

SERIES
LXI

OWNERS MANUAL

MODEL NO.
580.53484390

KNOW YOUR UNIT

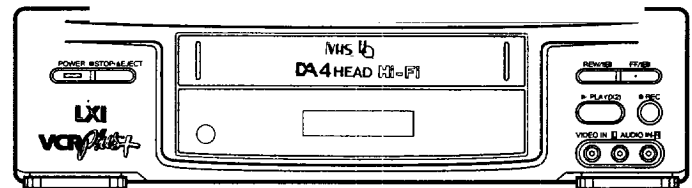
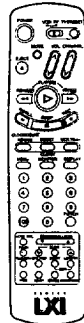
Read this booklet so you will be able to enjoy all the features in your video cassette recorder.

Record in space provided below the Model No. and the Serial No. as found on the rear of your video cassette recorder.

Model No. _____

Serial No. _____

Retain this information for future reference.

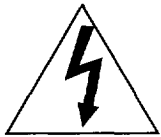


VHS

VIDEO CASSETTE RECORDER

Operation

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.



CAUTION

**RISK OF ELECTRIC SHOCK
DO NOT OPEN**



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK.
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE
PERSONNEL.

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 product.

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.

DEW (MOISTURE CONDENSATION)

If you pour cold liquid into a glass, water vapor in the air will condense on the surface of the glass. This is moisture condensation. Moisture condensation on the head drum, one of the most crucial parts of the unit, will cause damage to the tape. When the unit is exposed to a rapid temperature change from cold to warm, some condensation will occur. Under this condition connect the power cord to the AC line, press POWER ON/OFF button on and allow at least two hours for the unit to dry out.




"POWER" ON/OFF Button

"Cable reception is only available to customers subscribing to cable service. Cable-compatible models will tune in most nonscrambled cable channels without the need for an external converter box. Scrambled Pay-TV services may require an additional descrambling box. Check with your local cable company for compatibility and any additional requirements."

FCC WARNING : This equipment may generate or use radio frequency energy. Changes or modifications to this equipment may cause harmful interference unless the modifications are expressly approved in the instruction manual. The user could lose the authority to operate this equipment if an unauthorized change or modifications is made.

Note: Depending on your antenna system, you will need a different type of Combiner (Mixer) and Separator (Splitter). You can purchase them at electronics store. For further details, ask your nearest service center.

Congratulations on buying the **VHS** Video Cassette Recorder (VCR). For your convenience, please read these simple instructions before operating your VCR.

- NOTES:**
- * This Video Cassette Recorder is compatible with any video cassette bearing the **VHS** mark.
 - * **VHS** is designed to expand your opportunities for in-home TV viewing and not for any usage which might violate the copyright laws.
 - *  The Video Cassette Recorder (VCR) with this marking incorporates **VHS** high-quality picture technology and is compatible with any Video Cassette Recorders bearing the **VHS** mark.

Check to make sure you have the following accessories before disposing of the packing material.

1. 75-ohm Coaxial Cable with Antenna Adaptor (75/300-ohm)
2. Remote Control
3. Audio connection cable
4. Video connection cable

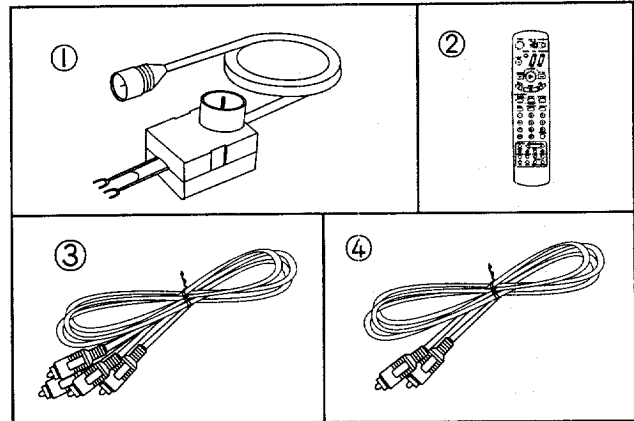


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IMPORTANT SAFETY INSTRUCTIONS

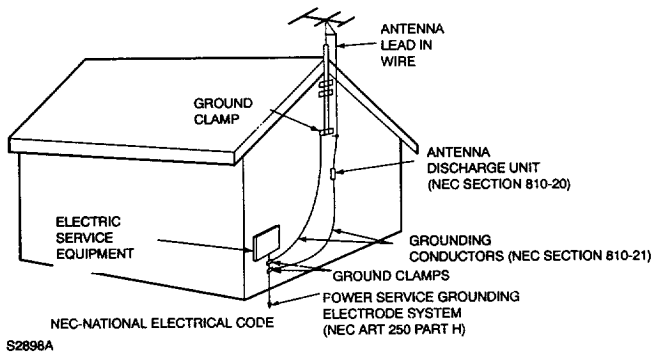
1. **Read Instructions**-All the safety and operating instructions should be read before the product is operated.
2. **Retain Instructions**-The safety and operating instructions should be retained for future reference.
3. **Heed Warnings**-All warnings on the product and in the operating instructions should be adhered to.
4. **Follow Instructions**-All operating and use instructions should be followed.
5. **Cleaning**-Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
Exception: A product that is meant for uninterrupted service and that for some specific reason, such as the possibility of the loss of an authorization code for a CATV converter, is not intended to be unplugged by the user for cleaning or any other purpose, may exclude the reference to unplugging the product in the cleaning description otherwise required in item 5.
6. **Attachments**-Do not use attachments not recommended by the product manufacturer as they may cause hazards.
7. **Water and Moisture**-Do not use this product 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.
8. **Accessories**-Do not place this product on an unstable cart, stand, tripod, bracket, or table. The product may fall, causing serious injury to a child or adult, and serious damage to the product. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the product. Any mounting of the product should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer.
9. A product and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the product and cart combination to overturn.



10. **Ventilation**-Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the 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 product on a bed, sofa, rug, or other similar surface. This 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.
11. **Power Sources**-This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your product dealer or local power company. For products intended to operate from battery power, or other sources, refer to the operating instructions.
12. **Grounding or Polarization**-This product may be 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.
Alternate Warnings-This product is equipped with a three-wire grounding-type plug, a plug having a third (grounding) pin. This plug will only fit into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding-type plug.
13. **Power-Cord Protection**-Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the product.

14. **Protective Attachment Plug**-The product is equipped with an attachment plug having overload protection. This is a safety feature. See Instruction Manual for replacement or resetting of protective device. If replacement of the plug is required, be sure the service technician has used a replacement plug specified by the manufacturer that has the same overload protection as the original plug.
15. **Outdoor Antenna Grounding**-If an outside antenna or cable system is connected to the product, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electrical Code ANSI/NFPA 70, provides information with regard to proper grounding of the mast or 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. See Figure 131.1.

FIGURE 131.1
EXAMPLE OF ANTENNA GROUNDING AS PER
NATIONAL ELECTRICAL CODE, ANSI/NFPA 70



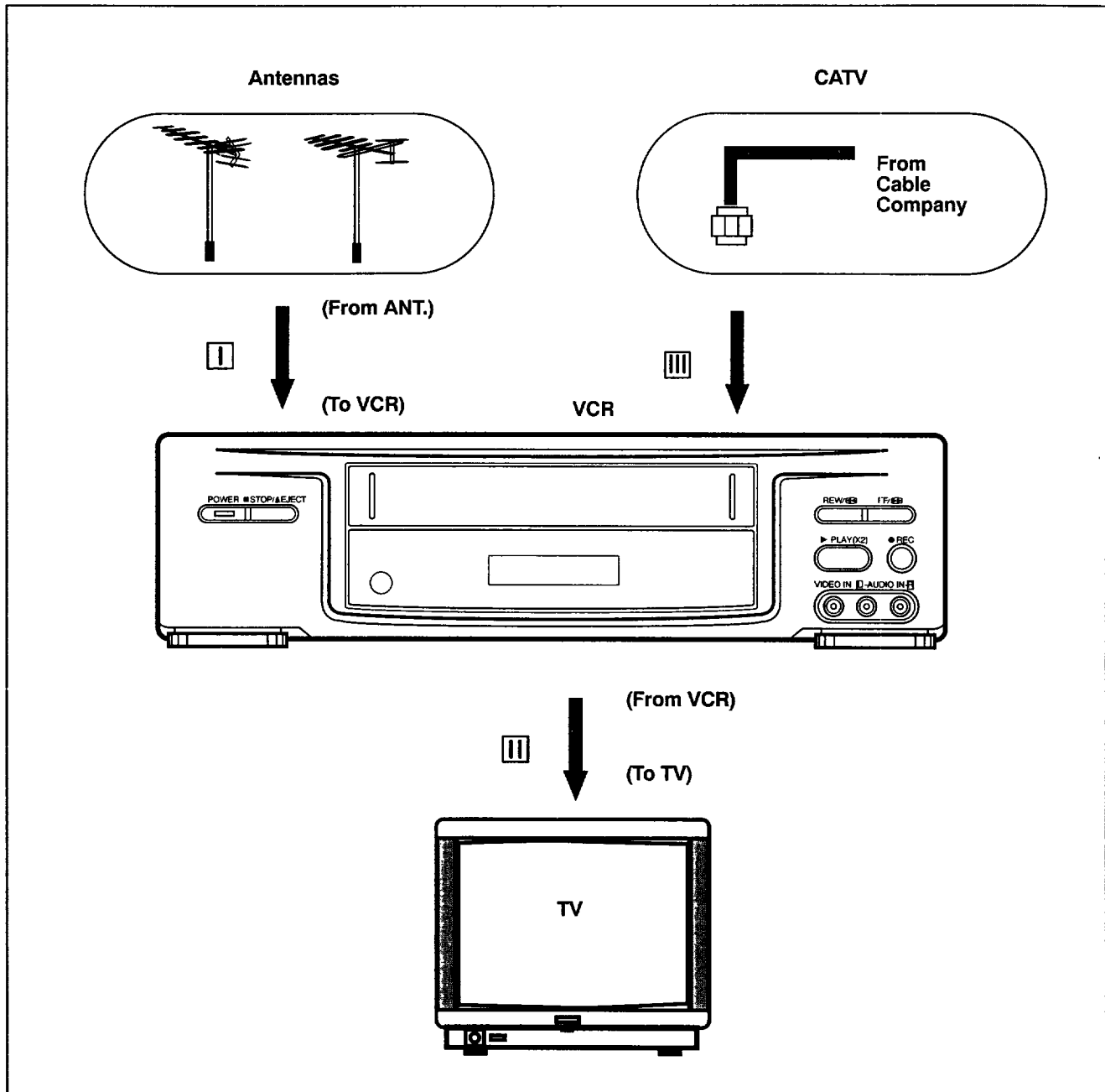
16. **Lightning**-For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the product due to lightning and power-line surges.
17. **Power Lines**-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.
18. **Overloading**-Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.
19. **Object and Liquid Entry**-Never push objects of any kind into this 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 product.
20. **Servicing**-Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
21. **Damage Requiring Service**-Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
- When the power-supply cord or plug is damaged.
 - If liquid has been spilled, or objects have fallen into the product.
 - If the product has been exposed to rain or water.
 - If the 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 product to its normal operation.
 - If the product has been dropped or the cabinet has been damaged.
 - When the product exhibits a distinct change in performance-this indicates a need for service.
22. **Replacement Parts**-When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.
23. **Safety Check**-Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.
24. **Wall or Ceiling Mounting**-The product should be mounted to a wall or ceiling only as recommended by the manufacturer.
25. **Heat**-The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.

INSTALLATION

Placing your VCR on the top of or under the TV receiver may result in interference appearing on the TV screen when the VCR is on. If this occurs, move the VCR to a position alongside the TV receiver.

WIRING DIAGRAM

To use your VCR connect it with your TV receiver and antenna system as illustrated below.



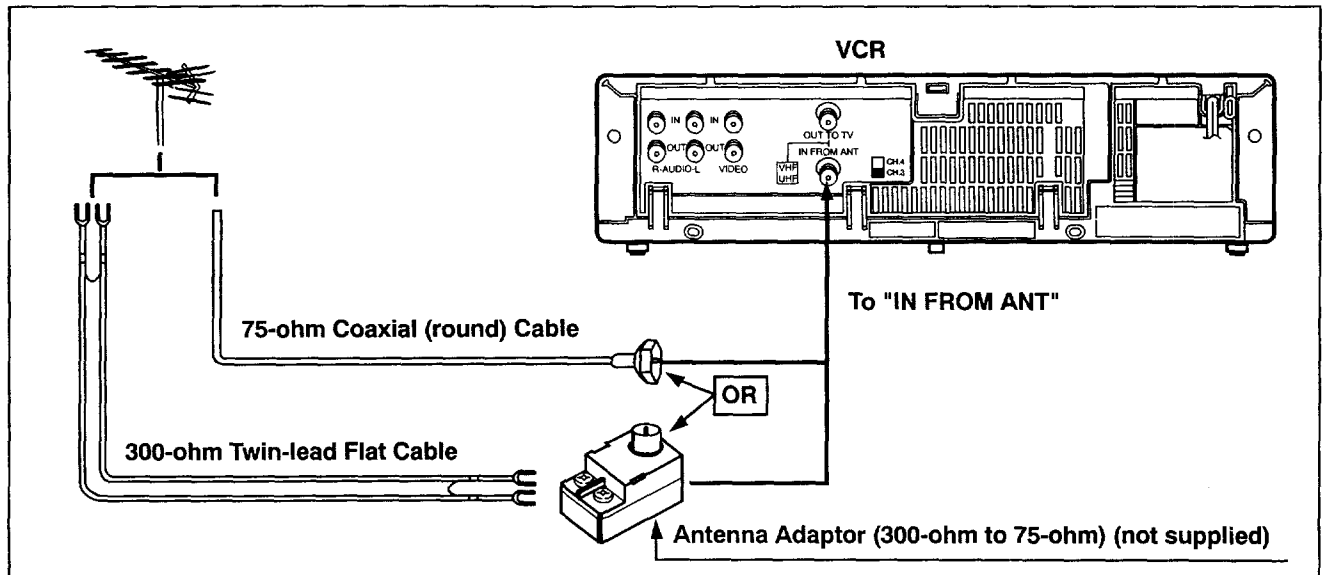
I: See "ANTENNA/VCR CONNECTIONS" on page 6.

II: See "VCR/TV CONNECTIONS" on page 7.

III: See "CABLE ANTENNA (CATV) CONNECTIONS" on page 8.

ANTENNA/VCR CONNECTIONS

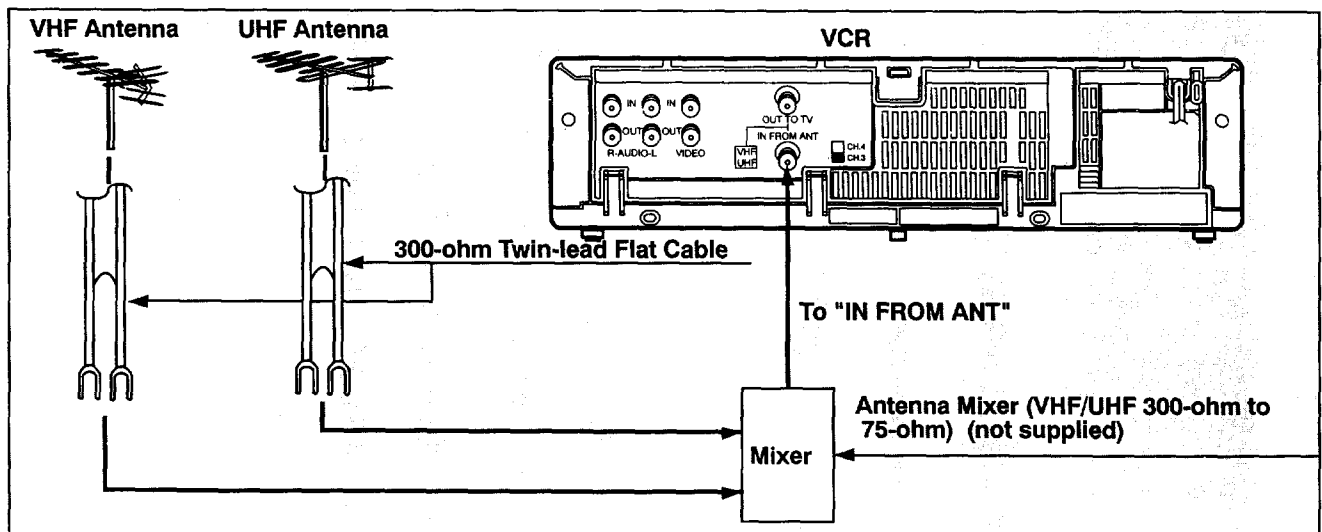
ANTENNAS WITH ONE LEAD (Combined VHF-UHF)



1. Disconnect the antenna leads from the rear of the TV receiver.
2. Identify the type of cable from your antenna. If it is a round cable as illustrated, it is a 75-ohm coaxial antenna cable. This cable will connect directly to the connector marked "IN FROM ANT" on your VCR.

If your antenna lead wire is a flat type antenna cable, connect it to the Antenna Adaptor (300-ohm to 75-ohm) (not supplied) and slip the Adaptor onto the "IN FROM ANT" terminal. The Adaptor does not screw onto the VCR, it just slips over the connector.

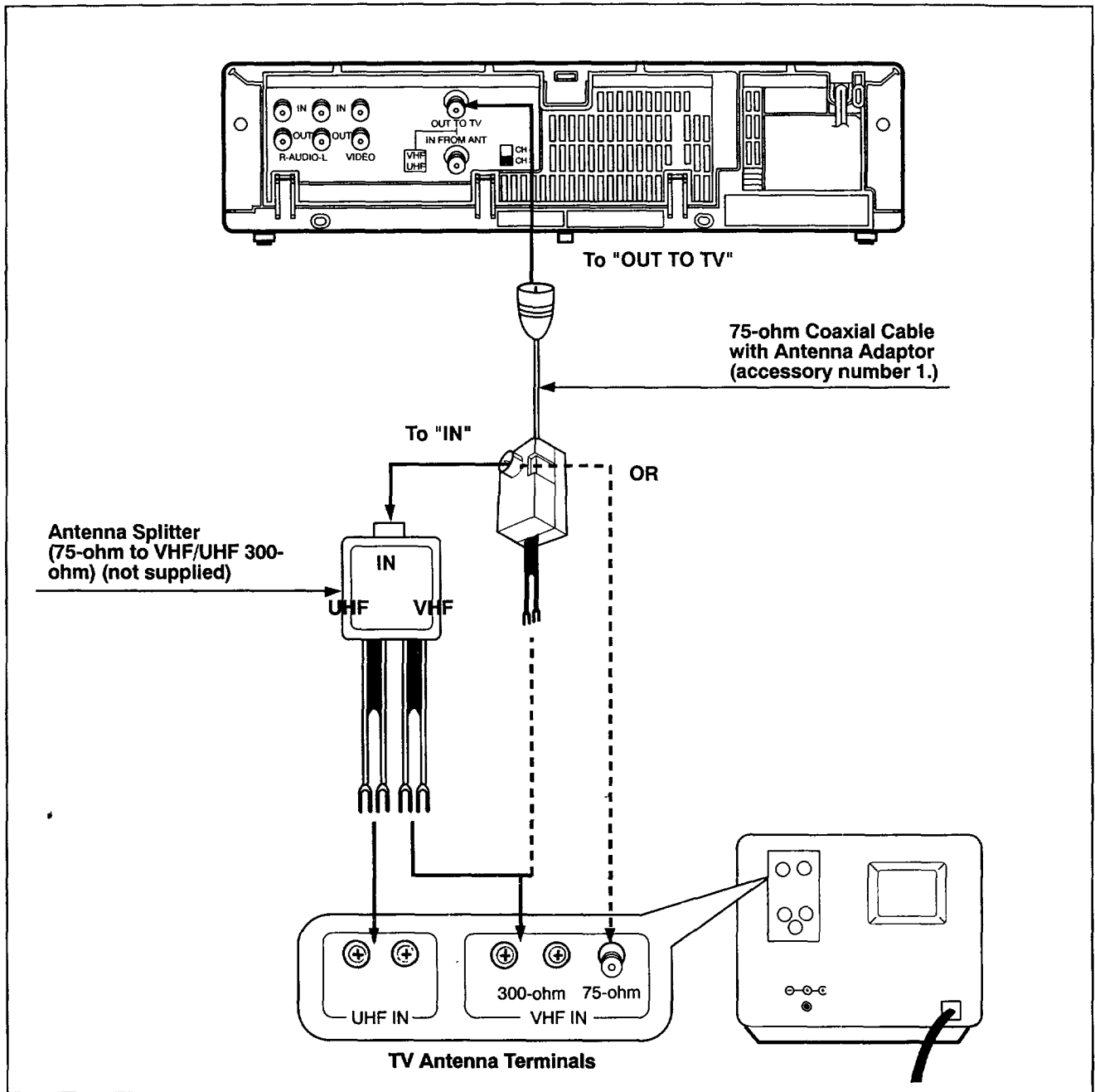
ANTENNA WITH SEPARATE VHF-UHF LEADS



1. Disconnect the UHF/VHF twin leads on your television.
2. Locate Antenna Mixer (VHF/UHF 300-ohm to 75-ohm) (not supplied).
3. Connect the VHF Twin-lead Cable to the "VHF" terminals on the Antenna Mixer.

4. Connect the UHF Twin-lead Cable to the "UHF" terminals on the Antenna Mixer.
5. Slip the Antenna Mixer onto the "IN FROM ANT" terminal.

VCR/TV CONNECTIONS



1. Connect the 75-ohm Coaxial Cable with Antenna adaptor (accessory number 1) to "OUT TO TV" on the VCR. Connect the other end to the Antenna Splitter (75-ohm to VHF/UHF 300-ohm) (not supplied) or 75-ohm antenna input on back of TV, as illustrated above.
2. Connect the wires marked "UHF" on the Splitter to the UHF terminals on the rear of your television.

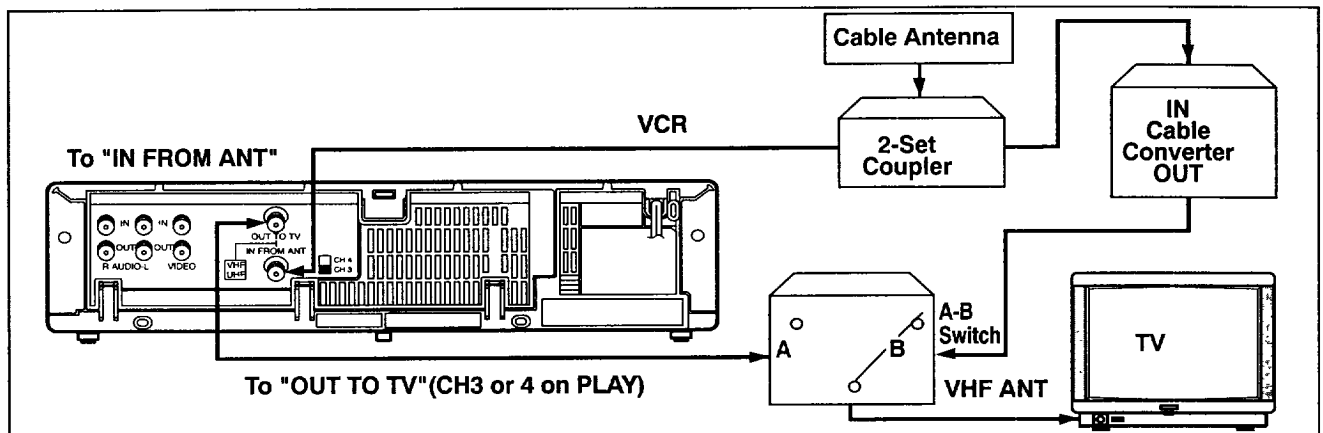
3. Connect the wires marked "VHF" on the Splitter to the VHF terminals on the rear of your television.

NOTE: When the VCR power cord is plugged into a 120V electrical outlet, the clock of the VCR will show "---- : ----". Don't worry. We will set it later.

CABLE ANTENNA (CATV) CONNECTIONS

"Note to CATV system installer: This reminder is provided to call the CATV system installer's attention to Section 820-40 of the NEC which 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".

Diagram No. 1

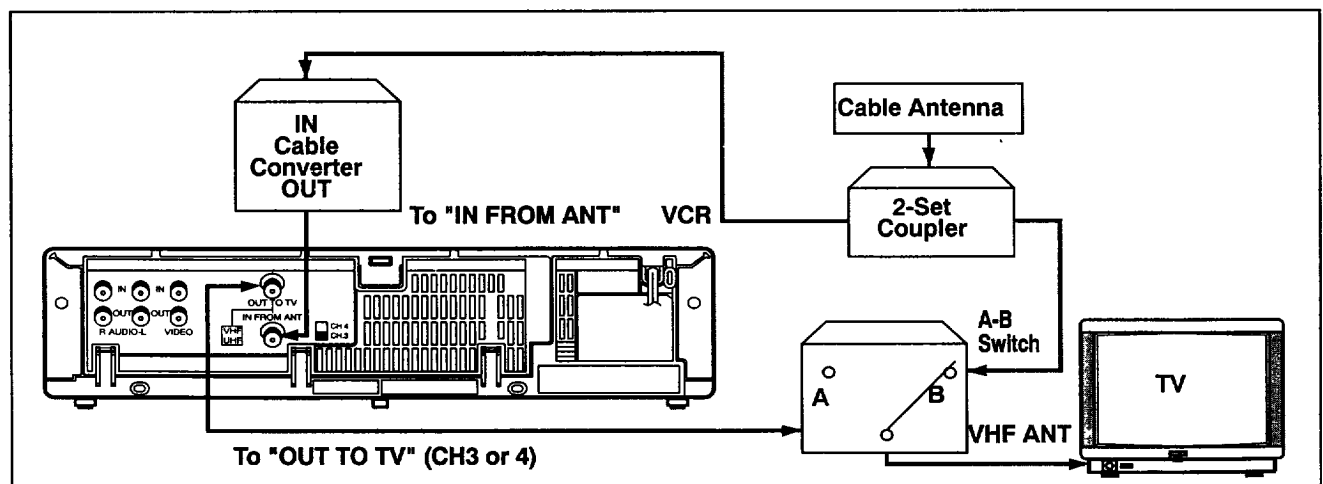


This hook-up permits the recording of cable channels except for scrambled channels. At the same time, you may watch any cable channel selected by the cable converter (with A-B Switch in B position).

To watch the playback picture from the VCR, set the A-B Switch to the A position.

If you connect your VCR like this, set the A-B switch to the A position for VCR Plus+ programming.

Diagram No. 2



This hook-up permits the recording of any channel (including scrambled premium channels).

