

The tapes can be copied and used only in accordance with the applicable copyright laws. But, if the tape is covered by a copyright, it is illegal to copy it and/or charge an entrance fee to see it.

BEFORE CALLING SERVICE PERSONNEL

Check the following list of problems and remedies before calling service personnel. The problem may be one you can solve yourself.

	PROBLEM	REMEDY
Power Supply	• The power won't turn on.	• The power cord is not plugged in. Plug it firmly into the outlet.
	• Although the power is on, the VCR won't work.	• Wait for two hours if moisture has condensed. (See page 2.) • There is no cassette in the VCR. Load a cassette.
Clock/Timer	• The clock will not work. • The timer will not work properly.	• There has been a power failure. Reset the clock. (See page 22.) • The clock is incorrect. Set the clock correctly. (See page 22.)
TV Reception	• The picture does not appear on the TV screen.	• Set the TV channel to the VCR output channel or set the TV/VCR button on the TV to VCR. • Adjust the antenna direction or use an optional antenna booster. • Plug the power cord into the outlet firmly.
Recording and Playback	• The picture does not appear on the TV screen during recording and playback.	• Press the TV/VCR button to select the VCR mode and set the TV channel to 3 or 4.
	• The VCR will not record.	• The cassette's safety tab is broken. Use a cassette with tab or cover the hole with cellophane tape.
	• The picture for the VCR tape is poor.	• Fine tune the TV. • Adjust the tracking on the VCR. • Clean the video heads with a commercially available cleaning tape.
	• The desired sound is not output, such as SAP, stereo, or regular sound.	• Set the AUDIO SELECT button on the remote control unit. (See page 39.)
	• Simulcast cannot be recorded.	• Select SIMUL ON on the SET UP screen. (See page 40.)
	• Noise is present in the hi-fi sound being output.	• Adjust the tracking on the VCR.
	• The timer recording function will not work.	• There is an error in programming. Reset the timer recording program. • There is not a cassette in the VCR. • If the cassette does not have its safety tab, use another cassette or cover the hole with cellophane tape. • Press the two TIMER buttons on the remote control unit simultaneously. • There has been a power failure. Reset the clock to the correct time if "12:00" is flashing and reprogram the timer. (See page 22.)
Remote Control Unit	• The remote control unit will not work properly.	• Replace with new batteries if the old ones are exhausted. • Make sure the remote control unit is within 30° of the remote control receiver on the VCR. • Use the remote control unit within 7 m (23 feet) from the VCR. • Remove any obstacle between the VCR and the remote control unit. • Check the VCR/TV selector setting.
Miscellaneous	• The cassette is ejected immediately after it is loaded.	• Remove the cassette and reload it carefully.
	• The cassette will not go into the cassette compartment.	• There is already a cassette in the VCR.

SPECIFICATIONS

Power supply:	120 V AC, 60 Hz
Power consumption:	23 W
External dimensions:	370 × 88 × 325 mm (W.H.D.) (Approx. 14 ⁵ / ₈ × 3 ¹ / ₂ × 12 ³ / ₄ inches)
Weight:	11.9 lbs (5.4 kg)
Channels received:	VHF: Channels 2–13 UHF: Channels 14–69 CATV: Channels 1–125
Antenna input/output terminals:	UHF/VHF: 75 ohm F type connector
Signal system:	Standard NTSC
Recording/Playback system:	Recording: VHS format (SP, SLP) Playback: VHS format (SP, LP, SLP)
Cassette:	Video cassette with VHS mark
Tape speed:	SLP: 1.11 cm/second, SP: 3.34 cm/second
Video recording/playback time:	SLP: 480 minutes, SP: 160 minutes (When T-160 video cassette is used.)
Fast forward/rewind time:	Within 5 minutes (When T-120 video cassette is used.)
Video input:	1 Vp-p, 75 ohm, unbalanced, negative sync., pin jack
Video output:	1 Vp-p, 75 ohm, unbalanced, negative sync., pin jack
Audio input:	Line input: –8.0 dB, more than 47 k ohm, pin jack
Audio output:	Line output: –8.0 dB, less than 4.7 k ohm, pin jack
Audio frequency range (Hi-Fi):	20 Hz – 20 kHz
Audio dynamic range (Hi-Fi):	90 dB
Utilization conditions:	Temperature: 41°F to 104°F (5°C to 40°C) Humidity: less than 80% RH

Designs and specifications are subject to change without notice.

LIMITED WARRANTY
TOSHIBA VIDEO CASSETTE RECORDER

Toshiba America Consumer Products, Inc. ("TACP") and Toshiba Hawaii Inc. ("THI") make the following limited warranties. These limited warranties extend to the original consumer purchaser or any person receiving this set as a gift from the original consumer purchaser and to no other purchaser or transferee.

Limited Ninety (90) Day Warranty

TACP and THI warrant this product against defects in materials or workmanship for a period of ninety (90) days after the date of original retail purchase. During this period, TACP and THI will replace a defective product or part, without charge to you. You must deliver the entire product to a TACP/THI Service Center. You pay for all transportation and insurance charges for the set to and from the Service Center.

