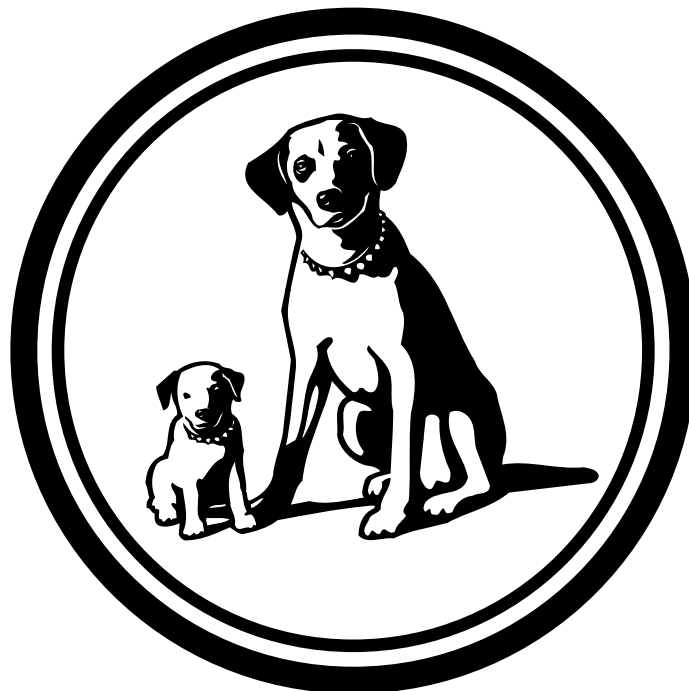


# **RCA**

## **video cassette recorder user's guide**

**VR616HF**



# IMPORTANT INFORMATION

## WARNING

RISK OF ELECTRIC SHOCK DO NOT OPEN

To reduce the risk of electric shock, do not remove cover (or back). No user serviceable parts inside. Refer servicing to qualified service personnel.



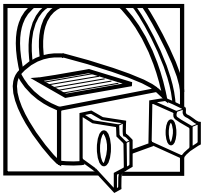
This symbol indicates "dangerous voltage" inside the product that presents a risk of electric shock or personal injury.



This symbol indicates important instructions accompanying the product.

## WARNING

To reduce the risk of fire or shock hazard, do not expose this product to rain or moisture.



**Caution:** To reduce the risk of 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.

Refer to the identification/rating label located on the back panel of your product for its proper operating voltage.

FCC Regulations state that unauthorized changes or modifications to this equipment may void the user's authority to operate it.

**Cable TV Installer:** This reminder is provided to call your attention to Article 820-40 of the National Electrical Code (Section 54 of the Canadian Electrical Code, Part 1) which provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building as close to the point of cable entry as practical.

## Product Registration

Please fill out the product registration card and return it immediately. Returning this card allows us to contact you if needed.

Keep your sales receipt to obtain warranty parts and service and for proof of purchase. Attach it here and record the serial and model numbers in case you need them. The numbers are located on the back of the product.

Model No. VR616HF

Serial No. \_\_\_\_\_

Purchase Date: \_\_\_\_\_

Dealer/Address/Phone: \_\_\_\_\_

\_\_\_\_\_

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# FIRST THINGS FIRST

## HI, MY NAME IS SUSAN...

and I wrote this User's Guide. It's my job to see that you have a rewarding user manual experience. And, I think you'll be pleased with the features that can be accessed through the on-screen menus.

## READ THE FIRST THREE SECTIONS

The first three sections of the manual introduce you to your VCR, and show you how to set the VCR up and use the on-screen menus. Reading these sections gives you the basic information you need to use your VCR.

## WHAT'S LEFT?

The rest of the book highlights playback and recording information, contains a detailed connections section, and a reference section that includes troubleshooting tips, limited warranty, and index.

### 1 FIRST THINGS FIRST



### 2 SETTING UP THE VCR



### 3 VCR BASICS



### 4 RECORDING



### 5 PROGRAMMING THE REMOTE



### 6 OTHER FEATURES



### 7 CONNECTIONS

#### READ ME!

These note boxes give you tips for your new video cassette recorder.

# FIRST THINGS FIRST

## STEP 1: UNPACK WHAT'S IN THE BOX

The following items come packed in the box:

- VCR
- Power cord
- Remote control
- RF coaxial cable

## STEP 2: INSTALL BATTERIES IN THE REMOTE CONTROL

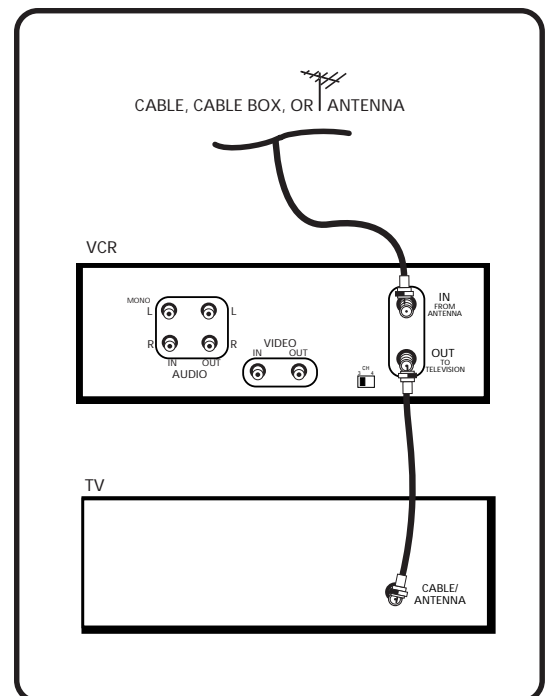
Follow these steps whenever you need to install or change the batteries in your VCR remote.

1. Remove the cover of the battery compartment.
2. Place batteries in the remote, matching the + and – ends of each battery to the diagram inside the compartment.
3. Replace the cover.

## STEP 3: CONNECT YOUR VCR

If you connect your VCR to your home antenna or cable system and then to your TV, use the VCR's IN FROM ANTENNA and OUT TO TELEVISION jacks for a good signal as shown.

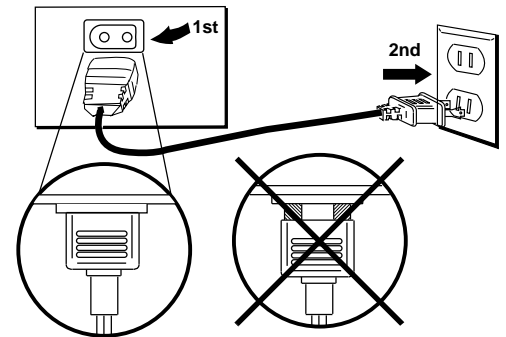
If you have a TV with AUDIO/VIDEO jacks, use these jacks for a better connection. In order to hear stereo and hi-fi sound, the audio/video jacks must be used. Refer to the *Connections* section, toward the back of the manual.