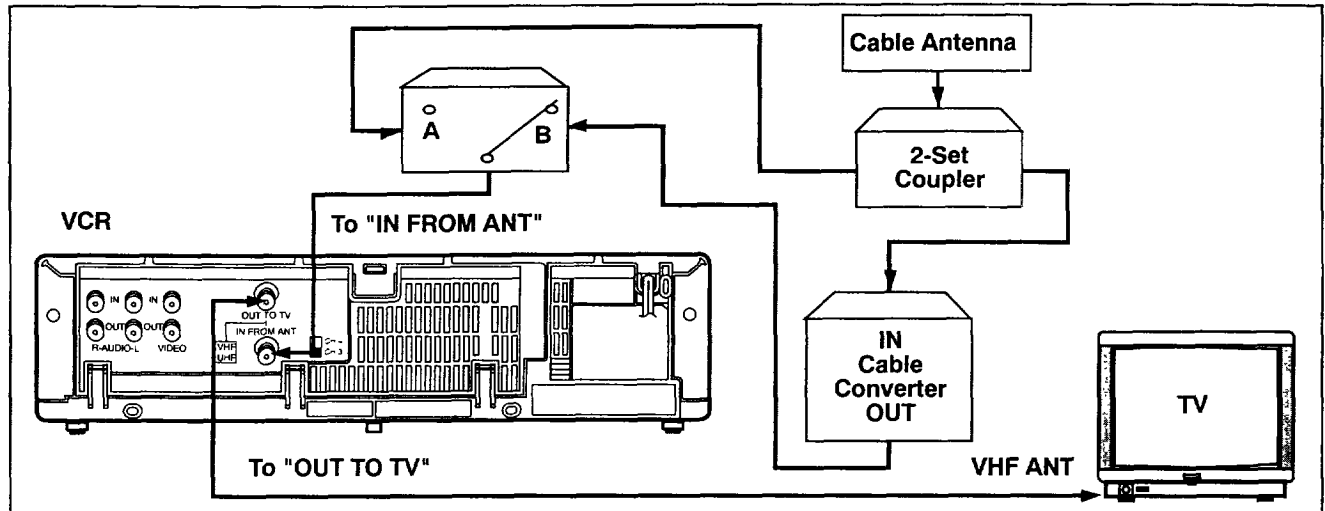
At the same time, you may view any channel except those that are scrambled. To view scrambled channels, put the A-B Switch in the A position. (In this position, you cannot watch one channel and record another.) To use this hook-up, you should have a cable compatible television receiver.

If you connect your VCR like this, set the A-B switch to the A position for VCR Plus+ programming.

NOTES:

1. The 2-Set Coupler and the A-B Switch are not supplied and should be purchased locally. The cable converter is normally supplied by the cable company.
2. There are other possible connections than shown here. Their use depends upon the type of cable system you have and on the type of equipment you wish to connect. Please consult with your local Sears Store or Service Department.

Diagram No. 3



Use A position of A-B switch for watching and /or recording channels that do not require a cable converter box.

Use B position of A-B switch for watching and/or recording channels that require a cable converter box.

ON SCREEN DISPLAY

Set TV to channel 3 or 4 to match OUTPUT CHANNEL SET on back of VCR.

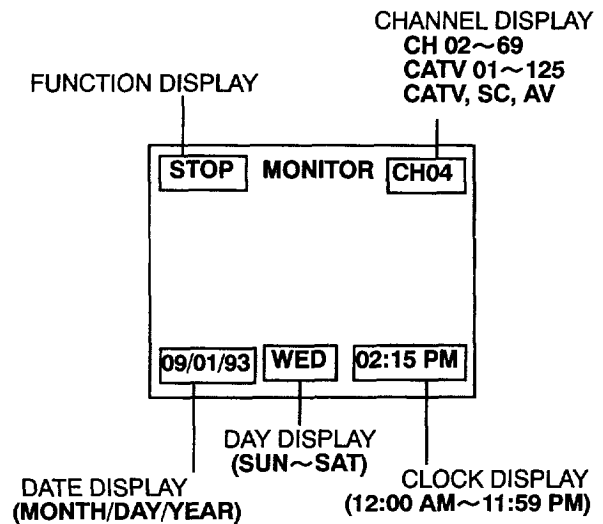
ON SCREEN FUNCTION DISPLAYS

Function of the "DISPLAY" button is, when pressed, to display the current time on the TV screen, along with the operation mode, the tape counter, the counter memory and channel number. The on screen overlays will appear momentarily as a clear indication that a main function or a channel has been changed with the remote control or at the VCR.

Whenever a function button (Stop, FF, etc.) is pressed, or when you change channels, a 4 second OSD appears. The function name and the channel number (if tuned) are displayed as a overlay for 2 seconds.

NOTE: The on-screen display will not be recorded.

Pressing "DISPLAY" button changes the TV screen in the following sequence.



Press once

Press twice

Press three times

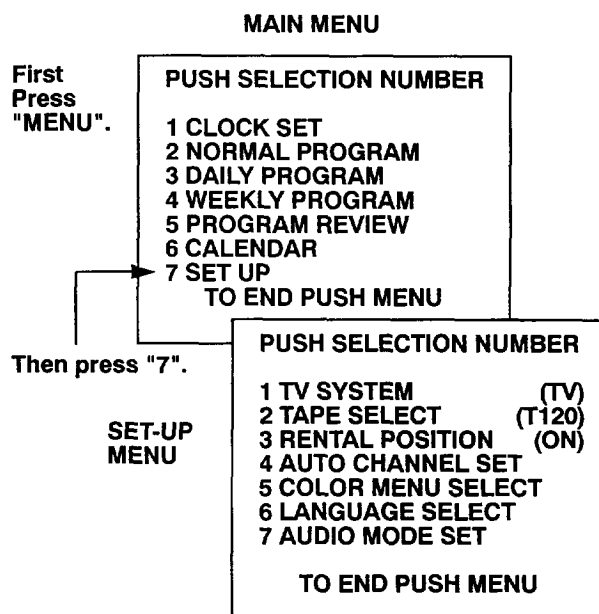
ON SCREEN MENU FEATURES

You only need to press the MENU button on the remote control. Each number buttons are indicated next to the feature displayed on the OSD menu. When you select a feature turn to the section in this manual and read the full description accompanying the instruction there.

SET UP MENU DISPLAY

Your VCR allows remote control adjustment of several additional feature options. You can use the SET UP menus to select the functions that best fit your personal needs.

- To display this menu, press MENU then press "7" on the remote control.



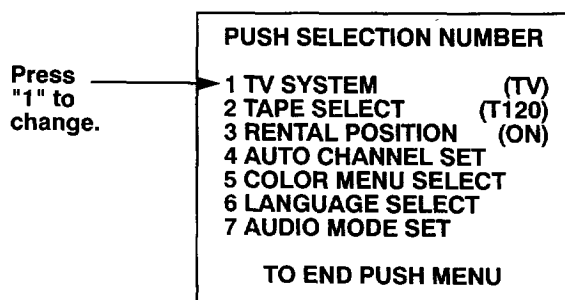
TV SYSTEM DISPLAY

The TV SYSTEM feature is used for manually setting the video recorder tuner to match your antenna system.

Broadcast band (TV): Select TV if your antenna system provides only UHF and VHF channels.

Regular cable band (CATV): Select CATV if your antenna system is a cable TV line with or without a cable converter/decoder box. Check with your cable supplier to determine your type of system.

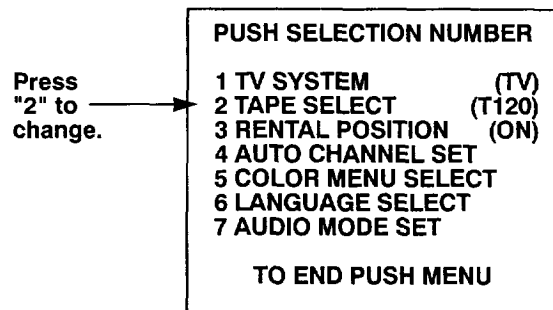
- To set the TV SYSTEM to TV or CATV, press "1" on the remote control in the SET UP menu display.



TAPE SELECT DISPLAY

To correctly calculate the time remaining on the cassette tape in the VCR, the TAPE SELECT display must be set for the type of tape you are using (either T-120 or T-140, T-160).

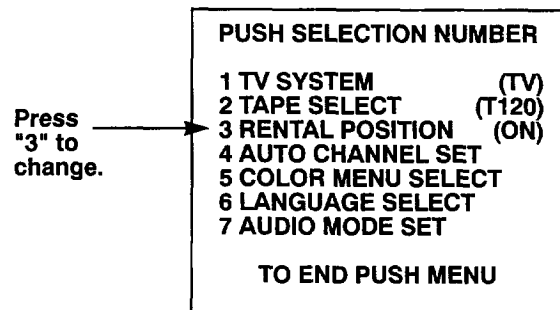
- Press "2" when the SET UP menu is displayed switches this display (T-120) to (T-140, T-160) or vice versa.



RENTAL POSITION DISPLAY

Set to ON position when playing back rental tapes. In the ON position the details of images will be better defined thanks to the vertical enhancer.

- Press "3" when the SET UP menu is displayed switches this display (ON) to (OFF) or vice versa.



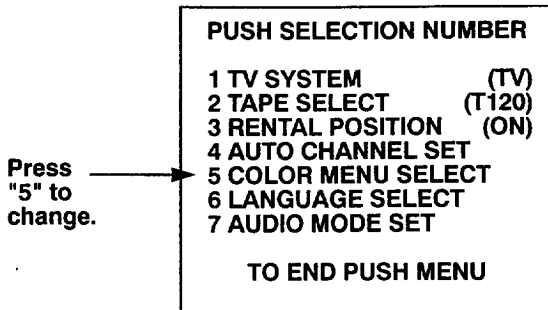
AUTO CHANNEL SET DISPLAY

See the "CHANNEL PRESETTING". (Described on page 13.)

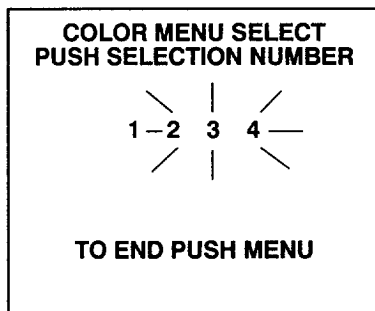
COLOR MENU SELECT DISPLAY

The on screen display color of this VCR can be changed between 4 color.

- Press "5" when the SET UP menu is displayed.



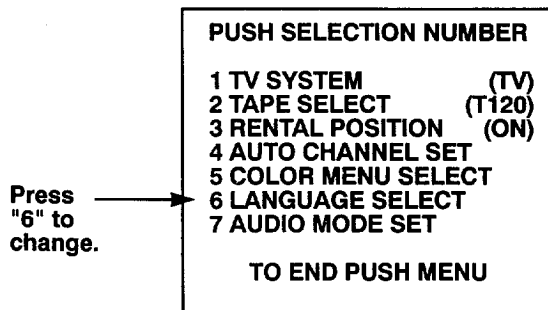
- Press a digit from "1" to "4" on the remote control to select the desired color (1=blue, 2=green, 3=pink, 4=orange).



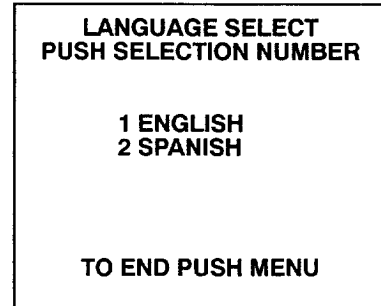
LANGUAGE SELECT DISPLAY

The on screen programming of this VCR can be display in either English or Spanish.

- Press "6" when the SET UP menu is displayed.



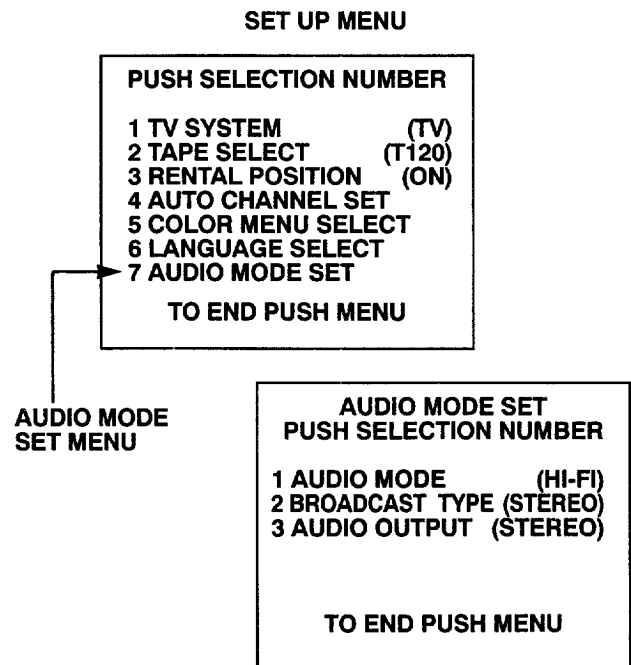
- Press "1" for ENGLISH or "2" for SPANISH.



AUDIO MODE SET DISPLAY

Your VCR allows remote control adjustment of audio mode set on screen feature.

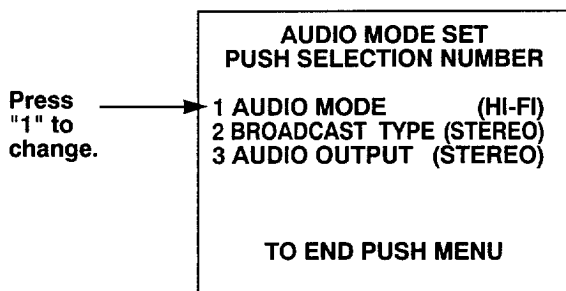
- Press "7" when the SET UP menu is displayed.



AUDIO MODE DISPLAY

The VCR has two separate audio recording systems the high quality "VHS Hi-Fi" system and standard "NORMAL" system. The same audio is recorded on both systems. The "VHS Hi-Fi" system records on separate (left and right) channels, and the "NORMAL" system records monaural sound. The normal track is always recorded so the cassette can be played on the VCR that does not have "VHS Hi-Fi".

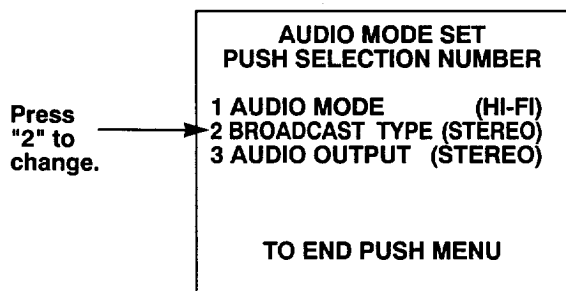
- Press "1" when the AUDIO MODE SET menu is displayed switches the AUDIO MODE display between Hi-Fi and NORMAL.



BROADCAST TYPE DISPLAY (STEREO/MONO/SAP)

Multichannel Television Sound (MTS) carries stereo and/or Second Audio Program (SAP) bilingual signals. Set this display to the desired position when both MTS indicators (Stereo and SAP) are lit. When only one for the MTS indicators is lit, the VCR automatically selects the corresponding receiving mode (Stereo or SAP) regardless of display position.

- Press "2" when the AUDIO MODE SET menu is displayed switches the BROADCAST TYPE display between STEREO, MONO, and SAP.



For normal operation, the display should be in the STEREO position. The VCR will then record a STEREO program when available, and record a mono program IF NOT IN STEREO.

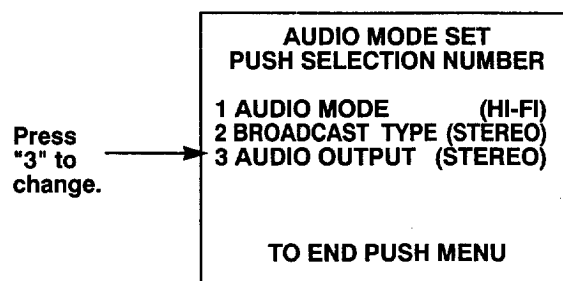
BROADCAST TYPE	POSITION OF SWITCH	RECORDED/AUDIO OUTPUT		RF OUTPUT (CH3 or CH4)
		L	R	
MONO	MONO	MONO	MONO	MONO
	STEREO	MONO	MONO	MONO
	SAP	MONO	MONO	MONO
STEREO	MONO	MONO	MONO	MONO
	STEREO	L	R	MONO
	SAP	L	R	MONO
MONO+SAP	MONO	MONO	MONO	MONO
	STEREO	MONO	MONO	MONO
	SAP	SAP	SAP	SAP
STEREO+SAP	MONO	MONO	MONO	MONO
	STEREO	L	R	MONO
	SAP	SAP	SAP	SAP

NOTE: For weak STEREO and/or SAP broadcasting, changing the display to mono may give clearer sound.

AUDIO OUTPUT DISPLAY (STEREO/LEFT/RIGHT)

Used during playback when AUDIO MODE display (Hi-Fi/MONO) is in Hi-Fi position for selecting the audio output signals from the AUDIO OUT terminals (L ch and R ch), and RF OUT.

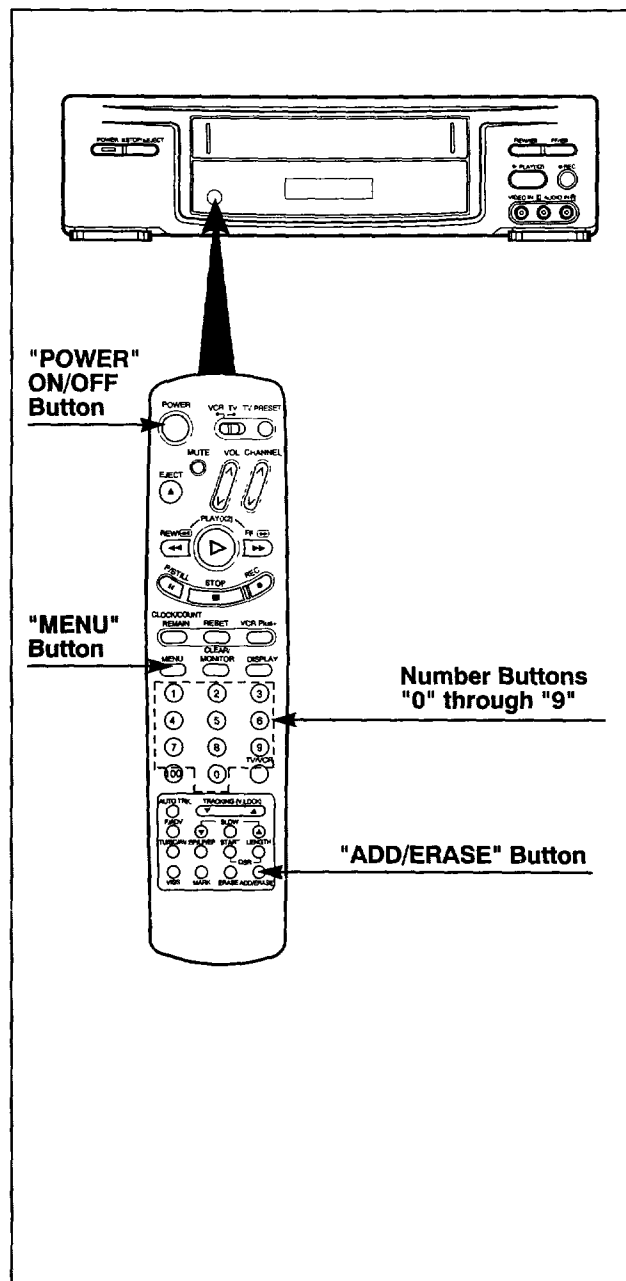
- Press "3" when the AUDIO MODE SET menu is displayed switches the AUDIO OUTPUT display between STEREO, LEFT and RIGHT



SELECTOR position	AUDIO OUT terminals		RF OUT
	L ch	R ch	
L	L	L	L
STEREO	L	R	MONO
R	R	R	R

CHANNEL PRESETTING (By using the Remote Control)

This VCR is equipped with a frequency synthesized tuner capable of receiving up to 181 channels (VHF channels 2~13, UHF channels 14~69 and CATV channels 1~125), but channel presetting is required as described below after "ANTENNA/VCR CONNECTIONS" and "VCR/TV CONNECTIONS" are made as described on pages 6 and 7.



AUTO CHANNEL SETTING

The automatic programming feature makes it easy and convenient to program the TV station into the tuner's memory.

Automatic programming is usually a 'one-time' procedure, but you will need to repeat it if you move to a location that has different channels, or if the power is interrupted.

- Turn on the power of both VCR and TV.
- Be sure that the TV is set to the video channel (channel 3 or 4).
- Aim the remote control at the receiver on the front panel of the VCR.

ON THE REMOTE CONTROL

1. Press the MENU button until the "MENU", as illustrated, appears on the TV screen.

PUSH SELECTION NUMBER

1 CLOCK SET
 2 NORMAL PROGRAM
 3 DAILY PROGRAM
 4 WEEKLY PROGRAM
 5 PROGRAM REVIEW
 6 CALENDAR
 7 SET UP

TO END PUSH MENU

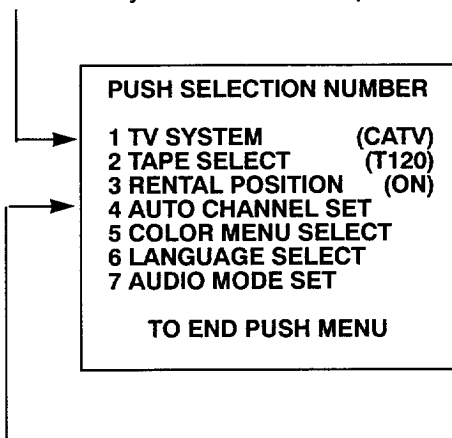
2. Press "7" button to select the SET-UP menu. The SET-UP menu will appear.

PUSH SELECTION NUMBER

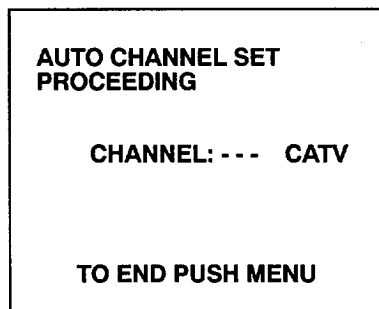
1 TV SYSTEM (TV)
 2 TAPE SELECT (T120)
 3 RENTAL POSITION (ON)
 4 AUTO CHANNEL SET
 5 COLOR MENU SELECT
 6 LANGUAGE SELECT
 7 AUDIO MODE SET

TO END PUSH MENU

3. Press "1" button to select "TV" or "CATV". If your VCR is connected to a home antenna system, select "TV", select "CATV" when your VCR is connected to a cable antenna. Switching is performed between "TV" and "CATV" on the TV screen every time "1" button is pressed.



4. Press "4" button for channel setting. The tuner will automatically cycle through all available channels in the area and place them in the tuner's memory. After auto-presetting is completed, the lowest active channel number stays on.



5. Press the MENU button to return to the TV screen.

NOTE: To check the presetting, first set the TV to the VCR channel and press "CHANNEL" select button (UP or DOWN) to cycle to VCR tuner through all the channels you have stored in memory.

TO ADD OR ERASE CHANNELS FROM CHANNEL MEMORY

This feature allows you to manually add or remove channels from the channel scan. To do so, please refer to the procedure below:

TO ERASE A CHANNEL(S)

1. Turn the TV and tune to channel 3 or 4.
2. Press the POWER ON/OFF button to turn the VCR on. The " VCR " indicator will light on the display panel of the VCR.
3. Press "CHANNEL" select button (^ or v) for an unwanted channel.
4. Press the ADD/ERASE button for eliminating the channel, and the channel display flashes on the VCR front panel display.
5. Repeat steps 3 and 4 until all unwanted channels have been eliminated.

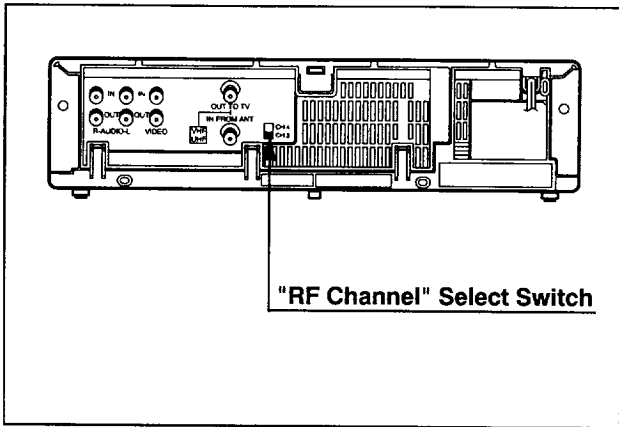
NOTE: This VCR is equipped with AFT (Automatic Fine Tuning). But it does not have an ON/OFF switch.

TO ADD A CHANNEL(S)

6. Press channel select buttons to select the desired channel (by using the "0" through "9" and "100" button).
7. Press "ADD/ERASE" button to store the channel, and the channel display flashing will stop.
8. Repeat steps 6 and 7 for other desired channels in your area.
Now both standard TV channels and CATV channels has been preset.

SET YOUR TELEVISION TO THE VCR CHANNEL

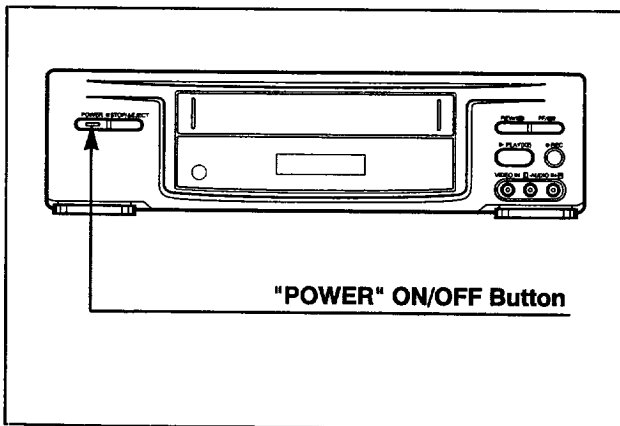
1. Set your TV to Channel 3 unless Channel 3 is one of the TV stations in your area. If Channel 3 is used in your area, set your TV to Channel 4. The RF Channel Select Switch is located on the Rear Control Panel. Slide the switch of CH3 or CH4 to match the channel selector on your TV. This is the VCR channel on your television set. Your television receiver must be tuned to this channel any time a video cassette is played back on the VCR.



2. Plug the VCR power cord into a 120V electrical outlet and press "POWER" ON/OFF button on, and the "POWER" and " **vcr** " lights will come on. The clock will show "--:--:--".

(See "Clock Setting" Instructions on page 26.)

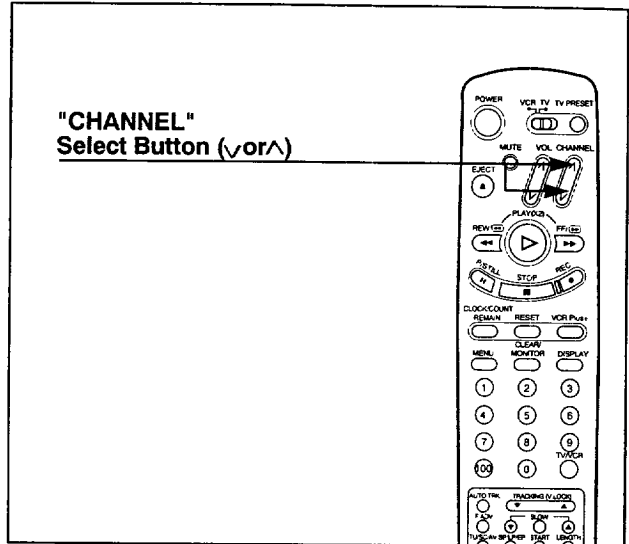
NOTE: When the power is turned on, the "VCR/TV" selector is switched to the VCR mode automatically.



3. Select an active TV channel by pressing the Channel Select button (\wedge or \vee) on the remote control aiming at the front panel of the VCR. The picture from that channel should now be displayed on your television.

