

M-53-04-431

MAGNAVOX

VIDEO CASSETTE RECORDER
OWNER'S MANUAL



MODEL VRS960

IMPORTANT

Return Your
Warranty Registration Card
Within 10 Days.
See Why Inside.

MAGNAVOX

Smart. Very smart.®

**WARRANTY
REGISTRATION
CARD**

Return your Warranty Registration Card today to ensure you receive all the benefits you're entitled to.

Once your MAGNAVOX purchase is registered, you're eligible to receive all the privileges of owning a MAGNAVOX product. So complete and return the Warranty Registration Card enclosed with your purchase at once. And take advantage of these important benefits.

■ Warranty Verification

Registering your product within 10 days confirms your right to maximum protection under the terms and conditions of your MAGNAVOX warranty.

■ Owner Confirmation

Your completed Warranty Registration Card serves as verification of ownership in the event of product theft or loss.

■ Model Registration

Returning your Warranty Registration Card right away guarantees you'll receive all the information, offers, and bonuses which you qualify for as the owner of your model.

MAGNAVOX

Smart. Very smart.®

**Congratulations on your purchase
--and welcome to the "family!"**

Dear MAGNAVOX product owner:

Thank you for your confidence in MAGNAVOX. You've selected one of the best-built, best-backed products available today. And we'll do everything in our power to keep you happy with your purchase for many years to come.

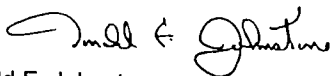
As a member of the MAGNAVOX "family," you're entitled to protection by one of the most comprehensive warranties and outstanding service networks in the industry.

What's more, your purchase guarantees you'll receive all the information, offers, and bonuses which you qualify for, plus easy access to accessories from our convenient home shopping network.

And most important of all, you can count on our uncompromising commitment to your total satisfaction.

All of this is our way of saying welcome—and thanks for investing in a MAGNAVOX product.

Sincerely,



Donald F. Johnstone
President and Chief Executive Officer

P.S. Remember, to get the most from your MAGNAVOX product, you must return your Warranty Registration Card within 10 days. So please mail it to us right now!

HURRY!
Registration
Needed
Within 10
Days.

KNOW THESE SAFETY SYMBOLS.



● This "bolt of lightning" indicates uninsulated material within your unit may cause an electrical shock. For the safety of everyone in your household, please do not remove product covering.

● The "exclamation point" calls attention to features for which you should read the enclosed literature closely to prevent operating and maintenance problems.

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

CAUTION: To prevent electric shock, match wide blade of plug to wide slot, fully insert.

ATTENTION: Pour éviter les chocs électriques, introduire la lame la plus large de la fiche dans la borne correspondante de la prise et pousser jusqu'au fond.

For Customer Use:

Enter below the Serial No. which is located on the rear of the cabinet. Retain this information for future reference.

Model No. VR9960

Serial No. _____

3 — Welcome

Hello. We are pleased to introduce you to one of the most popular entertainment products available today.

Before you do anything else, record the Serial and Model Numbers in the spaces provided either on page two (to the right of the president's signature) or on the Warranty page at the back of this owner's manual. These numbers are located on the back of the VCR. Keep this manual and numbers near your VCR for quick reference or in case you should have to call for help.

Done? Good. You now have a legal description of your new VCR (Video Cassette Recorder).

This owner's manual is designed for you. To help you, keep certain things in mind. One, this book is divided into four sections. If you turn to page 4, you'll see that those sections are "Getting Started," "Describing Your Controls," "Doing More," and "Information You May Need."

The "Getting Started" section guides you through what you need to know to get your VCR up and running.

The "Describing Your Controls" section gives you an overview of on-screen displays, your remote control, and your VCR. (You can even look at this section first, or any time you want.)

The "Doing More" section takes you through the more advanced features of your VCR, building on what you've done in "Getting Started." The features in this section are done only as you need them.

The "Information You May Need" section is there if you should need the information. But you may never have reason to look there.

Go take a look, then come back. No hurry.

Taken a look? Good.

Remember, at the very least, read all the numbered steps for each feature you want to do before you do that feature. Once you have done this, you may find as you do the feature, you will only need to pay attention to the on-screen displays. But reading the instructions will tell you what to expect. It is your road map to the adventure of traveling through your VCR.

There is also a **Quick Use Guide** — a separate card packed with your VCR. It can be used by those already familiar with VCRs. It should be kept near the VCR for quick reference once the VCR is hooked up and you are familiar with it.

Never be afraid to take the next step. You can't hurt your VCR. Certainly not by trying out any of the features. The features, like this manual, were made with you in mind.

So, Read on ... and Relax!

— Safety Precautions

WARNING: To prevent fire or shock hazard, do not expose this equipment to rain or moisture.

FCC WARNING: Any unauthorized changes or modifications to this equipment would void the user's authority to operate.

This video recorder, equipped with the HQ (High Quality) System, is compatible with existing VHS (Video Home System) equipment.

CAUTION:
TO PREVENT ELECTRIC SHOCK, MATCH WIDE
BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

PHILIPS CONSUMER ELECTRONICS COMPANY recommends that you use only cassette tapes which have been tested and inspected for use in 2, 4, 6 and 8 hour video cassette recorders, and which are labeled with the **VHS** mark. The use of tapes which have not been tested and inspected for 2, 4, 6 and 8 hour recorders may result in poor picture quality and excess deposits on the VIDEO head, which may not be covered by the warranty if damage occurs.

ATTENTION:
Pour éviter les chocs électriques, introduire la lame la plus large de la fiche dans la borne correspondante de la prise et pousser jusqu'au fond.

Note to CATV System Installer:

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

4— *Table of Contents*

Getting Started

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Information You May Need

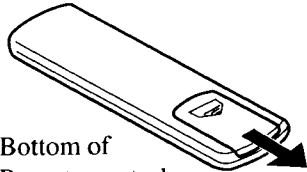
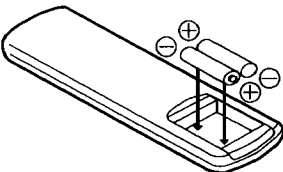
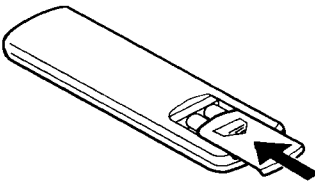
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— *Features*

- HQ (High Quality) System
- Frequency Synthesizer Tuning with Auto Set Feature
- On Screen Displays (OSD) in either English or Spanish
- Display Panel
- Auto Tracking
- One-Touch Recording (OTR)
- Unattended (Timer) Recording
- Special Effects Playback
 - Fast Search
 - Still
 - Variable Slow
 - Frame Advance
- Wireless Remote control
- Auto Operation Functions
- Daylight Savings Time

5— Before using your VCR

1 Load the batteries as follows:

<p>1 Remove the Battery Compartment lid from the bottom of the remote control.</p>  <p>Bottom of Remote control</p>	<p>2 Install two batteries as indicated inside the Battery Compartment.</p> 	<p>3 Replace the lid.</p> 
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Battery Replacement Caution

- Do not mix old and new batteries. (Also never mix alkaline batteries with manganese batteries.)

NOTE This remote control and batteries are supplied accessories. Please check to make sure they are included. Also, check the Accessories page to see what other accessories are included.

2 Types of video cassette and tape speeds

The chart below shows the recording/playback time for 3 different types of video cassette (T160, T120, T60). Each type of cassette can be played and recorded at any one of the 3 tape speeds: **SP** (Standard Play), **LP** (Long Play), **SLP** (Super Long Play).

In this VCR, use only tapes with the **VHS** mark. The chart below shows the recording/playback time for 3 types of tapes (T160, T120, T60).

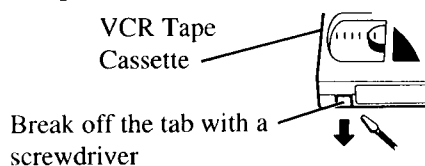
Tape Speed Selector Position	Maximum Record/Playback Time			
	Type of Tapes	T160	T120	T60
SP (Standard Play)		2 Hours 40 Minutes	2 Hours	1 Hour
LP (Long Play)		5 Hours 20 Minutes	4 Hours	2 Hours
SLP (Super Long Play)		8 Hours	6 Hours	3 Hours

- * During Playback, the VCR selects the tape speed, SP, LP, or SLP automatically. You can change recording speed for a tape using the Tape SPEED button (see page 14).
- Make sure any light adhesive stick-on notes are removed from the Video Cassette Tape before inserting Tape into the VCR. This type of "removable" label can jam the mechanical operation of the VCR.

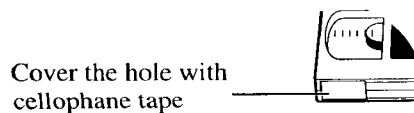
3 Erase protection

Cassettes have a Record Tab to ensure that recordings are not accidentally erased.

- **To prevent accidental erasure:**



- **To record again:**



4 Please Read and Relax

NOTE Please read all the numbered steps for each feature *before* attempting that feature. For example, read all 12 steps for Timer recording (pages 18-19) before doing a Timer recording.



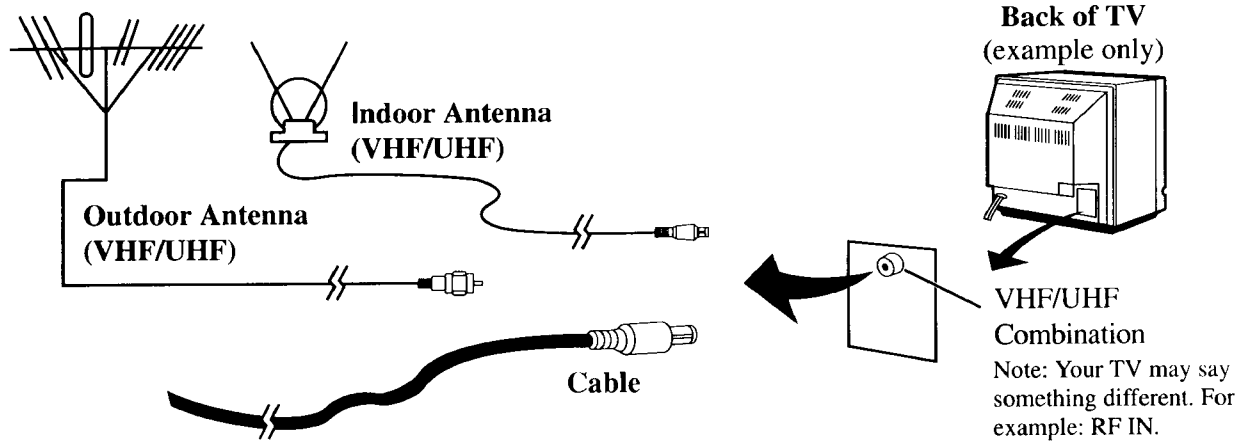
You cannot hurt your VCR by trying any of the features in this book. Even if you don't get it right the first time, the VCR will not be harmed.

**Ready to begin hooking up your VCR?
Go to the next page.**

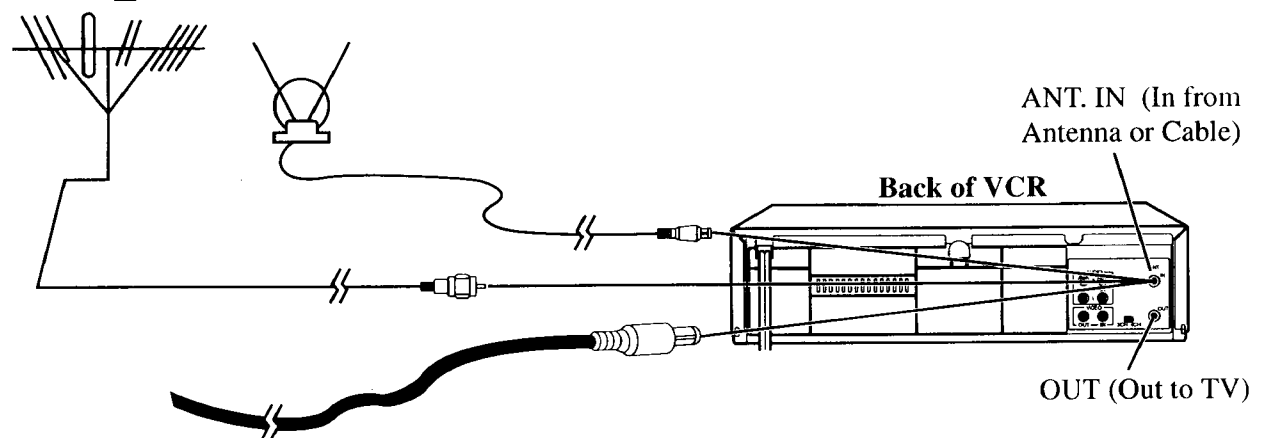
6— Hook up your VCR

Antenna or Cable to VCR to TV hook up (For other possible hook ups, please see pages 34-37.)

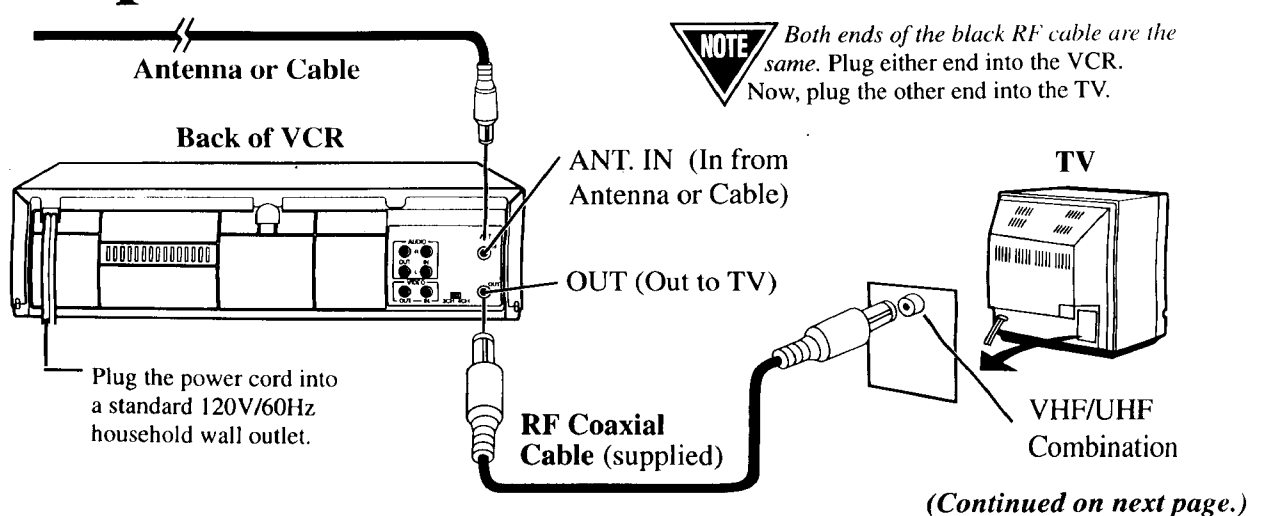
Step 1: Disconnect the Antenna or Cable from your TV.



Step 2: Connect Your Antenna or Cable to your VCR.



Step 3: Connect your VCR to your TV.



7— Hook up your VCR (continued)

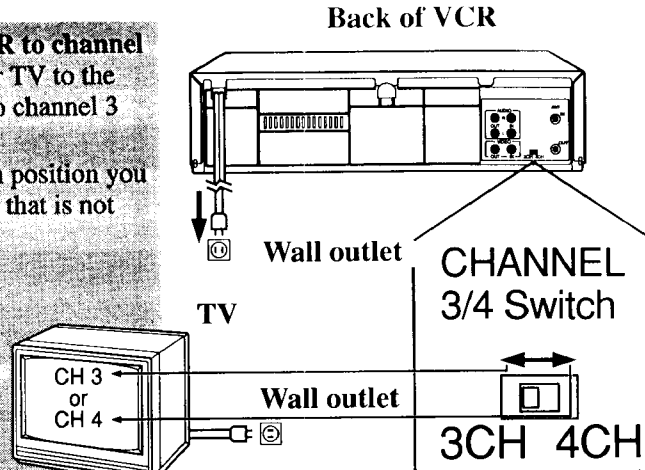
Step 4: Select channel 3 or 4.

Set the CH3/CH4 switch on the back of the VCR to channel 3 or 4. To operate the VCR with your TV, set your TV to the same channel. For example, if your switch is set to channel 3 (CH3), turn your TV to channel 3.

To avoid local interference, the CH3/CH4 switch position you choose should correspond to the local TV channel that is not used or least used.

If both are used, select the channel that gives you the best picture when playing a tape.

Remember, any time you use your VCR, make sure your TV is turned to the same channel as the VCR's CH3/CH4 switch. For example, when playing a tape, if the switch is set to CH3, the TV should be tuned to channel 3.



— Turn on your VCR

Make sure ...

the batteries are loaded in the remote control and the hook ups on pages 6 and 7 have been completed before continuing to the steps below.

1 At the TV

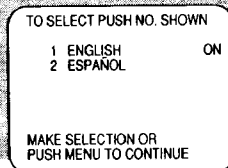
Turn the TV on. Set the TV to the same channel as the 3CH/4CH Switch on the back of the VCR. (See "Step 4" at top of this page.)

2 Choose your language

First, press the VCR POWER button. The VCR comes on and the Language Select menu appears.

Next, press the NUMBER 1 button if you want English on-screen displays. Or, press the NUMBER 2 button if you want Spanish.