# FIRST THINGS FIRST

## STEP 4: PLUG IN THE VCR

Insert the small end of the power cord into the back of the VCR. Match the wide blade of the plug on the other end of the cord with the wide slot in the AC outlet. Be sure to insert the plugs completely.



## STEP 5: TUNE THE TV

Tune the TV to the VCR viewing channel. The VCR viewing channel is channel 3 or 4 or the TV's video input.

- If you connect your VCR using the IN FROM ANTENNA and OUT TO TELEVISION jacks with RF coaxial cable, set the 3CH4 switch to channel 3 or channel 4--the channel you want to use on your TV.
- If you connect your VCR using the AUDIO/VIDEO jacks with audio/video cables, select the TV's video input to see the signal. See the *TV Owner's Manual*.

## STEP 6: TURN ON THE VCR

The first time you connect your VCR and turn it on, a menu screen appears. This is the beginning of the On-Screen Guide which helps you to set up specific features of the VCR. If you choose not to use this Guide, you can set up each feature individually.

Go to the next step to understand how to move through and change items in the menu system.

## STEP 7: ACCESS THE MENUS

The MENU and number buttons let you access, select, and change menu items. For example, to change the Auto Play setting, you would do the following:

### VCR Viewing Channel

When using the ANTENNA jacks to connect your VCR, tune your TV to channel 3 or 4.

When using the audio/video jacks to connect your VCR, tune your TV to the TV's video input.

# FIRST THINGS FIRST

1. Press MENU to bring up the VCR MAIN MENU.

```
VCR MAIN MENU
1 VCR Plus+
2 Timer Recordings
3 Time
4 Channels
5 Preferences
6 Language/Langue/Idioma
7 Audio
0 Exit
```

2. Press 5 to display the PREFERENCES menu.

```
PREFERENCES
1 Remote Control: VCR1
2 Auto Play: ON
3 Auto TV/VCR: ON
0 Exit
```

3. Press 2 to switch Auto Play to ON or OFF.

```
PREFERENCES
1 Remote Control: VCR1
2 Auto Play: OFF
3 Auto TV/VCR: ON
0 Exit
```

See *Additional Set-Up Features* for detailed information about the Auto Play feature.

## STEP 8: SET UP THE VCR

Once you understand how to move around through the menus, go to the next section to set up your VCR.



# SETTING UP THE VCR

## ADDITIONAL SET-UP FEATURES

Below is a list of set-up features that you may want to set up before you begin using your VCR for the first time.

- Select a Language
- Set up VCR channel list (Auto Channel Search)
- Set Automatic Daylight-Saving time
- Set up VCR Plus+ channels
- Set the Time and Date
- Set the Remote VCR1/VCR2 feature
- Set the Auto Play feature
- Set the Auto TV/VCR feature

## 1 FIRST THINGS FIRST



## 2 SETTING UP THE VCR



## 3 VCR BASICS



## 4 RECORDING



## 5 PROGRAMMING THE REMOTE



## 6 OTHER FEATURES



## 7 CONNECTIONS

# SETTING UP THE VCR

## USING THE MENU TO SET UP FEATURES

You can set up features by using the menu system. The features are explained in this section.

If a menu does not appear:

- Make sure TV is tuned to the same channel as the 3CH4 switch or TV's video line input.
- Make sure VCR indicator is on in the VCR display if you connected your VCR using the IN FROM ANTENNA and OUT TO TELEVISION jacks.
- Check your connections.

## LANGUAGE

Select your preferred language, and the on-screen displays will appear in that language.

1. Press MENU to display the VCR MAIN MENU.

```
VCR MAIN MENU
1 VCR Plus+
2 Timer Recordings
3 Time
4 Channels
5 Preferences
6 Language/Langue/Idioma
7 Audio
0 Exit
```

2. Press 6 to select and display the LANGUAGE menu.

```
LANGUAGE
Select a language.
1>English
2 Français
3 Español

Press MENU to continue
```

3. Select English, Français (French), or Español (Spanish).

### On-Screen Menus

Not all the VCR screens are shown in this manual when explaining the features.

# SETTING UP THE VCR

## VCR CHANNELS LIST

If you use a cable box for *all channels*, this step is not necessary. Your VCR may come with a channel list preset at the factory. Even though your VCR may come with a list, it's possible that you may want to add or eliminate some channels depending on whether they are active.

### To Auto Channel Search

1. Press MENU to display the VCR MAIN MENU.

```
VCR MAIN MENU
1 VCR Plus+
2 Timer Recordings
3 Time
4 Channels
5 Preferences
6 Language/Langue/Idioma
7 Audio
0 Exit
```

2. Press 4 to display the CHANNELS menu.

```
CHANNELS
1 Auto Channel Search
2 Add/Remove Channels
3 Signal Type: CABLE
4 VCR Plus+ Channel List
0 Exit
```

3. Press 1 to display the AUTO CHANNEL SEARCH menu.

```
AUTO CHANNEL SEARCH
What type of signal
are you using?
1 Cable TV
2 Antenna
3 Detect Automatically
0 Cancel
```

# SETTING UP THE VCR

4. Select one of the three AUTO CHANNEL SEARCH options.

Choices one and two are self-explanatory. If you choose Detect Automatically, the VCR automatically detects which signal system you have attached to your VCR.

```
AUTO CHANNEL SEARCH

Now scanning channel 14

Press any key to cancel
```

The VCR begins scanning for the available channels--this takes about one to two minutes. The lowest channel is tuned once the search is complete. Now pressing CHANNEL up or down should only select the active channels.

## To Change the Signal Type

1. Press MENU to display the VCR MAIN MENU.

```
VCR MAIN MENU
1 VCR Plus+
2 Timer Recordings
3 Time
4 Channels
5 Preferences
6 Language/Langue/Idioma
7 Audio
0 Exit
```

2. Press 4 to display the CHANNELS menu.

```
CHANNELS
1 Auto Channel Search
2 Add/Remove Channels
3 Signal Type: CABLE
4 VCR Plus+ Channel List
0 Exit
```

3. Press 3 to change the Signal Type between CABLE and ANTENNA.

### Detect Automatically

A strong cable or antenna signal in your area may cause Auto Detect to mis-detect. If this should happen, select 1 or 2 for the system you have.