NOTES:

- If the range is short, try new batteries.
- An object between the VCR and remote control may block the invisible light beam and operation will not be possible.



4. Fine tune the television for best picture.

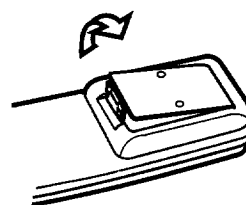
NOTE: If both Channel 3 and Channel 4 are in use in your area, select the one which does not interfere with the playback picture.

SPECIAL NOTE:

Certain television receivers with "ELECTRONIC TUNERS" may require special procedures to tune Channel 3 or 4. These receivers may not tune to the VCR channel (3 or 4) because there isn't an active TV station on these channels.

In these cases, press VCR "POWER" ON/OFF button on. Make sure that the " **vcr** " indication in the display is on. If the indication is off, press "VCR/TV" selector on the remote control to turn the " **vcr** " indication on. Tune VCR tuner to an active channel. The television receiver will now tune in to the VCR channel (Channel 3 or 4). For more detailed instructions, consult your TV owners manual.

HOW TO INSTALL THE BATTERIES IN THE REMOTE CONTROL



(Remove the protect compartment cover completely.)

NOTES:

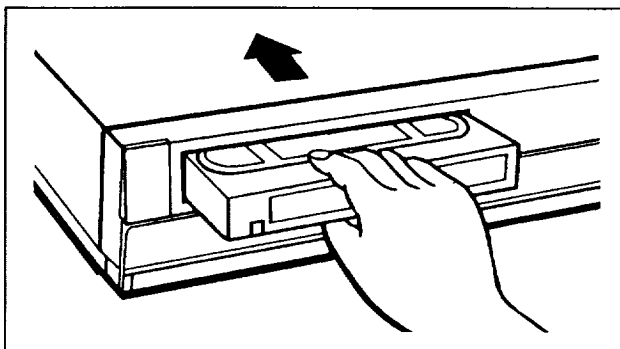
1. Be sure to install two "AAA" size batteries (not supplied) before use.
2. Be aware of the polarity.

MAKING A SAMPLE RECORDING

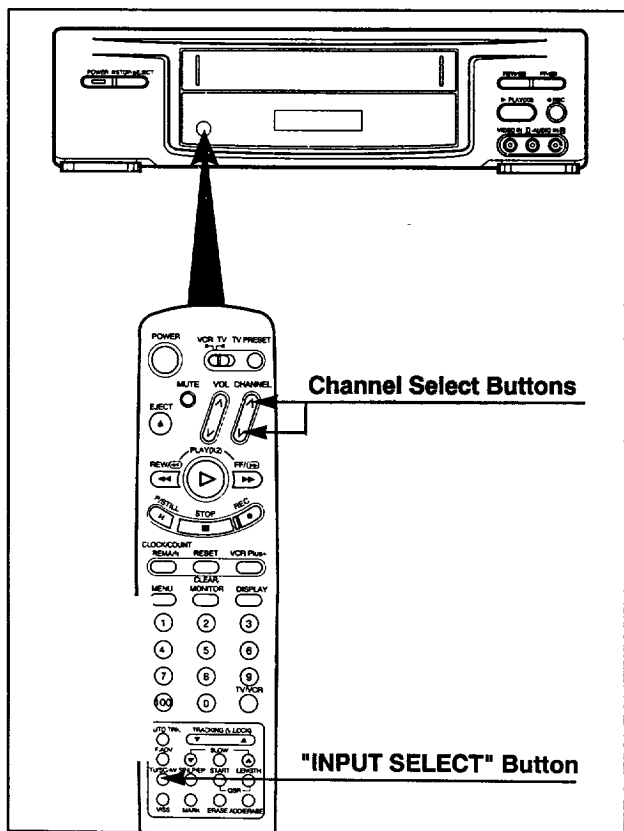
1. Insert the Cassette so the transparent window is up and the arrow toward the Cassette Loading Door until the VCR mechanism starts to pull the cassette into the opening.

NOTES:

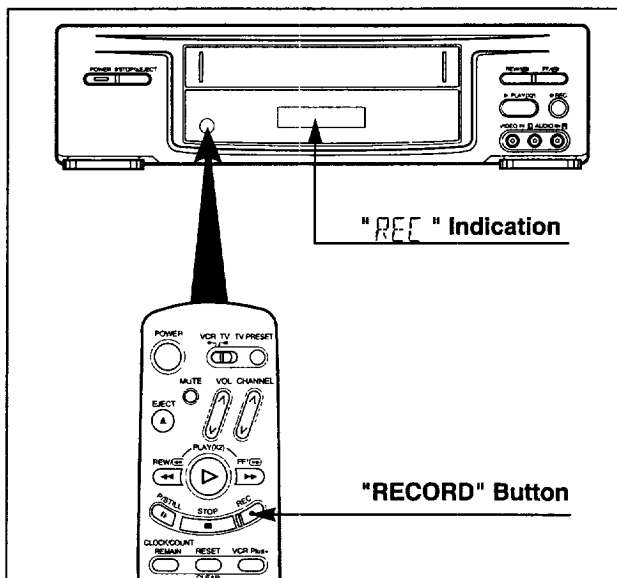
1. When the cassette is loaded, the power is turned on automatically.
2. Be sure to check that the erase prevention tab is not missing. If it is removed, the VCR goes into playback mode automatically.



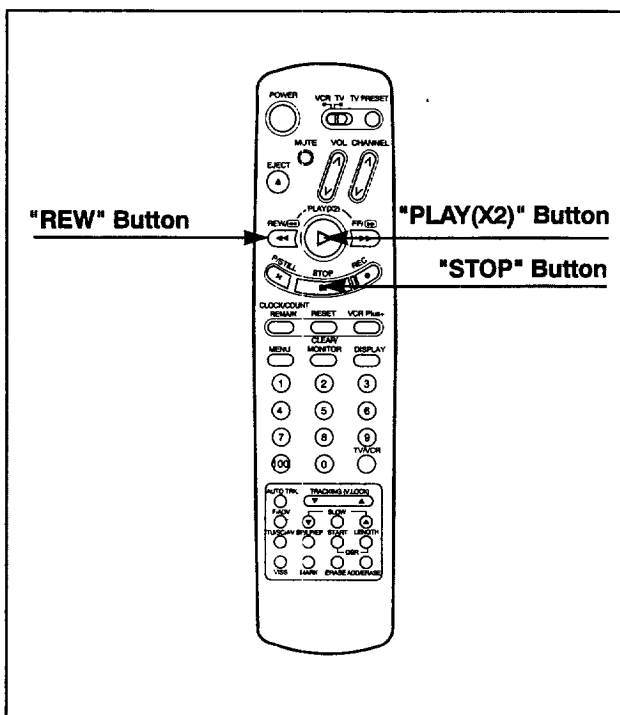
2. Press "INPUT SELECT" button on the remote control so as to select Channel Number Display (without "sc" indication) on the display.
3. Turn on TV and tune to the VCR Channel (Channel 3 or 4).
4. Press Channel Select button (∨ or ∧) on the remote control to select the channel to be recorded.



5. Now, press "RECORD" and "PLAY(x2)" buttons on the VCR or one "RECORD" button on the remote control. The "REC" indication appears on the Display and you are now recording the program you see on your TV screen.



6. Record for a few minutes. Press "STOP" button on the VCR or on the remote control and then "REW" button. The tape will be rewound to the beginning.
7. Press "PLAY(x2)" button on the VCR or remote control. The program you just recorded will be shown.
8. After playing, press "STOP" button on the VCR or on the remote control.



IDENTIFICATION AND OPERATION OF CONTROLS

Now that you have experienced the simple operation of your VCR, let's get familiar with the complete operation of your VCR and all its capabilities.

REAR

AUDIO IN (R and L) and VIDEO IN

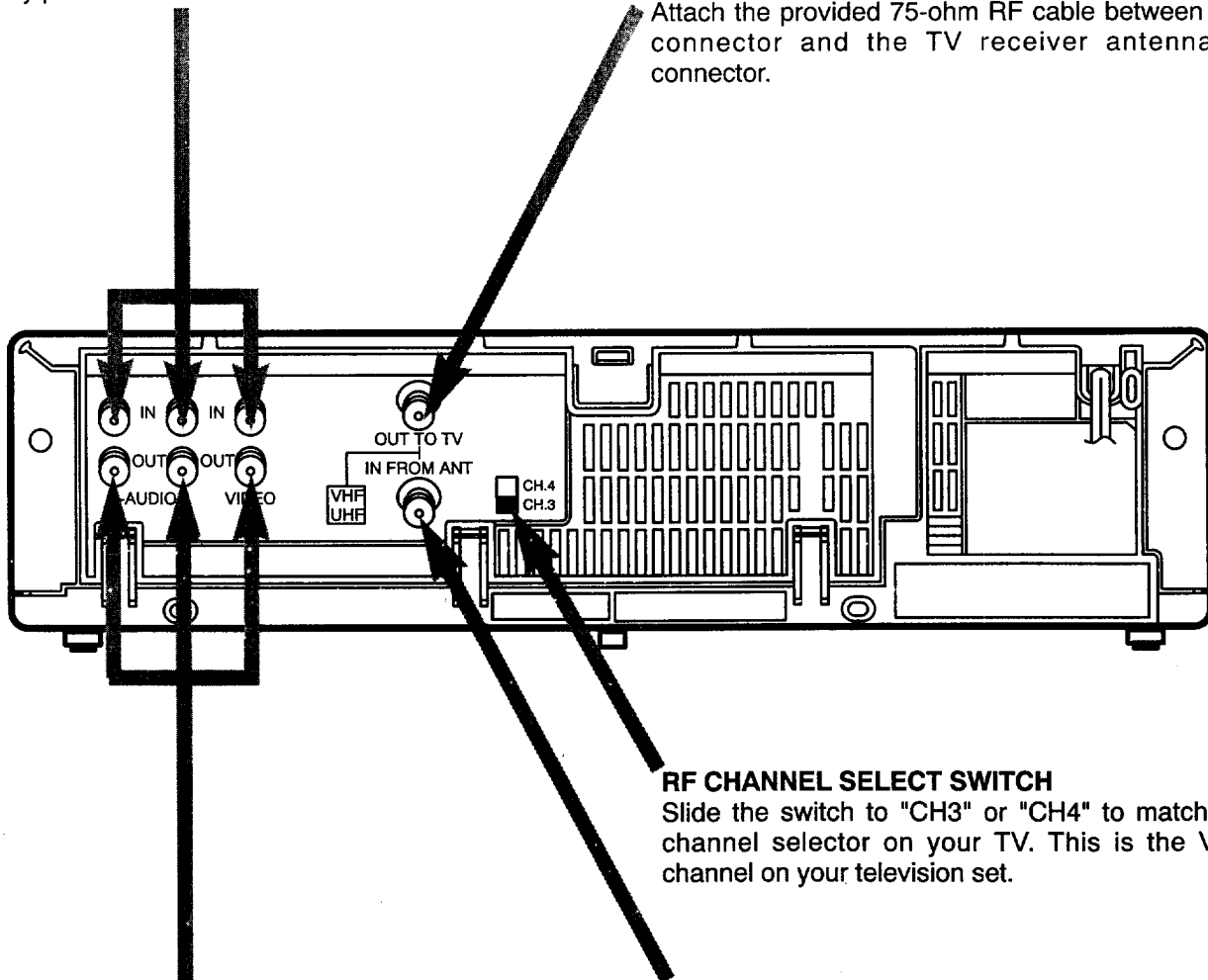
These jacks are used to receive signals from another device (such as a camcorder or another VCR).

To see and hear the signal from these jacks, press the "INPUT SELECT" button to light the "A/V" indicator in the VCR's display panel.

To record audio from these jacks and video from the VCR's tuner, press the "INPUT SELECT" button to light the "sc" indicator in the VCR's display panel.

VHF/UHF/CATV ANTENNA OUT CONNECTOR

Attach the provided 75-ohm RF cable between this connector and the TV receiver antenna in connector.



AUDIO OUT (R and L) and VIDEO OUT

These jacks are used to send signals from the VCR to another device.

RF CHANNEL SELECT SWITCH

Slide the switch to "CH3" or "CH4" to match the channel selector on your TV. This is the VCR channel on your television set.

VHF/UHF/CATV ANTENNA IN CONNECTOR

Attach your antenna or Cable TV line to this connector.

FRONT

"POWER" ON/OFF BUTTON

Press to turn the power on. The indicator will illuminate. To turn the unit off, press the button again. If a timer reservation has been made when the power is switched OFF, the VCR will go into a timer recording standby status. (The "⌚" indicators will go ON.)

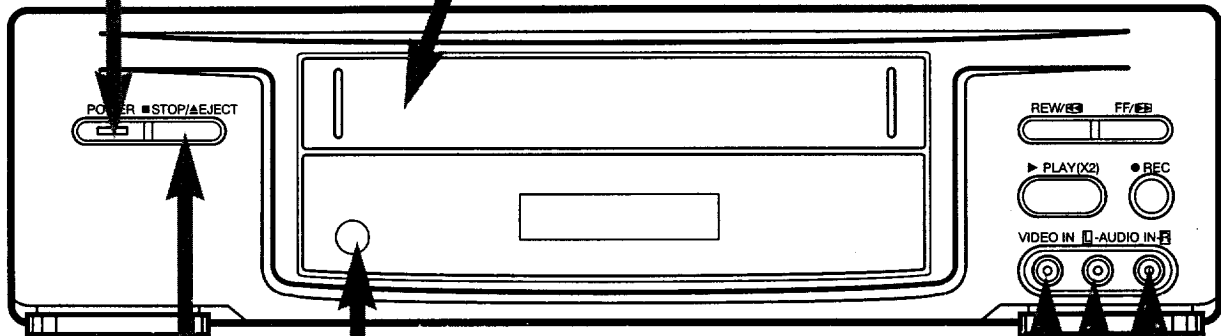
CASSETTE LOADING DOOR

When a cassette is inserted, loading will be completed automatically and Cassette indicator (●●●) will light.

NOTES:

- 1. Power is turned on automatically when the cassette is loaded.
- 2. When a cassette with erase prevention tab removed is inserted, playback will start automatically. ("AUTO PLAYBACK FUNCTION")

CAUTION: Do not put your finger or other objects behind the Cassette Door because of the risk of injury. Particulary, keep small children away from the unit.



REMOTE CONTROL RECEIVER
This sensor window receives the signals from the wireless remote control.

VIDEO IN JACK
Connect CAMCORDER or other video output to this jack for dubbing or editing functions.

STOP/EJECT BUTTON

If this button is pressed, while the set is operating the running of tape stops and all operating modes are cancelled (except for timer recording). Press this button to eject a cassette in the stop mode.

NOTE: Power may be on or off when removing the cassette.

AUDIO IN JACKS (L / R)

Connect CAMCORDER or other audio output to this jack for dubbing or editing functions.

**"REW" REWIND/
"VISUAL SEARCH" REVERSE SEARCH**

Press "REW" button during Stop or Fast forward mode and fast rewinding starts.

"REW" indication appears on the Display.

Press the button during playback of tape. The tape is played back in the rewind direction approximately 15 times faster than the normal speed (EP recorded tape), 9 times faster than the normal speed (LP recorded tape) or 5 times faster than the normal speed (SP recorded tape) to confirm the recorded contents.

Press "PLAY (x2)" button to return to normal playback mode or press "STOP" button to stop tape movement. Sound is muted during "VISUAL SEARCH" mode.

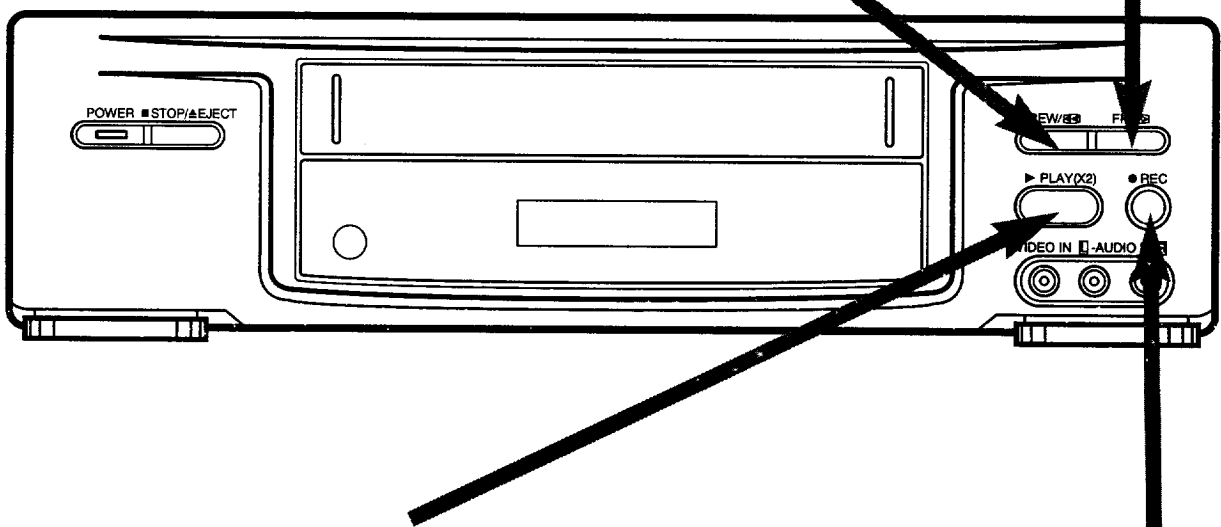
**"FF" FAST FORWARD/
"VISUAL SEARCH" FORWARD SEARCH**

Press "FF" button during Stop or Rewind mode, and fast forwarding starts.

"FF" indication appears on the Display.

Press the button during playback of tape. The tape is played back in the forward direction approximately 15 times faster than the normal speed (EP recorded tape), 9 times faster than the normal speed (LP recorded tape) or 5 times faster than the normal speed (SP recorded tape) to confirm the recorded content.

Press "PLAY (x2)" button to return to normal playback mode or press "STOP" button to stop tape movement. Sound is muted during "VISUAL SEARCH" mode.



"PLAY (x2)" BUTTON

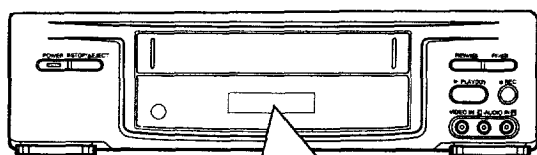
Press the "PLAY (x2)" button. The "PLAY" indication appears on the Display and playback starts. Be sure the TV set's channel selector is tuned to Channel 3 or 4 depending on the VCR RF Channel Select Switch setting of VCR.

Press "PLAY (x2)" button during playback of tape and a double speed playback picture of the normal speed can be seen. Press "PLAY (x2)" button to return to normal playback mode or press "STOP" button to stop tape movement. Sound is muted during the double speed playback mode.

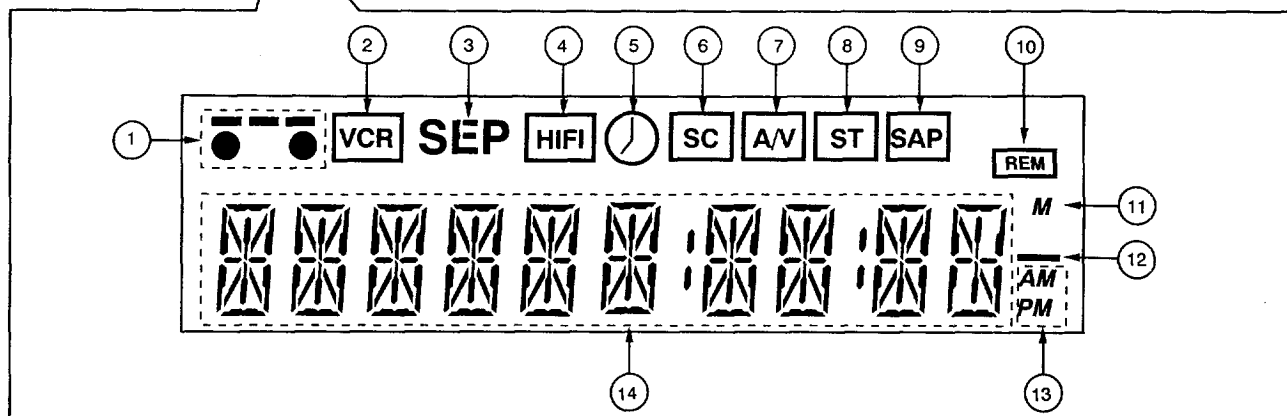
"RECORD" BUTTON

Press both the RECORD and PLAY (x2) buttons at the same time to start recording. "REC" appears on the Display.

INDICATORS OF VCR DISPLAY



NOTE: All indicators will not light up at one time. The indicator panel brightness is increased when the VCR power is ON and lowered when the VCR power is OFF.



① CASSETTE IN/TAPE RUN INDICATORS

—Cassette-In Indicator

Lights to indicate a cassette is loaded.

—Tape Run Indicators

These indicators indicate the direction and speed of tape travel.

- All indicators lit (- - -)
... The VCR is in the stop mode.
- Lit indicators move to the right (- - -)
...The tape is advancing in the take-up direction.
- Lit indicators move to the left (- - -)
...The tape is advancing in the rewind direction.

② " VCR " INDICATOR

Illuminates when the "VCR" is selected by "VCR/TV" selector. " VCR " indicator is off when "TV" is selected.

③ TAPE SPEED INDICATORS ("SP", "LP" and "EP")

Indicates the speed selected by the "TAPE SPEED" button.

④ HIFI INDICATOR

This indicator lights when the Hi-Fi circuit detects Hi-Fi signals in playback mode, and the AUDIO MODE SET feature is set to Hi-Fi.

⑤ "TIMER" INDICATOR

Indicates the VCR is in the timer recording stand-by mode.

⑥ SIMULCAST (SC) INDICATOR

Press the "INPUT SELECT" button to turn the " SC " indicator on when you want to record audio from the AUDIO IN jacks and video from the VCR's built-in tuner.

⑦ AUDIO/VIDEO (A/V) INDICATOR

Press the "INPUT SELECT" button to turn the " A/V " indicator on when you want to record from the VIDEO IN and AUDIO IN jacks on the VCR.

⑧ STEREO (ST) INDICATOR

This indicator lights when the station you are tuned to is broadcasting stereo. The AUDIO MODE SET feature must be set to STEREO.

⑨ SAP INDICATOR

This indicator lights when the station you are tuned to is broadcasting SAP, and the AUDIO MODE SET feature is set to SAP.

⑩ REMAINING TAPE TIME INDICATOR

" REM " lights on the display along with the remaining tape time in hour and minutes after the "CLOCK/COUNT/REMAIN" button is pressed.

⑪ MEMORY INDICATOR

Indicates when the "CLOCK/COUNT/REMAIN" button is pressed with counter memory mode.

⑫ MINUS INDICATOR (-)

This symbol is minus sign of the COUNT indicator.

⑬ AM/PM INDICATORS

⑭ FUNCTION INDICATORS

Shows the operation mode of VCR (CLOCK, CHANNEL, PLAY, STILL, REC, QSR, EJECT, PAUSE, CUE, REV, STOP, AV, REW, FF, etc.)

UNIFIED REMOTE CONTROL

The remote control is used for most of the operations and features of the VCR. Before proceeding, install batteries into the remote and get familiar with the buttons on the remote. The remote control provided with the VCR may also be used to operate the TV.

Aim the remote control at the receiver on the front panel of the VCR.

NOTES:

1. If the range is short, try new batteries.
2. An object between the VCR and remote control may block the invisible light beam and operation will not be possible.

SIGNAL TRANSMISSION WINDOW

Transmits an invisible light beam from the Remote Control to the VCR

"POWER" ON/OFF BUTTON

Press to turn VCR on. Press again to turn VCR off.

CHANNEL SELECT BUTTONS (∨ or ∧)

You can scan up or down through all the memorized channels using the Channel Select button (∨ or ∧).

NORMAL OPERATION BUTTONS

These buttons (except for "RECORD" button) function same as the buttons on the front of your VCR.

NOTE: The one "RECORD" button must be pressed to start recording.

● **"PAUSE/STILL" BUTTON**

Used in the record or play mode to stop the tape movement. Press it to cut out station breaks or unwanted program material. The "RECP" appears on the Display during the RECORD/PAUSE mode. Press this button again to resume recording. Pressing this button during the PLAY mode will cause the tape to stop and "FREEZE" picture.

" STILL " appears on the Display during the PLAY/STILL mode. Press the "PLAY (x2)" or PAUSE/STILL button to resume normal playback.

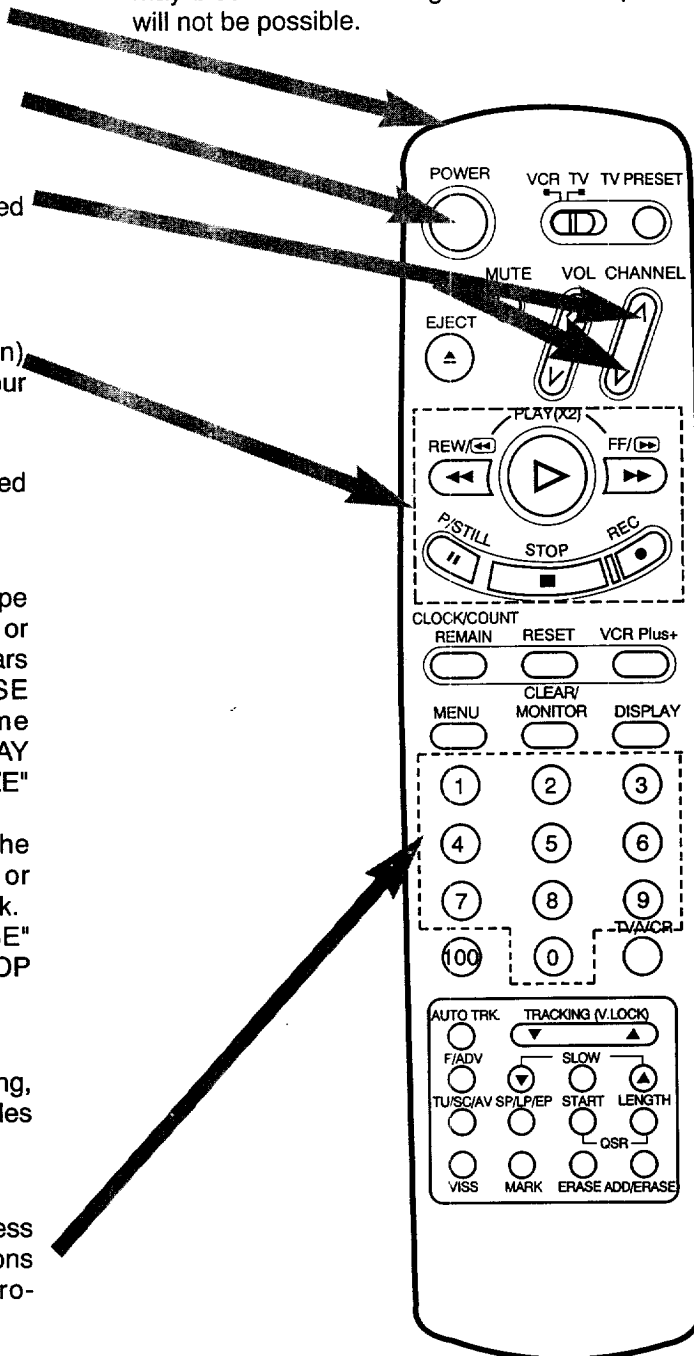
NOTE:After 5 minutes of continuous "PAUSE" (record mode), the VCR will go into the STOP mode.