Now, press the MENU button.

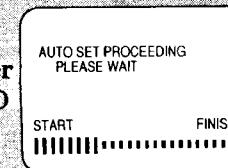
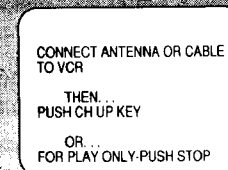


3 Place channels in VCR's memory

After selecting the language, the Channel Select menu at the right appears.

First, press the CHANNEL UP button to begin automatic channel programming. The VCR detects if you have Antenna or Cable hooked to your VCR and places the channels it receives into the VCR's memory.

Now, wait while the VCR places channels in its memory. It only takes a minute or two. After all channels have been programmed, "AUTO SET COMPLETED" briefly appears, then the VCR displays the lowest channel number programmed. For example, channel 2.

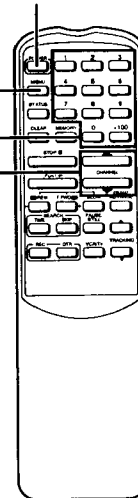


POWER button

MENU button

NUMBER buttons

CHANNEL UP/DOWN buttons



Remote control



You do this feature one time!

If you do not see any on-screen displays, please repeat the four steps under "Hook up your VCR," pages 6 and 7.

If you still do not see either of the displays, go to page 31, "OSD Language Select," then page 30, "Special VCR Features." Or, go on to page 8 and play a tape.

At a later time, you can change your language selection or channels in memory by going to page 30 or 31.

You can also fast track through this feature. For details, see page 11.



If channel programming is done without an antenna or cable hook up, the on-screen display will say "NO TV SIGNALS." If this happens, hook up an antenna or cable and try step 3 again.

To confirm language selection, press the MENU button.

To confirm channel selection, press the CHANNEL UP button.

Ready to play a tape?
Go to the next page.

8— Play a tape

Make sure ...

the batteries are loaded in the remote control and the hook ups on pages 6 and 7 have been completed before continuing to the steps below.

1 At the TV
Turn the TV on. Set the TV to the same channel as the switch on the back of the VCR (3CH/4CH).

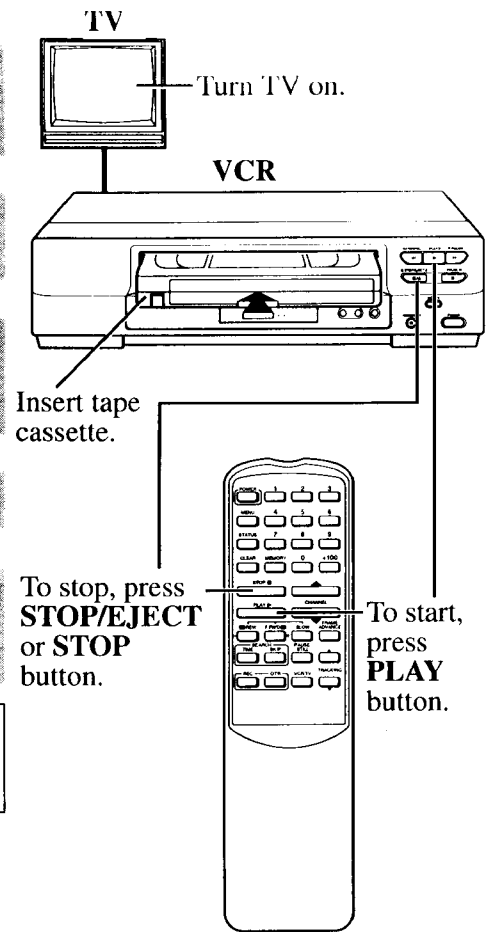
2 At the VCR
Insert a cassette.*
• The VCR Power will come on.
• The VCR mode is automatically set. "VCR" light shines.

3 Start playback
Press the PLAY button.

4 Stop playback
Press the STOP/EJECT button to stop playback.
• Press the REW(ind) button to fully rewind the tape.
• Press the STOP/EJECT button again to remove the tape.

- * If a cassette's record tab (page 5) is removed, playback starts automatically.
- If a cassette is already in the VCR, just press the POWER button.

Other playback features are discussed on pages 24 - 25.



Remote control

— A word about the remote

Using the 100 button

To record or watch channels 100 to 125 with the NUMBER buttons, first press the NUMBER 100 button, then enter the remaining two numbers. For example, for channel 105, press NUMBER buttons 100, 0, 5. For channel 100, press NUMBER button 100, 0, 0.

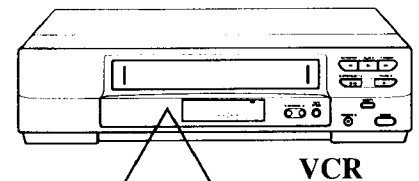


Point the remote control at the VCR's remote sensor, within the angle shown in the illustration at right.

Do not put objects between the remote control and the VCR.

Keep fresh batteries loaded in the remote. For details, see page 5.

More information about the remote control is on pages 12 - 13.



60°

+100 button

Remote control

Ready to record on a tape?
Go to the next page.

9— Record on a tape

Read step 1-7 to record on a cassette tape. Read all the instructions before starting. You must use your remote control.

Make sure ...

the steps in "Hook up your VCR" on pages 6 – 7 have been completed.

1 **At the TV**
Turn the TV on.
Turn to channel 3 if the VCR 3CH/4CH switch is set to "3CH." Turn to channel 4 if the VCR is set to "4CH."

2 **At the VCR**
Insert a cassette with the record tab in place (for details, see page 5). The power comes on.
If the cassette is already in the VCR, press the **POWER** button.
If the VCR light comes on, do nothing.
If it doesn't, press the **VCR/TV** button.

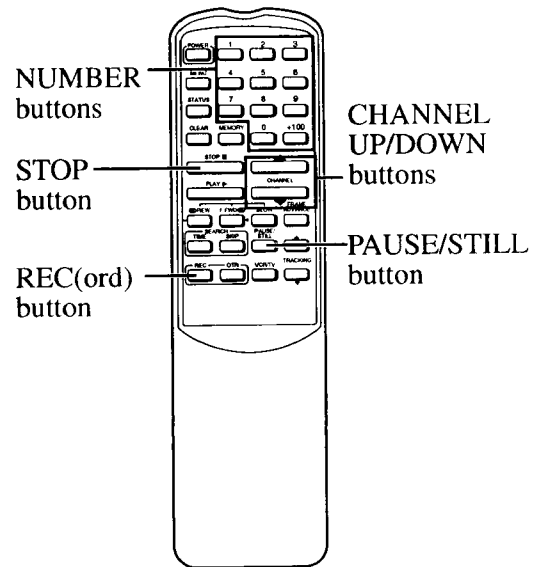
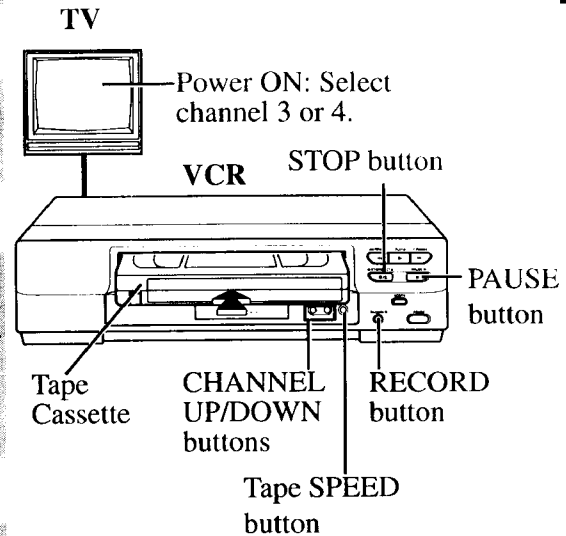
3 **Choose the tape speed**
(Skip this step if the desired tape speed is already selected.)
Press the **Tape SPEED** button on the VCR the desired tape speed (SP, LP, SLP – for details, see page 5) appears on the TV screen and the VCR display panel.

4 **Choose the channel**
Press the **CHANNEL UP/DOWN** or **NUMBER** buttons to select the channel to be recorded.

5 **Start recording**
Press the **REC(ord)** button.

6 **Pause recording**
To pause, press the **PAUSE/STILL** button.
To continue recording, press this button again.

7 **Stop recording**
To stop, press the **STOP** button.



Remote control

NOTE

- Other recording options are available. See pages 17–21.
- If the **REC(ord)** button is pressed while a cassette tape without its record tab is in the VCR, the tape will be ejected and "PROTECTED CASSETTE CANNOT RECORD" will appear on the TV screen.

Ready to set the clock?
Go to the next page.

10— Set the clock

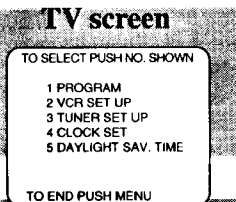
Read step 1-4 to set your VCR to the present day and time. Once set, your VCR (Video Cassette Recorder) will maintain the time in its internal clock, and will make timer recording possible. **You must use your remote control.**

Make sure ...

- your VCR and TV are connected and turned on (see pages 6-7).
- the VCR light says "VCR" (see page 15).
- to make each entry within 60 seconds, otherwise the VCR will exit the Clock Set mode and you will have to start over.

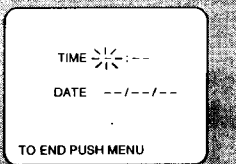
1 Select the Clock Set mode

First, press the **MENU** button. Next, press the **NUMBER 4** button to select "CLOCK SET" from the main menu screen.



2 Set the time & AM or PM

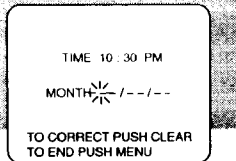
First, press two **NUMBER** buttons for the hour, then two **NUMBER** buttons for the minutes, and finally press "1" for AM or "2" for PM. For example, for 10:30 PM, press the **NUMBER** buttons 1-0, 3-0, 2.



- When setting the clock for the first time, entries that do not match the VCR's internal calendar will cause a "?" to appear.
- Always enter "0" before any single-number entries.
- To make corrections, press the **CLEAR** button repeatedly to move back to an item, then enter the correct number.

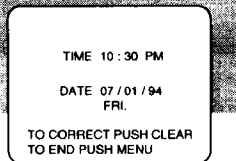
3 Set the month, day & year

Press two **NUMBER** buttons for the month, two **NUMBER** buttons for the day, and two **NUMBER** buttons for the year. For example, for July 1, 1994, press the **NUMBER** buttons 0-7, 0-1, 9-4. The day appears automatically.

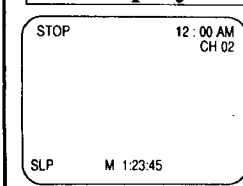


4 Start the clock

Press the **MENU** button. The clock starts and the screen returns to the program you were on.

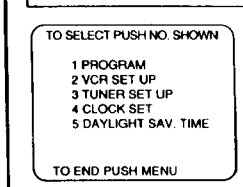


To display the time

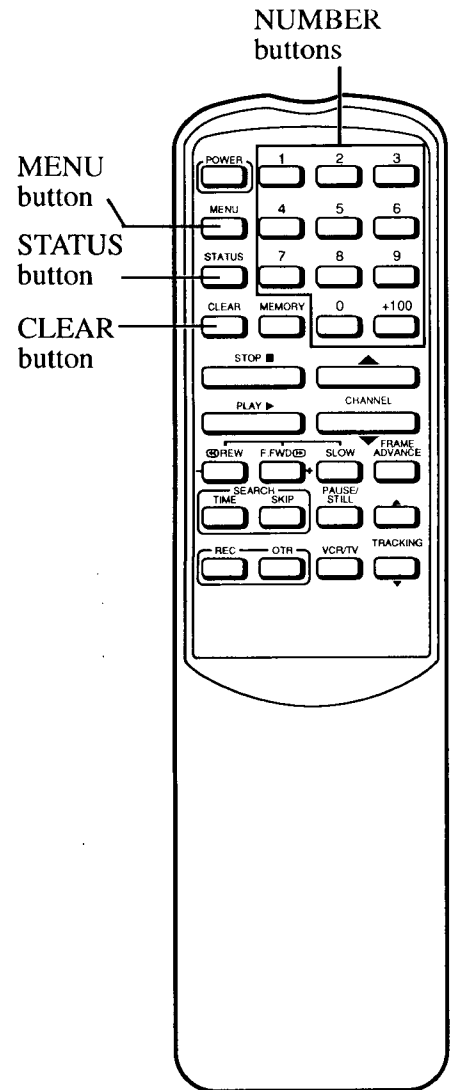


Press the **STATUS** button. A status display, including the time, will appear on the TV screen. For details, see page 11, "VCR Status display."

To reset the clock



Press the **MENU** button. The TV and VCR must be on and the VCR in the VCR mode. The main menu screen appears. Press the **NUMBER 4** button and follow Steps 2 - 4 above to enter the new date and time.



Remote control



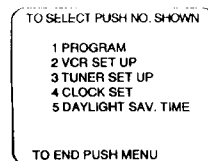
Power failures can cause you to lose both your clock setting and local channels placed in the VCR's memory. Should this happen, repeat steps on pages 7 and 10 before doing anything else.

*Ready to see what controls you have?
Go to the next page.*

11 — On-screen displays (OSD)

OSD Main menu screen

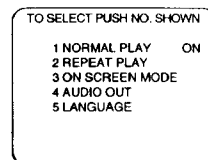
Press the MENU button on the remote to display the main menu screen. Then, press the NUMBER button on the remote control for the desired feature displayed on the menu. When you select a feature, turn to the section in this manual and read the accompanying instructions.



Main menu

VCR Status display

1. Press the MENU button.
2. Next, press the 2 button to select "VCR SET UP."
3. Then, press the 3 button to select "ON SCREEN MODE."
4. Now, press the 1, 2, or 3 button to select "ON SCREEN ON," "COUNTER ONLY" or "ON SCREEN OFF."
"ON" appears beside the selection made.



VCR set up

POSITION

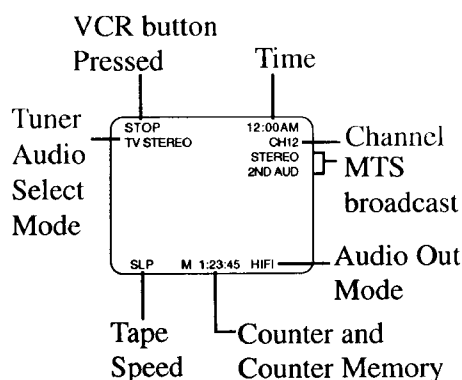
ON-SCREEN ON: Whenever a function button (Stop, FF, etc.) is pressed, a 5 second VCR Status Display appears.

COUNTER ONLY: Whenever a function button (Stop, FF, etc.) is pressed, a 5 second VCR Status Display appears.

After 5 seconds, the counter information will remain on the screen. To remove, press the STATUS button.

ON-SCREEN OFF: In this position, there will be no indication when normal functions are pressed.

- You may display the VCR Status any time by pressing the STATUS button. Status display remains on for 5 seconds. To remove press this button again.
- Channels (when tuned) are displayed as an overlay for a few seconds.



VCR Status display

Fast Track through "Turn on your VCR"

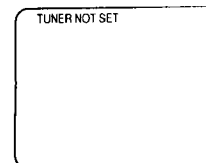
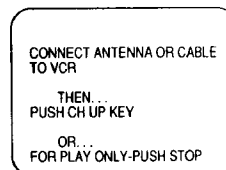
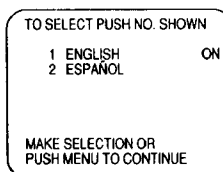
1. If the record tab on a cassette (see page 5 for details) is removed, playback starts automatically.

Or

1. To skip Step 2 on page 7, press the MENU button. All on-screen displays will be in English.
2. To skip Step 3 on page 7, press the STOP button. You can now play a pre-recorded tape.
"TUNER NOT SET" briefly appears on the screen.

Blank tape or Channel indication

If a blank section of tape is encountered in the Play mode or the channel you select has no broadcast, the screen will change to a solid blue field. The screen will remain blue until a recorded signal is again detected or an active channel is selected.

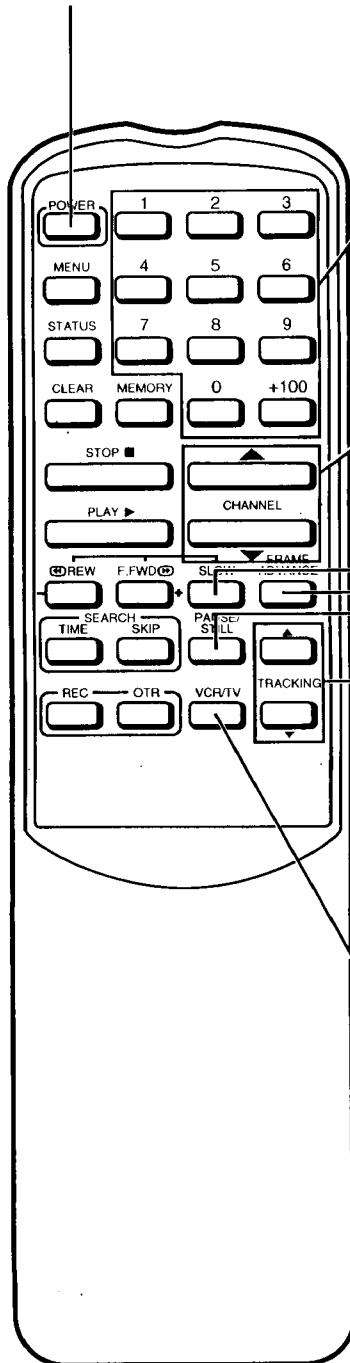


"Fast Track" displays

12— Remote control

POWER button

Press to turn VCR power ON or OFF.
Also, to set the VCR for unattended timer recording.