### Auto Channel Search

Use the Auto Channel Search feature to place all available channels in memory.

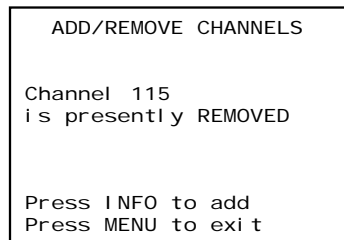
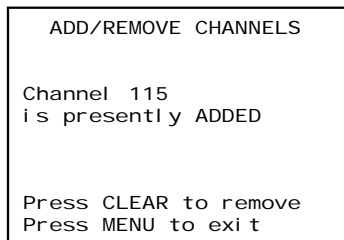
If you ever change cable or antenna signals, you may need to Auto Channel Search again.

# SETTING UP THE VCR

## To Add or Remove Channels

You may want to add or remove channels after you Auto Channel Search, especially if some of the channels have weak signals or you don't want to watch them.

1. Press MENU to display the VCR MAIN MENU.
2. Press 4 to display the CHANNELS menu.
3. Press 2 to display the ADD/REMOVE CHANNELS screen. Use CHANNEL up or down or number buttons to go to the channels you want to remove or add.

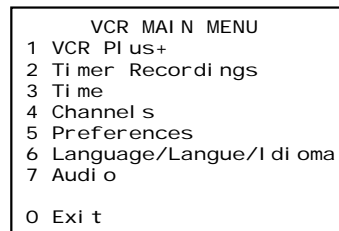


## TIME AND DATE

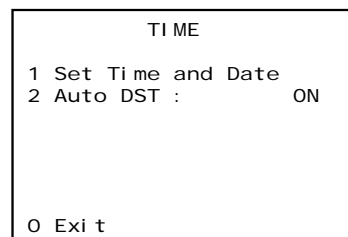
Before you set the time and date, set the Auto DST (Daylight-Saving Time) feature to ON or OFF for your area.

### Set Daylight-Saving Time

1. Press MENU to display the VCR MAIN MENU.



2. Press 3 to display the TIME menu.



3. Press 2 to turn Auto DST: ON or OFF.

### Selecting Channels

The CHANNEL up and down buttons access those channels active in your VCR channel list.

You can still access channels not in the channel list by using the number buttons on the remote.

# SETTING UP THE VCR

## Set the Time and Date

1. Press MENU to display the VCR MAIN MENU.

```
VCR MAIN MENU
1 VCR Plus+
2 Timer Recordings
3 Time
4 Channels
5 Preferences
6 Language/Langue/Idioma
7 Audio
0 Exit
```

2. Press 3 to display the TIME menu.

```
TIME
1 Set Time and Date
2 Auto DST : ON
0 Exit
```

3. Press 1 to display the SET TIME AND DATE menu.

```
SET TIME AND DATE
Time --:--
(hh:mm)
Date --/--/--
Press MENU to cancel
```

4. Enter the data using the number buttons. Press 0 before single-digit numbers and follow the on-screen directions.

```
SET TIME AND DATE
Time 12:34 PM
Date 11/18/97 Tuesday
Press CLEAR to correct
Press MENU to set
```

### Time/Date Display

Pressing INFO on the remote displays the time and date on the screen.

### Spring forward; Fall backward

In the Spring, daylight-saving time begins on the first Sunday in April. Because the clock automatically changes from 2:00 AM to 3:00 AM (forward one hour), remember to include the extra hour for timer recording falling within this time frame.

In the Autumn, daylight-saving time ends on the last Sunday in October. The VCR clock automatically changes from 2:00 AM to 1:00 AM (back one hour). Therefore, it can affect your recording length.

# SETTING UP THE VCR

## VCR PLUS+ CHANNELS

Using VCR Plus+ can make programming timer recordings for cable or off-air antenna easier, but you have to put in a little time right now to set up a channel list. A worksheet and abbreviated codes for typical cable services in the U.S. and Canada follow.

1. Press MENU to display the VCR MAIN MENU.

```
VCR MAIN MENU
1 VCR Plus+
2 Timer Recordings
3 Time
4 Channels
5 Preferences
6 Language/Langue/Lidoma
7 Audio
0 Exit
```

2. Press 4 to display the CHANNELS menu.

```
CHANNELS
1 Auto Channel Search
2 Add/Remove Channels
3 Signal Type: CABLE
4 VCR Plus+ Channel List
0 Exit
```

3. Press 4 to display the VCR Plus+ Channel List menu.

```
VCR+ Channel My Channel
5          --
4          --
3 -> -> -> --
2          --
1          --
Use CH+/- to select
Press 0-9 to change
Press MENU to exit
```

4. Enter the data following the on-screen directions using your worksheet.

```
VCR+ Channel My Channel
5          46
4          --
3 -> -> -> 23
2          --
1          --
Use CH+/- to select
Press 0-9 to change
Press MENU to save
```

*Screen is for an example only.*

## Two-Digit VCR Plus+ Channel Numbers for Cable TV (USA List)

35	American Movie Classics
39	Arts &-Entertainment
57	Black Entertainment
54	Bravo
42	Cable News Network
45	Cinemax
98	Cinemax 2
37	The Discovery Channel
53	The Disney Channel
63	Entertainment Television
34	ESPN Sports Network
47	The Family Channel
33	Home Box Office
95	Home Box Office 2
96	Home Box Office 3
51	The Learning Channel
46	Lifetime
58	The Movie Channel
48	Music Television
49	The Nashville Network
38	Nickelodeon
64	Nostalgia Television
99	Quality Value Cable
41	Showtime
97	Showtime 2
59	Sports Channel
52	Turner Network Television
44	USA-Network
62	Video Hits 1
93	Viewer's Choice 1
94	Viewer's Choice 2
55	WGN Chicago
43	WTBS Atlanta
60	WWOR-New York

*See next page for Canadian List*

## VCR Plus+ Channel List

Refer to your local television list for a complete VCR Plus+ channel list for your viewing area or contact your cable company. Using the list may save you some time.





# SETTING UP THE VCR

## WHAT'S NEXT--ADDITIONAL SET-UP FEATURES IN THE PREFERENCES MENU

The features in this section are all accessed through the PREFERENCES menu.

1. Press MENU to display the VCR MAIN MENU.

```
VCR MAIN MENU
1 VCR Plus+
2 Timer Recordings
3 Time
4 Channels
5 Preferences
6 Language/Langue/Idioma
7 Audio
0 Exit
```

2. Press 5 to display the PREFERENCES menu.

```
PREFERENCES
1 Remote Control: VCR1
2 Auto Play: ON
3 Auto TV/VCR: ON
0 Exit
```

Now you are ready to select an item from the menu to set up.