● **"STOP" BUTTON**

If this button is pressed while the set is operating, the running of tape stops and all operating modes are cancelled.

NUMBER BUTTONS "0" THROUGH "9"

Select any channel by pressing two buttons. (Press "0" and then "8" for channel 8.) The number buttons are also used for setting the On Screen Programming.



VCR/TV MODE SELECT SWITCH

Set to "VCR" position to operate the VCR.
 Set to "TV" position to operate the TV.
 For example, when this switch is set to "VCR" position and you press the POWER button, you can turn the VCR power on and off.
 When this switch is set to "TV" position and you press the POWER button, you can turn the TV power on and off.

TV PRESET BUTTON

To program the remote control to operate a TV, set the VCR/TV mode select switch to the "TV" position. Press the TV PRESET button and hold it down. While holding down the TV PRESET button, press one of the NUMBER buttons (1 thru 6) depending upon the maker of TV as shown below. Then release both buttons.

- Number button 1: Sanyo TV
 2: Goldstar TV
 3: Sony TV
 4: Magnavox TV
 5: RCA TV
 6: Zenith TV

NOTES:

- TV/VCR common keys: 0 ~ 9, channel up/down, power on/off, 100.
 - necessary to select TV or VCR mode with VCR/TV selector.
- Keys only for TV: mute, volume up/down.
 - not necessary to select the mode.
- For RCA TV's only, use the 100 button for power off.

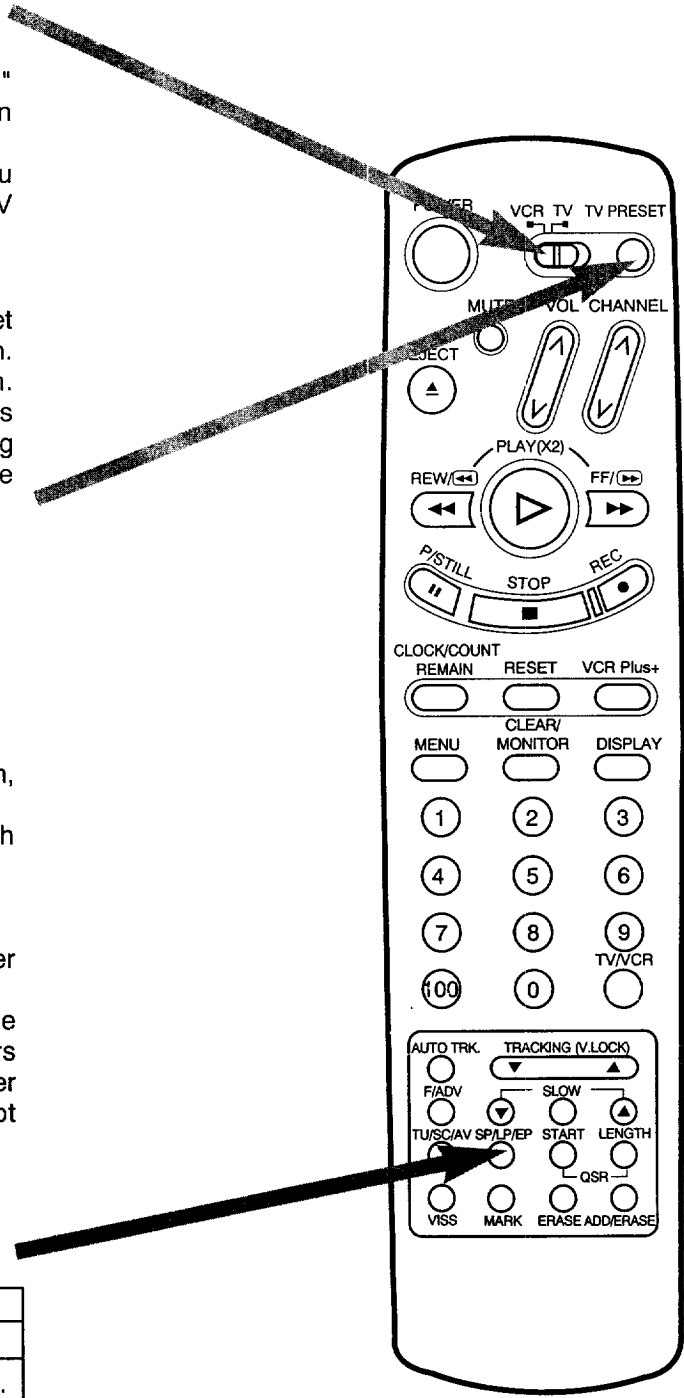
The remote control operates most of the name brand TV's above. But if the TV manufacturers change their TV code system and or control carrier frequencies, the unified remote control may not work.

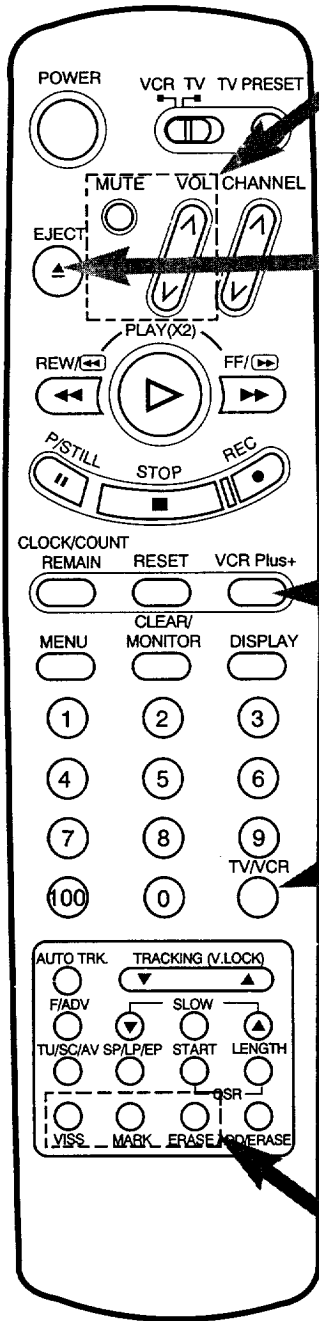
"TAPE SPEED" BUTTON

Changes tape speed in the recording mode.
 Record and playback time is as follows:

"TAPE SPEED" Indicator	Video Cassette		
	T-60	T-120	T-160
SP	60 MIN.	120 MIN.	160 MIN.
LP	120 MIN.	240 MIN.	320 MIN.
EP	180 MIN.	360 MIN.	480 MIN.

In the playback mode, tape speed is automatically selected to match the recording speed.





TV CONTROL BUTTONS

These buttons control the TV volume up/down and muting.

● **MUTE BUTTON**

To turn the sound off. Press again and the sound will return.

● **VOLUME BUTTONS (UP/DOWN)**

Press either VOLUME UP or DOWN button to change the sound level.

"EJECT" BUTTON

Press this button to eject a cassette which is loaded in the VCR.

NOTE: If this button is pressed, even when the VCR is turned off, the power will turn on automatically and the cassette will be ejected and then the power will be turned off automatically. (This automatic function eliminates the need for pressing "POWER" ON/OFF button.)

VCR Plus+ BUTTON

Press the VCR Plus+ button to display the program menu on the TV screen for the VCR Plus + programming.

"VCR/TV" SELECTOR

Selects the program for viewing on your TV. The "VCR" position (appears the " **VCR** " indication) supplies a signal to your TV on Channel 3 or 4 depending on the RF Channel Select Switch setting. With the PLAY (x2) button selected, the recorded tape program is supplied to the TV. With the RECORD and PLAY (x2) buttons on the VCR or one "RECORD" button on the remote control pressed, the TV will display the program as it is being recorded. The TV position (the " **VCR** " indication is off) is used for regular TV operation when the VCR is not being used. This position also allows you to record one channel while viewing another.

NOTES:

- When the power is turned on, the VCR/TV selector is switched to the VCR mode automatically.
- The VCR/TV selector is switched to the VCR mode when "PLAY (x2)" button is pressed.

VISS BUTTONS

- VISS**-Use to enter the VISS function mode.
- MARK**-To mark a VISS signal at the desired point on tape during recording or playback.
- ERASE**-To erase a previously recorded VISS signal.

QSR BUTTONS

Quick Set Recording (QSR) allows you to record one program for up to 9 hours without using the program timer.

—QSR LENGTH BUTTON

Used to select the length of the recording time.

—QSR START BUTTON

Used to select the QSR start time setting.

"100" BUTTON

Use to select TV channels with number 100 or above. Press "100", "2" and "3" in this order to select channel 123.

Press "100", "0" and "5" for channel 105.

"SLOW" BUTTONS

Press "SLOW" button during play mode and the tape is played back in the forward direction about 1/6 to 1/32 times slower than the normal speed (SP or EP recorded tape). When you press "SLOW ▼" (down) button, the speed becomes slower. When you press "SLOW ▲" (up) button, the speed becomes faster.

FRAME ADVANCE BUTTON

While viewing a still picture, press this button to advance a picture one frame at a time.

INPUT SELECT BUTTON (TU/SC/AV)

TUNER: (TU)

To record signals coming from the built-in tuner (Video and Audio).

SIMULCAST: (SC)

To record the video signals from the built-in tuner and the audio signals from the AUDIO IN terminals. Use this position when FM simulcast (TV+ FM) recording is desired.

AUDIO/VIDEO: (AV)

To record signals coming from the VIDEO IN and AUDIO IN terminals.

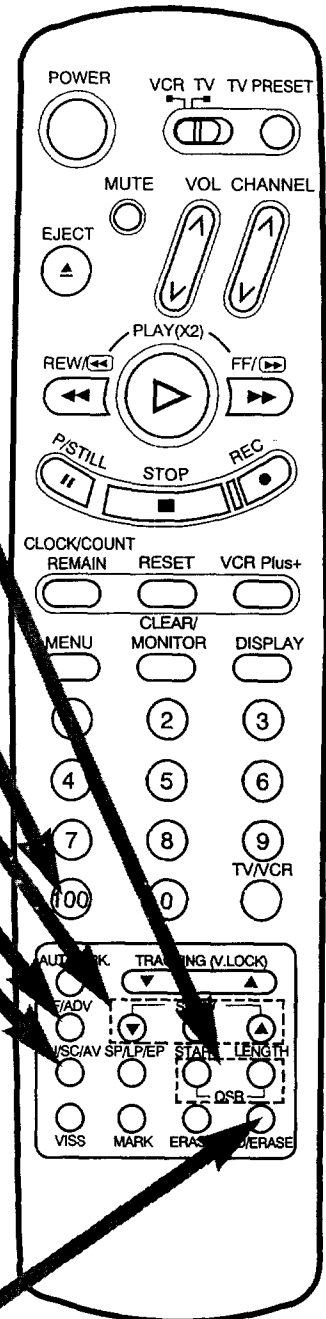
NOTE: This VCR can be used as an Audio deck when INPUT Select button is in AV position.

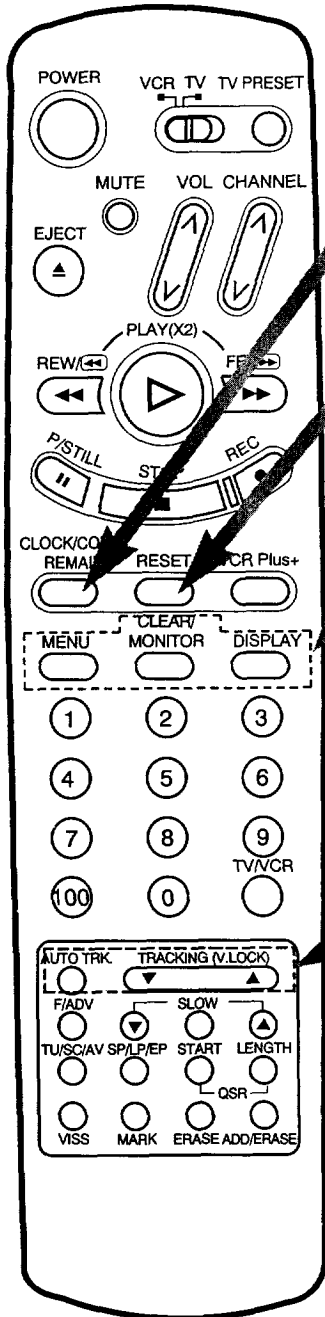
FOR RECORDING

Input Select Button Position	Input Signals		
	Video	normal audio (on mono audio track)	Hi-Fi Audio
TUNER	VCR TUNER	VCR TUNER	VCR TUNER
SIMULCAST	VCR TUNER	VCR TUNER	AUDIO/VIDEO
AUDIO/VIDEO	AUDIO/VIDEO	AUDIO/VIDEO	AUDIO/VIDEO

ADD/ERASE BUTTON

Used to add or erase a selected channel memory.





CLOCK/COUNT/REMAIN BUTTON

To switch the display between the counter, remaining tape time, and clock modes.

NOTE: To "CLOCK/COUNT/REMAIN" button does not work when the tape is not inserted.

COUNTER "RESET" BUTTON

The readout of the tape counter will return to "0:00:00" when this button is pressed.

OSD (On Screen Display) FUNCTION BUTTONS

MENU BUTTON

Used to enter the On-Screen Programming mode.

CLEAR/MONITOR BUTTON

CLEAR-Used to go backward and correct the programmed information.

MONITOR-Press MONITOR button to view TV program during playback. To return to normal play viewing, press MONITOR button once again. Tape continues in play mode during Monitoring.

DISPLAY BUTTON

Press to display the VCR operation mode, tape counter, channel number, date and clock. Press this button once again to remove the on-screen display. Press this button twice to remove the clock display (the display switches by pressing the "CLOCK/COUNT/REMAIN" button when tape is inserted).

TRACKING/V.LOCK BUTTONS

- **"AUTO" TRACKING:** When playback is started, the auto tracking function operates and adjusts tracking automatically so the picture is optimized. "AUTO TRK" flashes in the VCR display for several seconds and then changes to "PLAY" indication.

- **MANUAL "TRACKING"/V.LOCK CONTROLS ("▲" and "▼")**

- **"TRACKING":** If noise appears on the screen during playback, press "▼" or "▲" button until the noise on the screen is reduced or eliminated.

- **"V.LOCK":** In case of vertical jitter in still mode carefully adjust these controls for a stable picture.

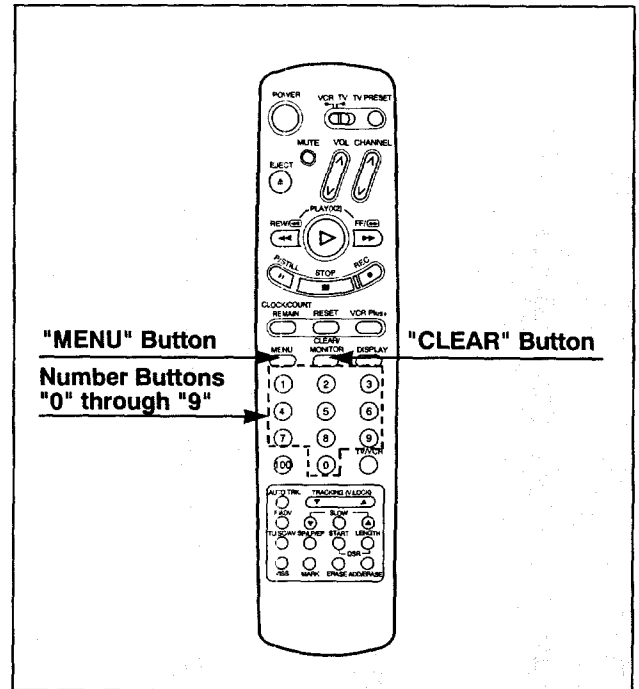
NOTES:

- Tracking is automatically reset to normal when a tape is inserted or the power cord is unplugged.
- Auto tracking may not operate correctly when the tape is scratched or the recorded condition is poor. In this case, press the TRACKING CONTROL button (▼ or ▲) to adjust tracking.
- If the AUTO TRACKING button is pressed after operating the tracking control button (▼ or ▲), auto tracking operates again.

CLOCK SETTING (By using the Remote Control)

Things to know before starting

- The clock uses the 12-hour system. (Be sure to set AM and PM correctly.)
- When you first plug in your VCR, the clock will read "-- : -- : --".
- The buttons for setting the clock are on the remote control.
- While you are setting the clock, the "Menu display" on the TV screen will prompt you through the procedures.
- If you have entered a wrong number by mistake, press "CLEAR" button several times to erase the wrong number. Then re-enter a correct number.
- If you input an illogical time or date (13th month for example), "?" will appear on the TV screen. (It will not enter the memory.)



- 1 Turn on the power of both VCR and TV.
- 2 Be sure that the TV is set to the VCR Output Channel (channel 3 or 4).
- 3 Aim the remote control at the sensor on the front panel of the VCR.

NOTE: If direct VIDEO/AUDIO connection is made between the VCR and the TV, set the TV's source selector to VIDEO.

- 4 Press "MENU" button on the remote control. The "MENU", as illustrated, will appear on the TV screen.

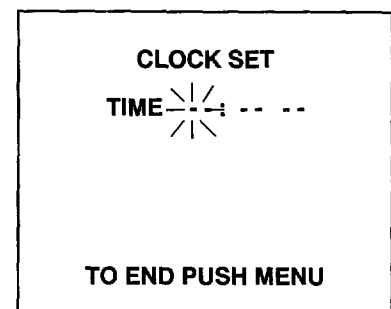
PUSH SELECTION NUMBER

- 1 CLOCK SET
- 2 NORMAL PROGRAM
- 3 DAILY PROGRAM
- 4 WEEKLY PROGRAM
- 5 PROGRAM REVIEW
- 6 CALENDAR
- 7 SET UP

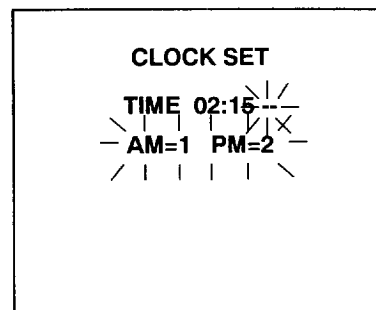
TO END PUSH MENU

Main MENU (English)

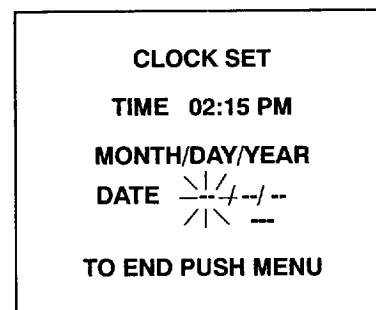
- 5 Press "1" button to set clock. The display prompts you to set the hour.



- 6 Set the hour by pressing two number buttons on the remote control and two more for the minute (for example, 0 2 15 for 2:15). The display prompts you to select AM or PM.



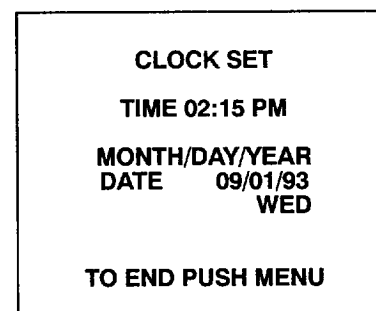
- 7 Press "1" for AM or "2" for PM (for example, 2 for PM). The display flashes and prompts you to set the date.



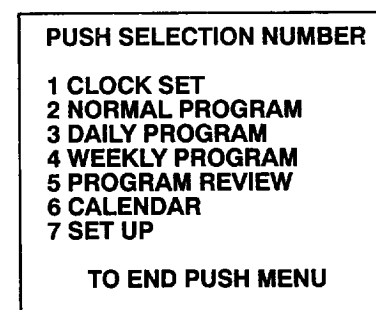
- 8 Set the date by pressing six digits in order of month, day and year (for example 09 01 93 for September 1, 1993). The day of the week will appear when you have entered all six digits for the date.

NOTE: Always press "0" before single-digit months and days.

- The VCR will not accept illogical time or date entries (13th month for example).
- Now the display on the VCR will show the correct time.



- 9 Press "MENU" button. The display resumes the "original menu".



- 10 Press "MENU" button once again to return to the TV screen.

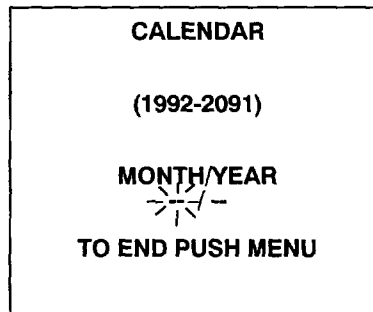
CLOCK SETTING NOTES:

1. The clock must be set to the correct time before programming VCR Plus+ or the timer for unattended recording.
2. When moving the VCR, if the power cord is reconnected within a few seconds (about 3 seconds), there is no need to reset the clock.
3. If a power failure lasts more than a few seconds, or if the power cord is disconnected for longer than a few seconds, the "-- : --" display will appear when power is restored and the clock needs to be reset.

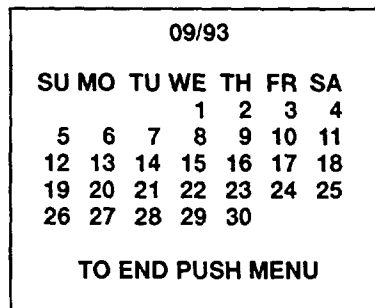
CALENDAR

A perpetual calendar, from 1992 to 2091, is available for display.
If 88 is entered for the year, the selected month for 2088 will be displayed.
If 00 is entered, a month from the year 2000 will be displayed.
If 49 is entered, a month from 2049 will be displayed.

1. Press "MENU" button.
2. Press "6" to see the calendar.



3. Press four digits, two for the month and two for the year.



09/93

SU	MO	TU	WE	TH	FR	SA
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

TO END PUSH MENU

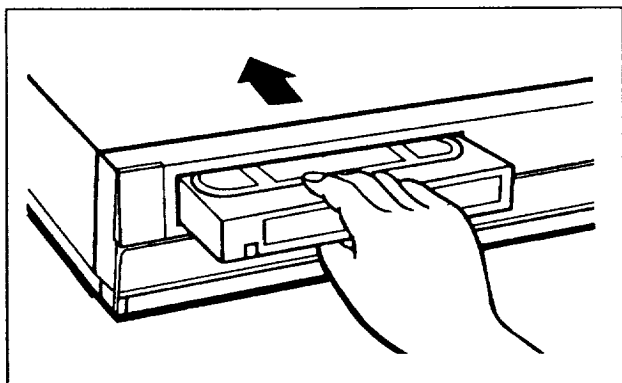
4. When you are finished, press "MENU" again.
5. To see the another month of the calendar, repeat step 2-3.
NOTE: If you don't press any button in on screen mode for three minutes the VCR will exit the on screen mode automatically.

RECORDING WHILE YOU ARE AWAY (You can use Programmable Timer or VCR Plus+)

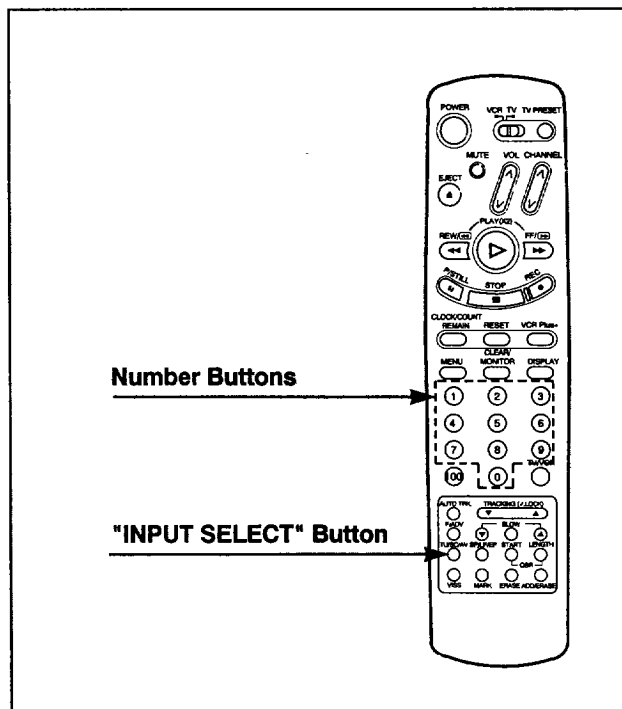
Be sure that the clock is set to the correct time.
(Refer to "CLOCK SETTING" on page 26.)

1. Insert the cassette.

NOTE: Before starting check that the erase prevention tab is not missing. If it is removed, recording will not start.



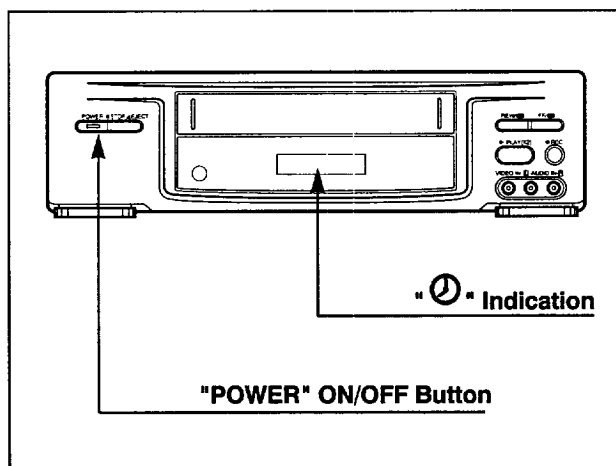
2. Set the program timer using the MENU button. Refer to "PROGRAM TIMER SETTING" on pages 30 through 34 or use VCR Plus+ on page 35 through 43.



3. Press "POWER" ON/OFF button to OFF. The TIMER indication "⌚" will appear on the Display.

NOTES:

1. If the erase prevention tab is removed, the cassette is ejected automatically and the "⏮" indication will flash. Stick a piece of cellophane tape over the erase prevention hole on the cassette to enable recording.
2. The "⏮" indication will flash if a cassette is not inserted.



4. The recording will start and the "⌚" and the "REC" indications will appear at the time you have programmed.

NOTES:

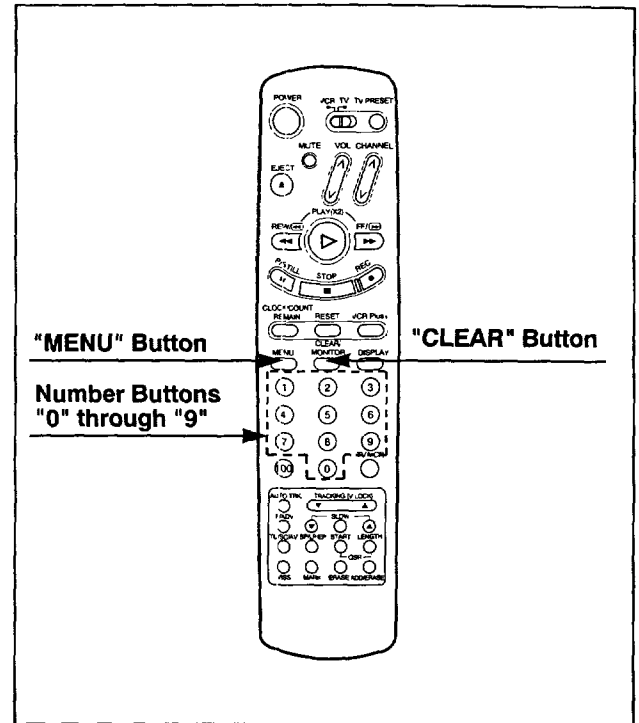
1. When the TIMER indication is on, your VCR can not be operated manually (except POWER button).
2. If the tape runs out (if the end of the tape is reached) during timer recording, the mode will change automatically to STOP, REWIND and EJECT in this order. At that point, power will cease to be supplied to prevent the recorded tape from being overlapped. You can continue timer recording within programmed time when a new tape is inserted.
3. If the clock displays "-- : --" it indicates that there has been a power interruption and the Time and Programming need to be reset.
4. To stop the VCR during Timer Recording, press "POWER" ON/OFF button OFF.