NUMBER buttons

(0, 1, 2, 3, 4, 5, 6, 7, 8 and 9)

Use for channel selection, on-screen menu selection, clock setting, program setting, etc. For selecting channels 1 to 9, first press "0" button and then press "1" to "9."
(+100)

Press this button first when selecting channels 100 and higher.
For details, see page 8.

CHANNEL UP/DOWN buttons

Press "△" or "▽" to scan up or down through the VCR's channels. Release at desired channel.

SLOW button

First press the SLOW button during SP, LP, or SLP playback to view a slow-motion picture. The speed can be varied from about 1/6 to about 1/30 of normal speed with the F.FWD or REW SLOW button. For details, see page 24.

FRAME ADVANCE button

Press this button while in the Still mode to advance the picture one frame at a time (Frame Advance). For details, see page 24.

PAUSE/STILL button

- Press once to temporarily stop the tape during recording (Pause).
- Press once to freeze the tape picture during playback (Still). Press PLAY button when you want to resume normal playback or recording. For details, see page 24.

TRACKING UP/DOWN buttons

When playing a tape, press TRACKING "△" or "▽" button to adjust the tracking. For details, see page 25.

VCR/TV button

Press to select the signal source that your TV receives.

VCR position (VCR light on the display panel: ON)

To watch a tape, monitor a recording, or watch a TV broadcast selected with the VCR's channel selector.

TV position (VCR light on the display panel: OFF)

To watch TV or to watch one program while recording another.
For details, see page 17.

13— Remote control (continued)

MENU button

Press to call up the on-screen menu display. For details, see page 11.

STATUS button

Press this button to display or clear the counter, time, function, and channel number. For details, see pages 11 and 23.

MEMORY button

Press to memorize the tape position at which the tape counter was reset to "0:00:00." For details, see page 23.

CLEAR button

- To erase incorrect or unwanted data in on-screen menu operation.
 - To reset the tape counter. "0:00:00" will appear on the TV screen.
- For details, see page 23.

STOP button

Press to stop the tape.

PLAY button

- Press to play back a tape. For details, see page 8.
- Press to release the Search and Still modes and return to playback. For details, see page 24.

REW(ind) button

Press to rewind the tape at high speed. Also, during playback, press this button to view the picture in rapid reverse. For details, see page 24.

F.FWD (Fast Forward) button

To move the tape forward at high speed. Also, during playback, press this button for rapid forward visual search. For details, see page 24.

TIME SEARCH button

This button can make search easier by allowing you to skip back or ahead on a tape. Press this button and select desired counter number with NUMBER buttons. For details, see page 22.

SKIP SEARCH button

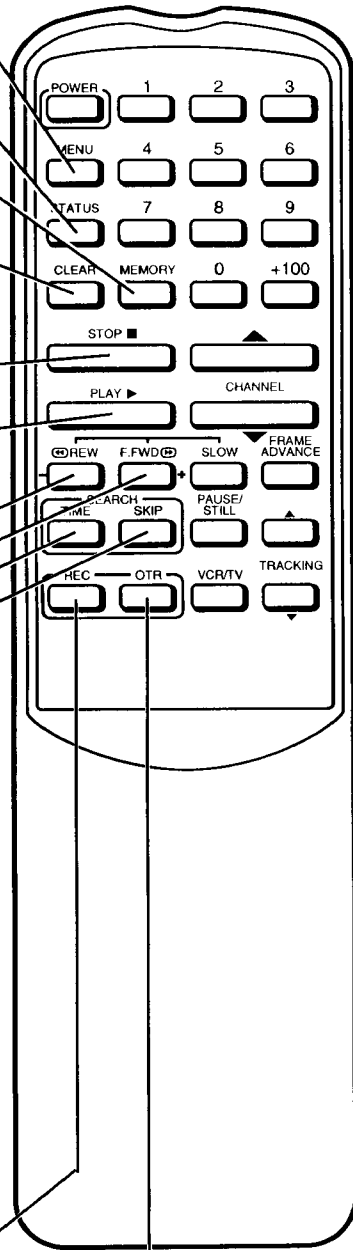
Press during playback mode to skip forward 30 seconds on tape counter. Press up to 6 times consecutively to skip up to 3 minutes on the tape counter. VCR will automatically return to Playback mode.

REC(ord) button

Press to start recording. For details, see page 9.

ONE TOUCH RECORDING (OTR) button

Select the channel and press this button to start an immediate recording 30 minutes to 4 hours long. Each press delays the shut-off time by 30 minutes. Power shut off is automatic. For details, see page 20.



14— VCR front panel

Wireless remote sensor

Receives the signal from the (wireless) remote control. For details, see page 8.

F.FWD (Fast Forward) button

Press to move the tape forward rapidly. Also, during playback, press this button for rapid forward visual search. For details, see page 24.

PLAY button

- Press to play back a tape. For details, see page 8.
- Press to release the Search and Still modes and return to playback. For details, see page 24.

REWIND button

Press to rewind tapes. Also, during playback, press this button for reverse visual search. For details, see page 24.

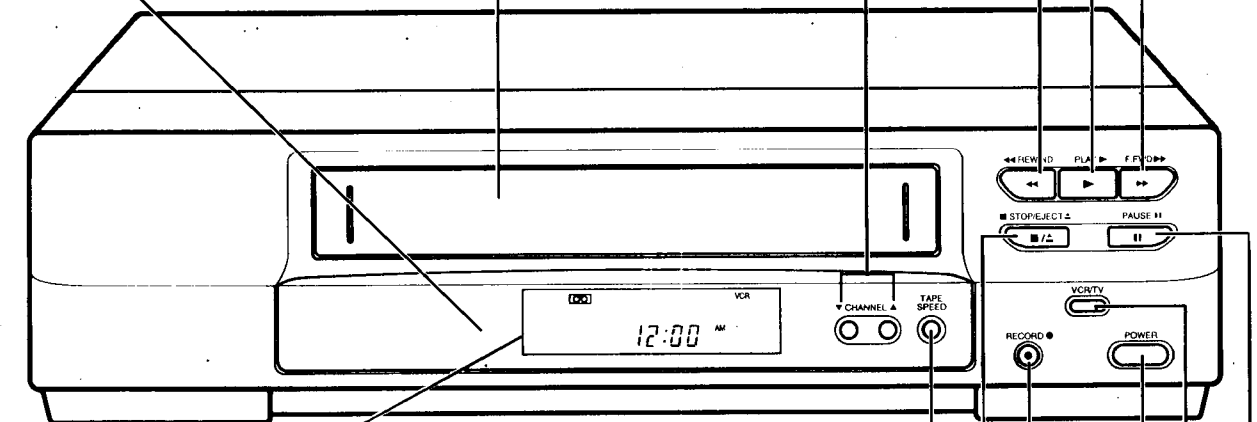
CHANNEL UP/DOWN buttons

Press to scan up or down through the VCR's channels.

You may also use these buttons to adjust the tracking control. For details, see page 25.

Cassette compartment

Where the video cassette is inserted. For details, see page 8.



VCR display panel

Where various information on VCR operation is displayed. For details, see page 15.

STOP/EJECT button

Press to stop the tape. Press again after the tape has stopped to eject the cassette.

RECORD button

Press to start recording.

TAPE SPEED button

Press to set the recording speed except for timer recording. For details, see page 5.

POWER button

Press to turn the VCR (Video Cassette Recorder) ON or OFF. To set the VCR for unattended recordings after timer settings have been completed.

VCR/TV button

Press to select the signal source that your TV receives.

VCR position (VCR light on the display panel: ON)

To watch a tape, monitor a recording, or watch a TV broadcast selected with the VCR's channel selector.

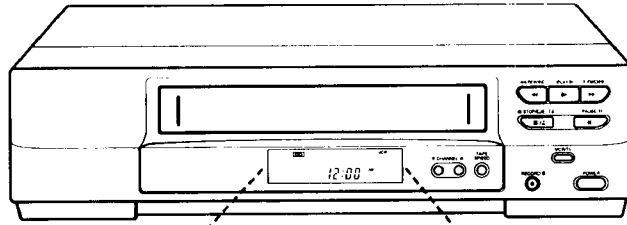
TV position (VCR light on the display panel: OFF)

To watch TV or to watch one program while recording another. For details, see page 17.

PAUSE button

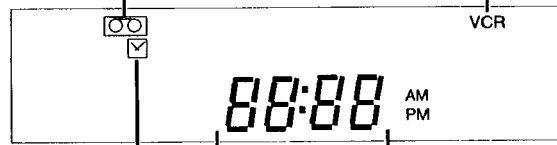
Press to temporarily stop the tape during recording or to view a still picture during playback. For details, see page 24.

15— VCR display panel



Cassette-In Light
Lights up when there is a cassette in the unit.

VCR Light
Appears when the VCR/TV button is set to VCR.



Timer Light
Shows the VCR is set for timer recording and one touch recording. For details, see pages 18-20.

Digital Display
Displays the current time. For details, see page 10.

Power Cord
[AC (Alternating Current)]
Plug into a standard 120V/60Hz household wall outlet. For details, see pages 6 and 7.

**ANT(enna) IN(put) jack
(in from Antenna)**

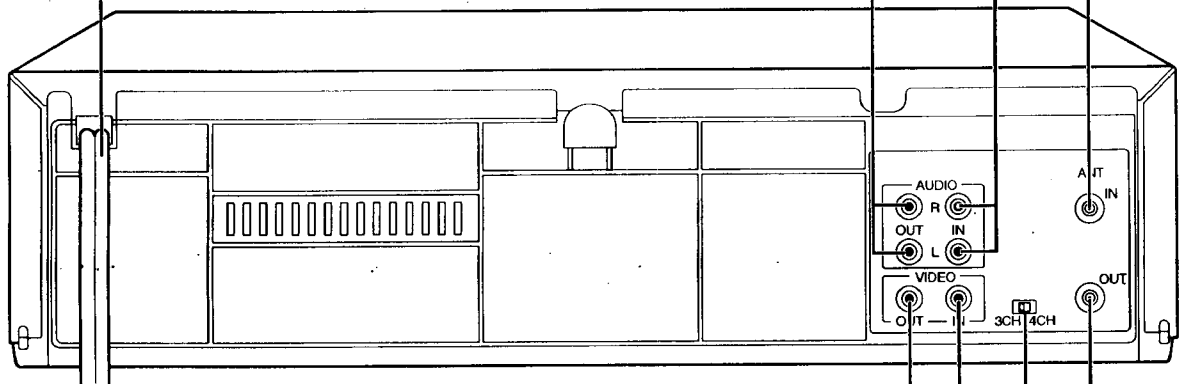
Hook up your antenna or cable to this terminal.
For details, see page 6.

AUDIO IN(put) jack

For hook up to the AUDIO OUT(put) jack of a portable video camera, another VCR, or another audio source. For details, see page 21.

AUDIO OUT(put) jack

For hook up to the AUDIO IN(put) jack on a TV, another VCR, or an audio tape recorder. For details, see pages 21 and 26.



VIDEO OUT(put) jack

For hook up to the VIDEO IN(put) jack of a TV, or another VCR. For details, see pages 21 and 26.

VIDEO IN(put) jack

For hook up to the VIDEO OUT(put) jack from another VCR or a portable video camera. For details, see page 21.

3CH/4CH switch

Set to channel 3 or 4 (whichever is not used for regular TV broadcasting in your area) to use your TV as a screen for your VCR. See "Hook up your VCR" on pages 6 and 7.

OUT(put) jack (out to TV set)

Use the supplied cable to hook up this terminal to the VHF/UHF input jack on your TV set. For details, see page 6.

17— Record one channel/See another

Read steps 1–4 to record one channel while viewing another. Please read all the instructions.

1 Start a recording
Start a recording as described on page 9.

2 Set the VCR/TV button
Press the **VCR/TV** button to select the TV mode.
The VCR light and channel being recorded disappear.

3 Select the channel at the TV for viewing
Select the channel to be viewed at the TV, using the channel controls on the TV or TV remote control. For example, while the VCR is recording channel 28, watch channel 10.

The channel selected with the TV channel controls appears on the TV screen. The channel selected with the VCR channel control is recorded on the tape.

4 To return to the channel being recorded
First, using the channel controls on the TV or TV remote control, return the TV to either channel 3 or 4 (please see page 7, "Hook up your VCR").

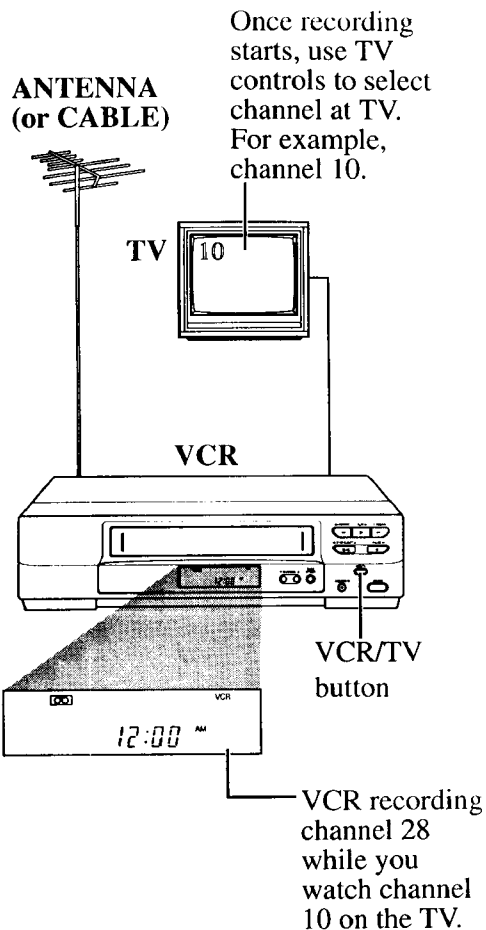
Now, press the **VCR/TV** button to view again the channel being recorded.
(If a blue screen appears on your TV instead of a channel, see "Choose Input Source" below.)

Choose input source

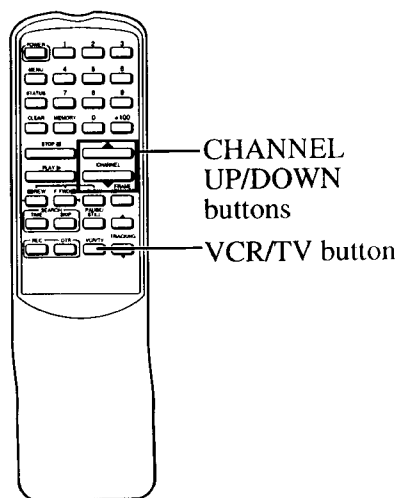
(If a blue screen appears on your TV instead of a channel.)
Press the VCR CHANNEL UP/DOWN buttons.

* If you are not receiving channels, please repeat the steps on page 6 – 7 of this book. Also, follow carefully the instructions listed above.

NOTE If you use a converter box or satellite system hook-up, you may not be able to do this feature.



Doing More



Remote Control

18 — Timer recording

Read steps 1–12 to record while you're away. For each event you set, the VCR will turn itself on, do the recording, and turn off automatically. You can store up to eight events. Instructions for each step appear on the TV screen after you begin. **You must use your remote control.**

Make sure ...

- the steps in "Hook up your VCR" on pages 6–7 are completed and the VCR and TV are ON.
 - channels have been programmed into the VCR's memory. See "Turn on your VCR" (page 7).
 - the VCR/TV button is set to "VCR" (page 12).
 - the clock is set to the correct time (See page 10).
 - a cassette tape is inserted in the VCR and the record tab is in place on the cassette (See page 5).
 - the tape is long enough to record the programs.
- For each step below you have 60 seconds to complete it. If you don't, you will have to restart programming from step 1.**

1 Select the Menu screen

Press the **MENU** button on the remote control. The main menu screen at right appears.

TO SELECT PUSH NO. SHOWN

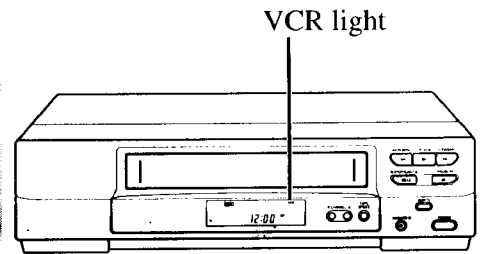
- 1 PROGRAM
- 2 VCR SET UP
- 3 TUNER SET UP
- 4 CLOCK SET
- 5 DAYLIGHT SAV. TIME

TO END PUSH MENU

2 Select the Program mode

Press the **NUMBER 1** button on the remote control to select the Program mode.

Remember, use the **NUMBER** buttons on your remote control.



VCR

3 Select NORMAL, DAILY or WEEKLY recording

NORMAL Recording

Press the 1 button to record a TV show on any day you choose up to 12 months away.

Or

DAILY Recording

Press the 2 button to record a TV show every day (Monday through Friday) at the same time and length.

Or

WEEKLY Recording

Press the 3 button to record a TV show once a week at the same day, time, and length.