## REMOTE VCR1/VCR2 OPTION

The VCR's remote controls two compatible RCA, ProScan, or GE VCRs. Most compatible VCRs automatically respond to the VCR1 button without being programmed. If you own two compatible VCRs, test them to see if the VCR1 button turns on both VCRs. If it does, then you may want to program this VCR to respond to the VCR2•DVD button on the remote.

Press 1 to select the Remote Control item. Then press the VCR2•DVD button to change.

```
PREFERENCES
<PRESS VCR2 TO CHANGE>
2 Auto Play: OFF
3 Auto TV/VCR: OFF
0 Exit
```

```
PREFERENCES
1 Remote Control: VCR2
2 Auto Play: OFF
3 Auto TV/VCR: OFF
0 Exit
```

### Remote Control Option

Remember you must press VCR1 or VCR2•DVD on the remote--whichever you selected in the menu--before the remote will operate the VCR.

# SETTING UP THE VCR

The VCR will only respond to the VCR2•DVD button. To change the remote setting back to VCR1, display the PREFERENCES menu, press 1, and then press the VCR1 button on the remote.

## AUTO PLAY

This feature allows the VCR to automatically start playing when you insert a tape with the safety tab removed. Press 2 to switch between ON and OFF.

- Select ON if you want a tape with its safety tab removed to start playing automatically when the tape is inserted.
- Select OFF if you *do not* want a tape with its safety tab removed to start playing automatically.

## AUTO TV/VCR

This feature controls whether the TV/VCR switch changes automatically to the VCR mode, when the VCR is turned on. Press 3 to switch between ON and OFF.

- Select ON if you want the VCR to switch to the VCR mode when the VCR is turned on or a cassette is inserted. *This only applies if you connect the IN FROM ANTENNA and OUT TO TELEVISION jacks of your VCR and TV and watch your VCR on channel 3 or 4 of your TV.*
- Select OFF if you want the VCR to remain in the TV mode. This is useful if you watch your VCR on the TV's video input and you don't want your antenna/cable signal interrupted by the VCR.

### Auto TV/VCR

Pressing TV•VCR on the remote will still switch between the VCR and TV mode.

VCR mode: VCR indicator in the display panel lights.

TV mode: VCR indicator turns off.

# VCR BASICS

## LEARN THE BASICS TO GET YOU STARTED

These VCR basics should be enough for you to begin enjoying your VCR. Learning the remote control functions, playing a recorded tape, and recording a program should do just that.

However, there are other features that enhance the enjoyment of your VCR, but they aren't necessary to get you started. If you want to learn more about your VCR, just keep reading.

**1 FIRST THINGS FIRST**



**2 SETTING UP THE VCR**



**3 VCR BASICS**



**4 RECORDING**



**5 PROGRAMMING THE REMOTE**



**6 OTHER FEATURES**



**7 CONNECTIONS**

VCR Basics tells you what you need to know in order to watch a movie or tape your favorite show.

# VCR BASICS

## REMOTE BUTTONS

Your back-lit remote has a light button (💡) that glows in the dark. Press this button to light the buttons on the remote. The remote buttons remain lit when they are pressed within a few seconds of each other. If a button is not pressed within approximately eight seconds, the light turns off to conserve battery power.

The remote control is capable of controlling more than just your VCR, and if you have compatible RCA, ProScan, or GE components, you may be able to control them without even having to program the remote.

## COMPONENT BUTTONS

**AUX** Used with PWR button to turn on a compatible RCA audio component.

**PWR** Turns off VCR when remote is set to control the VCR. Also turns some compatible components on and off.

**SAT•CABLE** Turns on a compatible RCA, ProScan, or GE satellite receiver and sets the remote to control the receiver. Can be programmed to control different brands of receivers. Used with the PWR button to turn on a compatible cable box (if programmed) and sets the remote to control the cable box.

**TV** Turns on a compatible RCA, ProScan, or GE TV and sets the remote to control the TV. Also used with the PWR button to turn on a different brand of TV (if programmed) and sets the remote to control the TV.

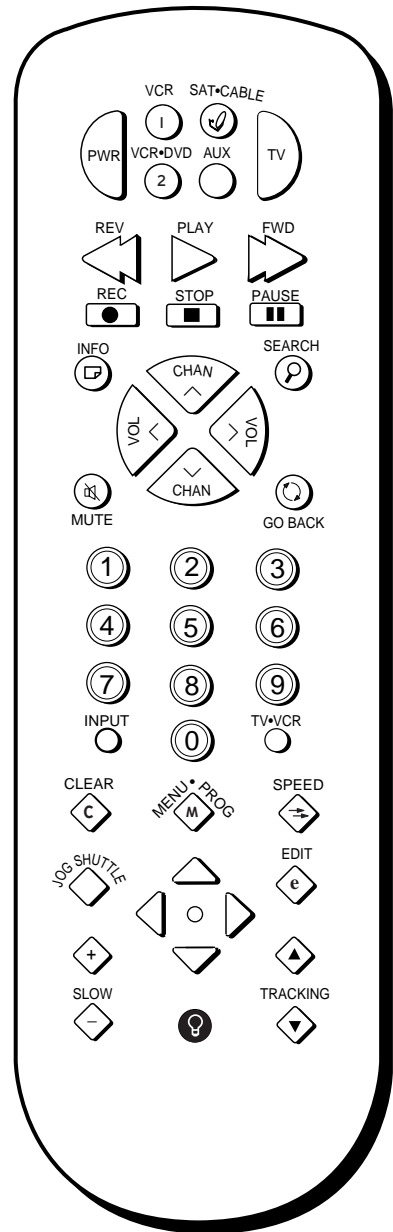
**VCR1** Turns on a compatible RCA, ProScan, or GE VCR and sets the remote to control the VCR.

**VCR2•DVD** Turns on a compatible RCA, ProScan, or GE VCR and sets remote to control VCR when it has been setup. Turns on compatible RCA or ProScan laser disc player. Also can be programmed to control a compatible RCA DVD player.

## VCR FUNCTION BUTTONS

**Arrow Buttons** (⏪⏩) Used with JOG SHUTTLE for frame advance and variable speed picture search.

**CHAN Up or Down** Selects next higher or lower channel in the VCR's channel memory.



# VCR BASICS

**CLEAR** Resets time counter to 0:00:00. Allows you to change entries when setting the clock or a timer recording.

**EDIT** Signals two properly connected compatible VCRs to begin copying a tape.

**FWD** Fast forwards the tape when the VCR is stopped. Searches forward through a tape during playback. Starts slow motion during play-pause and increases slow-motion speed.