PROGRAM TIMER SETTING (You must use the Remote Control)

This VCR can be programmed to record up to 8 programs within a period of 1 year. For unattended recording, the timer needs to know the channels to be recorded and the times to start and to end.

Things to know before starting

- If you try to set the program timer before setting the clock, "CLOCK SET" mode appears on the TV screen. Set the time and date before proceeding.
- The buttons for programming the timer are on the remote control.
- While you are programming the timer, the "Menu display" on the TV screen will prompt you through the procedures.
- The display contents will be switched to the TV screen automatically if it is left on without further steps for about 3 minutes.
- Make sure batteries are installed in the remote control.
- Make sure a tape is in the VCR.
- You can correct an error in the program, any time before the last step by pressing "CLEAR" button repeatedly until the digit to be corrected flashes and then by entering the corrections.



- 1 Turn on the power of both VCR and TV.
- 2 Be sure that the TV is set to the VCR Output Channel (Channel 3 or 4).
- 3 Aim the remote control at the receiver on the front panel of the VCR.
- 4 Press "MENU" button on the remote control. The "MENU", as illustrated, will appear on the TV screen.

PUSH SELECTION NUMBER

- 1 CLOCK SET
- 2 NORMAL PROGRAM
- 3 DAILY PROGRAM
- 4 WEEKLY PROGRAM
- 5 PROGRAM REVIEW
- 6 CALENDAR
- 7 SET UP

TO END PUSH MENU

- 5 Make sure that the TV system (TV or CATV) to the desired position in the SET-UP mode feature.

PUSH SELECTION NUMBER

- 1 TV SYSTEM (TV)
- 2 TAPE SELECT (T120)
- 3 RENTAL POSITION (ON)
- 4 AUTO CHANNEL SET
- 5 COLOR MENU SELECT
- 6 LANGUAGE SELECT
- 7 AUDIO MODE SET

TO END PUSH MENU

- ⑥ Press MENU to return to first screen as shown. Press "2" to enter a NORMAL program, "3" to enter a DAILY program, or "4" to enter a WEEKLY program.

Normal event ... for recording up to 8 programs on a single day or over the days within a period of 1 year.

Weekly event ... for recording up to 8 programs on a certain day of every week.

Daily event ... for recording up to 8 programs at the same time(s) Monday through Friday.

NOTE: Any one of these program modes or any combination thereof (up to 8 programs in total) may be selected. A typical example of a "NORMAL" program is demonstrated below. The display will prompt you to select a Program Number.

NOTE: All 8 program numbers will be flashing because none of them have been used. If the timer has been programmed, the number that was used will stay on instead of flashing.

PUSH SELECTION NUMBER

- 1 CLOCK SET
- 2 NORMAL PROGRAM
- 3 DAILY PROGRAM
- 4 WEEKLY PROGRAM
- 5 PROGRAM REVIEW
- 6 CALENDAR
- 7 SET UP

TO END PUSH MENU

NORMAL PROGRAM
PROGRAM -1 2 3 4 5 6 7 8-
SELECT PROG. NUMBER

TO END PUSH MENU

- ⑦ Press a digit from "1" to "8" on the remote control to select the program number you want to program. The display will prompt you to select "TUNER" mode or "A/V" mode. (example program No. 1)

NORMAL PROGRAM

PROGRAM 1
SELECT SOURCE INPUT

-TUNER=1 A/V=2-

TO END PUSH MENU

- ⑧ Press "1" for TUNER mode or "2" for A/V mode. The display will prompt you select a channel number. If you want to select the channel in CATV, set the TV system (CATV or TV) in the SET-UP mode feature and then set the channel number.

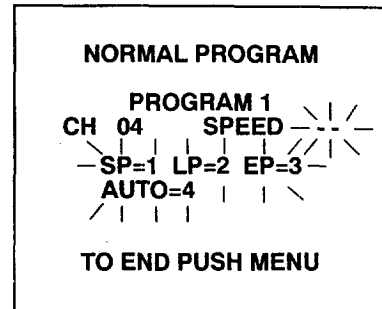
NORMAL PROGRAM

PROGRAM 1

CH - - - - -

TO END PUSH MENU

- 9 Press two digits for the channel to be recorded (for example, "0" "4" for channel 4). The display will prompt you to select a recording speed.

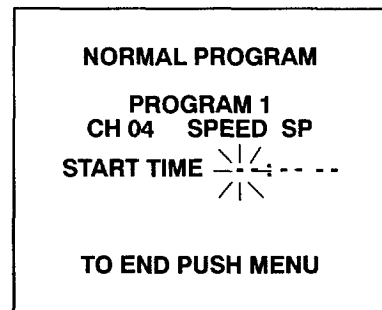


- 10 Press a digit from "1" to "4" on the remote control to select the recording speed you want program ("1" for SP, "2" for LP, "3" for EP, "4" for AUTO mode).

NOTE: If you select the "AUTO" mode, the "AUTO" mode automatically determines how much tape is left and switches speed according. The "AUTO" mode starts recording at SP speed, but if it finds out there is not enough tape left to complete the programmed recording, it switches over to EP speed.

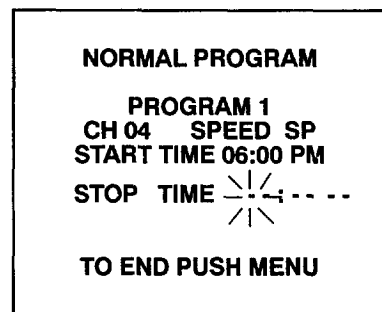
There will be some distortion in picture and sound at the point where speed is switched.

(for example, "1" for SP) The display will then prompt you to enter the recording start time.



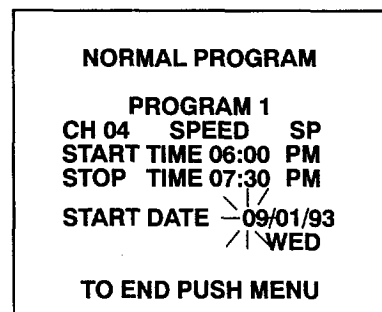
- 11 Press five digits, two for the hour and two more for the minute and one more for AM or PM (for example, "0" "6" "0" "0" "2" for 6:00 PM). Press "1" for AM or "2" for PM. The display will prompt you to select the stop time.

NOTE: Always press "0" before a single digit hour and minute.



- 12 Press five digits, two for the hour and two more for the minute and one more for AM or PM (for example, "0" "7" "3" "0" "2" for 7:30 PM).

NOTE: The present month, day and year for the DATE (for example, 090193 for September 1, to change it at step 13).



-
- 13 Press four digits, two for the start month and two more for the start date, (for example, "0" "9" "0" "2" to begin recording on September 2). The year and day of the week are displayed automatically.

```
NORMAL PROGRAM

PROGRAM 1
CH 04  SPEED  SP
START TIME 06:00 PM
STOP TIME 07:30 PM
START DATE 09/02/93
                THU

TO END PUSH MENU
```

NOTES:

- To change an incorrect entry, or an undesired entry, proceed as follows;
1. Press "CLEAR" button repeatedly until the digit to be changed flashes.
 2. Enter the correct number.

-
- 14 Press "MENU" to enter your program and return to the menu display.

If the program preset time is past, the "PAST TIME PROGRAMMED" message will blink on the screen. Return to the incorrect program and reprogram it with the correct time.

```
NORMAL PROGRAM

PROGRAM 1
CH 04  SPEED  SP
START TIME 01:00 PM
STOP TIME 01:30 PM
START DATE 09/01/93
                WED
- PAST TIME PROGRAMMED -
/ TO END PUSH MENU \
```

-
- 15 Press "MENU" again to return to the main menu display. Additional program may be entered by repeating steps 5 ~ 13. If you are finished programming and you want to set the VCR to record the programs you have entered, a) make sure you have inserted a tape in the machine, and b) press the POWER button to OFF (Timer mark 1 appears). The VCR is now set to record the preset programs.

CHECKING THE TIMER PROGRAM

Program can be checked whenever the VCR is turned on.

1. Press "MENU" on the remote control to display the menu.
2. Press "5" to review the program. (Program Review). The program review menu will appear on the TV screen.
3. Press "5" again if you want to review the next program information.
4. When you are finished, press "MENU" again.

```
NORMAL PROGRAM

PROGRAM 1
CH 04  SPEED  SP
START TIME 06:00 PM
STOP TIME 07:30 PM
START DATE 09/02/93
                THU
TO CONTINUE PUSH NO.5
TO ERASE PUSH CLEAR
TO END PUSH MENU
```

ERASING A TIMER PROGRAM

1. Press "MENU" button on the remote control to display the menu.
2. Press "5" to erase a program. (Program Review)
3. Press "5" again if you want to review the next program information.
4. Press "CLEAR" button when the program information you want to erase is displayed.
5. When you are finished, press "MENU" button again.

NORMAL PROGRAM

PROGRAM 1

CH 04 SPEED SP

START TIME 06:00 PM

STOP TIME 07:30 PM

START DATE 09/02/93

THU

TO CONTINUE PUSH NO.5

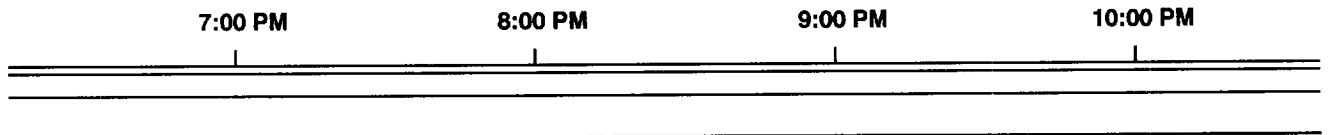
TO ERASE PUSH CLEAR

TO END PUSH MENU

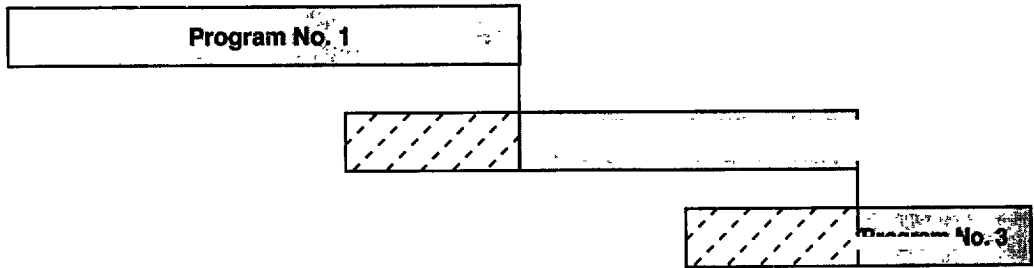
NOTE: When there is no program in the VCR, if you press "5" to review or to erase in the menu mode, the display will be shown (EMPTY) for 3 seconds.

PROGRAM PRIORITY

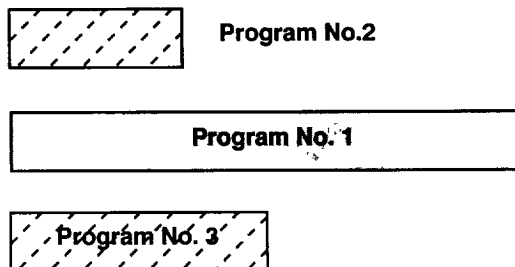
When there is an overlap of the program timer settings..



Case 1



Case 2



Chooses lowest numbered program.

VCR Plus™ + PROGRAMMING

INTRODUCTION TO VCR Plus™ +

After initial set up, the new VCR Plus+ programming feature lets you program the VCR for unattended recordings by entering a Plus Code number. The Plus Codes are published in the TV listings of many newspapers, TV Guide, and local cable-TV guides. These Plus Code numbers provide your VCR with all the information it needs to make an unattended recording, so you don't have to program start time, stop time, channel number, or date†. These code numbers can vary from three to nine digits and are usually listed with the program name as shown here in the sample page of a TV Guide listing.

NOTE: If the Plus Codes are not currently available in your area, they will probably be introduced soon. Check with your local newspaper or cable-TV company for publishing details.

To enable people across the country to all use the Plus Code numbers, each broadcast station and cable-TV channel have been assigned a special VCR Plus+ guide channel number.

Depending on how your VCR is connected, you may need to enter the channel number for your area which match the VCR Plus+ guide channel numbers. Before attempting to use the VCR Plus+ feature, read the initial set-up instructions for your type of connection.

The VCR Plus+ set up is a procedure that tells your VCR what channel to record when you select a Plus Code number. Guide channel numbers are especially important when the VCR is connected to a cable-TV system. Guide channel numbers for some of the cable services such as HBO, the Disney Channel and ESPN have been standardized for all locations where Plus Codes are available. Certain channels received on a home antenna may also require set up. The guide channel charts for both cable-TV and broadcast channels are usually located in the TV program listings in your TV Guide or local TV publication. Your VCR makes channel set up easy.

NOTE:

* VCR Plus+ numbers for technical assistance call 1-800-432-1827.

*VCR Plus™+ and Plus Code are trademarks of Gemstar Development Corporation.

VCR Plus+ system is manufactured under license from Gemstar Development.

† Scrambled channels with decoder box require additional steps to record. Refer to the mapping and programming instructions.

Tuesday
9AM
11AM

(**30**) COLLEGE BASKETBALL; 2 hrs. 175029
Miami at Davidson, taped Feb. 1.

(**SHO**) MOVIE—Drama (**89**); 1 hr., 45 min. ★★
6770839
"The Miniver Story." Greer Garson.

(**TMC**) MOVIE—Adventure; 1 hr., 50 min. ★★★
9020966
"Blue Thunder." Roy Scheider.

(**TNT**) DALLAS—Drama; 60 min. 797810

(**USA**) MURDER, SHE WROTE (CC)—Mystery;
60 min. 242164

(**WOR**) BONANZA—Western; 60 min. 977094

9:05 (**TBS**) MOVIE—Drama; 2 hrs. ★★ 9879433
"Sins of the Past." (Made for TV; 1984) Former call girls are being mysteriously murdered, one by one. Barbara Carrera, Anthony Geary. Paula: Kim Catrall.

9:30 (**5**) CONCENTRATION—Game 15839

(**20**) JAPAN: THE CHANGING TRADITION
36029

(**23**) ASK AN EXPERT—Investments 18617

(**32**) SMALL WONDER (CC)—Comedy 74297

(**33**) ANOTHER LIFE—Serial 53075

(**DIS**) MUSIC BOX—Children 901891

(**USC**) GREAT CHEFS OF THE WEST 817365

(**ESPN**) SPORTSCENTER 271549

(**LIF**) SISTER KATE—Comedy 490669

9:45 (**HBO**) MOVIE—Drama; 1 hr., 40 min. ★★
19704433
"When Hell Was in Session." Hal Holbrook.

10AM (**2**) PRICE IS RIGHT—Game; 60 min. 31704

(**5**) ONE ON ONE—John Tesh 61471
Scheduled: Don Henley, Marilyn McCoo.

(**7**) HOME—Information; 90 min. 12636
Scheduled: Italian recipes (Part 2).

(**9**) JOAN RIVERS; 60 min. 28810
Scheduled program topic: Hollywood and the supernatural.

(**11**) MISTER ROGERS (CC)—Children 98549

(**20**) MECHANICAL UNIVERSE & BEYOND (CC) 75452

(**25**) NEWS

(**32**) I LOVE LUCY—Comedy (**89**) 24146

(**33**) (**FAM**) HEART TO HEART 58159

(**44**) MI NOMBRE ES CORAJE—Novela 29471

(**ABC**) FUGITIVE—Drama (**89**); 60 min. 175926

(**BET**) LIVE FROM L.A.—Interview 242544

(**CHN**) NEWS—Cain/Kelley

(**DIS**) JIM HENSON'S MOTHER GOOSE STORIES (CC)—Children 443452

(**USC**) LOW CHOLESTEROL GOURMET 523029

(**ESPN**) GETTING FIT—Exercise 805655

Sample
page from
TV Guide
showing
Plus
Codes

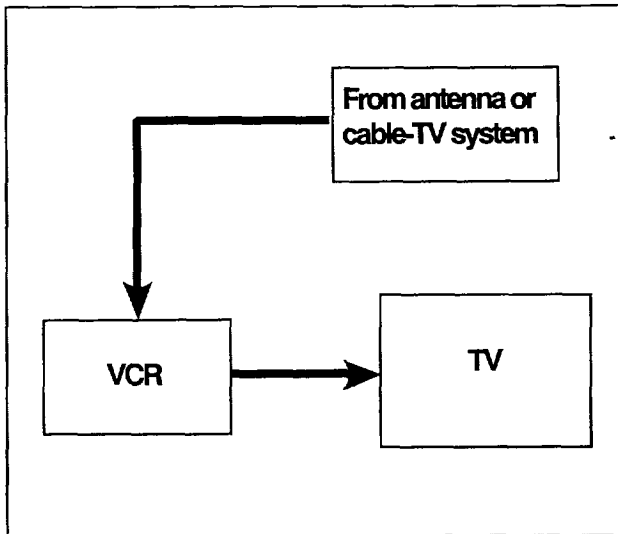
Standardized Guide Channel Numbers for cable-TV

10 TRAV Travel Channel	47 FAM The Family Channel
13 GALA Galavision	48 MTV Music Television
14 CSPAN C-SPAN	49 TNN The Nashville Network
19 CNBC Consumer News & Bus.	51 TLC The Learning Channel
21 COM Comedy Central	52 TNT Tuner Network Television
33 HBO Home Box Office	53 DIS The Disney Channel
34 ESPN Sports Network	54 BRV BRAVO
35 AMC American Movie Classic	55 WGN (Chicago)
37 TDC The Discovery Channel	57 BET Black Entertainment Television
38 NIC Nickelodeon	58 TMC The Movie Channel
39 A&E Arts & Entertainment	59 SC Sports Channel
41 SHO Showtime	60 WOR WWOR (New York)
42 CNN Cable News Network	62 VHI Video Hits 1
43 TBS Turner Broadcasting Network	63 FNN Financial News Network
44 USA Network	64 NOS Nostalgia
45 MAX Cinemax	70 ENC Encord
46 LIF Lifetime	75 CORT Court TV

VCR Plus™ + ANTENNA/CABLE CONNECTIONS

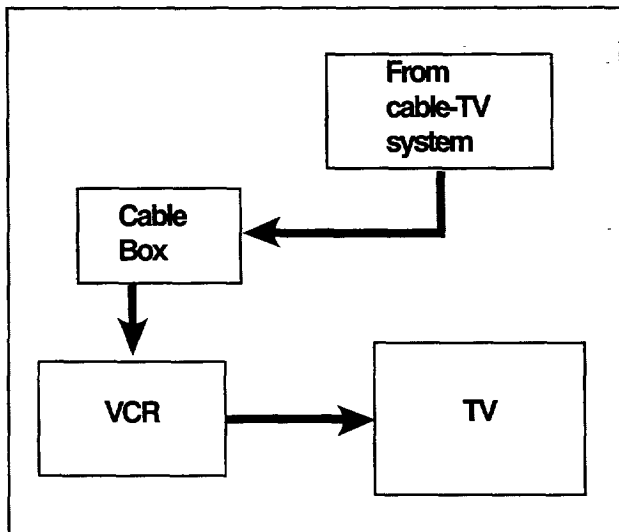
The Channel Mapping instructions for VCR Plus+ vary depending on how you have connected your antenna or cable-TV system to the VCR. Shown below are recommended hook-ups for VCR timer recordings. Match the picture below with your hook-up and then follow the mapping instructions on the page(s) indicated.

- A.** Direct connection from either a home antenna or cable-TV that does not require a cable box. Details are on pages 5-6 for a home antenna and page 8 for cable TV.



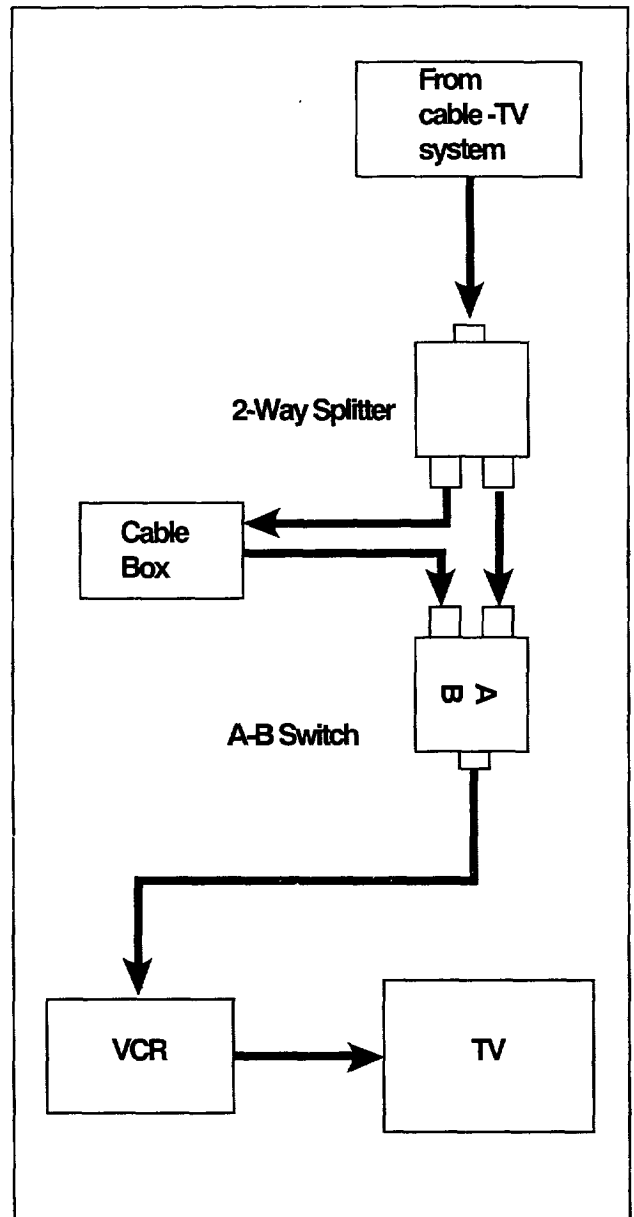
If you have your VCR connected like this, follow the VCR Plus+ Channel Mapping instructions on pages 37 - 38.

- B.** Cable-TV connection that requires cable box for all channels. Details are on page 8.



If you have your VCR connected like this, follow the VCR Plus+ Channel Mapping instructions on page 39.

- C.** Cable-TV connection that requires cable box for some channels. Details are on page 9.



If you have your VCR connected like this, follow the VCR Plus+ Channel Mapping instructions on pages 40 - 41.

VCR Plus™ + CHANNEL MAPPING FOR CONNECTION A

Use these Channel Mapping instructions only if you have your VCR connected as shown in Connection A on the previous page.

Only channels that are assigned a VCR Plus+ guide number different than the number you select to watch that channel on your TV require map. A chart of the assigned VCR Plus+ guide numbers is usually published in your local TV listings or TV Guide. Check the list of VCR Plus+ guide numbers for your area to see if any of the assigned numbers are different than the channel number you select on your TV.

Home Antenna Map : If you have connected a home antenna to your VCR, most channels probably do not require any map. If the published VCR Plus+ guide numbers are all the same as the channel number you select when you watch that station, no map is necessary. You can skip the map information on these two pages.

Cable-TV Map : If you have connected a cable-TV system to your VCR, you will map any channel that has a VCR Plus+ guide number different than the number you select to watch that channel on your TV.

BEFORE MAPPING CHANNELS

- You can map channels from only one TV system (TV or CATV) at a time.
Make sure that you have selected the correct TV system.
- On a piece of paper, write down which channels in your TV listings correspond to the channels you receive.
- Turn on the power of both VCR and TV.
- Be sure that the TV is set to the VCR output channel (3 or 4).
Aim the remote control at the receiver on the front of the VCR.

TO MAP CHANNELS

- 1 Make sure that you have selected the correct TV system (TV or CATV).
- 2 Display the CHANNEL MAPPING screen.
Press the VCR Plus+ button twice on the remote control.

First press VCR Plus+.

VCR PLUS PROGRAM MENU will appear.

VCR PLUS PROGRAM
PUSH VCR PLUS CODE:

TO ENTER PUSH DISPLAY
TO END PUSH VCR PLUS

Then press VCR Plus+ again (without VCR PLUS code).

VCR PLUS MAIN MENU will appear.

VCR PLUS PROGRAM
PUSH SELECTION NUMBER

1 VCR PLUS PROGRAM
2 PROGRAM REVIEW
3 CHANNEL MAPPING

TO END PUSH VCR PLUS

- 3 Press 3 to begin channel Mapping process. The following will appear on the TV screen.
This screen appears only if the TV system (TV or CATV) is set to CATV.

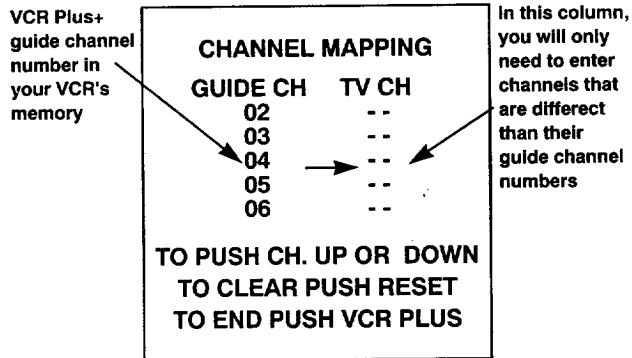
CHANNEL SOURCE SELECT

1 VCR CHANNEL
2 CABLE BOX CHANNEL
3 CABLE BOX WITH
A/B SELECTOR

TO END PUSH VCR PLUS

- 4 Press 1 for VCR CHANNEL Mapping.