TO SELECT PUSH NO. SHOWN

- 1 NORMAL
- 2 DAILY
- 3 WEEKLY
- 4 PROGRAM REVIEW

TO END PUSH MENU

DAILY PROGRAM (MON-FRI)

PROGRAM - 1 2 3 4 5 6 7 8 -

SELECT PROGRAM NUMBER TO END PUSH MENU

WEEKLY PROGRAM

PROGRAM - 1 2 3 4 5 6 7 8 -

SELECT PROGRAM NUMBER TO END PUSH MENU

4 Select the event position

Press one of the **NUMBER** buttons 1–8.

This selects an event position to store a timer record program. The flashing numbers indicate an open position where a program can be stored.

- "PREVIOUSLY SET PROGRAM" appears for a few seconds if you select a position that has already been filled. Then the position contents are displayed.

If you wish to select an event position again, first press the **MENU** button once. Next, redo from step 4.

If you wish to exit the Program mode, press the **MENU** button twice.

PREVIOUSLY SET PROGRAM

5 Select the channel

Enter two numbers for the TV channel. For example, for channel 6, press **NUMBER** button 0, then 6.

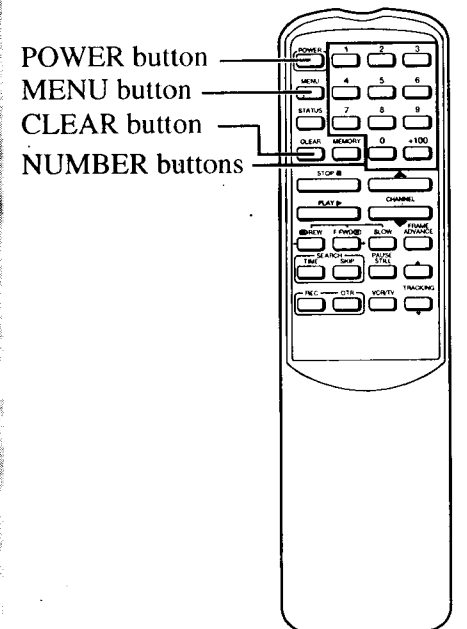
For channels above 100, press the 100 button, then two numbers for the channel. For example, for channel 115, press 100, then press 1 and 5.

To record from line input, press 0 and 0. "A/V IN" will appear on the screen.

To record using a Cable Box, see pages 34-37.

NORMAL PROGRAM PROGRAM CHANNEL

TO CORRECT PUSH CLEAR TO END PUSH MENU



Remote Control

To make corrections

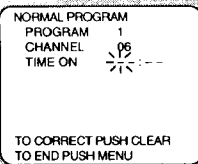
While the screen you wish to change is displayed, press the **CLEAR** button. This moves the flashing cursor back to the number you want to change. Now, enter the correct number. You may have to press the **CLEAR** button more than once to reach the numbers you want to change.

(Continued on next page.)

19 — Timer recording (continued)

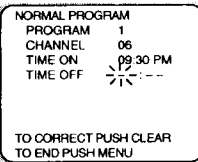
6 Select the "TIME ON"
First, press two NUMBER buttons for the hour.
Next, press two NUMBER buttons for the minute.

Now, press NUMBER button "1" for AM or "2" for PM.
For example, for 9:30 PM, press NUMBER buttons 0-9, 3-0, 2.

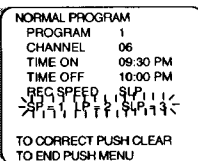


7 Select the "TIME OFF"
First, press two NUMBER buttons for the hour.
Next, press two NUMBER buttons for the minute.

For example, for 10:00 PM, press 1-0, 0-0. AM or PM will appear when you have entered the hour and minute.

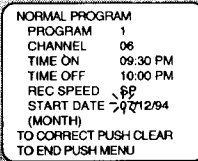


8 Select the recording speed
Press the 1, 2, or 3 button to choose SP (Standard Play), LP (Long Play), or SLP (Super Long Play).
You cannot use the Tape SPEED button.



9 Select the "START DATE"
First, press two NUMBER buttons for the month.
Next, press two NUMBER buttons for the day.

For example, to make a recording on July 12, press 0-7, 1-2. The year and day of the week will be displayed automatically.



10 Confirm your program
Press the MENU button.
"PROGRAM WAS COMPLETED PLEASE TURN OFF VCR FOR TIMER RECORDING" appears on the screen.
If "PROGRAM NOT COMPLETED" appears, please try again from step 1 on page 18.
After 3 seconds, the display disappears from the screen and the normal TV program reappears. Now, go to steps 11 and 12.

11 Select the next program
If needed, press the MENU button and repeat steps 2 to 10.
When done, go to step 12.

12 Set the timer
When all programs are "COMPLETED," press the VCR POWER button to OFF.
The TIMER light will come on.



"PLEASE TURN OFF VCR FOR TIMER RECORDING" flashes on your TV screen 2 minutes before a timer recording starts. Turn the VCR off. The TIMER light appears on the VCR's Display panel. Until this warning appears, you can play a tape or select channels for viewing using the VCR. **THE VCR MUST BE TURNED OFF FOR A TIMER RECORDING TO TAKE PLACE.**

After a timer recording has taken place...

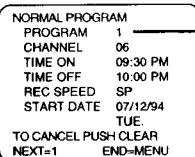
...press the VCR POWER button on the remote control to return your VCR (Video Cassette Recorder) to normal operation.



If you're having questions or problems

Check or clear timer recordings

1. Turn the VCR on. "VCR" appears on the Display panel. If it doesn't, press the VCR/TV button.
2. First, press the MENU button. Next, press the 1 button to select "PROGRAM." Now, press the 4 button to select "PROGRAM REVIEW." The Timer Record information for the lowest numbered position (1 - 8) appears.



Event Position

3. Press the 1 button repeatedly to view all the filled positions. If you do not press the 1 button, after 10 seconds the display changes to the next filled position. This continues until all filled positions appear. Finally, the screen returns to the TV program.
4. Press the CLEAR button. This clears a filled position.
5. At any time, press the MENU button once to exit the Program Review mode.
6. Repeat steps 2 - 4 to make sure you have cleared the correct position. To fill a position, follow "Timer Recording" steps.

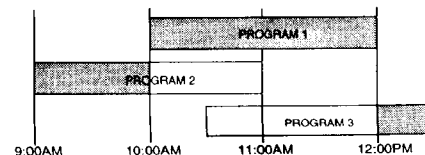
Doing More

Stop a started timer recording

1. Press the STOP/EJECT button on the VCR.
Actual Timer Recording stops. But if you press the POWER button again, the timer recording will be carried out as programmed.



When events overlap, the lowest (event position) program number has priority.



Example: If you programmed as illustrated, they will execute in the following order.
9:00AM-10:00AM for PROGRAM 2
10:00AM-12:00PM for PROGRAM 1
12:00PM- for PROGRAM 3



If the Power Fails...repeat the steps on pages 7 and 10 before setting up a Timer Recording.

(For additional information, see page 33.)

20 — One touch recording (OTR)

Read steps 1–3 to set the VCR (Video Cassette Recorder) to automatically shut off after recording is completed. OTR lets you quickly specify how long you want recording to continue. You don't have to program the timer with this function. **You must use your remote control.**

Make sure ...

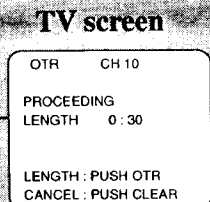
- the steps in "Hook up your VCR" (pages 6–7) are done, channels are programmed into the VCR's memory (page 7 or 30), and the TV and VCR are both turned on.
- the desired tape speed (SP, LP, SLP) is selected. Use the Tape SPEED button (page 14)
- the record tab is in place on the cassette (page 5).
- the tape is long enough to record the programs (page 5).
- a tape cassette is inserted in the VCR and the VCR light is ON (page 8, step 2).

1 Choose a TV program
Press the CHANNEL UP/DOWN or NUMBER buttons on the remote control.

2 Start an OTR
Press the OTR button on the remote control.
The screen at right appears.

- Press the OTR button 1 more time to begin a 30 minute recording.

This indicates that the VCR will automatically shut off after 30 minutes of recording.
The TIMER light comes on.



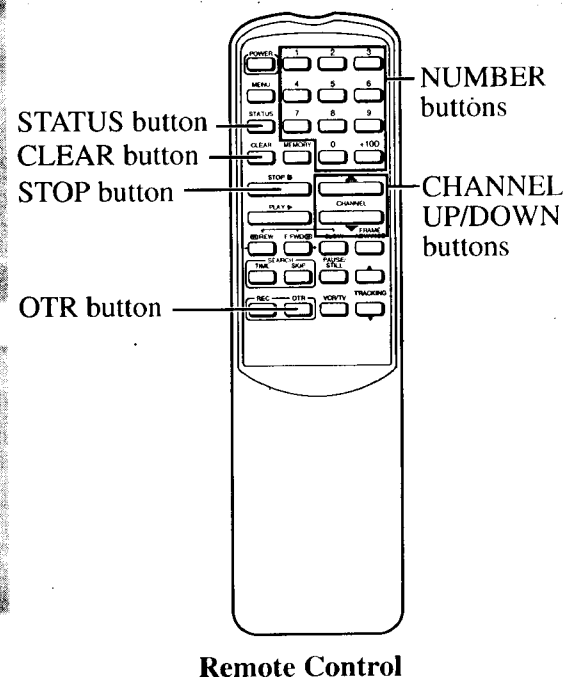
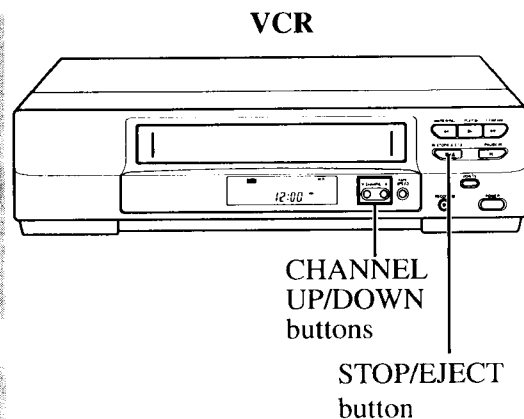
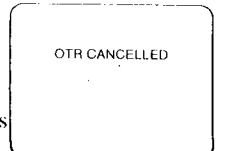
3 Select a recording length
Continue pressing the OTR button on the remote control until the desired recording length is displayed.
Each press of the button will add 30 minutes, up to 4 hours.
If pressed beyond 4 hours, recording stops, OTR reverts to 0:00, TIMER light on display panel blinks, then VCR turns off.
• To check time remaining after an OTR has been set, press the STATUS button.

To change the recording length

Press the OTR button until the desired length is displayed.

To cancel an OTR

Press the OTR button on the remote control to select the OTR display. Now, press the CLEAR button on the remote control or the STOP/EJECT button on the VCR. "OTR CANCELLED" appears on the TV and the VCR goes into the Stop mode.



21 — Re-Recording (Tape Duplication)

Dubbing from any VHS recorder (or camcorder) to another is simple. Just use the connections and steps below. The example below uses two VCRs like this one. Other VCRs may operate differently.

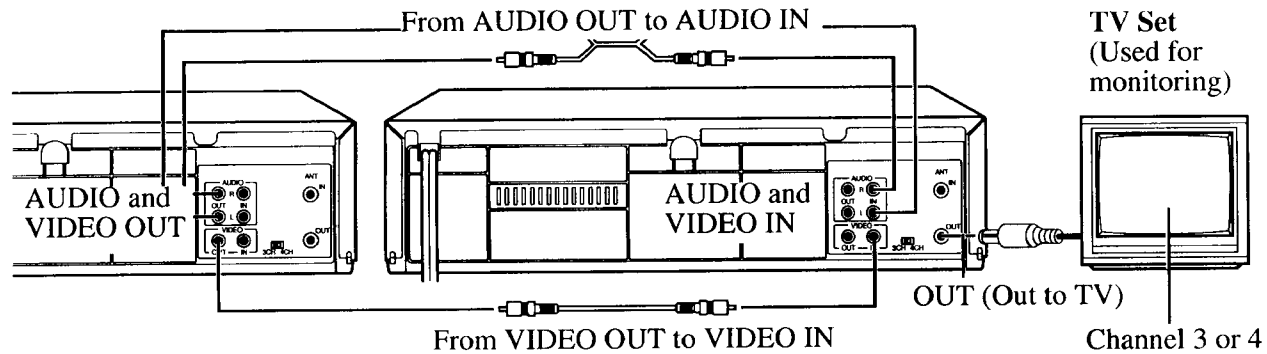
Connections

VCR1

Source (Playing) VCR
(Back View)

VCR2

Editing (Recording) VCR
(Back View)



AUDIO and VIDEO cables not supplied.

1 **At VCR 1**
Insert a pre-recorded tape. VCR 1 is the VCR (Video Cassette Recorder) that will play your tape. If your tape is missing its record tab (page 5), playback starts. In that case, press the STOP button.

2 **At VCR 2**
Insert a blank tape in the editing VCR. The VCR will turn on automatically. The VCR light on the VCR should come on. If not, press the VCR/TV button on the remote control.

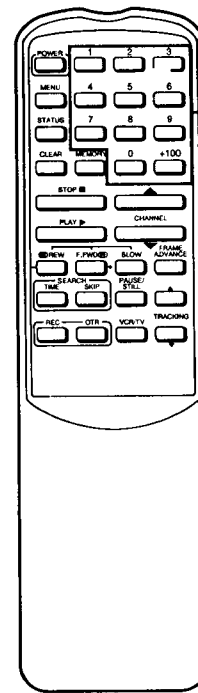
3 **To monitor the re-recording on your TV**
Turn the TV on.
Turn the TV channel to either 3 or 4, whichever channel the VCR 2 CH3/CH4 switch is set to (see page 7).

4 **Select input source**
Point your remote control at VCR 2. Press 0-0 on the NUMBER buttons. "L" appears on the VCR display panel, "A/V IN" appears on the TV screen.

5 **Select tape speed**
Point your VCR 2. Press Tape SPEED button to select SP (Standard Play), LP (Long Play), or SLP (Super Long Play) — details about tape speed are on page 5.

6 **Play back the tape**
Press the PLAY button on VCR 1.

7 **Record (copy) the tape**
Press the REC(ord) button on VCR 2.
Remember: press the buttons in steps 6 and 7 simultaneously to avoid missing any of the recording.



NUMBER buttons

Remote Control

Doing More

CAUTION

Unauthorized recording of copyrighted television programs, films, video tapes, and other materials may infringe on the rights of copyright owners and be contrary to copyright laws.

22 — Tape operation

Auto repeat playback

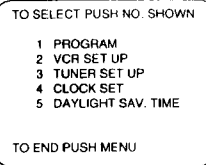
With Repeat Play, the VCR automatically plays a tape to the end of the tape, then rewinds the tape and repeats playback over and over. **You must use your remote control.**

1 Select Menu mode

Press the **MENU** button.

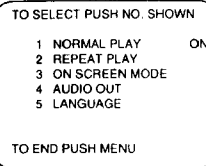
The main menu appears on the TV screen.

TV screen



2 Select Repeat Play display

Press the **2** button to select "VCR SET UP."



3 Start Repeat Play

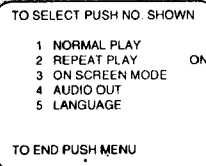
First, press the **2** button to select "REPEAT PLAY."

"ON" appears beside "REPEAT PLAY."

Press the **MENU** button to remove the OSD.

Now, press the **PLAY** button.

"REPEAT PLAY" will appear on the TV screen.



- When Repeat Play is selected, the VCR will automatically play the tape over and over after you press the PLAY button.

4 Release the Repeat Play mode

Repeat steps 1 to 3 and select Normal Play by pressing the **1** button.

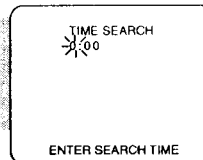
"ON" appears beside "NORMAL PLAY."

Time search function

You can have your VCR automatically "go to" and locate the point on the tape with the counter reading that you specify. **You must use your remote control.**

1 Select the Time search function

While in the Stop mode, press the **TIME SEARCH** button.



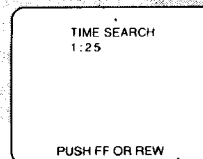
2 Select a length of time

First, press one **NUMBERED** button for the hour.

Next, press two **NUMBERED** buttons for the minute.

For example, for 1 hour 25 minutes, press 1-2-5. For 5 minutes, press 0-0-5.

This enters the length you want to skip back or ahead.



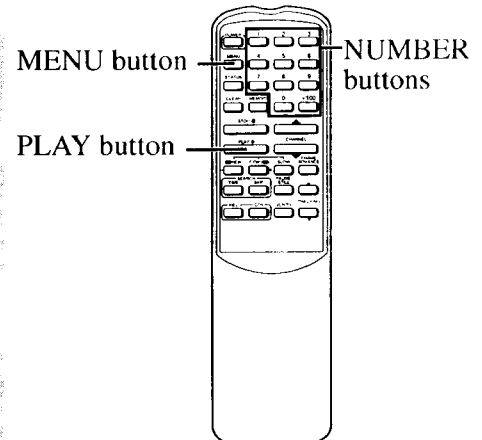
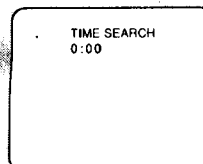
3 Start the Time search function

Press the **FF (Fast Forward)** or **REW(ind)** button to skip ahead or back.

The VCR will skip over the desired length of time and go into Playback mode automatically.

- Make each button entry for your length Selections within 10 seconds, or the VCR will automatically cancel this mode.