**GO BACK** Switches between two channels. Select one channel and then select another using the number buttons. Press GO BACK to switch between the two channels.

**INFO** Shows the status displays on the TV screen.

**INPUT** Selects between the line inputs and the VCR's tuner. Line input refers to the signal coming from the component connected to the audio/video input jacks on the back or front of the VCR.

**JOG SHUTTLE and Indicator Light** Used with arrow buttons for frame advance and variable speed search. The indicator in the middle of the arrow buttons lights when JOG SHUTTLE is on.

**MENU•PROG** Displays VCR MAIN MENU on the TV screen.

**Numbers (0 through 9)** Select a channel up to 99 by pressing two numbers. Select a cable channel over 99 by pressing and holding 1 until 1 -- appears on the screen. Then press the other two numbers.

**PAUSE** Pauses playback or recording. Press PAUSE again to return to playback or recording.

**PLAY** Plays a tape.

**PWR** Turns the VCR on and off.

**REC** Starts VCR recording. Also used for express recording.

**REV** Rewinds the tape when the VCR is stopped. Searches backward through a tape during playback. Starts slow motion during play-pause and decreases slow-motion speed.

**SEARCH** Displays INDEX and GO-TO SEARCH menus on TV screen when VCR is stopped. Advances the tape 60 or 120 seconds of recorded material during playback.

**SLOW + and -** Used for slow-motion playback. Press + to increase the speed or - to decrease the speed.

# VCR BASICS

**SPEED** Selects a recording speed (SP or SLP).

**STOP** Stops the current VCR function such as record, playback, rewind, or fast forward.

**TRACKING Up or Down** Lets you manually reduce the streaks that may appear on the picture during play, slow motion, or pause. Reduces picture "jitter" during stop-action playback.

**TV•VCR** Switches the picture signal so that it either comes from the VCR or cable/antenna system.

## TV FUNCTION BUTTONS

**CHAN Up or Down** Selects next higher or lower channel in the TV's channel memory.

**CLEAR** Removes menus or status displays from the screen.

**GO BACK** Switches between two channels. Select one channel and then select another using the number buttons. Press GO BACK to switch between the two channels.

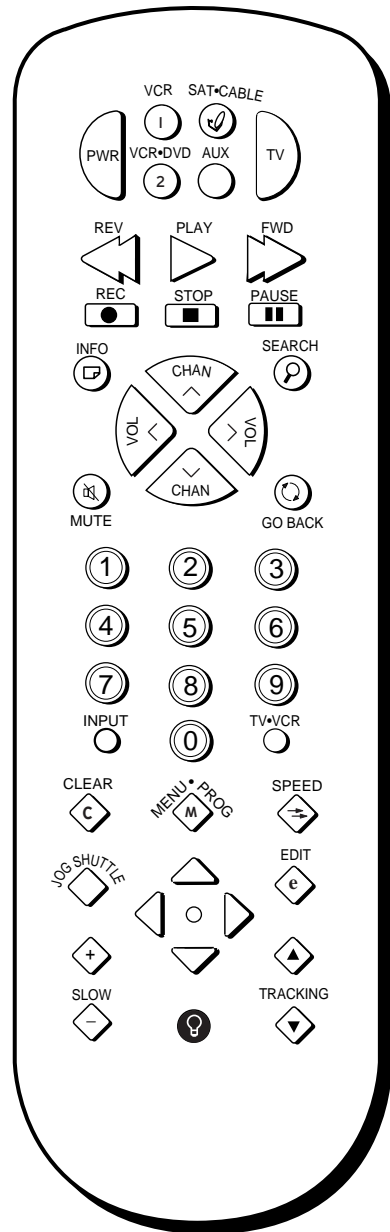
**INFO** Shows the TV's status displays on the TV screen.

**MUTE** Reduces volume to minimum level.

**Numbers (0 through 9)** Select a channel up to 99 by pressing two numbers. Select a cable channel over 99 by pressing and holding 1 until 1 -- appears on the screen. Then press the other two numbers.

**PWR** Turns the TV on and off.

**VOL Up and Down** Raises and lowers sound of TV.



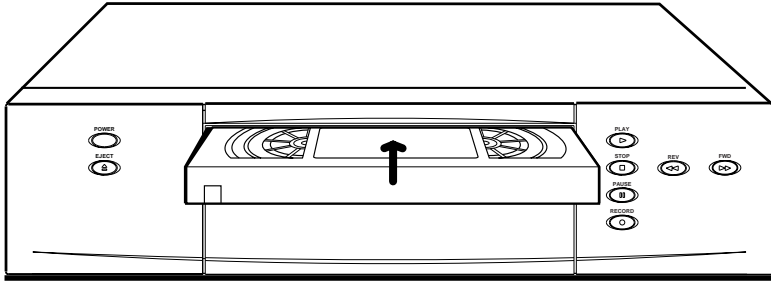
### TV Buttons

The TV buttons may not control all features of all models of RCA, ProScan, and GE TVs.

# VCR BASICS

## PLAYING A TAPE

1. Tune the TV to your VCR viewing channel (3, 4, or TV's video input).
2. Insert a tape in the VCR.



If the Auto Play feature is set to ON, the tape automatically begins playback (if the safety tab on the cassette is removed).

- Press FWD or REV to position the tape.
- Press PLAY (if necessary) to begin tape play.
- Press PAUSE for stop action.
- Press TRACKING up or down to remove any streaks from the picture, if necessary.
- Press STOP to stop playback.

## AUTOMATIC REWIND

The VCR automatically rewinds the tape if it reaches the end of the tape during playback. While rewinding, you can press POWER on the VCR (PWR on the remote) and the VCR will turn off after rewinding.

## TAPE EJECT

Press EJECT on the VCR when it is stopped to eject the tape.

### Pause

If you pause, the VCR automatically switches from pause to stop after a few minutes to reduce tape wear.

### Automatic Tracking

The VCR has automatic tracking which adjusts the picture when playing back a tape recorded on another VCR. Automatic tracking is turned on whenever a tape is inserted or the VCR's power is turned on.

# VCR BASICS

## RECORDING

If you want to record something that you're watching, you can use basic recording.

1. Set the tape speed by pressing the SPEED button on the remote (see margin note for information about tape speed settings).
2. Press the RECORD (REC) button to begin recording.
3. Press STOP to stop recording.

If you just want to pause the recording for a short time (like during a commercial), press PAUSE instead of STOP.

## CHECK THE SAFETY TAB

No matter which recording option you use, you need to make sure there is a tape in the VCR, and that the tape's safety tab is in place. You cannot record on a tape with the safety tab removed.