The screen that appears next lists all of the VCR Plus+ guide numbers that you receive through your cable or antenna system.



ng and holding the CHANNEL UP or l button moves all the numbers up or

he VCR Plus+ guide number is the same nber you select to watch that channel on o entry is necessary. For example, if you S on channel 8 and its VCR Plus+ guide B, no entry is necessary.

areas, some channels have been more than one VCR Plus+ guide channel nter that channel number next to both -l number on the CHANNEL MAPPING

ant to complete a his on a separate per with the VCR fe channels and sponding names nnel numbers. this list will help he numbers more tep 6.	Guide	Name	CATV
	Channel		Channel
Examples :			
	04	ABC	05
	05	CBS	07
	33	HBO	03
	41	Showtime	03

ples below may help you determine where rs can be found and in which column they

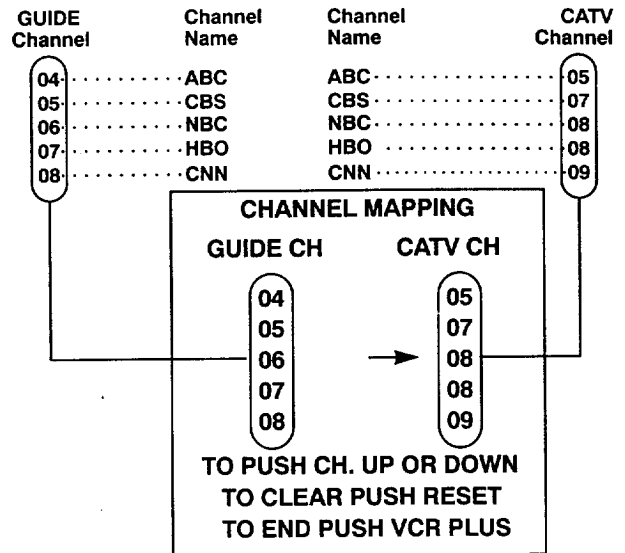
les for cable-TV users

published VCR Plus+ guide channel er for ABC is 04 and you tune your TV to nel 05 to watch ABC, you would enter er 05 in the CATV CH column next to 04 GUIDE CH column as shown.

'S' published guide channel is 05 and you n CBS on channel 07, you would enter 07 e CATV CH column next to 05 in the UIDE CH column as shown.

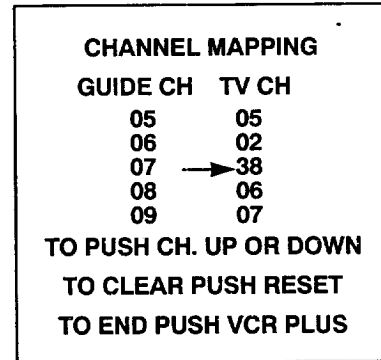
Page from TV Listing Showing VCR Plus+ Guide Channels

Channel Line-up Chart from Cable Company



B.Example for home antenna:

If the published VCR Plus+ guide number for PBS (Public Broadcast Service) is 07 and you tune your TV to channel 38 to watch PBS, you would enter number 38 in the TV CH column next to 07 in the GUIDE CH column as shown.



- After you have determined which channel numbers need to be entered, repeatedly press the CHANNEL up or down button to position the guide channel number on the line marked with an arrow. Then press number buttons to enter the channel number in the CATV CH (or TV CH) column. Follow this procedure to enter all necessary channel numbers.

NOTE: If you enter an incorrect number, press RESET to erase the incorrect number, press CLEAR and then re-enter the correct number.

- After you have entered the necessary channel numbers, press the VCR Plus+ button to store the channels in memory. You can now use VCR Plus+ to record as described on pages 42 and 43.

VCR Plus™ + CHANNEL MAPPING FOR CONNECTION B

Use these Channel Mapping instructions only if you have your VCR connected as shown in connection B on page 36.

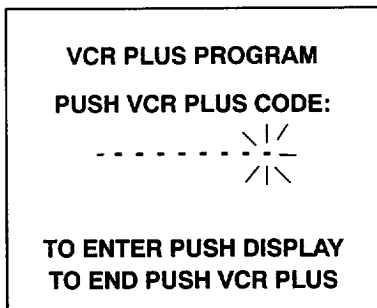
TO MAP CHANNELS

- 1 Make sure the TV system (TV or CATV) is set correctly to CATV.
- 2 Press the VCR Plus+ button twice on the remote control.

NOTE: If the VCR PLUS PROGRAM menu appears when you press the VCR Plus+ button, press VCR Plus+ again to return to the main menu.

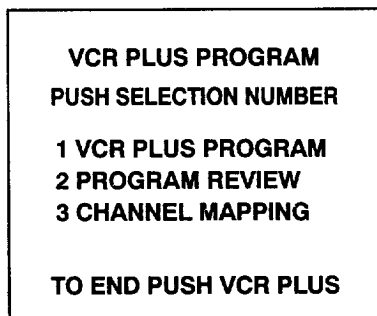
First press VCR Plus+

VCR Plus+ PROGRAM MENU will appear.

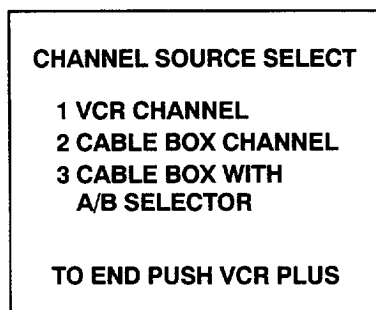


Then press VCR Plus+ again (without VCR Plus+ code)

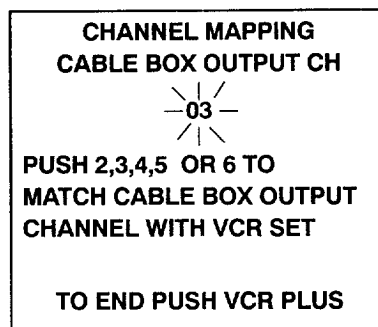
VCR Plus+ MAIN MENU will appear.



- 3 Press 3 to begin Channel Mapping process. The following will appear on the TV screen.



- 4 Press 2 for the CABLE BOX CHANNEL Mapping.
This screen only appears for cable-TV systems. It will not appear if you set the TV/CATV function to TV position when you autoprogrammed the VCR.



- 5 Press one number button to enter output channel of cable box (usually 2, 3, 4, 5, or 6).
- 6 When you are finished, press VCR Plus+ button. You can now use VCR Plus+ to record as described on page 42.

IMPORTANT: Because your cable company requires a cable box, remember to turn on the cable box and tune it to channel you want to record before the time you have programmed a recording to occur.

VCR Plus™ + CHANNEL MAPPING FOR CONNECTION C

Use these Channel Mapping instructions only if you have your VCR connected as shown in connection C on page 36.

Since you are using an A-B switch with a cable box, you will need to divide the channels you watch into two groups—channels that do not require a cable box and those that do require a cable box.

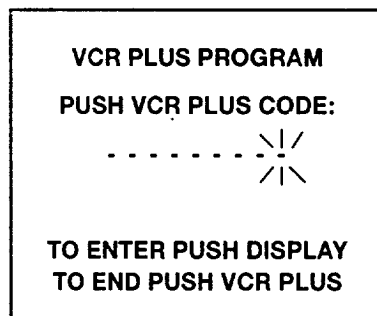
- Channels that do not require a cable box. For these channels, you will map any channel that has a VCR Plus+ guide number different than the number you select to watch that channel on your TV.
- Channels that do require a cable box. For these channels, you will enter the output channel of your cable box.

TO MAP CHANNELS

- 1 Make sure the TV/CATV function is set correctly to CATV. Put A-B switch in "A" position.
- 2 Display the VCR Plus+ CHANNEL MAPPING screen. Press the VCR Plus+ button twice on the remote control.

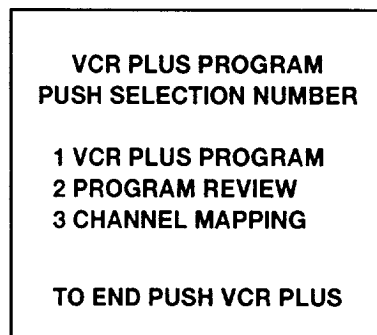
NOTE: If the VCR Plus+ PROGRAM menu appears, when you press the VCR Plus+ button, press VCR Plus+ again to return to the main menu.

First press VCR Plus+
VCR Plus+ PROGRAM MENU will appear.

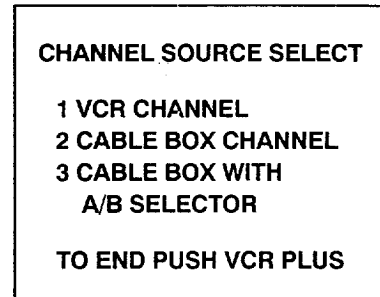


Then press VCR Plus+ again (without VCR Plus+ code)

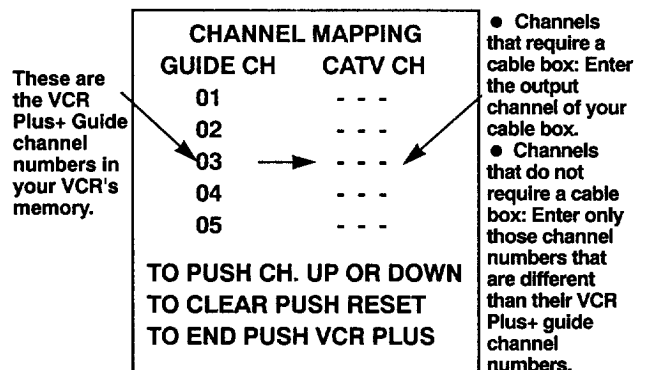
VCR Plus+ MAIN MENU will appear.



- 3 Press 3 to begin Channel Mapping process. The following will appear on the TV screen.



- 4 Press 3 to select cable box with A/B switch.
- 5 The screen that appears next lists all of the VCR Plus+ guide channel numbers. Pressing and holding the CHANNEL up or down button moves all the numbers up or down.



NOTE : If the VCR Plus+ guide number is the same as the number you select to watch that channel on your TV, no entry is necessary. For example, if you receive CBS on channel 8 and its VCR Plus+ guide number is 8, no entry is necessary.

Enter the output channel of your cable box in the CATV CH column for all channels that require a cable box.

In certain areas, some channels have been assigned more than one VCR Plus+ guide channel number. Enter that channel next to both GUIDE CH numbers on the CHANNEL MAPPING menu.

Guide Channel	Name	CATV Channel
Examples :		
04	ABC	05
05	CBS	07
33	HBO	03
41	Showtime	03

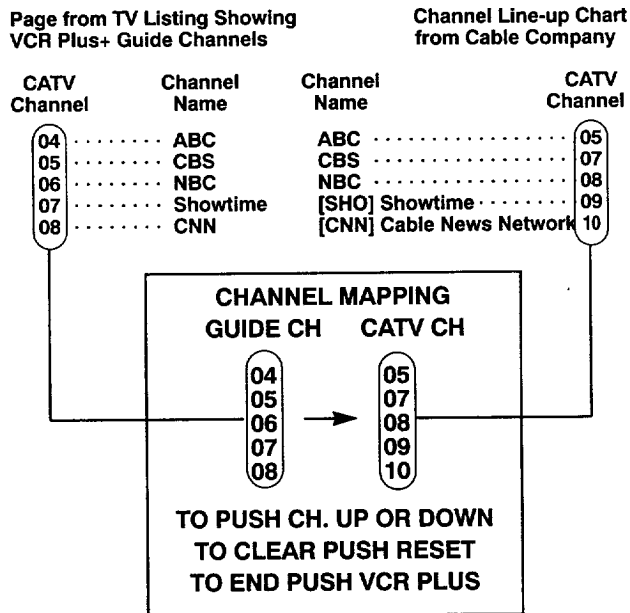
You may want to complete a chart like this on a separate piece of paper of the VCR Plus+ guide channels with their corresponding names and channel numbers. Preparing this list will help you enter the numbers more quickly in step 6.

Enter the output channel of your cable box if the channel require a cable box.

The example below may help you determine where the numbers can be found and in which column they belong.

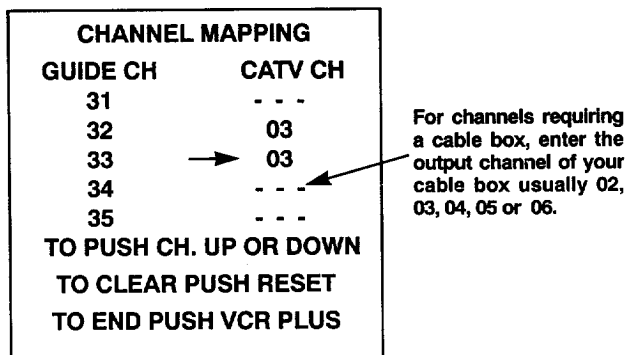
A. Examples for channels not requiring the cable box:

- If the published VCR Plus+ guide channel number for ABC is 04 and you tune your TV to channel 05 to watch ABC, you would enter number 05 in the CATV CH column next to 04 in the GUIDE CH column as shown.
- If CBS' published guide channel is 05 and you watch CBS on channel 07, you would enter 07 in the CATV CH column next to 05 in the GUIDE CH column as shown.



B. Example for channels requiring the cable box:

- If HBO's (Home Box Office) published VCR Plus+ guide number is 33, you would enter the output channel of your cable box (for example 03) in the CATV CH column next to 33 in the GUIDE CH column as shown.



- 6 After you have determined which channel numbers need to be entered, repeatedly press the CHANNEL up or down button to position the first guide channel number on the line marked with an arrow. Then press two number buttons to enter the correct channel number (or output channel of your cable box) for that VCR Plus+ guide channel number. Follow this procedure to enter all necessary channel numbers.

NOTE: If you enter an incorrect number press RESET to erase the incorrect number, press CLEAR and then re-enter the correct number.

- 7 After you have entered the necessary channel numbers, press the VCR Plus+ button to store the channels in memory. You can now use VCR Plus+ to record as described on pages 42 and 43.

IMPORTANT: If you want to record a channel that requires the use of a cable box, remember to leave the cable box turned on and tuned to the channel you want to record whenever a recording is to occur. Also remember to put the A-B switch in the B position for recording from the cable box.

NOTES:

- Power interruptions will not affect the guide channels you entered. They will remain in memory.
- If your cable company changes its channel line-up, moves channels to different numbers, or adds new channels, be sure to re-enter the channel numbers for the VCR Plus+ guide channels that changed.

VCR Plus™+ PROGRAMMING

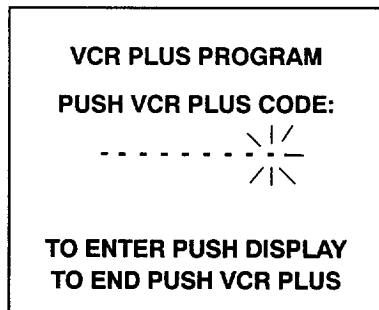
IMPORTANT: Before you try to record with VCR Plus+ for the first time, be sure you have completed all map described on the previous pages.

Programming with VCR Plus+

- Turn on the TV and VCR. Turn the TV to the "VCR Channel" (3, 4 or video input) so you can see the program menu on the TV screen. Make sure the VCR's clock is set to the correct time and date as described on page 26.
- Press the VCR Plus+ button on the remote control to display the VCR PLUS PROGRAM menu.

NOTE: If all timer programs are full, FULLY PROGRAMMED will appear on the TV screen .

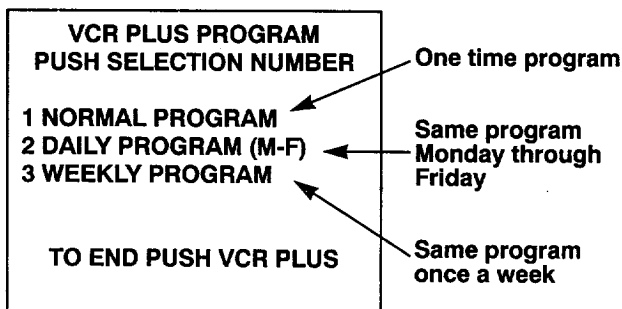
First press
VCR Plus+



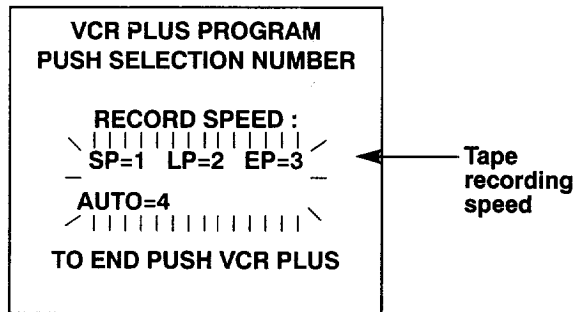
- Enter the Plus Code from the TV Guide, newspaper, etc. for the program you want to record.

NOTE: If you enter an incorrect number, repeatedly press the CLEAR button on the remote control to erase it, and then enter the correct number.
- After entering the Plus Code, press the DISPLAY button to enter your program into memory.

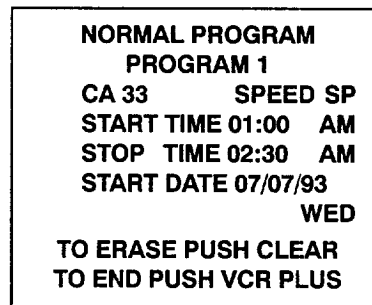
NOTE: If you enter a code number that your VCR does not recognize, it will display this message on the TV screen: PLEASE CHECK NUMBER. If this message appears, check the number and enter it again.
If a valid number has been entered the following display will appear.



- Press number button "1", "2" or "3" to choose which type of program you want to record. The VCR will then display the record speed information on the TV screen.



- If you want to change the tape speed, press the 1, 2, 3 or 4 button on the remote control. The VCR will then display the program review mode on the TV screen for confirmation. If you want to erase the program, press the CLEAR button on the remote control.



- Press the VCR Plus+ button when you are finished.
- Turn off the VCR before the recording is to begin.

IMPORTANT: If you are recording a channel which requires use of a cable box, remember to tune the cable box to the desired channel and leave the cable box turned on some time before the recording is scheduled to start.

Checking and Clearing VCR Plus™+ program

Programs can be checked (or cleared) whenever the VCR is turned on.

- 1 Press the VCR Plus+ button twice on the remote control to display the main menu.

NOTE: If the VCR Plus+ PROGRAM menu appears when you press the VCR Plus+ button, press VCR Plus+ again to return to the main menu.

VCR PLUS PROGRAM
PUSH SELECTION NUMBER

1 VCR PLUS PROGRAM
2 PROGRAM REVIEW
3 CHANNEL MAPPING

TO END PUSH VCR PLUS

- 2 Press number button "2" for PROGRAM REVIEW.

The TV screen will display the information you entered for the lowest program number.

NORMAL PROGRAM
PROGRAM 1

CATV109 SPEED SP
START TIME 09: 05 AM
STOP TIME 10: 35 AM
START DATE 07/07/93

WED

TO CONTINUE PUSH NO. 2
TO ERASE PUSH CLEAR
TO END PUSH VCR PLUS

- 3 Press the number button "2" again if you want to review the next program information.
When there is no program in the VCR, if you press "2" to review, the display will be flash "EMPTY" for 3 seconds.
- 4 If you want to clear a program from memory, press the CLEAR button on the remote control when the program appears on the TV screen.
- 5 When you are finished, press the VCR Plus+ button to remove the program menu from the TV screen.

NOTES:

- One-time timer programs clear automatically when the recording is finished.
- Daily and weekly programs remain in the timer indefinitely.
- All programs are erased if power is interrupted.

QUICK SET RECORDING (QSR)

Quick Set Recording allows you to make simplified timer recording without using the program timer. There are two simplified methods explained below.

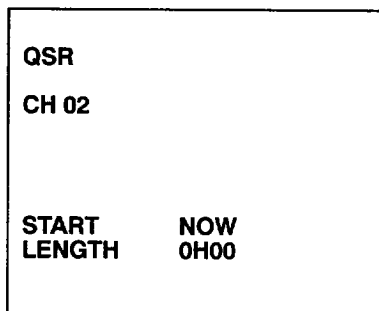
■ FOR QSR RECORDING

1. Be sure that the clock is set to the correct time.
(Refer to "CLOCK SETTING".)
2. Insert the cassette (one with the erase prevention tab intact) into the cassette loading door.
3. Press "INPUT SELECT" button so as to select Channel Number Display on the display.
4. Press "CHANNEL" Select Buttons to select the channel to be recorded.
5. Press "TAPE SPEED" button to select the desired speed.

■ STARTING QSR NOW

To start recording immediately and to set the recording length (in 30-minute increments).

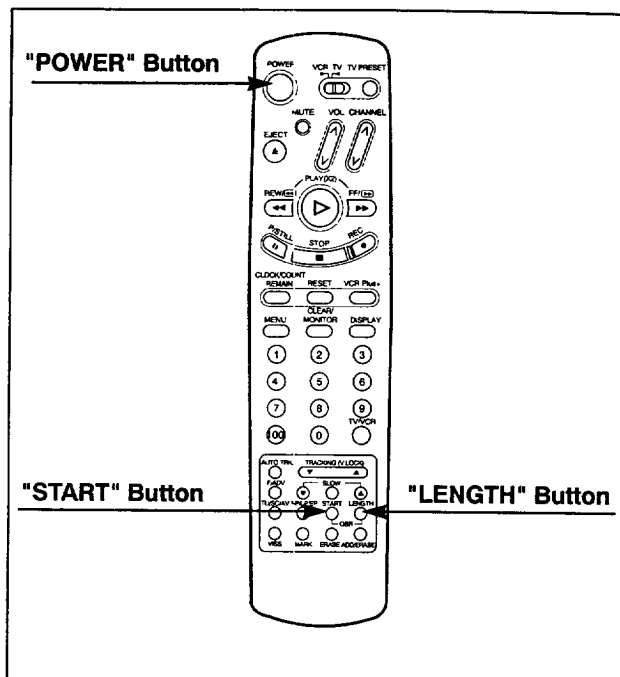
1. First perform Steps 1 through 5 of "FOR QSR RECORDING".
2. Make sure the display shows the present time. Then go to QSR, press the "QSR-LENGTH" button to indicate the recording time on screen.



For each press, the time changes as in the chart below.

LENGTH Button	LENGTH display (QSR STOP TIME)
1 press	0H00
2 presses	0H30
3 presses	1H00
⋮	⋮
17 presses	8H00
18 presses	8H30
19 presses	9H00
20 presses	0H00

NOTE: Recording starts immediately after the second press of the QSR LENGTH button.

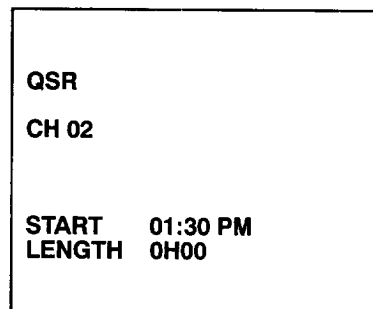


■ DELAYED START QSR

To quickly preset the starting time (in 30-minute increments) and the length of recording (in 30-minute increments).

1. First perform Steps 1 through 5 of "FOR QSR RECORDING".
2. Press "QSR-START" button to preset the time when the recording will start. (The start time is presettable in 30-minute increments within the 24-hour period from the present time.)

If you try to set the start time before setting the clock, CLOCK SET mode appears on the TV screen. Set the time and date before proceeding.



EXAMPLE: CURRENT TIME 01:09 PM

START Button	START display (QSR START TIME)
1 press	01:30 PM
2 presses	02:00 PM
⋮	⋮

3. Press "QSR-LENGTH" button to preset the length of recording in 30-minute increments for up to 9 hours and then to "END" (the recording will continue until the end of the tape.)
4. Press "POWER" ON/OFF button to OFF. The TIMER indication "⌚" will appear on the Display.

NOTES:

- The recording time can be extended any time during "QSR" by pressing "LENGTH" button. Press "QSR LENGTH" button to reset the length of recording in 30 minute increments for up to 9 hours and then to "END" (the recording will continue until the end of the tape).
- To change the "QSR" program, the previous information must be cleared first.
- If "QSR" and the program timer recording overlap, the former will override the latter.

RECALLING THE QSR SETTING

Press the "QSR LENGTH" or "START" button, and the recalled QSR setting will be displayed on the screen. The recalled QSR setting will automatically return to the current position in 5 seconds.

NOTE: To recall the recording time, press the LENGTH button only once. If you press this button twice or more, the recording time will be changed, if power on.

TO CANCEL THE QSR SETTING

1. Press "LENGTH" button until the display reads "0H00". The display will return to the current position and "QSR" has been now cleared.
2. Press the "POWER" ON/OFF button to stop the VCR during QSR operation.

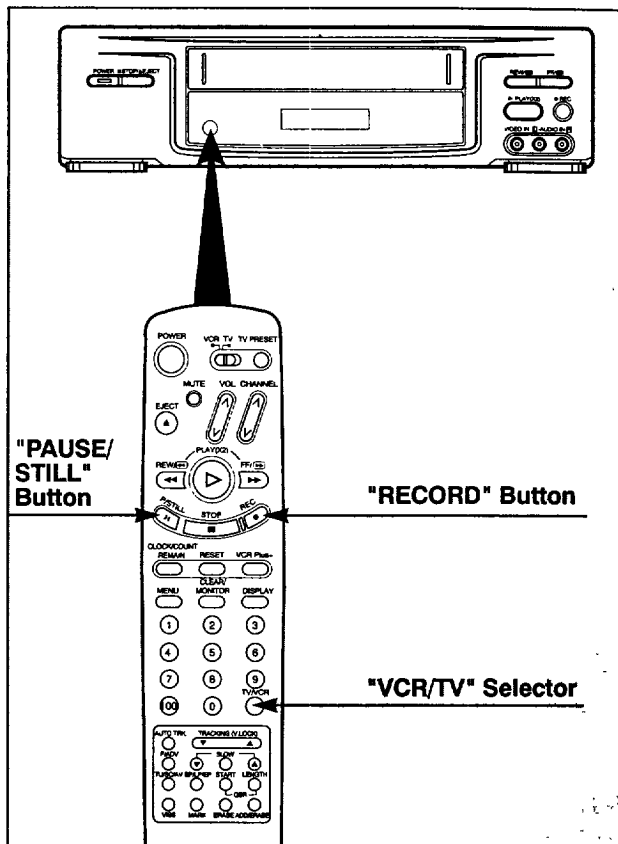
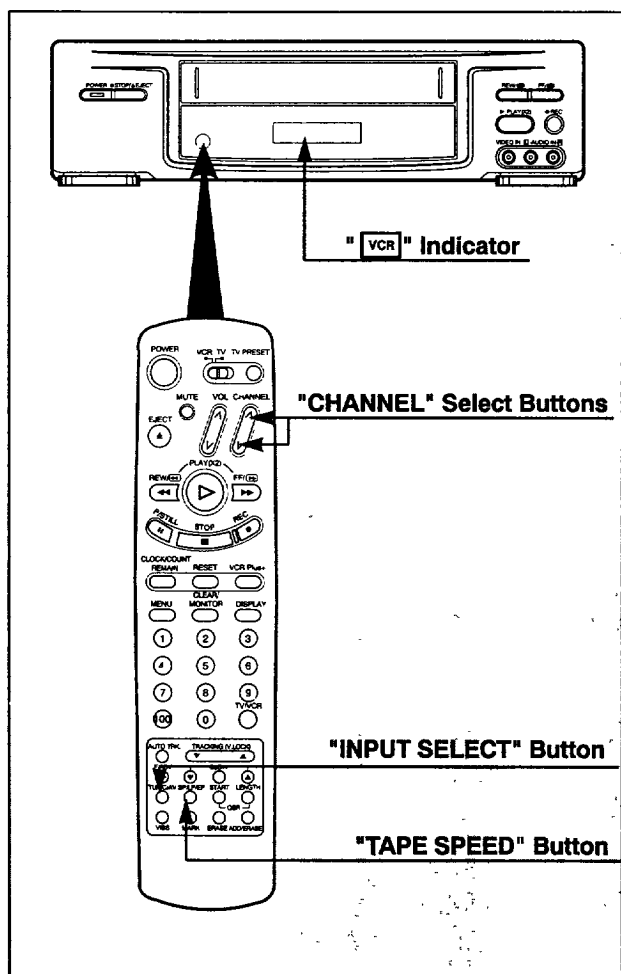
NOTES:

- The timer display will show the present time during Quick Set Recording.
- You may change the duration by pressing the QSR LENGTH button repeatedly. Select the length time within 5 seconds, otherwise the display will return to the current position.
- During Quick Set Recording, you can not change the Channel of the VCR. If you want to view another channel, Press the VCR/TV button to TV mode, and then select the channel to be viewed with the TV's channel selector.