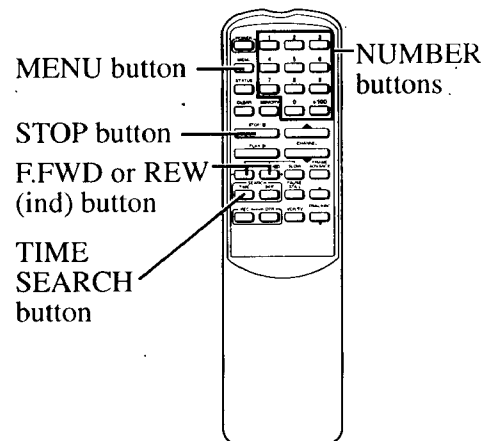
The time count down is displayed on the TV screen.



Remote Control



The Counter Memory does not function during Repeat Play.



Remote Control



The Counter Memory must be off during the Time Search.



To Cancel Time Search

Press the **TIME SEARCH** button again before pressing the **FF (or REW)** button. Time search mode will be cancelled.

Or

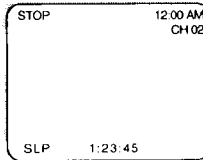
Press the **STOP** button in the **FF (or REW)** mode. Time search mode will be cancelled and the tape will stop.

23 — Tape operation (continued)

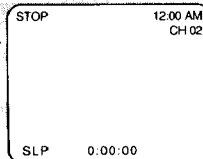
Tape Counter Control

If you always rewind your tapes fully and reset the tape counter, then you'll be able to use a list of program locations as an index. You must use your remote control.

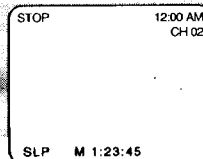
- 1 Select the Tape Counter display**
To select the tape counter display, press the **STATUS** button. The tape counter display appears on the TV screen. **TV screen**



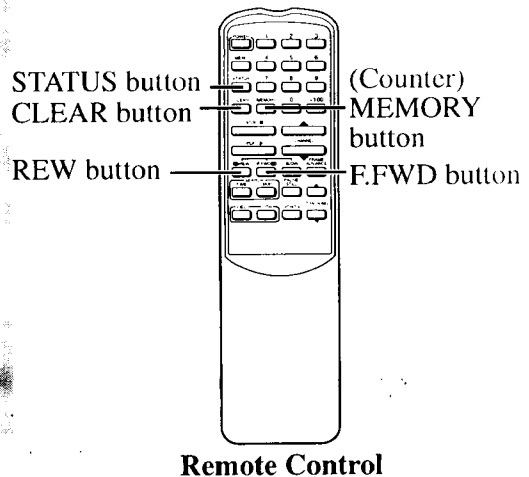
- 2 Reset the tape counter**
To reset the tape counter, press the **CLEAR** button. You can reset the counter to zero at whatever point on the tape you choose.



- 3 Select the Memory function**
To select the memory function, press the **MEMORY** button. "M" appears on the screen next to the counter reading.



- 4 Start the Memory function**
To start the memory function, from anywhere on the tape, press the **STOP** button, then press the **REW(ind)** or **FF (Fast Forward)** button. The tape will stop automatically wherever "0:00:00" was set.



The Counter Memory must be off during the Time Search.

Doing More

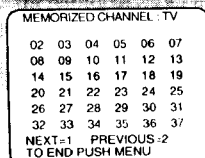
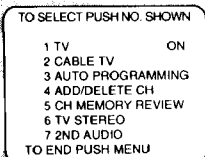
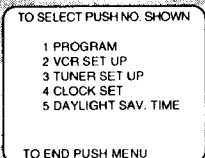
— Channel memory review

Make sure ...

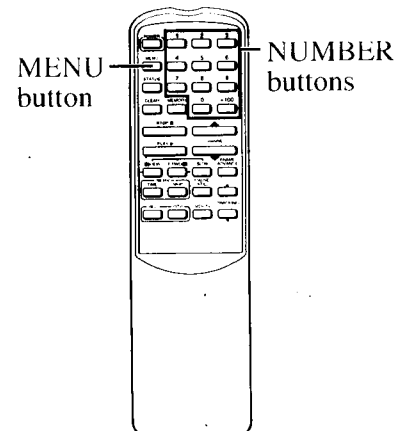
- batteries are in the remote control (page 5).
- all the steps on pages 6 and 7 have been completed.
- channels are programmed into memory (page 7 or 30).
- and the TV and VCR are on.

- 1 At the remote control**
First, press the **MENU** button. Next, press the **NUMBER 3** button to select "TUNER SET UP." Now, press the **5** button to select "CH MEMORY REVIEW." The memorized channel list appears on the TV screen. **Main menu**

TV screen



- 2 To view all memorized channels**
To see the next channel list, press the **NUMBER 1** button. To see the previous list, press the **NUMBER 2** button. If the screen does not change, there are no other memorized channels. To exit, press the **MENU** button.



24 — Special playback features

Is your VCR (Video Cassette Recorder) connected to your TV (see page 6-7 "Hook up Your VCR")? Are you familiar with tape playback (see page 8, "Play a Tape")? If so, you are ready to enjoy the special playback features described on this page. You must use your remote control.

1 To perform a visual search (SP/LP/SLP mode)

First, press the **PLAY** button.
Next, press the **REW(ind)/SEARCH** or **FF (Fast Forward)/SEARCH** button.
A rapid forward or reverse picture search begins.

2 Now, press the **PLAY** button to return to playback.

• During search playback, some noise bars will appear on the TV screen.

1 To perform a super high speed search (LP/SLP mode)

First, press the **PLAY** button.
Next, press either **FF (Fast Forward)/SEARCH** or **REW(ind)/SEARCH** button while the unit is in the Play mode.
Release button, then press again.
The unit will now search in super high speed.

2 Now, press the **PLAY** button or **PAUSE/STILL** button to return to playback.

• During search playback, some noise bars will appear on the TV screen.

1 To view a still picture (during playback)

First, press the **PLAY** button.
Next, press the **PAUSE/STILL** button.
A freeze frame (still) playback image appears.

2 Now, press the **PLAY** button or **PAUSE/STILL** button again to release the stilled image and continue playback.

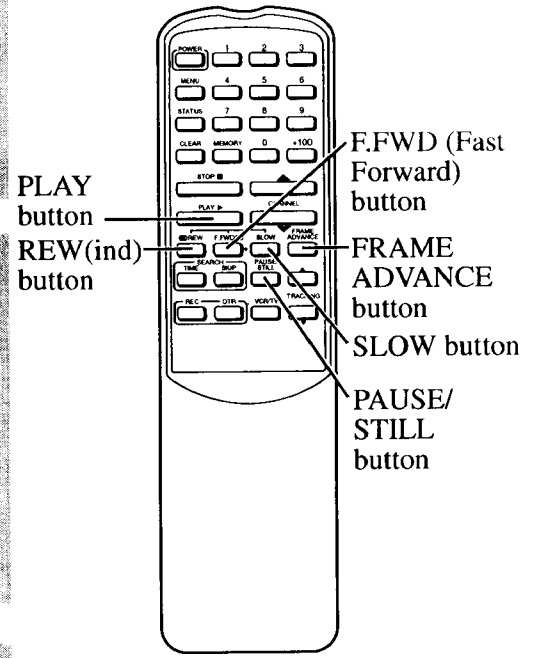
1 To advance a still picture

In the Still mode, press the **FRAME ADVANCE** button.

1 To view a slow motion picture

First, press the **PLAY** button.
Next, press the **SLOW** button.
• During slow motion the slow speed can be controlled using the **F.FWD (SLOW +) / REW (SLOW -)** buttons.

2 Now, press the **PLAY** or **SLOW** button to release the Slow mode and continue playback.



Remote Control



• The Still and the Slow mode automatically switches to the Stop mode after 5 minutes to protect the tape and video heads.

• SP/LP/SLP mode means this feature will work with tapes recorded in Standard Play speed, Long Play speed, or Super Long Play speed. For details on tape speed, see page 5.

• LP/SLP mode means this feature will work with tapes recorded in Long Play speed and Super Long Play speed. For details on tape speed, see page 5.

Auto operation features

Auto Playback

When a tape is inserted, the power comes on. If the record tab* is removed, playback begins.

Auto Rewind, Eject Off

When a tape reaches its end during playback, fast forward, or manual record, the VCR (Video Cassette Recorder) automatically rewinds the tape, ejects the tape, and the VCR turns itself off.

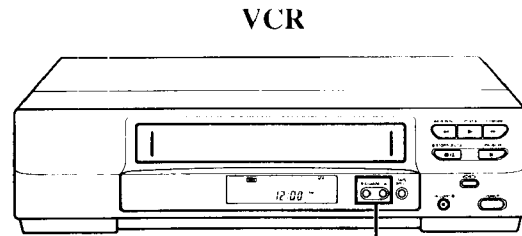
Memory Rewind Power Off

When the POWER button is pressed during rewind, the VCR will turn off after rewind is complete. "REWIND → POWER OFF" appears on the TV screen.

Eject Cassette

A cassette may be ejected with power on or off.

* For record tab information, refer to page 5.



CHANNEL UP/DOWN buttons

Auto tracking control

With Auto Tracking there is usually no need for manual adjustments to minimize noise in playback for most tapes. Auto Tracking continuously analyzes the signal to adjust for optimum picture quality for each recording. However, with some recordings you may get a better result using the TRACKING UP/DOWN buttons.

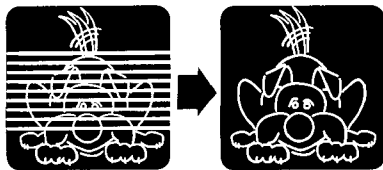
Manual tracking controls

Play Tracking

When playing pre-recorded tapes or tapes recorded on units other than your own, noise lines (black and white streaks) may appear on the playback picture. If this occurs, adjust the TRACKING control with the TRACKING UP/DOWN buttons on your remote control until the streaks disappear.

To reset the tracking to its center position, press at the same time the CHANNEL UP and DOWN buttons on the VCR.

The tracking can also be reset to its center position by pressing the STOP button to stop the tape, and then pressing the PLAY button.

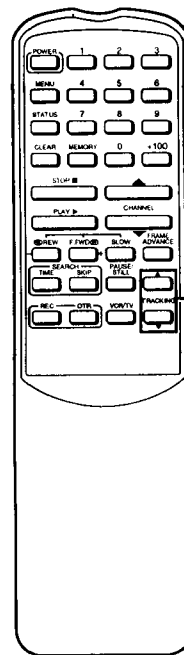


Slow Tracking

Auto Tracking does not function in the Slow mode. You can reduce the noise lines in the slow motion picture by pressing the TRACKING UP/DOWN buttons. This will only be necessary if noise lines appear. If the picture is fine, do nothing.

Note: The Manual Tracking Control will not operate in the Still mode. If you want to reduce the noise in a Still picture, first place the unit in the Slow mode (see page 24) and cancel the noise with the TRACKING UP/DOWN buttons, then return it to the Still mode. A clear picture should be obtained.

This enables you to see the picture in its entirety without distracting noise lines.



TRACKING UP/DOWN buttons

Remote Control

Doing More

Vertical hold control

When the picture begins to vibrate vertically, adjust to stabilize the still picture by pressing the TRACKING UP/DOWN buttons.

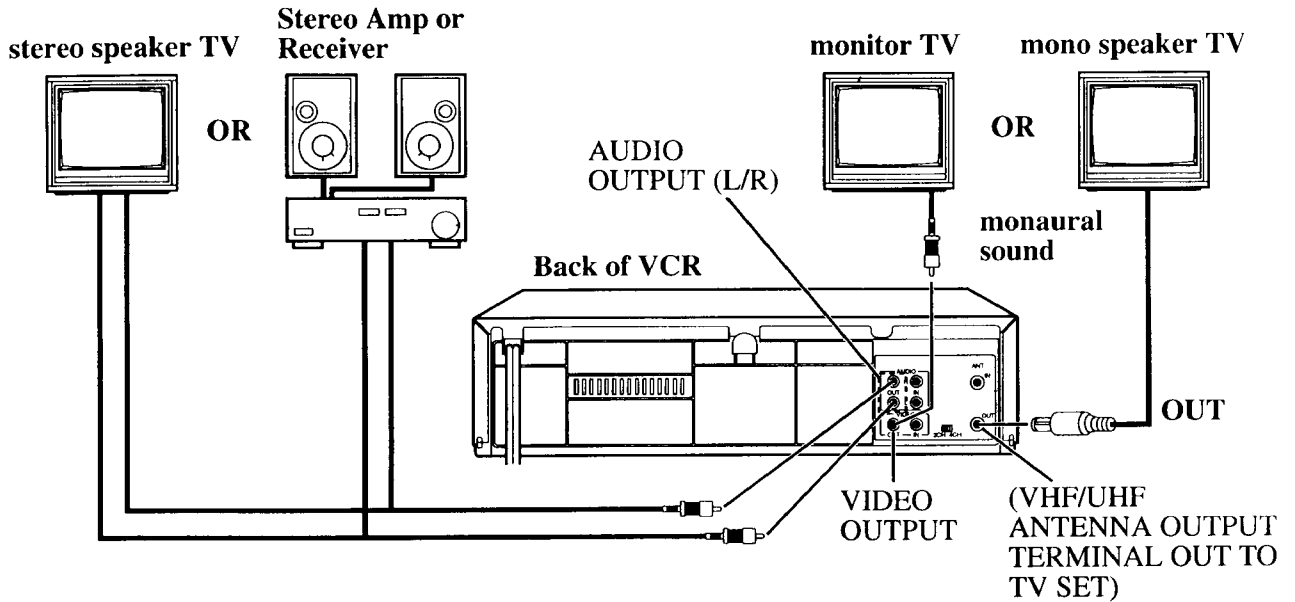
Notes:

- 1) This adjustment works only in the Still mode with TRACKING UP/DOWN buttons.
- 2) When the picture is distorted or rolls vertically, adjust vertical hold control of your TV.
- 3) Some TVs do not have a user-adjustable vertical hold control.

To Record MTS Stereo Broadcast

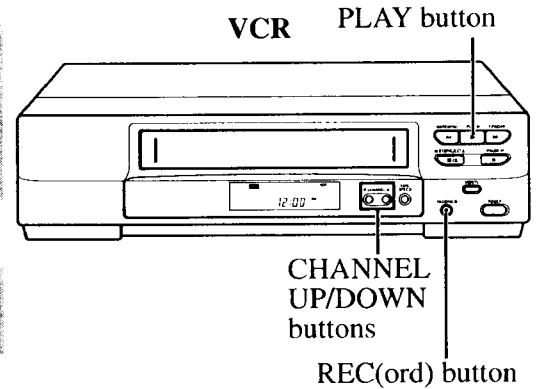
The enjoyment of MTS broadcast stereo can be yours, even when you are watching a mono sound TV, by using a stereo amp and speakers. You can select the type of broadcast and sound track you wish to record using the steps below.

Connections



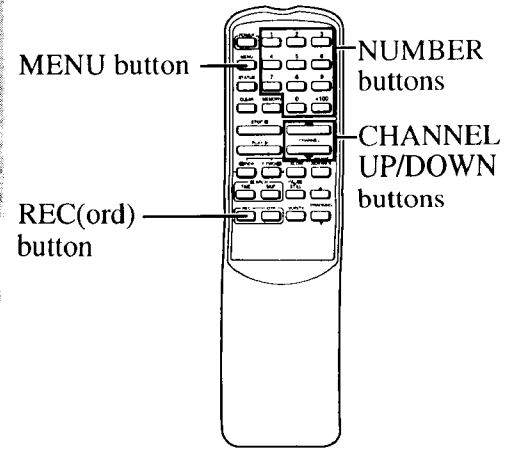
Make sure ...

- the steps in "Hook up your VCR" (page 6-7) have been completed and an antenna or cable system is connected to the VCR.
- to insert a tape cassette.
- the desired tape speed (SP, LP, SLP) is selected (page 5).



1 Choose Channel
Select a channel to be recorded using the CHANNEL UP/DOWN or NUMBER buttons.

2 Choose Program
Select the "TV STEREO" or "2ND AUDIO" mode.
1) Press the MENU button.
2) Press the 3 button.
3) Press the 6 or 7 button to make the desired selection according to the type of broadcast. This selects which type of audio programs are recorded on the tape. (Refer to page 27 for details.)
Press the MENU button to leave this mode.



3 Start Recording
Hold the REC(ord) button in and press the PLAY button on the VCR. When using the remote control, just press REC(ord) button.

Remote Control

Your VCR (Video Cassette Recorder) can record in Hi-Fi stereo or record a second audio broadcast, and also record either when both are received as an MTS broadcast. To play back Hi-Fi stereo, you should connect a stereo amplifier and speakers to your VCR. No additional connections are needed for second audio. In addition to these two left and right Hi-Fi tracks, there is a normal audio linear monaural track which is automatically recorded for playback on non-HiFi VCR's.

Program Display (On-Screen)

When you press the status button on the remote control, the various combinations of program display described below will appear when broadcast signals are received. The type of broadcast possible are shown below.

Receiving MTS (Both appear)

When both STEREO and 2ND AUD appear, an MTS broadcast is being received. For recording and playback, select "TV STEREO" or "2ND AUDIO" you desire as shown to the right. (Refer to page 26.)

When: Receiving stereo or MTS

To record in stereo, "TV STEREO" should be selected in the "TUNER SET UP" menu.