Safety Tab

If the safety tab is removed and you want to record over it, simply cover the hole with vinyl tape.

### Tape Speeds

#### SP (Standard Play)

Gives the best quality recording, but fewer programs can be recorded on the tape. Special effects such as pause, slow motion, picture search, and frame advance work well when you play back tapes recorded in this speed.

#### LP (Long Play)

Gives twice the recording time of tapes recorded in LP. If you plan on using special effects during playback, LP is not recommended.

#### SLP (Super Long Play)

Gives three times the recording time of tapes recorded in SP. Special effects such as pause, slow motion, picture search, and frame advance work well when you play back tapes recorded in this speed.

	Recording Time		
Cassette	SP	LP	SLP
T-120	2Hr	3Hr	6Hr
T-160	2Hr 40Min	5 Hr 20 Min	8Hr



# RECORDING

## SEVERAL RECORDING FEATURES

Now that you've gone through the necessary steps to operate your VCR, I'll explain the different recording features that are available to suit your needs.

Recording Features:

- Recording (explained in *VCR Basics* section)
- Express Recording
- Timer Recording
- Timer Recording with VCR Plus+
- Broadcast Stereo or Second Audio Program (SAP)
- Audio Only Recording
- Copying and Editing Tapes

**1** FIRST THINGS FIRST



**2** SETTING UP THE VCR



**3** VCR BASICS



**4** RECORDING



**5** PROGRAMMING THE REMOTE



**6** OTHER FEATURES



**7** CONNECTIONS

# RECORDING

## RECORDING FEATURES

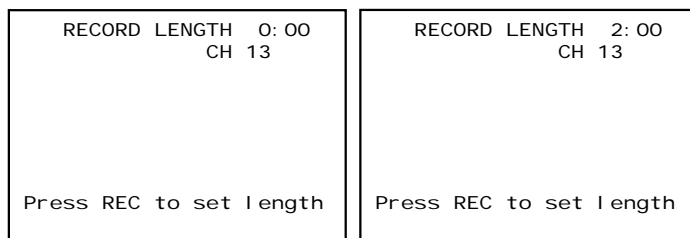
There are four ways to record programs:

- **Recording** lets you press one button to start recording a program. (See *VCR Basics* section.)
- **Express Recording** lets you start recording a program you are watching, and then set the VCR to automatically stop recording after a designated period of time.
- **Timer Recording** lets you program the VCR to automatically start and stop recording at a predetermined time.
- **Timer Recording with VCR Plus+** lets you program the VCR just by entering a PlusCode number found in some TV guides.

## EXPRESS RECORDING

Use express recording when you want to quickly record the remaining portion of the program you are watching.

1. Set the tape speed by pressing the SPEED button on the remote.
2. Press the RECORD (REC) button to begin recording.
3. Repeatedly press the RECORD (REC) button to set up the recording duration.



Each time you press the RECORD (REC) button, you increase the recording time (up to 4 hours).

The VCR continues to record for the amount of time you indicate, and then automatically turns off.

### Express Recording

Express recording is a great way to tape the last quarter of the game, or the last part of a movie when you have to leave.

To stop an express recording, press and hold STOP for a few seconds.

# RECORDING

## TIMER RECORDING

You can set up as many as eight timer recording programs.

1. Press MENU to display the VCR MAIN MENU.

```
VCR MAIN MENU
1 VCR Plus+
2 Timer Recordings
3 Time
4 Channels
5 Preferences
6 Language/Langue/Idioma
7 Audio
0 Exit
```

2. Press 2 to display the TIMER RECORDINGS menu.

```
TIMER RECORDINGS
1 Create a New Program
2 Review Existing Progs.
3 Use VCR Plus+ Code
0 Exit
```

3. Select 1 to Create a New Program.

```
How often should this
program record?
1 One Time
2 Daily (every day)
3 Weekdays (M-F)
4 Weekly (Once per week)
0 Cancel
```

4. Select how often you want the program to record.

```
Program 1 (One Time)
Channel    --
Start Time ---:--
End Time   ---:--
Start Date --/--/--
Tape Speed SLP
Press MENU to cancel
```

5. Enter the data for the program with the number buttons.

The data includes the channel number (press INPUT to select the line input), start time including AM or PM, and end time. The start date is automatically entered based on the VCR clock. Both the date and speed can be changed.

### Timer Recording Information

Clock must be set correctly.

Insert a tape with the safety tab in place and enough tape to record the program.

PROGRAMS OVERLAP appears if you have entered two programs where the times overlap.

TIMER appears in the display when you turn off the VCR and a timer recording has been set. TAPE flashes if there is no tape in the VCR.

For cable box, turn on the cable box and tune it to the channel you want to record before the recording is to begin.

# RECORDING

- Review the information to make sure it is correct, and then press MENU to save.

```
Program 1 (One Time)
Channel      03 Cable
Start Time  08:00 PM
End Time    09:30 PM
Start Date  10/24/97 FRI
Tape Speed  SLP
1=SP  2=LP  3=SLP
Press CLEAR to correct
Press MENU to save
```

```
Program 1 has been saved
Remember to insert a
recordable tape and
turn the VCR off before
the program start time.
Press MENU to continue
```

## TIMER RECORDING WITH VCR PLUS+

You can use VCR Plus+ to simplify timer programming if you have cable TV and don't receive all channels through a cable box or if you get your TV signal off-air.

### Setting Up the Channel List

If you did not set up the VCR Plus+ Channel List, you can do it now.

- Display the CHANNELS menu from the VCR MAIN MENU.
- Display the VCR Plus+ Channel List menu.
- Go to *Setting Up Your VCR* if you need more information on setting up your VCR Plus+ Channel List.

### Using VCR Plus+

- Press MENU to bring up the VCR MAIN MENU.

```
VCR MAIN MENU
1 VCR Plus+
2 Timer Recordings
3 Time
4 Channels
5 Preferences
6 Language/Langue/Idioma
7 Audio
0 Exit
```

- Press 1 to display the VCR PLUS+ menu.

```
VCR PLUS+
Enter PlusCode number
(from TV listing)
-
Press MENU to cancel
```

```
VCR MAIN MENU
1 VCR Plus+
2 Timer Recordings
3 Time
4 Channels

CHANNELS
1 Auto Channel Search
2 Add/Remove Channels
3 Signal Type: CABLE
4 VCR Plus+ Channel List

VCR+ Channel My Channel
5          46
4          --
3 -> -> -> 23
2          --
1          --

Use CH+/- to select
Press 0-9 to change
Press MENU to save
```

This VCR is equipped with ShowSaver™ Memory Protection where timer programs are kept in permanent memory and will not be cleared during power outages.