RECORDING ONE PROGRAM WHILE VIEWING ANOTHER

1. Insert the cassette (one with erase prevention tab intact) into cassette loading door .
2. Press "TAPE SPEED" button to select the desired speed.
3. Press "INPUT SELECT" button so as to select Channel Number Display.
4. Press Channel Select Button (^ or v) to select channel to be recorded and set the television to Channel 3 or 4 depending on which channel is selected on the RF CHANNEL Select Switch on the rear of the VCR.
5. Check to make sure that the reception is acceptable.

8. If you want to periodically check what you are recording, simply set the channel selector on the television to the VCR channel (3 or 4) and press "VCR/TV" selector to turn " VCR " indication on.



6. Press the RECORD and PLAY(x2) buttons simultaneously on the VCR or one "RECORD" button on the remote control. You are now recording the program you see on the TV screen.
7. To continue to record this program while you watch something else, simply press "VCR/TV" selector to turn " VCR " indication off. Set the channel selector on the television to the program you want to watch.

EDITING A RECORDING

1. Press "PLAY (x2)" button and watch the program until the exact point is reached where you want the new recording to start.
2. Press "PAUSE/STILL" button.
3. Press "RECORD" and "PLAY (x2)" buttons on the VCR or one "RECORD" button on the remote control. The program material to be recorded will appear on the television.
4. When you wish to start recording, press "PAUSE/STILL" button again. The new program material will directly follow the previously recorded material. This feature is especially helpful during camera use so each segment of the recording becomes a continuous program.

VHS INDEX SEARCH SYSTEM (VISS)

The VHS INDEX SEARCH SYSTEM enables you to locate the beginning of any recording made on this VCR.

Whenever a recording is begun, an invisible INDEX mark is recorded on the tape. This feature makes use of VISS signals to search out a specified tape segment and begin playback automatically.

■ MARKING VISS SIGNALS

Automatic marking during recording....

A VISS signal is automatically marked on the tape when a recording or a timer recording starts.

The "V.MARK" indicator is displayed on the display while a VISS signal is being marked.

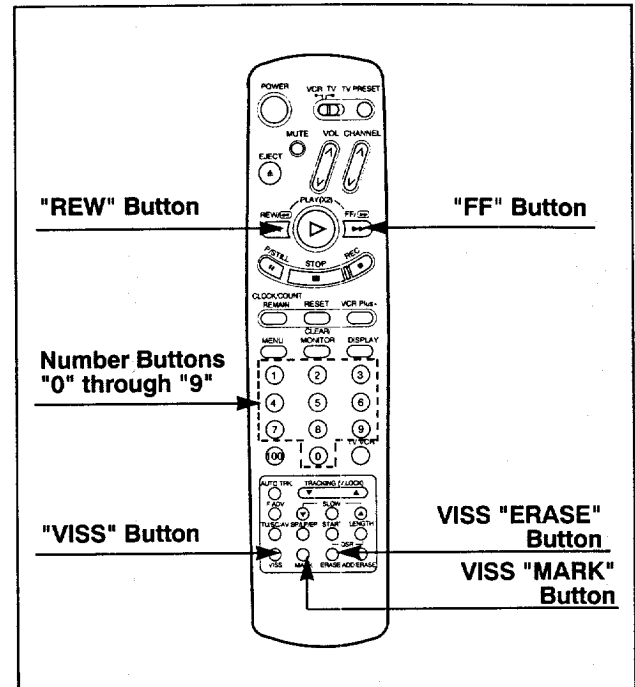
Marking VISS signals manually.

The VISS signal may be activated by pressing the VISS and MARK button during playback or recording.

1. Press the VISS button once, while a tape is playing or recording. The "VISS 00" indicator appears.
2. Press the MARK button at the point where a VISS signal is to be marked. The "V.MARK" indicator will appear on the display.

NOTES:

- VISS signals should be separated by more than 10 minutes so the VCR can detect them properly.
- The VISS signals cannot be marked on cassettes whose erase prevention tab has been broken off.
- The VISS signals can not be marked on an unrecorded portion of the tape.
- The VISS may not function on damaged or worn tapes.



■ PLAYING BACK THE BEGINNING OF EACH PROGRAM IN SEQUENCE- VISS SCAN

1. Insert a cassette tape that has VISS signals marked.
2. Press the VISS button once, while a tape is playing. The "VISS 00" indicator will appear on the TV screen.
3. Press either the FF or REW button, VISS will start. The indicator appears simultaneously during scanning. The tape will be rewound or rapidly advanced to the next signal marked. The tape will be played back for approximately 5 seconds, and then rewound or rapidly advanced to the next VISS signal. Every time a VISS signal is detected and playback begins, the displayed VISS scan number appears. ("V.SCAN 00")
4. At the desired program, press the VISS button. Normal playback of that program will begin.

■ LOCATING THE DESIRED PROGRAM -VISS SEARCH

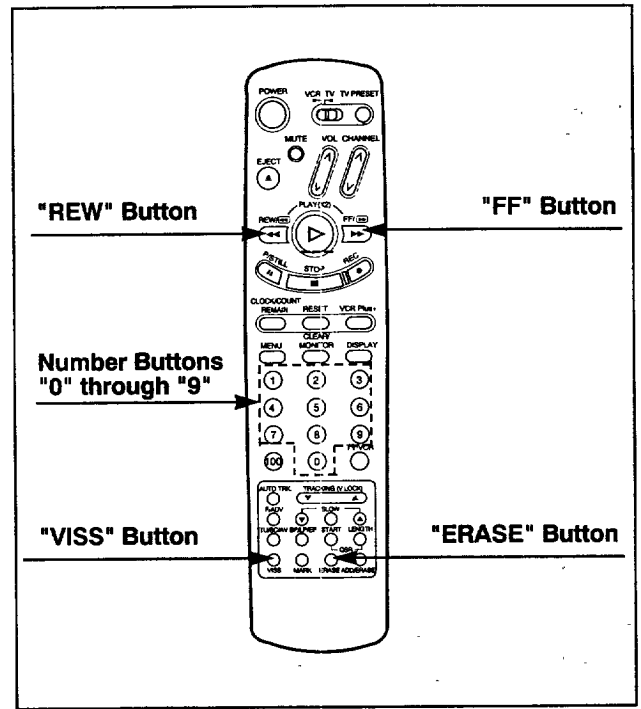
You can locate the desired program and play it back automatically by designating the number of its VISS signal. Up to the 99th VISS signal from the present position on the tape can be located.

1. Press the VISS button once during playback.
2. Press the numbered buttons (0~9) which corresponds to the number of VISS codes to be passed on the way to the VISS destination from the present tape location (up to 99 codes can be detected on an individual tape).
3. Press either the FF or REW button briefly. The "V.SEARCH 00" appears on the display. When the desired VISS signal recorded section is found, playback begins automatically.

■ ERASING VISS SIGNALS

You can erase unnecessary VISS signals.

1. Press the VISS button once during playback.
2. Press the ERASE button.
The "V.ERASE" appears on the display.
3. Press either the FF or REW button.
The first subsequent VISS signal is erased and the tape is played back.
While a VISS signal is being erased, the recorded sound will not be heard, but it is not erased.



VISUAL SEARCH (F-SEARCH AND R-SEARCH)

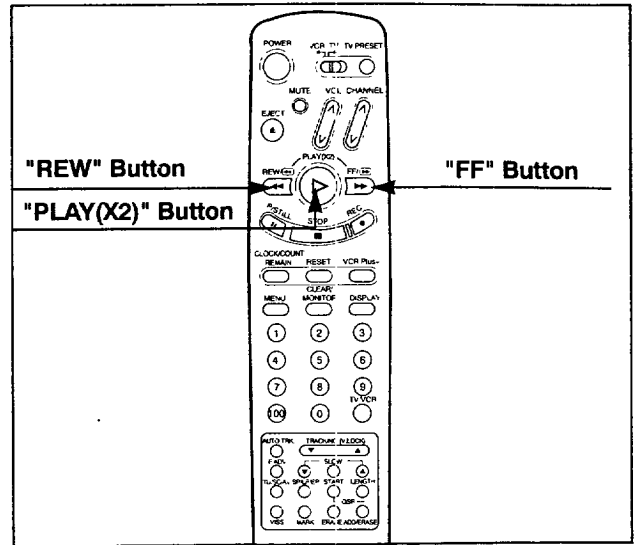
When you press "FF(▶▶)" (Forward SEARCH) or "REW(◀◀)" (Reverse SEARCH) button during playback, the tape will be played back at a speed about 15 times faster than the normal playback speed (EP recorded tape), 9 times faster than the normal playback speed (LP recorded tape), or 5 times faster than the normal playback speed (SP recorded tape), and you can easily locate a certain spot on the tape. - PICTURE SEARCH.

NOTE:

- During playback, press either search button (FF or REW) to begin visual search. When you have reached the desired point on the tape, press the "PLAY (x2)" button again so that the unit enters the normal playback mode. Otherwise, speed search continues for about 3 minutes, after which time the PLAY mode is resumed.

While you hold down "FF" or "REW" button during the picture search mode, the picture will be viewed at 9 times faster than the normal playback speed (SP recorded tape), at a speed about 17 times faster than the normal playback speed (LP recorded tape) or at 27 times faster than the normal playback speed (EP recorded tape). - RAPID PICTURE SEARCH.

When you have reached the desired point of the tape, release the REW or FF button so that the VCR enters the normal playback mode.



While holding down "FF" or "REW" button during the fast forward or rewind mode, the picture will be viewed at 5 times faster than the normal playback speed (SP recorded tape). 9 times faster than the normal playback speed (LP recorded tape), or at 15 times faster than the normal playback speed (EP recorded tape). To release the fast forward or rewind mode, press "PLAY (x2)" or "STOP" button. - FR SEARCH.

NOTE: The F Search and R Search features are intended for use with SP or EP recording. The LP recordings will contain too much noise (interference) to produce a viewable picture.

PICTURE SEARCH



SP recording (× 5)



EP recording (× 15)



LP recording (× 9)

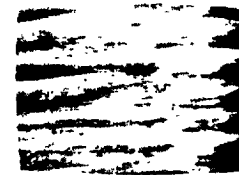
RAPID PICTURE SEARCH



SP recording (× 9)



EP recording (× 27)



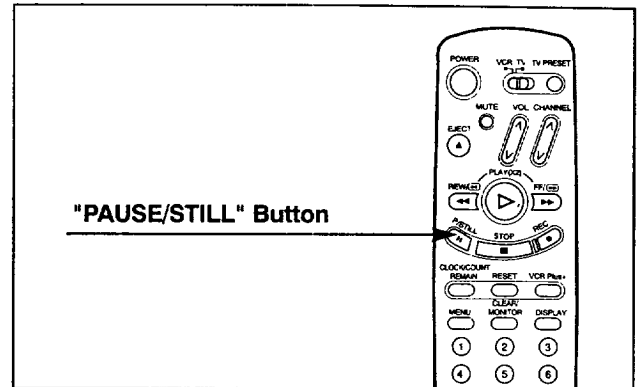
LP recording (× 17)

PAUSE/STILL

When "PAUSE/STILL" button is pressed during recording, "RECP" will appear and the VCR will stop recording. This feature can be used for eliminating unwanted station breaks or program material while recording a TV program or when using a camera from one scene to another. To start again press "PAUSE/STILL" button, and "P" indication will go off and the VCR will continue recording. When "PAUSE/STILL" button is pressed during playback, "STILL" will appear and a still picture can be seen. To start again press "PLAY(x2)" or "PAUSE/STILL" button and the VCR will continue playback.

NOTES:

1. If a noise band is seen during STILL, first press "SLOW" button and "TRACKING" ("▲" or "▼") button to eliminate the noise.
2. The tape recorded at LP mode will contain more noise and flagging than the tape recorded at SP or EP mode.



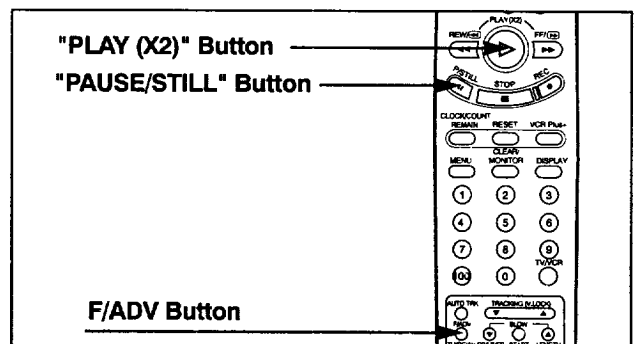
3. When the PAUSE (STILL) mode continues for more than about 5 minutes, the VCR will automatically change to stop mode to protect the tape.

FRAME ADVANCE

Every time you press F/ADV (Frame Advance) button in the STILL (play pause) mode, tape will be played back one frame at a time.

It operates only after "PAUSE/STILL" button has been pressed.

Press the "PLAY(x2)" button to resume normal playback.

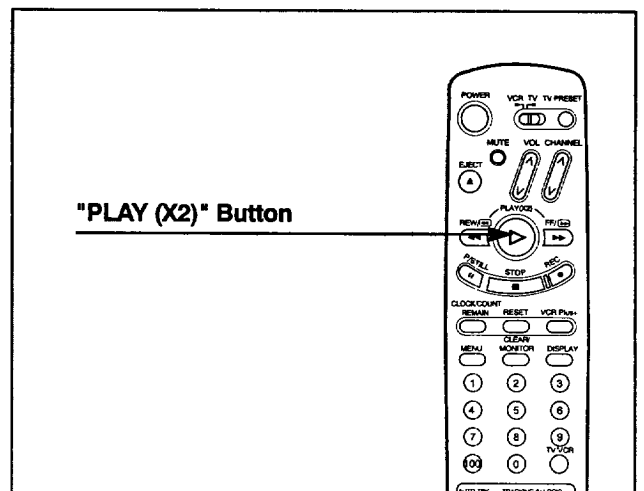


DOUBLE SPEED PLAYBACK

When "PLAY (x2)" button is pressed during playback mode, a double speed playback picture of the normal speed (SP or EP recorded tape) can be seen. Press "PLAY (x2)" button to return to the normal playback mode, and the VCR will continue playback.

NOTES:

1. During double speed playback, a certain amount of noise may appear on the screen. If so, press "TRACKING" ("▲" or "▼") button to find the position at which the least amount of noise occurs.
2. The double speed playback feature is intended for use with SP or EP recordings. The LP recording will contain too much noise (interference) to produce a viewable picture.

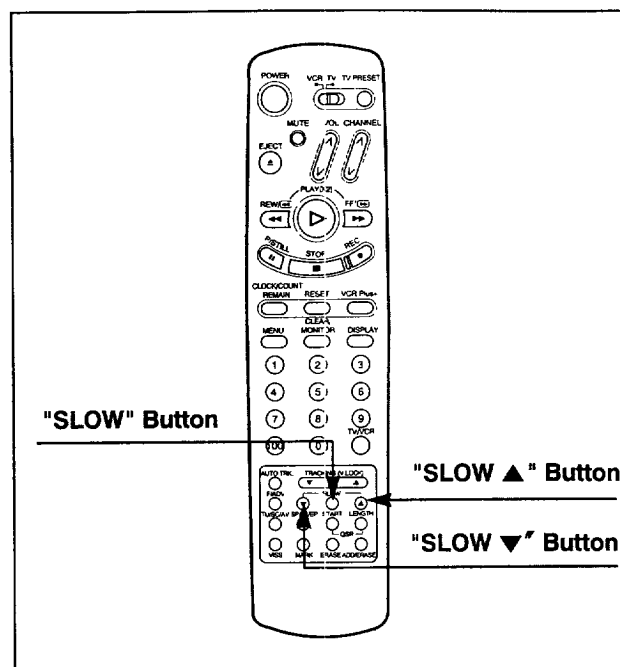


SLOW

When you press "SLOW" button during playback, the tape will be played back at a speed about 1/6 times through 1/32 times slower than the normal speed becomes slower. When you press "SLOW▼" button, the speed becomes slower. When you press "SLOW▲" button, the speed becomes faster. Press "PLAY (X2)" button to return to normal playback speed or press "STOP" button to stop tape movement.

NOTES:

1. The Slow feature is intended for use with SP and EP recordings. The LP recordings will contain too much noise (interference) to produce a viewable picture.
2. During slow playback, "TRACKING" buttons on the Remote Control can be used to minimize noise bands.
3. When the slow mode continues for more than about 3 minutes, the VCR will automatically change to play mode to protect the tape from damage.

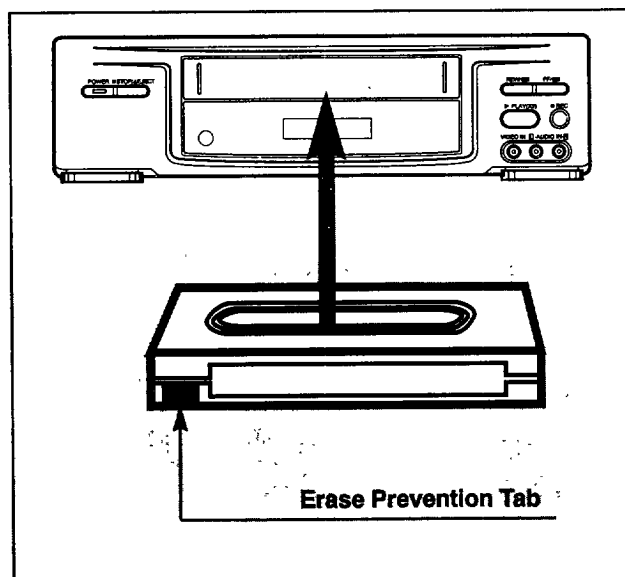


AUTO PLAYBACK FUNCTION

When a cassette with erase prevention tab removed is inserted, playback will start automatically. This automatic function eliminates the need for pressing "PLAY (X2)" button.

1. Inserting a cassette into the Cassette Loading Slot automatically switches on the VCR's power. (Auto Power-on)
2. The VCR starts playback automatically. (Auto Playback)
3. At the end of the tape, the tape automatically rewinds to the beginning. (Auto Rewind)
4. The cassette is ejected automatically when the tape has finished rewinding. (Auto Eject)
5. Auto power off.

NOTE: The cassette can be ejected when the EJECT button is pressed, even if the VCR's power is OFF.
(Auto Power-off-eject)



USING THE COUNTER MEMORY FEATURE

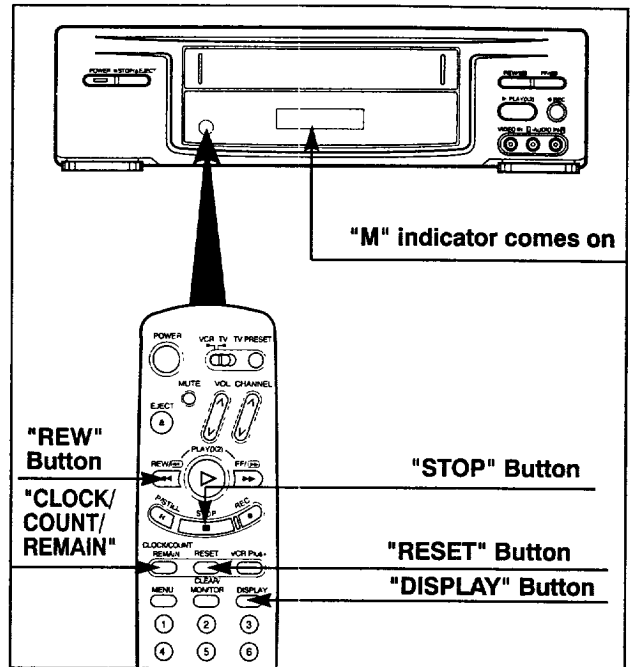
The tape counter on this VCR indicates the tape travel time in hours, minutes, and seconds during recording and playback.

The memory feature allows you to return to a specific spot on the cassette after recording or playing.

The memory works with the Counter to return to a particular spot on the cassette. The memory is designed to stop when the counter reaches "0:00:00" during rewind (REW).

This feature is especially helpful when editing a recording.

1. Press "CLOCK/COUNT/REMAIN" button repeatedly for counter memory mode. The indicator "M" appears.
2. Press "DISPLAY" button twice for counter display on the screen if necessary.
3. Start playing or recording a tape.
4. At the point you want to start, press "RESET" button to reset the counter to "0:00:00".
5. Continue to play or record.
6. Press "STOP" button.
7. Press "REW" button. The tape will be rewound to the preselected point approximately at "0:00:00".

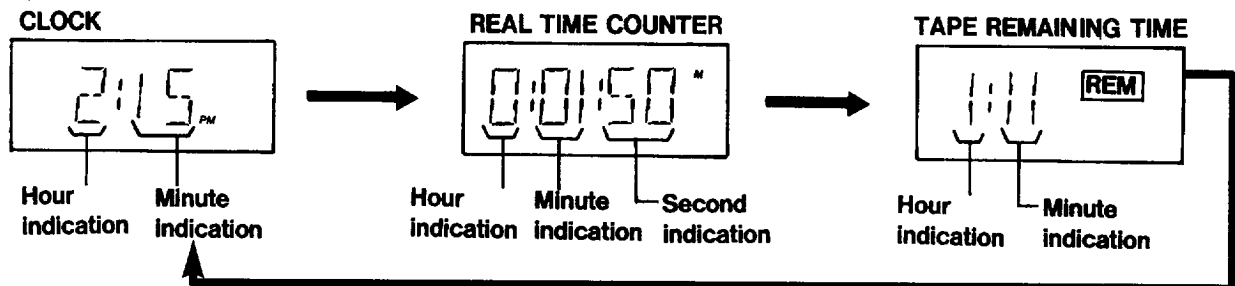


NOTES:

1. The linear time counter does not operate for nonrecorded portions.
2. The tape counter will be automatically reset "0:00:00" when the tape is loaded.
3. If a tape is rewound beyond 0:00:00, the counter will show a negative indication.
4. The tape starts moving from 0:00:00 and counter indicates amount elapsed time.

HOW TO CALCULATE THE REMAINING TIME

The remaining tape time can be calculated by pressing "CLOCK/COUNT/REMAIN" button. Each time the "CLOCK/COUNT/REMAIN" button is pressed, the display switches as follows.



NOTES:

1. If the "CLOCK/COUNT/REMAIN" button is pressed immediately after beginning recording or playback, the tape remaining time will be displayed after about half a minute.
2. The TAPE SELECT (T-120/T-140, T-160) menu display must be set to the correct position depending on the tape to be used.
3. Use the 120 position when using a shorter tape than a T-120 video cassette. Use the 160 position when using a T-160 video cassette.
3. The tape remaining display shows the approximate time remaining on the tape.

Hi-Fi AUDIO SOUND SYSTEM

This VCR is equipped with the VHS Hi-Fi audio sound system for recording and playback. The information below gives a brief description of Hi-Fi audio and how to record and playback in the Hi-Fi audio mode.

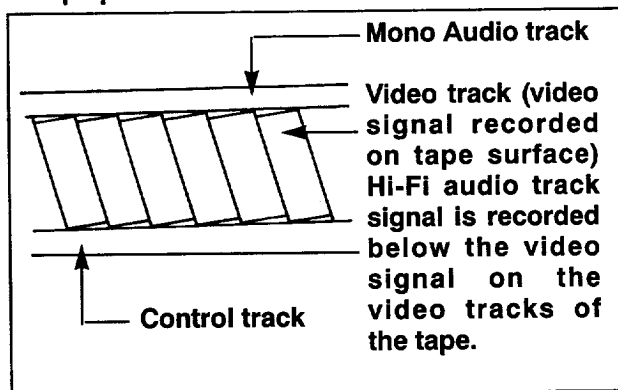
DESCRIPTION OF THE AUDIO RECORDING SECTION

AUDIO TRACK SYSTEM

The unit is a video recorder with a regular audio track and two "VHS Hi-Fi" audio tracks, allowing you to make high quality audio recordings in the stereo or bilingual modes from an MTS (Multichannel Television sound) broadcast, a stereo Audio system, stereo video disc or VCR and play them back in the stereo or bilingual mode.

Combine the VCR with your audio system for more listening enjoyment when viewing video tapes.

● Tape pattern recorded with the VCR.



A mono audio sound signal is recorded automatically onto the mono audio track, even if Hi-Fi is selected for recording.

■ PLAYBACK WITH Hi-Fi AUDIO SOUND

1. Set the AUDIO MODE display (Hi-Fi/NORMAL) to Hi-Fi position. Details are on page 12.
2. Set the AUDIO OUTPUT display (STEREO/LEFT, /RIGHT) to STEREO position.
3. Other operations are the same as general PLAYBACK.

NOTES:

- A difference in audio level may be detected between Hi-Fi and NORMAL audio playback.
- When the TRACKING CONTROL is misadjusted, Hi-Fi AUDIO sound may revert to NORMAL AUDIO sound. This is normal. Adjust the tracking control again to make " **HiFi** " indicator appear. If noise is heard in the audio, the TRACKING CONTROL may need more critical adjustment.

■ RECORDING WITH Hi-Fi AUDIO SOUND

Both Hi-Fi AUDIO and NORMAL AUDIO sound are automatically recorded during regular video recording. (It is not necessary to use the AUDIO MODE SET menu.)

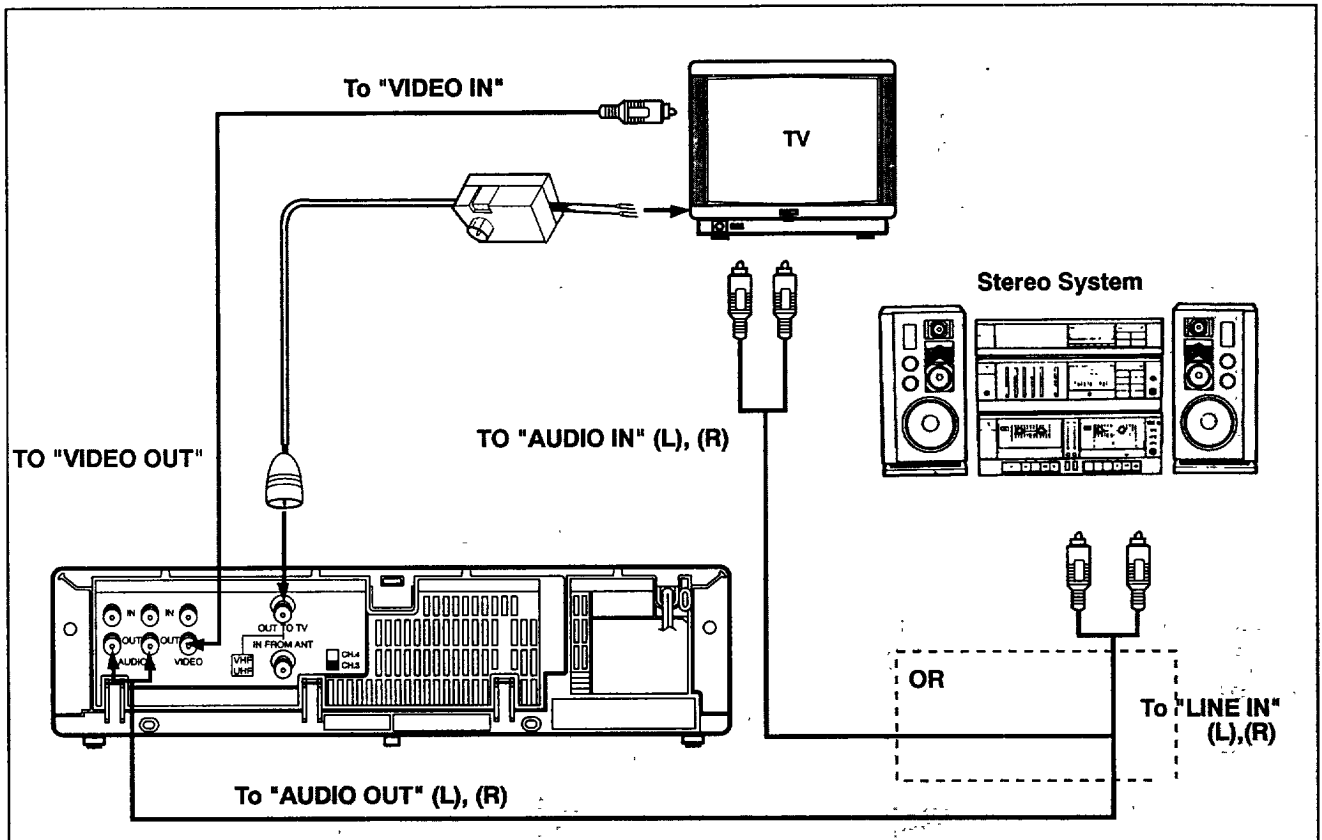
■ OPERATION AS A Hi-Fi AUDIO TAPE DECK

To use your VCR as when you use a Hi-Fi AUDIO TAPE DECK.