Receiving separate audio or MTS

To record second language alone, "2ND AUD" should be selected in the "TUNER SET UP" menu. Only the second language will be recorded on the left and right Hi-Fi tracks and the normal track. To record the main language, "TV STEREO" should be selected on the "TUNER SET UP" display. Only the main language will be recorded on the left and right Hi-Fi tracks and the normal track.

Receiving a mono broadcast

Monaural audio will be recorded in all positions. For a mono TV broadcast only, monaural audio is received and recorded.

MTS: means a Multi-Channel Television Sound broadcast.
Hi-Fi Stereo: records and plays back on the Left and Right Hi-Fi tracks.
2ND AUD: means a Second Audio Program, usually in a second language.

TO SELECT PUSH NO. SHOWN

- 1 PROGRAM
- 2 VCR SET UP
- 3 TUNER SET UP
- 4 CLOCK SET
- 5 DAYLIGHT SAV. TIME

TO END PUSH MENU

Main Menu

Press the 3 button

TO SELECT PUSH NO. SHOWN

- 1 TV
- 2 CABLE TV ON
- 3 AUTO PROGRAMMING
- 4 ADD/DELETE CH
- 5 CH MEMORY REVIEW
- 6 TV STEREO ON
- 7 2ND AUDIO

TO END PUSH MENU

TUNER SET UP Menu

Press the 7 button

TO SELECT PUSH NO. SHOWN

- 1 TV
- 2 CABLE TV ON
- 3 AUTO PROGRAMMING
- 4 ADD/DELETE CH
- 5 CH MEMORY REVIEW
- 6 TV STEREO
- 7 2ND AUDIO ON

TO END PUSH MENU

Doing More

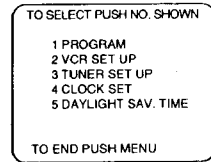
28 — VHS Hi-Fi stereo sound system

Your VCR (Video Cassette Recorder) has a new VHS Hi-Fi stereo sound system with several improvements. When an MTS (Multi-Channel Television Sound) program is broadcast in stereo, it can be recorded in stereo Hi-Fi. Just be sure the settings shown in the AUDIO OUT and TUNER SET UP menus are displayed like those below. With these settings, you can record and playback stereo programs in Hi-Fi audio. **You must use your remote control.**

Hi-Fi Recording and Playback of MTS

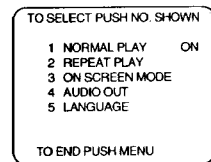
When recording or playing an MTS broadcast, be sure the selections below have been made.

- 1** **Selecting Main Menu**
Press the **MENU** button. The main menu appears.



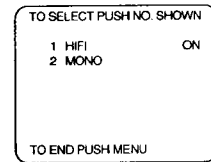
Main Menu

- 2** **Selecting VCR SET UP Menu**
Press the **NUMBER 2** button to display the "VCR SET UP" menu.



VCR SET UP Menu

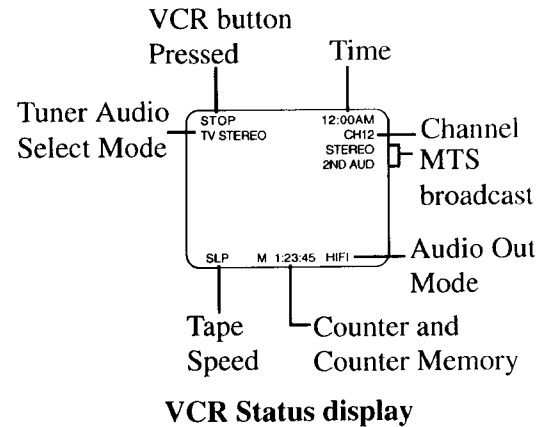
- 3** **Press the NUMBER 4 button to select the "AUDIO OUT" menu. Now, press the NUMBER 1 button to select "HIFI." To exit, press the MENU button.**
This setting gives you:
• stereo Hi-Fi playback.
• monaural playback of non Hi-Fi tapes.



AUDIO OUT Menu



• Normally, "HIFI" should be selected from the "AUDIO OUT" menu for playback with Hi-Fi sound so that "Hi-Fi" appears on the status display. But, you can change the selection to "MONO" to the normal audio playback. "Hi-Fi" disappears on the status display.



2 Selecting TV STEREO or 2ND AUDIO mode

First, press the MENU button. The main menu appears. Next, press the NUMBER 3 button to display the "TUNER SET UP."

Now,

a) Press the NUMBER 6 button to select "TV STEREO."

This setting gives you:

- stereo Hi-Fi recording (in the main language).

Or

b) Press the NUMBER 7 button to select "2ND AUDIO."

This setting gives you:

- Recording in the Second Audio program.

Return to the Normal Screen

After completing the setting you want, press the MENU button to exit. The channel or a blue background will return to the screen.

Recording in VHS Hi-Fi

Both the Hi-Fi audio and a separate linear (monaural) audio are automatically recorded on the each track.

Note: To record, a video signal is requires for proper speed accuracy.

TO SELECT PUSH NO. SHOWN	
1 TV	
2 CABLE TV	ON
3 AUTO PROGRAMMING	
4 ADD/DELETE CH	
5 CH MEMORY REVIEW	
6 TV STEREO	ON
7 2ND AUDIO	
TO END PUSH MENU	

TUNER SET UP Menu

Doing More

Place local channels in VCR's memory

Read steps 1–4 to place receivable channels in your VCR (Video Cassette Recorder). Although your VCR automatically scans all Normal TV channels and places receivable ones in memory the first time you turn its power on, this function lets you re-program your VCR's tuner at any time. This allows reception of either Normal TV channels or Cable TV channels, but not both. With the Add/Delete feature you can add or delete any channel. **You must use your remote control.**

Make sure ...

the steps on pages 6–7 have been completed, and your TV and VCR are ON.

1 Display the Tuner Set Up mode

First, press the MENU button to display the main menu screen.

Now, press the NUMBER 3 button to select "TUNER SET UP."

The screen at right appears.

TV screen

TO SELECT PUSH NO. SHOWN

1 TV	ON
2 CABLE TV	
3 AUTO PROGRAMMING	
4 ADD/DELETE CH	
5 CH MEMORY REVIEW	
6 TV STEREO	
7 2ND AUDIO	

TO END PUSH MENU

2 Select the antenna system

Press the 2 button to change from "TV" to "CABLE TV."

Press the 1 button to change from "CABLE TV" to "TV."
"ON" appears beside your selection.

3 Start auto program

Press the NUMBER 3 button to start Auto Programming.

The memorized channel numbers begin appearing on the TV screen.

for example

MEMORIZED CHANNEL : TV

02	03	04	05	06	07
08	09	10	11	12	13
14	15	16	17	18	19
20	21	22			

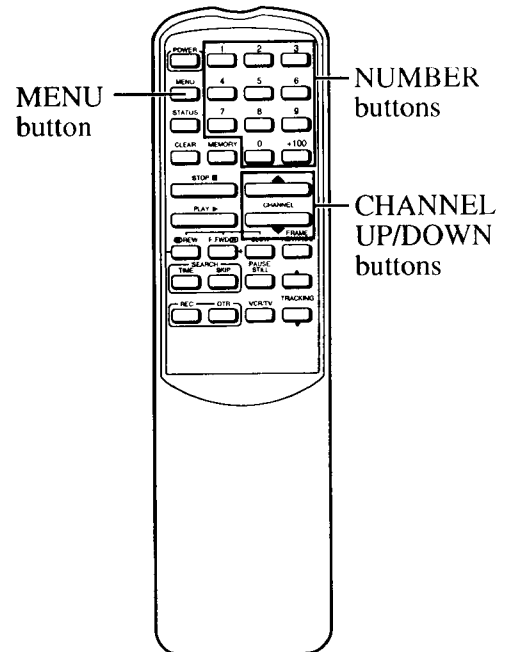
TO END PUSH MENU

4 Finish auto program

After auto program is complete, "AUTO SET COMPLETED" appears on the TV screen about 3 seconds.

Then the lowest numbered channel stored in the VCR's memory will appear on the TV screen. To view other stored channels, press the CHANNEL UP/DOWN buttons.

AUTO SET COMPLETED



Remote Control

Adding and Deleting a Channel

- Press the MENU button to display the menu screen. Next, press the 3 button to select "TUNER SET UP."
- Press the 4 button to select the Add/Delete channel feature. The display shown here will appear.
- Press two numbers to add or delete channels up to 99. For 100 or more, first press the 100 button, then two numbers.
 - Always enter a "0" before any single-digit entries. For example, 0, then 6 for "6."
 - Refer to "Using the 100 button" (Page 8) to enter a three-digit number.
- Press the 1, 2, or 3 button to "ADD," "DELETE," or "SELECT ANOTHER CH" that is in the VCR's memory.
 - If "3" is selected, the display in step 2 will re-appear.
 - To exit the Add/Delete mode, press the MENU button once.

SELECT CHANNEL NUMBER

CH 12

TO END PUSH MENU

TO SELECT PUSH NO. SHOWN

CH 12

1 ADD
2 DELETE
3 SELECT ANOTHER CH

TO END PUSH MENU

Note:

Channel 0, 0 (Line input) cannot be added or deleted from the VCR's memory.

31 — Daylight savings time

Select this feature and the VCR's clock will automatically advance one hour in April; then reverse the clock one hour in October. **Remember :** The clock must be set first (page 10). **You must use your remote control.**

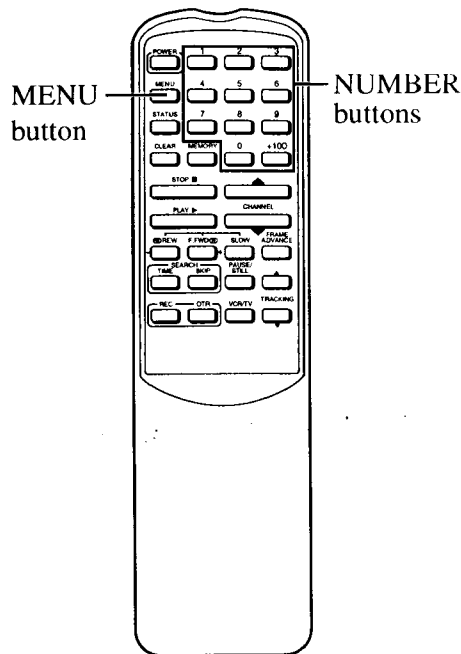
1 **Select Menu mode**
 Press **MENU** button.
 The main menu appears on the TV screen.

TO SELECT PUSH NO. SHOWN
 1 PROGRAM
 2 VCR SET UP
 3 TUNER SET UP
 4 CLOCK SET
 5 DAYLIGHT SAV. TIME
 TO END PUSH MENU

TV screen

2 **Select Daylight savings time**
 First, press the **5** button to select
 "DAYLIGHT SAV. TIME."
 Next, press the **1** button to select "ON."
 "ON" appears on the screen.
 Now, press the **MENU** button.

DAYLIGHT SAVINGS TIME
 SELECT D. S. T. ON
 1 ON
 2 OFF
 TO END PUSH MENU



Remote Control

Doing More



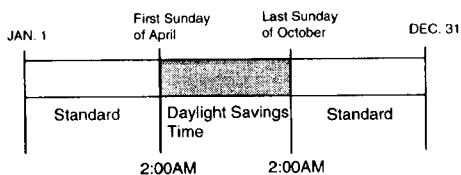
When Saving Time is switched to on, clock time will change automatically as follows;

First Sunday of April : 2:00AM to 3:00AM
 Last Sunday of October: 2:00AM to 1:00AM

When events programmed start between 2:00AM - 2:59AM on the 1st Sunday of April, VCR will start from 3:00AM summer time.

When events programmed end between 2:00AM - 2:59AM on the 1st Sunday of April, VCR will stop at 3:00AM.

When using Automatic Daylight Saving Time feature, there is a possibility of not fully recording a program which occurs during the spring 2:00AM change time. Add enough program time to accommodate this.



— Language select

1 **Display the VCR Set Up mode**
 First, press the **MENU** button to display the main menu screen.
 Now, press the **NUMBER 2** button to select "VCR SET UP."
 The display shown here will appear.

TO SELECT PUSH NO. SHOWN
 1 NORMAL PLAY ON
 2 REPEAT PLAY
 3 ON SCREEN MODE
 4 AUDIO OUT
 5 LANGUAGE
 TO END PUSH MENU

TO SELECT PUSH NO. SHOWN
 1 PROGRAM
 2 VCR SET UP
 3 TUNER SET UP
 4 CLOCK SET
 5 DAYLIGHT SAV. TIME
 TO END PUSH MENU

Main menu

2 **Display the Language Select mode**
 First, press the **NUMBER 5** button to display the Language Select Mode.
 Next, press the **NUMBER 1** or **2** button to select the language (English or Español).
 Now, press the **MENU** button.

TO SELECT PUSH NO. SHOWN
 1 ENGLISH ON
 2 ESPAÑOL
 MAKE SELECTION OR PUSH MENU TO CONTINUE

32 — Maintenance

Cabinet cleaning

- Wipe the front panel and other exterior surfaces of the unit with a soft cloth immersed in lukewarm water and wrung dry.
- Never use a solvent or alcohol. Do not spray insecticide liquid near the unit. Such chemicals may cause damage and discoloration to the exposed surfaces.

VCR head cleaning

- Picture playback may become blurred or interrupted while the TV reception remains clear. This does not mean that the recorded program has been erased. Dirt accumulated on the heads after long periods of use causes this problem. Head cleaning requires highly technical skill. Clean heads only when this symptom occurs. Bring the unit to your nearest Authorized Service Center for a complete cleaning of the heads and cassette compartment.

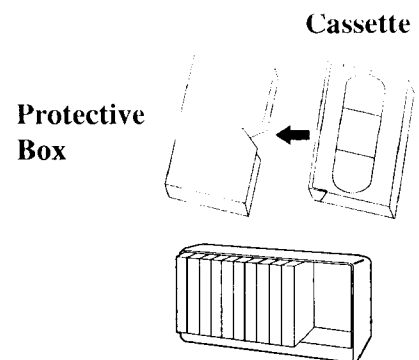
Servicing

- Should your unit become inoperative, do not try to correct the problem yourself. There are no user-serviceable parts or adjustments inside. Switch power off, unplug the power cord, and take the unit to your nearest Authorized Service Center for servicing.

Protecting your video cassettes

Eject and store the cassette after you play it. This helps protect the cassette and the VCR's internal mechanisms from dust. Place your video cassettes in their protective boxes and store them in a cool, dry, dust-free area. Store the cassettes on end, not on their sides.

This prevents improper setting of the tape spool.



Store the cassette in its case as shown.

When handling cassette tapes, take the following precautions:

- **Avoid moisture**, which can condense on the tape if it is moved from a cold place to a warm place. Playing a tape that has moisture on it will damage the tape and your VCR (Video Cassette Recorder). Before using a tape with these conditions, wait until the tape has warmed to room temperature and the moisture has evaporated.
- **Avoid extreme heat**, high humidity and magnetic fields.
- **Do not tamper** with the cassette mechanism.
- **Do not touch** the tape with your fingers.

Hook up Your VCR

- If the reception on all VHF (Very High Frequency) channels is unsatisfactory, you may need to re-tune your TV set.

Clock Adjustment

- In the *Clock Adjustment mode*, be sure to enter the first digit and all subsequent entries within 60 seconds of one another. Otherwise, the VCR will automatically leave this mode and the program you were watching will return to the screen. If this happens, press the MENU button and start again.
- Be sure to enter "0" before single-digit numbers.
- The letters indicating the day of the week will appear when you have entered both digits for the year.
- If the digits entered for the day do not match the calendar, the entry will be rejected and "?" will appear.
- If you press the MENU button while in the Clock Set mode, the TV screen will return to the program you were watching.

Special Playback Features

- During *VISUAL SEARCH*, horizontal noise bars will appear on the TV screen.
- *SUPER HIGH SPEED SEARCH* can be activated during playback of the tapes recorded in LP or SLP speed.
- After the VCR has been in the Still mode for more than 5 minutes, it will automatically go into the Stop mode to protect the tape and video heads.

To Record

- Although it is possible to change the tape speed while you are recording, some distortion will appear on the tape at the point where you make the change.
- After the VCR has been in the Pause mode for 5 minutes, it will automatically go to the Stop mode to protect the tape and video heads.

One Touch Recording (OTR)

- If the preset time for a timer recording comes up during OTR recording, OTR has priority.
- In addition to the way described on page 20, once an OTR starts, you can cancel it by pressing the OTR button twice. This cancels the OTR but also turns the VCR off after a few seconds.

Power Failure

- *Timer Recordings will be erased* if the power fails. Repeat "Turn on your VCR" on page 7 and "Set the Clock" on page 10 before setting up a "Timer Recording" on pages 18–19.

Line Input

- If you accidentally get into the Line mode ("L" appears on the VCR), to exit simply press the CHANNEL UP/DOWN button or select a channel using the NUMBER buttons.