VCR Plus+ and PlusCode are registered trademarks of Gemstar Development Corporation.

# RECORDING

3. Enter the VCR PlusCode shown in your local television programming guide.

```
VCR PLUS+
Enter PlusCode Number
  (from TV listing)
  12876

Press CLEAR to correct
Press MENU when done
```

4. Press MENU to enter the VCR PlusCode number.

```
How often should this
program record?

1 One Time
2 Daily (every day)
3 Weekdays (M-F)
4 Weekly (Once per week)

0 Cancel
```

5. Indicate how often you want the program to be recorded.

```
Program 1 (One Time)

Channel    03 CABLE
Start Time 08:00 PM
End Time   09:30 PM
Start Date 10/24/97 Fri
Tape Speed SLP

Press CLEAR to correct
Press MENU to save
```

6. Change the speed with the SPEED button on the remote or the program end time with the CLEAR button on the remote (if necessary).

Changing the end time comes in handy when you are recording a program such as a sporting event that may exceed the scheduled broadcast time.

7. Press MENU to save the program.

```
Program 1 has been saved

Remember to insert a
recordable tape and
turn the VCR off before
the program start time.

Press MENU to continue
```

## VCR Plus+ Recording

Clock must be set correctly.

Insert a tape with the safety tab in place and enough tape to record the program.

**UNRECOGNIZED NUMBER... PLEASE RE-ENTER** appears when the VCR does not recognize the PlusCode number.

**PROGRAMS OVERLAP** appears if you have entered two programs where the times overlap.

**TIMER** appears in the display when you turn off the VCR and a timer recording has been set. **TAPE** flashes if there is no tape in the VCR.

Turn on the cable box and tune it to the channel you want to record before the recording is to begin.

# RECORDING

## STOPPING A TIMER RECORDING

To stop or cancel a timer recording in progress (even an express recording):

- Press and hold the STOP button.

## REVIEWING AND CLEARING PROGRAMS

To review programs that you have already set up:

1. Press 2 when the VCR MAIN MENU is displayed to display the TIMER RECORDINGS menu.

```
TI MER RECO RDI NGS
1 Create a New Program
2 Revi ew Exi sti ng Progs.
3 Use VCR PI us+ Code

0 Exi t
```

2. Press 2 to display the Review Existing Progs. screen.

```
Program 1 (One Time)
Channel      104 CABLE
Start Time  12: 00 AM
End Time    01: 30 AM
Start Date  10/24/97 Fri
Tape Speed  SLP

Press CLEAR to delete
Press MENU for next prog
```

3. Press CLEAR to delete or MENU to see the next program.

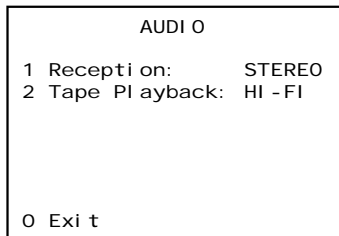
## RECORDING BROADCAST STEREO TV OR SAP (SECOND AUDIO PROGRAM)

Some TV programs are broadcast with stereo audio or SAP (Second Audio Program).

1. Turn on the TV and tune it to the VCR viewing channel (either 3, 4, or TV's video input).
2. Insert a tape with safety tab in place.

# RECORDING

3. If your VCR viewing channel is 3 or 4, make sure the VCR indicator appears in the VCR's display panel. If not, press TV•VCR to turn it on.
4. Use the SPEED button on the remote to select a recording speed.
5. Select the channel or line input to be recorded.
6. Set the Reception: STEREO/MONO/SAP feature for the type of audio you want to record. See *Other Features* section.



7. Press RECORD (REC) to start recording.
8. Press STOP when you are finished.

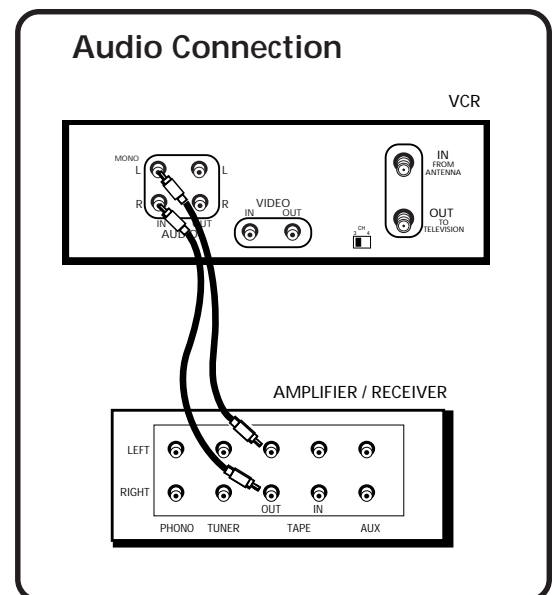
## RECORDING AUDIO ONLY

You can record audio only from another audio source connected to the AUDIO IN (MONO L and R) jacks on the back or front of the VCR.

1. Press the INPUT button on the remote to select the line input. "L1" or "L2" will appear in the display.  
  
Select "L1" to record audio from the audio equipment connected to the AUDIO IN jacks on the back of the VCR or "L2" to record from the jacks on the front of the VCR.
2. Use SPEED on the remote to select the recording speed.
3. Start audio source playing and press RECORD (REC) to begin recording.
4. Press STOP when you are finished.

## Playing Back Audio Only

To get stereo sound, connect the AUDIO OUT jacks of the VCR to the appropriate input on your amplifier or receiver. Do not use the phono input. Refer to your amplifier or receiver user's guide.



# RECORDING

## USING TWO VCERS FOR COPYING AND EDITING TAPES

Use one VCR as the *playback VCR* and the other as the *recording VCR*.

1. Turn on the TV and VCRs.
2. Tune the TV to the VCR viewing channel (either 3, 4, or TV's video input).
3. If you connected your VCR using the IN FROM ANTENNA and OUT TO TELEVISION jacks, tune the *recording VCR* to channel 3 or 4--the one selected on the back of the *playback VCR*.