1. Switch off the TV. (Not needed)
2. Set the INPUT Select button to A/V.
3. Adjust STEREO TUNER or Receiver for high-quality sound.
4. Follow the normal steps for recording.

STEREO RECORDING/PLAYBACK CONNECTIONS AND OPERATION

This VCR is capable of receiving stereo and SAP broadcasts where available-no modification or special equipment is required. External stereo system or compatible stereo TV is required for stereo playback.



1. Connect Antenna, VCR and TV. Refer to "ANTENNA/VCR CONNECTIONS" and "VCR/TV CONNECTIONS" on pages 6 and 7.
2. Connect the video cable to "VIDEO OUT" of your VCR. Connect the other end to "VIDEO IN" of your TV.
3. Connect the audio cable to "AUDIO OUT" (L), (R) of your VCR. Connect the other ends to "AUDIO IN" (L), (R) of your TV. If you have a stereo system, connect the audio cable to "LINE IN" (L), (R) of your stereo system.

■ Stereo Playback

1. Turn on your stereo system and hold the sound of TV to minimum.
2. Turn on TV and select Channel 3 or 4 (depending upon your VCR channel).
3. Insert a cassette and press "PLAY(X2)" button. Sound will come out in stereo. Adjust volume at your stereo system.

NOTES:

1. Set the AUDIO MODE display (Hi-Fi/NORMAL) to Hi-Fi position. Details are on page 12.
2. Set the AUDIO OUTPUT display (STEREO/LEFT/RIGHT) to STEREO position.

■ Stereo Recording

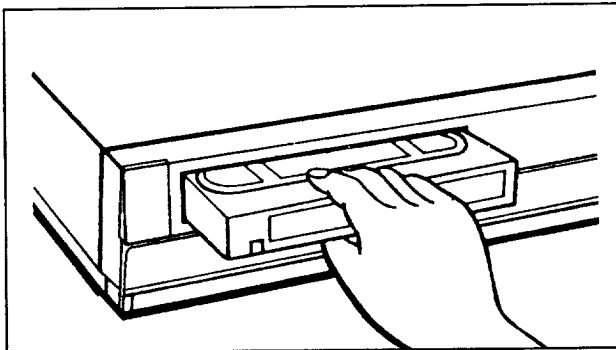
1. Perform steps 1 through 6 of "RECORDING ONE PROGRAM WHILE VIEWING ANOTHER" on page 46.

NOTE: When the stereo signal is noisy and interrupted, set the BROADCAST TYPE display (STEREO/MONO/SAP) to "MONO".

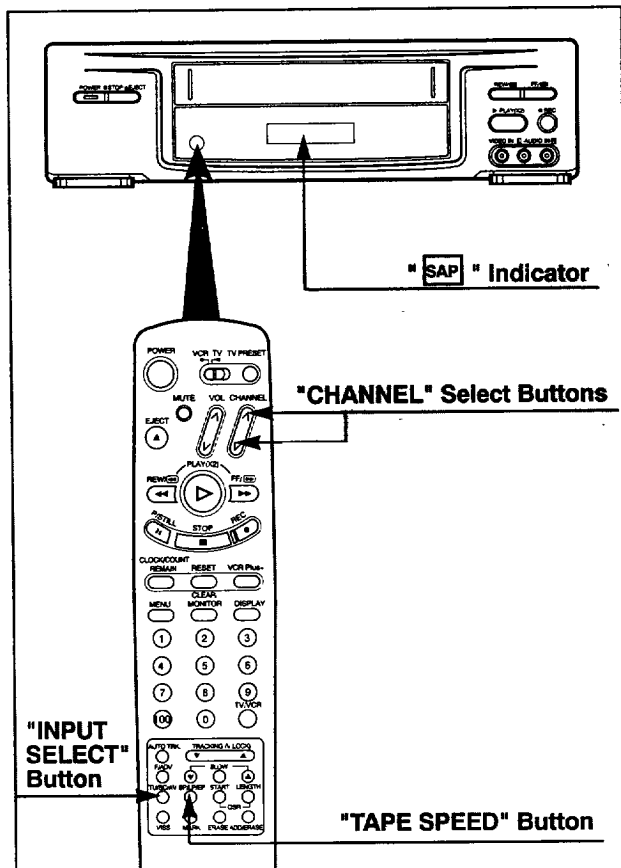
SAP (Second Audio Program) RECORDING

Some stations transmit a "Second Audio Program," which is used for a second language. When the station broadcasts a Second Audio Program, the "SAP" indicator lights. Follow the procedure below to record the SAP.

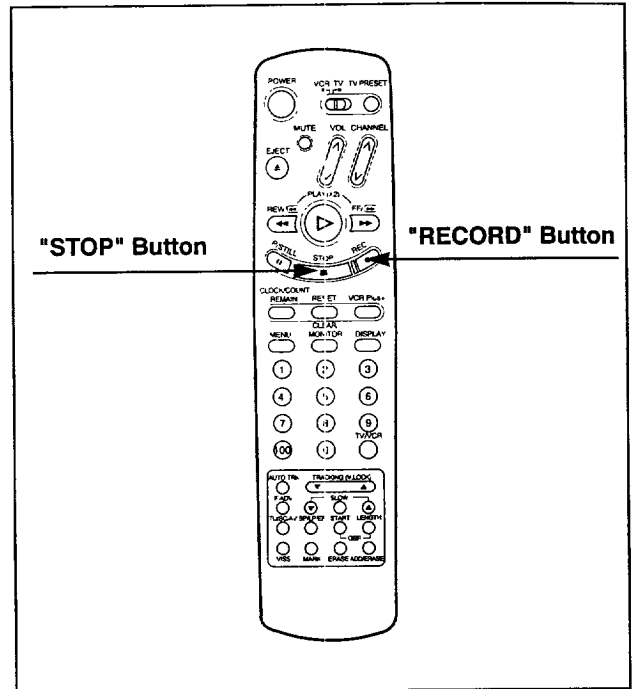
1. Insert a cassette into the cassette loading door.



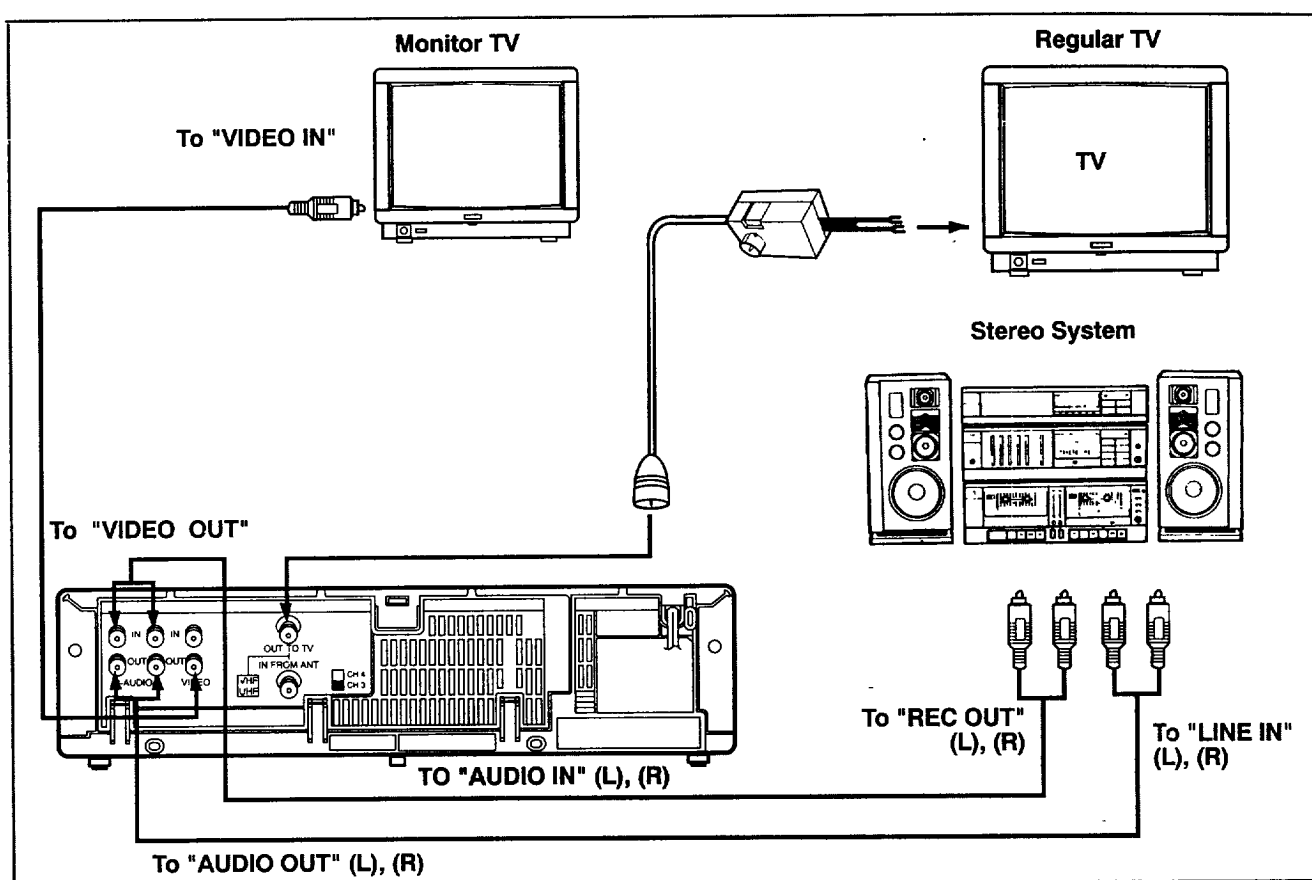
2. Press "INPUT SELECT" button on the remote control so as to select Channel Number Display (without "sc" indication) on the display.
3. Set BROADCAST TYPE display (STEREO/MONO/SAP) to "SAP". Details are on page 12.
4. Press "TAPE SPEED" button to select the desired speed.
5. Turn on TV and set to Channel 3 or 4.
6. Press "CHANNEL" Select button on the remote control to select the channel which is broadcasting the SAP. The "SAP" indicator will light.



7. Place the VCR in the RECORD mode. You are now recording the program you see and hear on the TV.
8. Press "STOP" button on the VCR or remote control to stop recording.



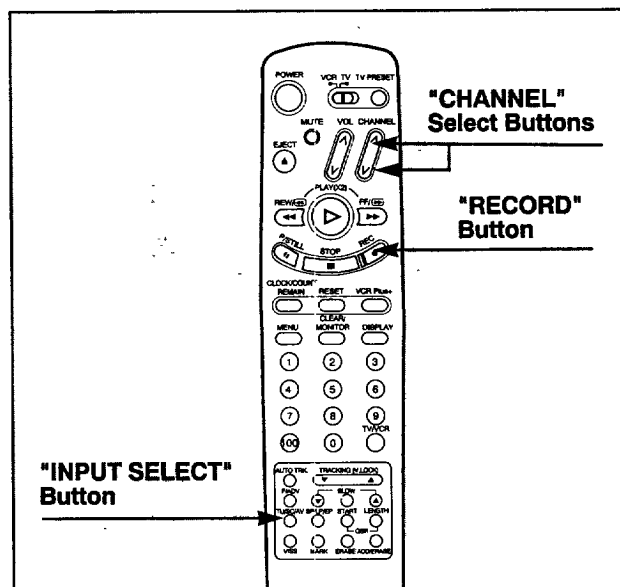
SIMULCAST RECORDING CONNECTION AND OPERATION



Simulcast recording allows you to record a program which is being transmitted simultaneously by television radio broadcast stations.

1. Connect VCR and Antennas. Refer to "ANTENNA/VCR CONNECTIONS" and "VCR/TV CONNECTIONS" on page 6 and 7. If you have a Monitor TV, connect the video cable to "VIDEO OUT" of your VCR and connect the other end to "VIDEO IN" of your TV.
2. Connect one audio cable to "AUDIO OUT" (L), (R) on the VCR. Connect the other end to "LINE IN" (L), (R) on your stereo system.
3. Connect another audio cable (not supplied) to "AUDIO IN" (L), (R) of your VCR. Connect the other end to "REC OUT" (L), (R) of your stereo system.
4. Turn the FM Tuner of the stereo system to the FM station which is broadcasting the simultaneous stereo sound.
5. Turn on TV and tune it to the VCR channel (3 or 4).
6. Insert a cassette.
7. Set the Input Select button to "SC" position. The "sc" indicator will appear on the Display.

8. Press "CHANNEL" Select button (▼ or ▲) on the remote control to select the channel to be recorded.
9. Put the VCR in the "RECORD" mode. The "REC" indication will appear on the Display. You are now recording the program you see on your TV screen and also recording the simulcast stereo audio to which you are listening.



AUTO-REWIND

In the record, playback or fast forward mode the VCR automatically rewinds the tape at the end of tape. The VCR will stop at the beginning of the tape.

AUTO MEMORY POWER SHUT-OFF

During rewind, press "POWER" button once:

Rewind complete → Auto Power off.

Press "POWER" button again to release "AUTO MEMORY POWER SHUT-OFF" function.

PLAYBACK WITH TV EQUIPPED WITH VIR

If your television receiver is equipped with VIR, it may be necessary to turn the VIR OFF when playing back the video tape. Otherwise the color may be too bright, too faint or even change.

VIDEO HEAD CLEANING

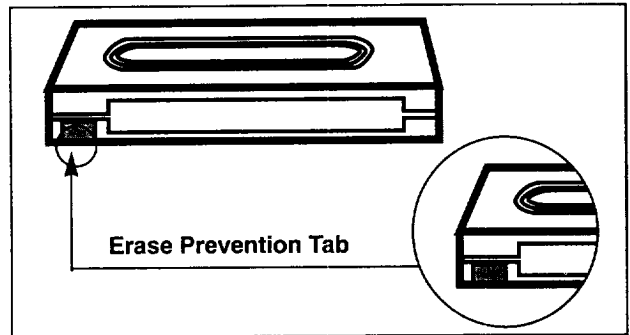


- Picture playback may become blurred or interrupted even though the TV program received is clear. This does not mean that the recorded program has been erased.
- Dirt accumulation on the head after long periods of use can cause these problems.
- If high quality video tapes are used in this VCR, the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

OPERATING HINTS....

- After you have finished using the VCR, rewind, eject and remove the cassette. Place the cassette in its protective sleeve to protect it from dust. It is not necessary to rewind the cassette before removing it, but if you do, it will be ready to play or record the next time you use it.
- Be sure the VCR "CHANNEL" selector is on the correct channel you wish to record. The channel that is being recorded can always be checked by setting the television on the VCR channel (3 or 4) and setting the "VCR/TV" selector to "VCR".
- Always reset the "COUNTER" to "0:00:00" when you start using a cassette. Make a note on the cassette what number the "COUNTER" reads when the recording is finished if less than the full program material at the end of the first recording. Any other locations on the tape can be noted on the cassette label also, if desired so you can quickly locate them later.

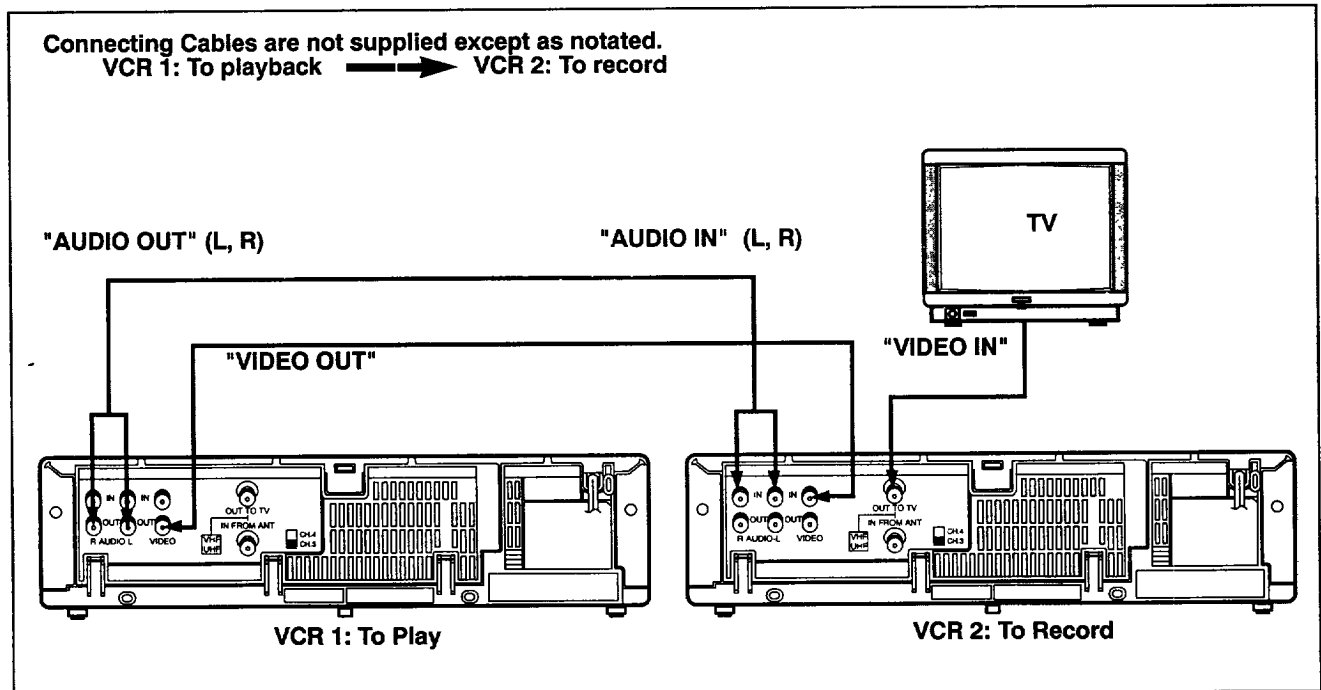
- Do not attempt to hook up more than one television set to the VCR for either recording or playback.
- **ERASE PREVENTION TAB**
If you wish to save a recording and prevent accidental erasure, remove the erase prevention tab from the cassette. This will prevent recording on the cassette. Later, if you wish to record, stick two layers of cellophane tape over the opening.



VCR TO VCR DUBBING

If you wish to exchange or copy some of your friend's favorite home recordings, the following instructions can be used to connect on VCR to another for this purpose.

CONNECTIONS



1. Connect VIDEO OUT/AUDIO OUT of VCR 1 to VIDEO IN/AUDIO IN of VCR 2.
2. Set Input Select Button of VCR 2 to A/V mode.
3. Play the tape on VCR 1 and record it on VCR 2.

NOTE:

If you connect the "VHF/UHF OUTPUT" connector of VCR 2 to the "TV ANT" connector, as illustrated, and press the "VCR/TV" selector to turn the "vcr" indicator on, the picture being dubbed by VCR 2 can be monitored.

TROUBLESHOOTING

Your Video Cassette Recorder is a highly sophisticated instrument. It has been carefully checked and adjusted at the factory under the most rigid quality control and inspection systems. However, should problems develop, check the following points and take necessary corrective measures.

INSERTING OR REMOVING THE CASSETTE

Symptom	Check Point & Correction
Cassette cannot be inserted into Cassette Compartment.	● Load cassette in direction indicated by arrow on cassette.
	● A cassette is already in the VCR.
	● Press "POWER" ON/OFF button to "OFF" and then to "ON" again, and then insert the cassette again.


RECORDING TV PROGRAM OFF THE AIR

Symptom	Check Point & Correction
No picture appears on television screen.	● Press "VCR/TV" selector to turn the " <input type="checkbox"/> VCR " indicator on.
	● Set the television to the same channel selected on the RF Channel Select Switch. (Channel 3 or 4).
A picture appears on television screen but is not clear.	● Adjust the Tuning Control on television to obtain best picture.
The VCR will not go into the recording mode, even when the both "RECORD" and "PLAY (X2)" buttons on the VCR or one "RECORD" button on the remote control are pressed.	● The cassette has had the erase prevention tab removed. Stick a piece of cellophane tape over erase prevention tab hole or select a different cassette.

PLAYBACK OF PRE-RECORDED CASSETTE

Symptom	Check Point & Correction
No picture appears on television screen when "PLAY (X2)" button is pressed.	● Set the television to the VCR channel (3 or 4) depending upon the selected channel on the RF Channel Select Switch.
	● Try different cassette tape.
No picture, but audio is clear.	● Take VCR to Sears Service Center for service.
Interference on playback picture.	● Adjust fine tuning knob on television set to obtain best picture.
	● Adjust "TRACKING" control button (▼ or ▲).
	● Take VCR to Sears Service Center for service.
Picture bends at top of screen.	● TV receiver is of older type. It needs to be modified to work properly with VCR.
	● Tape is damaged. Try another cassette.
Color is too bright, too faint or changes.	● TV set has VIR circuit. Turn it off during playback.
Picture shakes or jitters in STILL or SLOW motion.	● Carefully adjust the V.LOCK/TRACKING control located on the remote control.

CLOCK

Symptom	Check Point & Correction
"-- --: -- --" appears on the display.	<ul style="list-style-type: none"> ● Reset time according to instructions. Power has been interrupted.
VCR does not start at preset record starting time.	<ul style="list-style-type: none"> ● Set up recording time according to instructions. ● Be sure the "AM-PM" display is correct. ● Press "POWER" ON/OFF button off.
VCR does not start at preset record starting time. The tape is ejected in the timer mode.	<ul style="list-style-type: none"> ● The cassette has had the erase prevention tab removed. Stick a piece of cellophane tape over the erase prevention tab hole or select a different cassette.
"  " indication flashes.	<ul style="list-style-type: none"> ● Insert a cassette.
Clock display disappears. "ERROR" flashes.	<ul style="list-style-type: none"> ● Unplug the VCR, after a few seconds, put the plug in again.

REMOTE CONTROL OPERATION

Symptom	Check Point & Correction
The VCR cannot be remotely controlled or the remote control has short range.	<ul style="list-style-type: none"> ● Weak or dead batteries.

ROUTINE MAINTENANCE

Your VCR is a highly sophisticated electro/mechanical device. It is normal for it to require routine cleaning and maintenance after approximately 1,000 hours of use. The exact schedule will depend on the condition in which it is used.

The necessity of maintenance will generally be indicated by a slight degeneration in picture or sound quality. Because of the delicate nature of VCR, it is recommended that you take the VCR to a Sears Service Center to have it cleaned and restored to "like new" operation.

SEARS SERVICE

Your Sears Video Cassette Recorder has added value when you consider that Sears has service units nationwide staffed with Sears trained technicians...professional technicians specifically trained on Sears home entertainment products; having the parts, tools and equipment to insure that we meet our pledge to you..."We Service What We Sell".

HOW TO ORDER REPAIR PARTS

Now that you have purchased your Video Cassette Recorder, should a need ever exist for repair parts or service, simply contact any Sears Service Center or Sears, Roebuck and Co. store. Be sure to provide all pertinent facts when you call or visit. When ordering parts by mail, selling prices will be furnished on request, or parts will be shipped at current selling prices and you will be billed accordingly.

The Model Number will be found on the rear of cabinet. Always mention the Model Number when requesting service or repair parts for your Video Cassette Recorder.

WHEN ORDERING REPAIR PARTS, ALWAYS GIVE THE FOLLOWING INFORMATION:

1. NAME of ITEM...Sears Video Cassette Recorder
2. MODEL NUMBER
3. PART DESCRIPTION

SPECIFICATIONS

Video input	1Vp-p, 75 ohms unbalanced
Video output	1Vp-p, 75 ohms unbalanced
Audio input	0.308 Vrms
Audio output	0.308 Vrms
Tape speed	33.35 mm/sec (SP), 16.67 mm/sec (LP), 11.12 mm/sec (EP)
Fast forward/Rewind time	Less than 6 minutes with T-160 cassette
Power requirements	120V AC, 60 Hz
Power consumption	35W
Dimensions	360(W) × 88(H) × 335(D) mm
Weight	Approx. 5.5 kg

FEATURES

- DA 4 Head System
- 181 Channel Frequency Synthesizer Tuner
- 1 year/8-Program Timer with Everyday and Everyweek Programming
- On screen program review
- On screen display of function
- Unified Remote
- High Quality (HQ) picture enhancement system for improved image sharpness and detail.
- Quick Set Recording (QSR) with standby
- Auto power and playback functions
- Record/play/visual search in 3 speeds (SP, LP, EP)
- VCR Plus™+ Programming
- Rapid picture search
- Freeze function in 3 speeds
- Clean still, slow motion, frame advance
- Double-speed playback
- Front AV jacks
- Quick start play
- VHS Index Search System (VISS)
- Real time counter, Tape remaining time
- TV monitor
- Auto power shut-off
- MTS Hi-Fi Stereo

OWNERS MANUAL

MODEL NO.
580.53484390



VIDEO CASSETTE RECORDER

Your Sears Video Cassette Recorder has added value when you consider that Sears has service units nationwide staffed with Sears trained technicians... professional technicians specifically trained on Sears home entertainment products; having the parts, tools and equipment to insure that we meet our pledge to you... "We Service What We Sell".

Should a need ever exist for repair parts or service, simply contact any Sears Service Center/Department.

WARRANTY

For 90 days from the date of purchase, Sears will repair any defect in material or workmanship in this video cassette recorder, free of charge. For one year from the date of purchase, Sears will supply, at no charge, replacement for defective parts.

The above warranty coverage applies only to video cassette recorders which are used for private household purposes.

TO OBTAIN WARRANTY SERVICE, SIMPLY RETURN THE VIDEO CASSETTE RECORDER TO THE NEAREST SEARS SERVICE CENTER/DEPARTMENT IN THE UNITED STATES.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Sears, Roebuck and Co.
D/817WA, Hoffman Estates, IL 60179