Limited One (1) Year Warranty

TACP and THI further warrant the parts in this product against defects in materials or workmanship for a period of one year after the date of original retail purchase. During this period, TACP and THI will replace a defective part without charge to you, except that if a defective part is replaced after ninety (90) days from the date of the original retail purchase, you pay labor charges involved in the replacement. You must also deliver the entire product to one of the TACP/THI Service Centers. You pay for all transportation and insurance charges for the set to and from the Service Center.

Owner's Manual and Registration Card

You should read the owner's manual thoroughly before operating this product. You should also insure that your name and address are on file as owners of a TACP/THI product by completing and mailing the enclosed registration card within ten days after you, or the person who has given you this product as a gift, purchased this product. This is one way to enable

Step-By-Step Procedures – How To Obtain Warranty Service

**IN THE CONTINENTAL
UNITED STATES ...**

Should your unit require
service or parts, CALL

IN THE EVENT A PROBLEM SHOULD DEVELOP WITH YOUR PRODUCT, PLEASE PROCEED AS FOLLOWS:

- (1) Refer to the troubleshooting guide in your owner's manual. This check list may solve your problem.
- (2) Contact one of the TACP/THI Service Centers listed below for warranty service or call the TACP toll free number 1-800-631-3811 within thirty (30) days after you find a defective product or part.
- (3) Arrange for the delivery of the product to the Authorized TACP/THI Service Center. Products shipped to the Service Center must be

TACP/THI to establish the date of purchase of the product, as well as to provide you with better customer service and improved products. Failure to return the card will not affect your rights under this warranty so long as you retain other proof of purchase such as a bill of sale.

Your Responsibility

The above warranties are subject to the following conditions:

- (1) You must retain your bill of sale or provide other proof of purchase. Completing and mailing in the enclosed registration card within ten days after the original retail purchase is one way of providing such other proof of purchase.
- (2) You must notify an Authorized TACP/THI Service Station within thirty (30) days after you discover a defective product or part.
- (3) All warranty servicing of this product must be made by an Authorized TACP/THI Service Station.
- (4) These warranties are effective only if the product is purchased and operated in the U.S.A..
- (5) Labor service charges for set installation, set up, adjustment of customer controls and installation of repair or antenna systems are not covered by this warranty. Reception problems caused by inadequate antenna systems are your responsibility.
- (6) Warranties extend only to defects in materials or workmanship as limited above and do not extend to any product or parts which have been lost or discarded by you or to damage to products or parts caused by misuse, accident, improper installation, improper maintenance or use in violation of instructions furnished by us; or to units which have been altered or modified without authorization of TACP/THI or to damage to products or parts thereof which have had the serial number removed, altered, defaced or rendered illegible.



HAWAII

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Service Department
327 Kamakee Street
Honolulu, HI 96814
Phone Number:
(808) 521-5377

EAST

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Phone Number:
(201) 628-8000

SOUTHEAST

490 Armour Circle,
N.E.
Atlanta, GA 30324
Phone Number:
(404) 872-6955

MIDWEST

1010 Johnson Drive
Buffalo Grove, IL
60089
Phone Number:
(708) 541-9400

SOUTHWEST

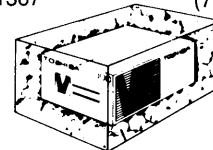
1421 Champion Drive
Suite 304
Carrollton, TX 75006
Phone Number:
(214) 243-1367

WEST

5490 E. Francis
Street Ontario,
CA 91761
Phone Number:
(714) 988-5303

IMPORTANT: PACKING AND SHIPPING INSTRUCTIONS

When you send the product to a service center, you must use the original carton box and packing material, then insert the original carton box containing the unit into another carton, using more packing material.



ALL WARRANTIES IMPLIED BY STATE LAW, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE EXPRESSLY LIMITED TO THE DURATION OF THE LIMITED WARRANTIES SET FORTH ABOVE. Some states do not allow limitations on how long an implied warranty lasts, so that above limitation may not apply to you. **WITH THE EXCEPTION OF ANY WARRANTIES IMPLIED BY STATE LAW AS HEREBY LIMITED, THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, GUARANTEES, AGREEMENTS AND SIMILAR OBLIGATIONS OF MANUFACTURER OR SELLER WITH RESPECT TO THE REPAIR OR REPLACEMENT OF ANY PRODUCT OR PARTS.**

IN THE EVENT SHALL TACP OF THI BE LIABLE FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES. Some states do not allow the exclusion or limitation of incidental or consequential damages so the above limitation may not apply to you.

No person, agent, distributor, dealer, service station or company is authorized to change, modify or extend the terms of these warranties in any manner whatsoever. The time within which an action must be commenced to enforce any obligation of TACP and THI arising under this warranty or under any statute, or law of the United States or any state thereof, is hereby limited to one year from the date you discover or should have discovered, the defect. This limitation does not apply to implied warranties arising under state law. Some states do not permit limitation of the time within which you may bring an action beyond the limits provided state law so the above provision may not apply to you. This warranty gives you specific legal rights and may also have other rights which vary from state to state.

TOSHIBA AMERICA CONSUMER PRODUCTS, INC.