Timer Recording

- You should finish programming a timer recording at least 5 minutes before the recording is set to start.
- To do a timer recording in the LINE mode, follow steps 1–4 in "Timer Recording" section. At step 5, press the NUMBER button 0 twice (0, 0) to engage the LINE (external source) mode. Complete the rest of the steps under "Timer Recording" section.
- *Timer recording may not be performed* or continued if a power interruption of more than one minute occurs before or during timer recording, even if power resumes thereafter. Preset clock and timer data will be lost. This is indicated by the clock display on the VCR which resets to "- : - : -". If this happens, reset the clock and reprogram the timer.
- If the time spans of two preset programs overlap, the lower numbered program will have priority.
- If the POWER button is pressed to OFF with no cassette loaded, the TIMER light blinks.
- If the record tab is missing, the cassette will be ejected when the POWER button is pressed to OFF, and the TIMER light blinks.
- 12PM = Noon
12AM = Midnight
- Once a timer recording has started, you can cancel it by following the directions on page 19, "Stop a started timer recording."

Satellite Hook-Up

- Watching one TV channel while recording another may not be possible with a satellite hook-up.
- You may have to set your VCR to channel 3 or 4 and make your channel selections at the satellite converter box.
- For many satellite hook ups, if you use accessory Audio and Video cables (not supplied) to hook up your satellite tuner to your VCR, you will have to set your VCR to Line Input. "A/V IN" appears on your TV screen when you first switch into this mode. "L" appears on your VCR. The VCR to TV hook-up will look similar to "VCR to Stereo TV Hook ups" on page 37. For details, see your satellite hook up instructions.

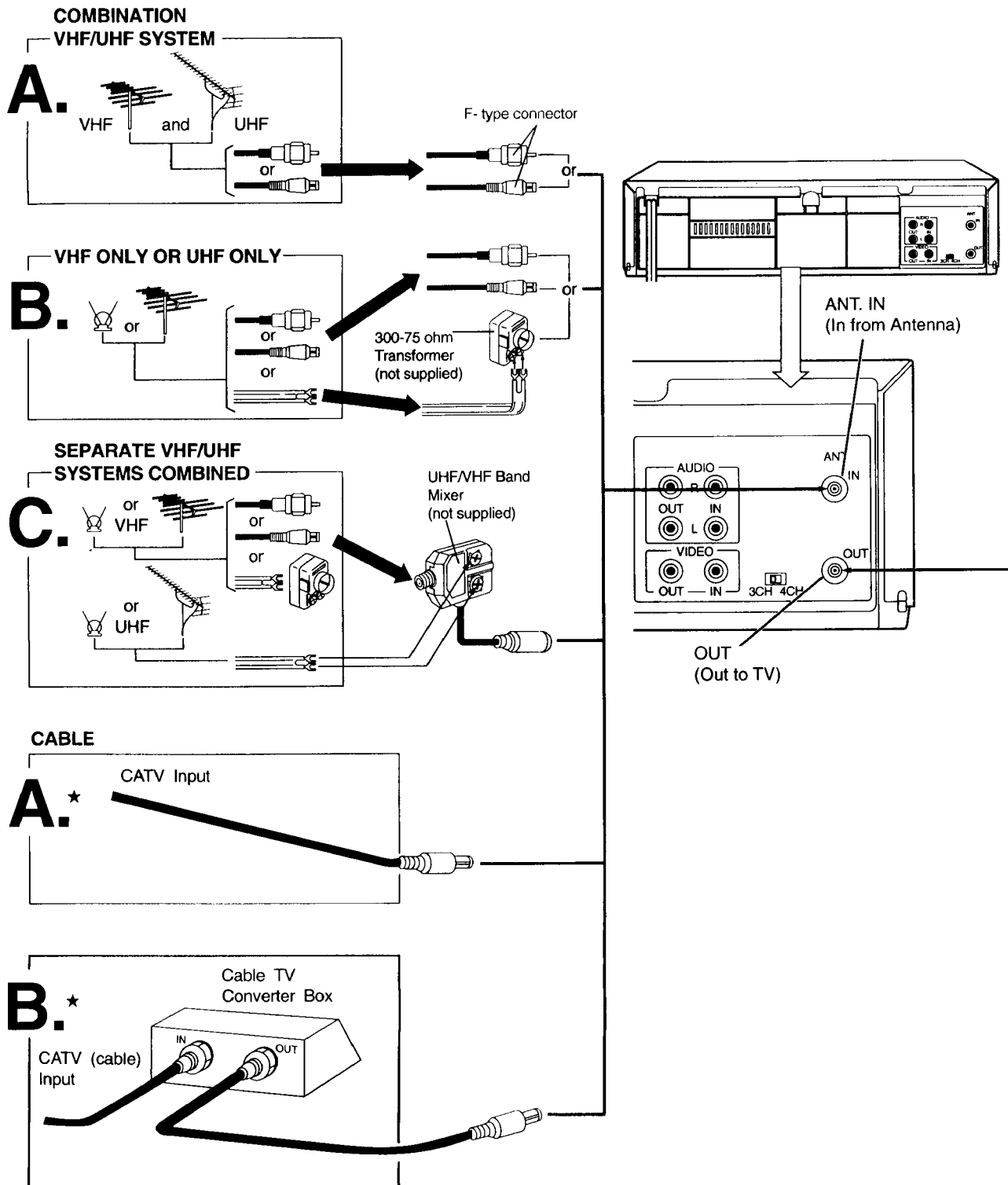
34 — Other hook ups you can try

Antenna or Cable to VCR to TV Connections

STEP 1: Disconnect the Antenna or Cable from your TV.

Your antenna or cable should have one of the ends shown below. To avoid confusion, label all terminals (on TV) and ends before disconnecting.

STEP 2: Connect your Antenna or Cable to your VCR.

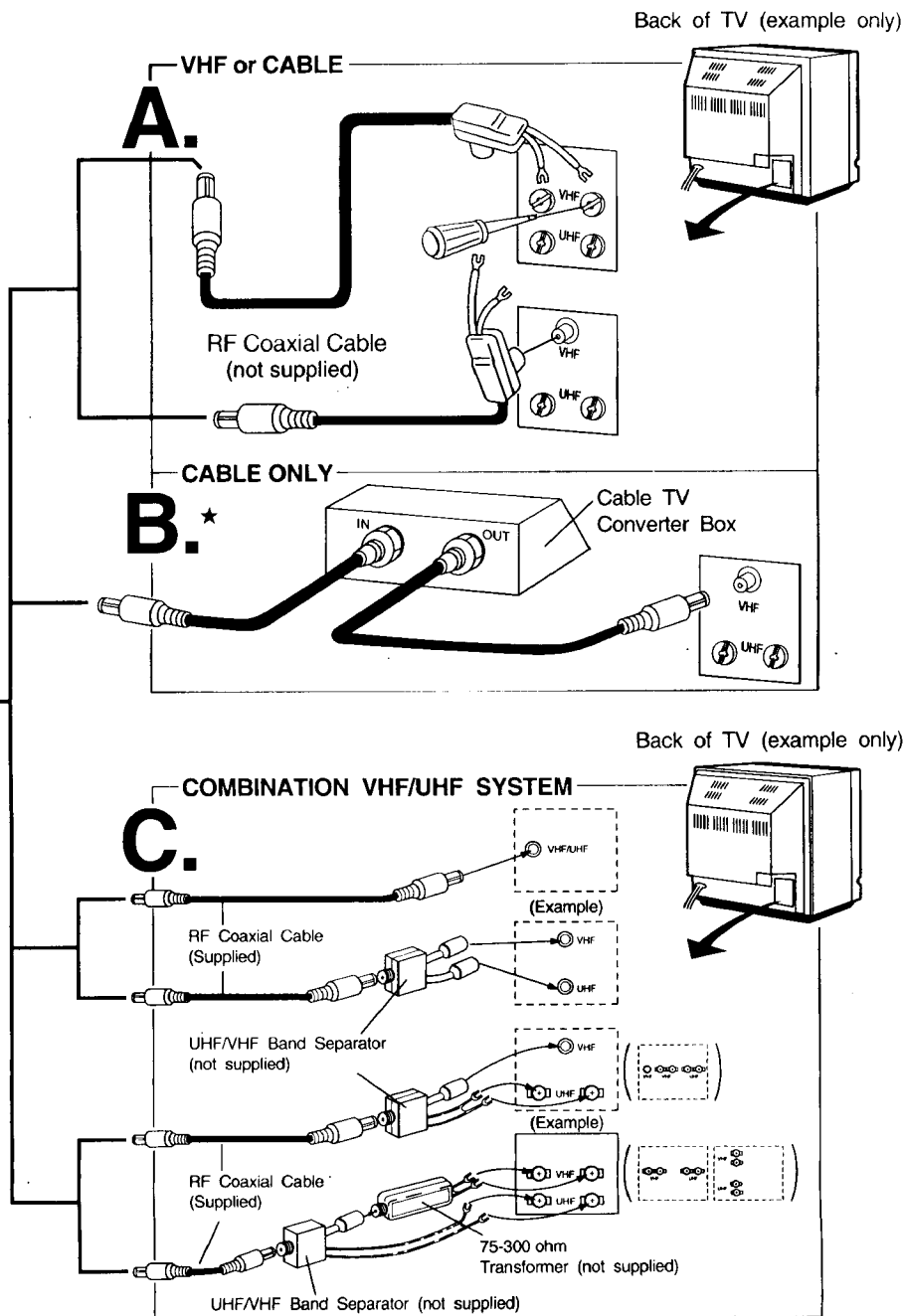


* Please see pages 36 – 37 for details.

(Continued on the next page.)

STEP 3: Connect Your VCR to your TV.
 Look at the back panel of your TV. Find the appropriate diagram below and use that method to connect your VCR to your TV. Use only one connection.

STEP 4: Select Channel 3 or 4.
 For details, see pages 7 and 36-37.



Information You May Need

For UHF-ONLY antenna system:

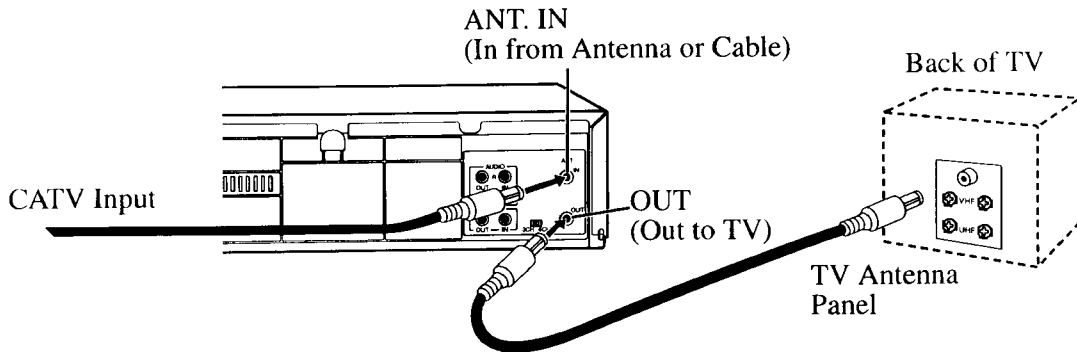
Even if you plan to only play back tapes or view and record UHF programs, you still need to make one of the combination VHF/UHF connections shown above, because when in operation, your VCR sends VHF signals (either channel 3 or 4) to the TV across the RF Coaxial Cable.

** Please see pages 36 – 37 for details.*

36— Other hook ups you can try (continued)

Without a Converter/Descrambler box

Use this connection if your cable system connects directly to your TV without a converter box.

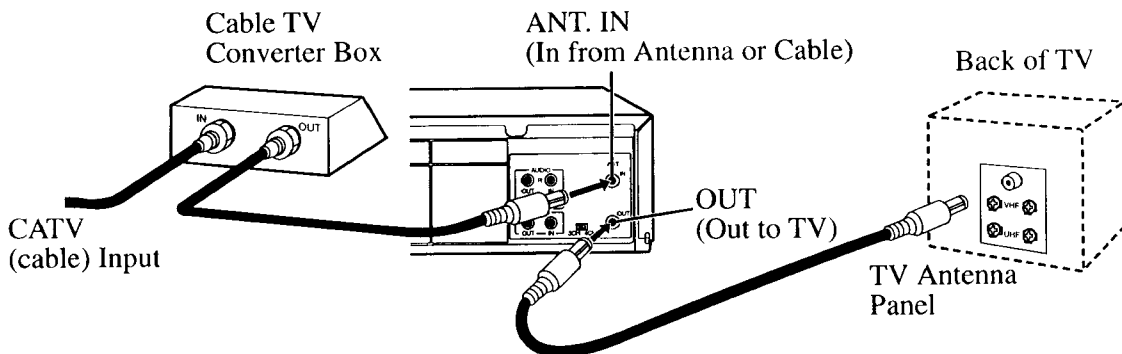


With this connection, you can: (1) use your VCR Remote Control to select channels; (2) program one or more unscrambled channels for unattended recording; (3) view one channel while recording another.

NOTE: • You can also use the CHANNEL UP/DOWN button to select the desired channel.
• You cannot record or view scrambled channels with this connection.

With a (Cable to VCR) Converter/Descrambler box

If your cable service supplies you with a converter box, you can use the basic connection shown here.



With this connection, you can record and view any channel including scrambled channels. However, channel selection must be made at the cable company converter box. This means that channels cannot be changed using the VCR Remote Control. Unattended recording is limited to one channel at a time, and you cannot view any channel than the one you are recording.

To Record and View a Scrambled/Unscrambled Channel

1. Turn the VCR on and, if needed, set the VCR/TV button located on the front of the VCR to "VCR." (VCR light will shine).
2. Using the VCR CHANNEL UP/DOWN buttons, set the VCR channel to the output channel of the Cable Converter Box. (If the Cable Converter Box is set to channel 3, the VCR should be set to channel 3. If the Box is set to channel 4, the VCR should be set to channel 4).
3. Set the TV channel to the output channel of the VCR (channel 3 or 4).
4. Select the channel to be recorded or viewed at the Cable Converter Box.

Note: To do a Timer Recording, One Touch Recording (OTR), or Standby OTR using this hook up, select the channel to be recorded at the Cable Converter Box. Leave the VCR on channel 3 or 4 (see step 2 above). Follow all other Timer Recording and OTR instructions.

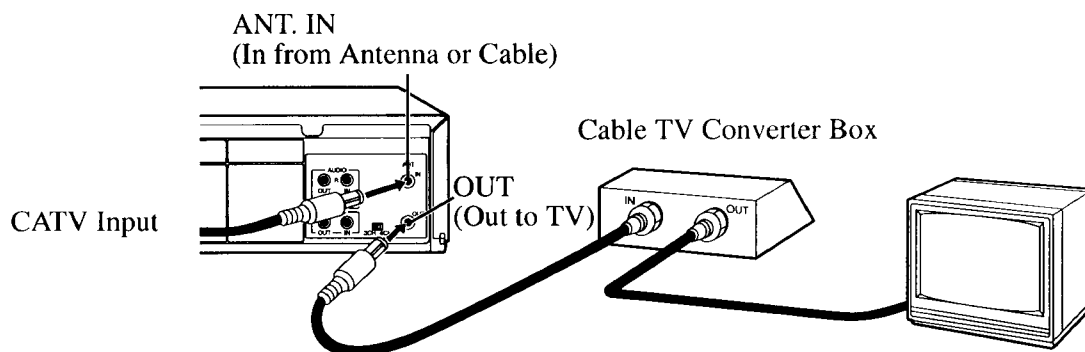
Remember: the Cable Converter Box must be ON during recording.

To Watch TV (with the VCR off)

1. Set the TV channel selector to the output channel of the Cable Converter Box.
2. Select the desired channel on the cable converter channel selector.

With a (VCR to TV) Converter/Descrambler box

If your cable system uses a converter box, you may try this connection instead of the basic cable connection shown on the previous page.



With this connection, you can: (1) program unattended recording of more than one unscrambled channel; (2) view one channel while recording another.

NOTE: • Use the CHANNEL UP/DOWN button to select the channel to be recorded, including Timer Recording and One Touch Recording.
• You cannot record scrambled channels with this connection.

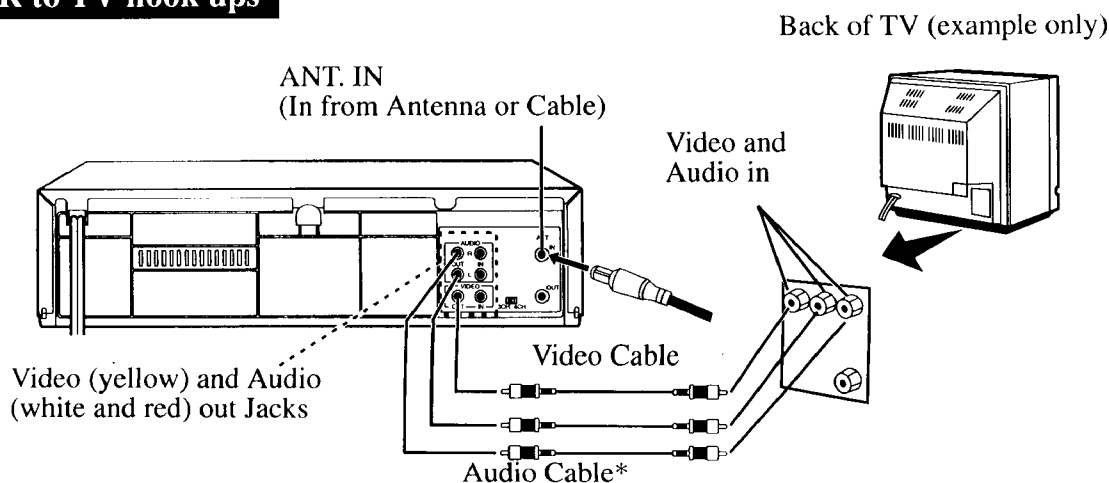
To record one channel while viewing another

1. Select the channel to be recorded with the CHANNEL UP/DOWN button.
2. On the VCR set the VCR/TV selector to "TV."
3. Set the channel selector on the TV to the output channel of the Converter Box.
4. Select the channel to be viewed on the Converter Box.

To play back a tape

1. Set the VCR/TV selector to "VCR."
2. Set the TV channel selector to the output channel of the Converter Box.
3. Set the Converter Box channel selector to the VCR output channel (channel 3 or 4).

VCR to TV hook ups



Stereo VCR to Stereo TV Hookup

*A stereo audio cable (not supplied) is used here to deliver sound to the TV's left and right channels. The TV must be in Aux or Line input mode.

For any additional adjustments you need to make to your TV, refer to your TV owner's manual.

Stereo VCR to Monaural TV Hookup

*Use the connection described above, but in place of a stereo audio cable, use a Y splitter audio cable (not supplied). Connect this cable to the VCR's double audio jacks and the TV's single audio jack.

38 — Before requesting service

IMPORTANT NOTE: Periodic maintenance is required in order to maintain the unit's continued excellent performance. After a period of time the video heads will require replacement. If cleaning or replacement of the video heads is required, this service should be performed by an authorized Video System Service Center.

Check the following points once again if you are having some difficulty with your VCR (Video Cassette Recorder).

Power	Correction
<p>No power...</p> <p>Power Failure...</p>	<ul style="list-style-type: none"> • Check that the Power plug is completely connected to an AC (Alternating Current) outlet. • Check that the Power button is set to ON. • Please complete "Setting the clock" on page 10 before attempting to set up a "Timer recording" on pages 18 – 19.
Recording & Playback	Correction
<p>TV program can't be recorded...</p> <p>Timer recording can't be performed...</p> <p>There is no playback picture, or the playback picture is noisy or contains streaks...</p> <p>During special effects playback, the picture may contain some vertical jitter when using a TV which has an Automatic Vertical Hold Control...</p> <p>If the top of your playback picture waves back and forth excessively...</p>	<ul style="list-style-type: none"> • Check the connections between the VCR, the external antenna, and your TV. • Check that the band selected matches your antenna or cable TV system (P. 34 – 37). • Make sure that the record tab on the back of the cassette is still intact (P. 5). • Set the recording start/stop time correctly (P. 18 – 19). • Make sure that the POWER button is set to "OFF" (P. 19). • Timer recording may not be performed or continued if a power interruption of more than 1 minute occurs before or during Timer recording, even if the power resumes thereafter. • Select the same channel on your TV as that of the VCR Channel 3/4 switch (P. 7). • Set the VCR/TV selector to "VCR" (P. 12 or 14). • Check that channel 3 or 4 of the TV is properly adjusted. • Adjust the Tracking control slowly in either direction (P. 25). • Set the TV's Vertical Hold Control, if available, to "MANUAL" and adjust. • Because the VCR playback signal is not as stable as an off-the-air TV signal, the top of your TV screen may be bent or unstable during playback. To solve this problem, slowly turn the HORIZONTAL HOLD control on your TV to correct the wavy picture. If your TV does not have the horizontal hold control or adjusting the control does not help, please contact your local TV service center.

39 — Before requesting service (continued)

Remote Control	Correction
VCR can't be remote controlled...	<ul style="list-style-type: none">• Aim the remote control directly at the remote sensor on the VCR (P. 8 & 14).• Avoid all obstacles which may interfere with the signal path.• Inspect or replace the batteries (P. 5).• Make sure batteries are inserted correctly (P. 5).
Miscellaneous	Correction
You can't view programs normally on the TV...	<ul style="list-style-type: none">• Set the VCR/TV selector to "TV" (P. 12 or 14).• Check VCR hook ups (P. 6-7 or 34-37).
Video cassette can't be inserted...	<ul style="list-style-type: none">• Insert the cassette with the window side up and the record tab facing you.• Make sure a cassette tape is not already inserted. Press STOP/EJECT button on VCR.
Video cassette can't be removed...	<ul style="list-style-type: none">• Check that the power plug is completely connected to a standard AC household outlet.
Video cassette ejects when the OTR or REC(ord) button is pressed or the POWER button is pressed OFF to set the Timer...	<ul style="list-style-type: none">• Check the cassette to be sure that the record tab on the back of the cassette is still intact (P. 5).
In the Stop mode, the motor (CYLINDER) continues to rotate...	<ul style="list-style-type: none">• To enable quick play mechanism the cylinder will rotate for about 5 minutes. This is normal.

40— Specifications

General Specifications

Television system	: NTSC-M
Recording system	: Rotary two-head helical scan system
Tape width	: 1/2 inch (12.65mm)
Tape speed	
SP	: 33.35mm/sec.
LP	: 16.67mm/sec.
SLP	: 11.12mm/sec.
Tuner channel	
TV VHF Low	: 2~ 6
TV VHF High	: 7~13
TV UHF	: 14~69
CATV Channels	
MID band	: A~I (14~22)
SUPER band	: J~W (23~36)
HYPER band	: W+1~W+28 (37~64)
LOW band	: A-5~A-1 (95~99)
SPECIAL CATV channel	: 5A (1)
ULTRA band	: W+29~W+58 (65~94), W+59~W+84 (100~125)
Terminals:	
Antenna input	: F type connector x 1
Antenna output	: F type connector x 1
Video input/output	: RCA connector x 2
Audio input/output	: RCA connector x 4

Electrical Specifications

Video output level	: 1Vp-p
Video output impedance	: 75 ohm
Audio output level	: -6dBv (1KHz)
Video input level	: 0.5~2.0Vp-p
Audio input level	: -10dBv
Video S/N ratio	
SP	: More than 40dB
Audio S/N ratio	
SP	: More than 38dB

Other Specifications

Operating Temperature	: 41°F (5°C) to 104°F (40°C)
Relative Humidity	: 10% to 75%
Power requirement	: AC 120V, 60Hz
Power consumption	: 20W
Dimensions	: 3-1/16" (92mm) x 14-3/16" (360mm) x 10" (252mm) (H/W/D)
Weight	: 7.6 lbs (3.4 kg)

Designs and specifications are subject to change without notice.

LIMITED WARRANTY

Video Cassette Recorder/Player

- 90-Day Carry-In Service Labor Warranty
- One (1) Year Exchange Warranty On Parts

• For purchases outside the U.S.A., Canada, Puerto Rico, and U.S. Virgin Islands, see applicable warranty from country of purchase.

Please keep...

...your sales receipt and other material proving proof-of-purchase. Attach it to this owner's manual and keep both nearby. Please also keep the original box and packing material. And please write in your model and serial numbers in the shaded area below.

Parts and Labor Coverage...

...starts from the date you bought your product. For the first 90 days both parts and labor are covered. After 90 days, only parts are covered for the remainder of one (1) year. Any defective part will be repaired or replaced. Any part is covered only for the original warranty period. Once the one (1) year warranty on the product has expired, the warranty on any replaced or repaired part also expires. Service is provided by a Philips Factory Service Center or an Authorized Service Center. Centers must be allowed to keep defective parts.

After 90 days, you pay for all labor. After one year, you pay for all parts, transportation, and service charges too.

Who is Protected? ...Where?

Only the person who has proof-of-purchase will receive warranty service. This service will be provided to any product bought and used in the U.S.A., Canada, Puerto Rico, and the U.S. Virgin Islands. If you move within these areas, any Philips Factory Service Center (See enclosed list) or an Authorized Service Center in your area will honor this warranty.

Before Calling for Service...

...please check your owner's manual. A check of the controls discussed there may save you a service call.

How to Get Warranty Service:

If warranty service is required, you must deliver your product with proof-of-purchase to a Philips Factory Service Center (See enclosed list) or Authorized Service Center for repair. When repair is completed, you must pick up the unit at the Center.

Please write in your model and serial numbers below. These numbers are located on your product. Keep this manual nearby for easy reference.

Model No.:

Serial No.:

Warranty Exclusions –

Your Warranty Does Not Cover...

...labor charges for installation or set up, adjustment of customer or preference controls, and installation or repair of antenna systems outside the unit.

...product repair and/or part replacement because of misuse, accident, unauthorized repair or other cause not within the control of Philips Consumer Electronics Company.

...reception problems caused by signal conditions or cable or antenna systems outside the unit.

...a product purchased, used, or serviced outside the U.S.A., Canada, Puerto Rico, and the U.S. Virgin Islands, or used for commercial or institutional purposes (including but not limited to products used for rental purposes).

...incidental or consequential damages resulting from the product. Some states do not allow the exclusion of incidental or consequential damages, so the above exclusion may not apply to you. This includes, but is not limited to, pre-recorded material (copyright or non-copyright).

ALL IMPLIED WARRANTIES, INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO THE DURATION OF THIS EXPRESS WARRANTY. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

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

Cassette Tapes

It is recommended that you use only cassette tapes which have been tested and inspected for use in 2, 4, 6, or 8 hour VHS recorders, and which are so labeled. The use of tapes which have not been tested nor of a VHS format may result in poor picture quality. Damage caused by the use of tapes other than those recommended may void the product warranty.

IMPORTANT REMINDER:

Please fill out and mail your warranty registration card promptly. It will be easier for us to notify you if it should ever be required. Please also keep your sales receipt and other proof-of-purchase information.

Philips Service Company

401 East Old Andrew Johnson Hwy. • Jefferson City, Tennessee 37760
(615) 475-8869

PLEASE HAVE YOUR MODEL AND SERIAL NUMBERS ON HAND ANY TIME YOU CALL.

Information You May Need

42— Glossary

For your convenience, the following list of terms is provided to help you better understand your VCR and its operation.

Audio In/Out: These are connectors (jacks) located on the back of the unit. They are used to record the audio from another source (IN) or play the audio to another source (OUT).

Auto Program: This is part of the CHANNEL MEMORY function. When used the VCR runs through (scans) all the channels on the VCR and all the channels received in your area are automatically placed in memory.

TV Bands: Two possible settings:

TV CH

This consists of two types of frequencies:

VHF

(Very High Frequency) Channels which are received by the tuner on channels 2 to 13.

UHF

(Ultra High Frequency) Channels which are received by the tuner on channels 14 to 69.

CATV

CABLE TV, the second setting possible for TV Band tuning. This term means the unit is capable of receiving standard and unscrambled channels on cable without the use of a cable decoder or converter box.

Channel(s): Selected with the NUMBER buttons or CHANNEL UP/DOWN buttons on the remote.

Clear: To remove a completely programmed Timer Recording or to correct a single clock or program entry.

Counter: For locating specific areas on a tape by referencing the counter number.

Dubbing: Copying the contents of a tape with the use of a second VCR.

Exit: To quit a specific task as directed by your operating instructions on screen or in the book.

Fast Forward (FF): To move the tape rapidly in the forward direction.

Frame: Single still picture.

HQ (High Quality): An enhancement feature in the VCR circuitry which provides greater picture detail.

Matching transformer: An adapter used primarily on non-cable ready TV's. One end has a "screw on" type connector and the other end has two flat leads that connect to the TV.

MENU: Information that will appear on the TV screen and give you operating directions.

Menu button: When the MENU button is pressed, you will be able to choose from a list of options:

- 1) Selecting the Program mode, to enter information for timer recordings.
- 2) Selecting the VCR SET UP mode, which includes OSD mode and language selection.
- 3) Setting the TUNER SET UP mode.
- 4) Setting the Clock.
- 5) Setting the Daylight Saving Time.

Mode: The process of placing the VCR in any of its operating features. Ex: "PLAY" mode.

OSD (On Screen Displays): Features and information that appear on the screen.

OTR (One Touch Recording): Making immediate timed recordings with the press of a single button. These recordings can be set from 30 minutes to 4 hours.

Rewind (REW): To move the tape rapidly in the reverse direction.

RF coaxial cable: Black insulated round cable used to connect the VCR to the TV.

Special effects: Viewing a Still Picture or Fast Forward during playback of a tape.

Separator: An adapter used to separate TV signals (VHF-UHF) when having to connect the VCR to a TV with separate VHF and UHF terminals.

Tape speeds: This determines how fast the tape travels during a recording.

SP (Standard Play):

Fastest tape speed. Recording time for a T120 tape will be approximately 2 hours. (Best Picture Quality)

LP (Long Play):

Average tape speed. Recording time for a T120 tape will be approximately 4 hours.

SLP (Super Long Play):

Slowest tape speed. Recording time for a T120 tape will be approximately 6 hours.

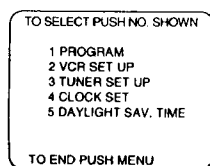
Tracking: For use when grainy streaks appear through the picture. This may be corrected by adjusting the Tracking Control.

VCR/TV button: This button turns the "VCR" light, on the front of the VCR, ON and OFF. When "VCR" is on, this prepares the VCR for viewing your recordings or tape playback on the TV. When off, all channel selections are made at the TV.

VCR: Video Cassette Recorder.

Video In/Out: These are connectors (jacks) located on the back of the unit that are used to record the video from another source (IN), or play the video to another source (OUT).

Wireless remote control: By pressing the buttons on the remote, signals are sent to the VCR to perform the desired task(s).



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SUPPLIED ACCESSORIES

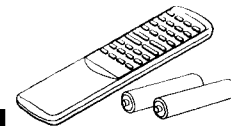
Check to be sure the following items are packed with your VCR.

These accessories are provided to help you use or set up your VCR.

A. 1 pc. Wireless Remote Control (2 "AA" batteries 4835 138 17012)

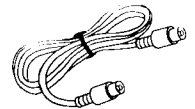
B. 1 pc. VHF/UHF Connecting Cable 75 Ohm

A



4835 218 37131

B



4835 323 27011

O P T I O N A L A C C E S S O R I E S

Maximize your viewing pleasure with state-of-the-art accessories designed specifically for your VCR.

The optional accessories shown in this booklet may be purchased from your local dealer, or may be ordered direct from Philips Consumer Electronics Company.

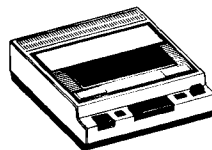
Call toll free:
1-800-292-6066

Or write:

Philips Consumer Electronics Company
Accessories
Marketing Dept.
P.O. Box 967
Greenville, TN
37744-0967

Prices subject to change without notice. Availability subject to change at time of purchase. When ordering accessories outside the U.S.A., please refer to the accessories material, address, and prices for that country.

Tape Rewinder



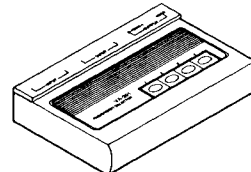
MAG9000

Two-Way Tape Rewinder and Fast Forwarder:

Why wait to start the next movie? This two-way, VHS Tape Rewinder/Fast Forwarder will save you time as well as wear and tear on your VCR. Features a see-thru, pop-up lid, built-in tape counter, and power light to indicate rewind or fast forward function.

MAG9000
List \$29.95

Audio/Video Select Switch Box



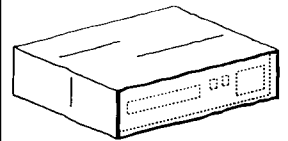
SBA2010A01

Audio/Video Select Switch Box:

Allows for the easy hookup of up to four different components such as television, VCR, laser disc player, and satellite without changing complicated wires. Has four stereo audio/video inputs, one stereo audio/video output, and four selector switches to select desirable sources for viewing.

SBA2010A01
List \$39.95

VCR Dust Cover



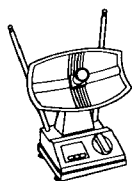
SBV1143A02

VCR Dust Cover:

An attractive and inexpensive way to prevent dust, dirt, spills, and scrapes from harming your VCR. Features a quality leather-like heavy-duty vinyl, a clear see-through front panel, back cutout for wires, and a unique padded inner liner to protect and guard against heat damage.

SBV1143A02
List \$4.29

TV Antenna



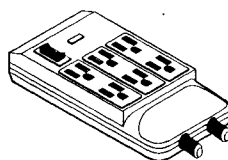
SBV2021A01

Indoor Color TV Antenna With Amplifier:

Solve your reception problems by using this color TV antenna with built-in amplifier. Features fully-directional, telescoping VHF rods with 180 degree tilt, rotating UHF antenna, and 12-position tuning control.

SBV2021A01
List \$24.95

Surge Suppressor



SRG9110

Surge Suppressor:

Protect your investment from damaging power surges coming through your cable or electrical line. Features coaxial cable input/output, six receptacles, power light, and reset switch. Plugs directly into wall outlet.

SRG9110
List \$39.95

Smart & Easy Universal Remote



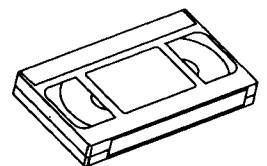
AK1250GZ01

"Smart & Easy" Universal Remote:

Pre-programmed Universal Remote controls TVs, VCRs, and cable boxes. Has alternating channel feature, on-screen capabilities, and patented search feature. Can operate more than 48 of the most popular brands. Replace lost or broken remotes. End remote control clutter.

AK1250GZ01
List \$19.95

VHS Head Cleaners



SBV1140A01/SBV1141A01

VHS Head Cleaners:

Cleaners reduce buildup of dust, dirt, and lint on your VHS VCR or camcorder heads. Allows for better connection of tape to tape head. Enjoy clear, sharp, quality pictures and sound by getting into the good habit of cleaning your equipment.

Wet Head Cleaner
SBV1140A01 List \$9.95

Dry Head Cleaner
SBV1141A01 List \$7.95