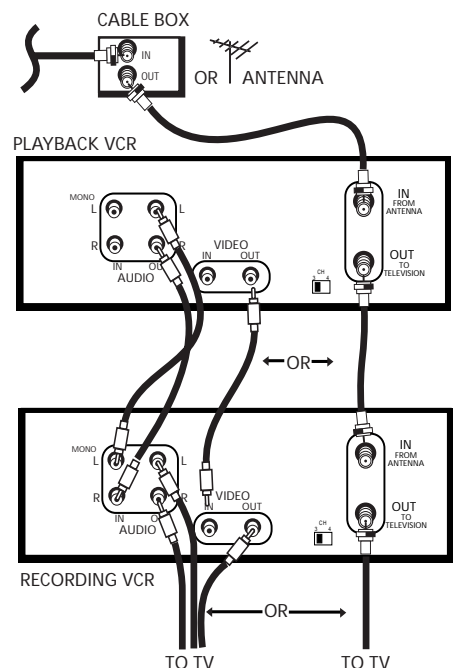
If you have connected your VCR using the audio/video jacks, press INPUT on the *recording VCR's* remote to select the line input. Select "L1" to record from the jacks on the back of the VCR or select "L2" to record from the jacks on the front.

4. Insert the tape you want to copy into the *playback VCR*. Insert a blank tape with safety tab in place into the *recording VCR*.
5. Press PLAY on the *playback VCR* to begin playback. When you reach the point on the tape or program where you want to begin copying, press PAUSE. You may need to adjust the tracking.
6. Press the RECORD (REC) button, then press PAUSE on the *recording VCR*.
7. Press the PAUSE buttons on *both VCRs* at the same time to begin copying the tape.
8. To edit segments that you do not want to copy:
  - Press PAUSE on *recording VCR* to pause copying.
  - Locate the next segment you want to copy on *playback VCR* by using FWD, REV, and PLAY and then press PAUSE.
  - Press PAUSE on *both VCRs* at the same time to resume copying.
9. Press STOP on *both VCRs* when you are finished.

### Caution

The unauthorized recording of television programs or other materials may infringe the rights of others.

### Two VCR Connection





# RECORDING

## USING DUAL REMOTE WITH AUTOEDIT

Use this VCR as the *playback VCR* and set it to respond to VCR2•DVD on the remote as described in *Setting Up the VCR* section. Use your other compatible VCR as the *recording VCR*, which should respond to VCR1.

1. Follow step 1 - 4 in the "Using Two VCRs for Copying and Editing Tapes."
2. Press VCR1 on remote to control *recording VCR*. Press RECORD (REC), then PAUSE, to put recording VCR in pause mode.
3. Press VCR2•DVD on remote to control *playback VCR*.
4. Use FWD, REV, and PLAY to locate the point where you want to begin copying. Press PAUSE while VCR is playing to put *playback VCR* in pause mode.
5. Press EDIT on remote to start the VCRs copying.
6. Press EDIT again when you want to pause copying.
7. Repeat step 4 - 6 as needed.
8. Press VCR1, STOP, then VCR2•DVD, STOP, when you are finished.



# PROGRAMMING THE REMOTE

## CONTROL YOUR OTHER COMPONENTS...

The remote can be programmed to control several components, such as a television, satellite receiver, cable box, laser disc player, DVD player, or RCA audio component.

It is initially programmed to control an RCA, GE, or ProScan TV and satellite receiver. Other manufacturer's brands need to be programmed.

## 1 FIRST THINGS FIRST



## 2 SETTING UP THE VCR



## 3 VCR BASICS



## 4 RECORDING



## 5 PROGRAMMING THE REMOTE



## 6 OTHER FEATURES



## 7 CONNECTIONS

# PROGRAMMING THE REMOTE

## ABOUT PROGRAMMING THE REMOTE

The remote can be programmed to control other brands of remote controllable TVs. It is already programmed to operate most RCA, ProScan, and GE TVs.

## PROGRAMMING THE REMOTE TO CONTROL A TV

If the TV does not turn on when you press the TV button, the remote needs to be programmed.

Follow these steps to program the remote to control your particular TV:

1. Turn on the TV.
2. Find your TV brand and code number(s) on the code list on the next page.
3. Press and hold the TV button on the remote.
4. Enter the three-digit code from the code list.
5. Release TV, and then press CHAN up or down. If the TV responds to the remote commands, the remote is programmed.
6. If the TV does not respond, repeat these steps using the next code in the list.

## OPERATE THE TV

After you set up the remote, see which buttons operate your TV.

1. Point the remote at the TV, and press the TV button.  
If the TV does not turn on, press the TV button and then press the PWR button.
2. You may want to experiment to see which buttons operate your TV. Try pressing buttons, such as VOL and MUTE. See "TV Function Buttons" in the *VCR Basic* Section for details.

**This remote may not operate all models of the brands that are shown. Note the difference between the TV and VCR on-screen displays to see which one the remote is operating.**

# PROGRAMMING THE REMOTE

TV Codes			
Brand	Code	Brand	Code
A-Mark .....	102	Mitsubishi .....	006,011,014,019,022,
Admiral .....	005,114	.....	027,041,055,056,061,068,108
Amtron .....	064	MTC .....	011,019,027
Akai .....	002,103	Multivision .....	081
Anam .....	104,105	NAD .....	018,023
Anam National .....	038,106	NEC .....	011,014,019,027,038,084
AOC .....	011,019,027,088,107	Panasonic .....	012,013,038,086,111
Bell & Howell .....	005,013	Philco .....	006,007,010,011,013,016,019,
Candle .....	011,027,033	.....	027,033,035,037,038,043,087,089
Citizen .....	011,027,033,064	Philips .....	002,006,007,010,011,013,016,
Colortyme .....	011,027,084	.....	033,035,037,038,043,066,073
Concerto .....	011,027	Pioneer .....	011,027,045,062,093,113
Contec/Cony .....	036,037,040,042,064	Portland .....	011,019,027,037
Craig .....	064	ProScan .....	000
Curtis Mathes .....	000,011,	Proton .....	011,027,037,072
.....	015,027,037	Quasar .....	012,038,092,111
CXC .....	064	Radio Shack .....	000,021,025,036,037,
Daewoo .....	011,019,027,112,116	.....	059,064,078
Daytron .....	011,027	RCA .....	000,006,011,019,027,034,
Dimensia .....	000	.....	038,044,046,088,100,101,109
Electrohome .....	006,011,014,027,038,	Realistic .....	021
.....	061,068	Sampo .....	011,027
Emerson .....	011,026,027,028,029,030,	Samsung .....	006,011,014,015,019
.....	031,032,037,042,053,064,065,067,	.....	027,036,037,077,110
.....	075,076,078,079,094,095,096	Sanyo .....	017,021,039,056,057,058
Envision .....	011,027	Scott .....	028,037,064
Fisher .....	017,021,039,041	Sears .....	000,006,011,014,017,018,021,
Funai .....	064	.....	023,027,039,040,041,051,071,083,095
GE .....	000,008,009,011,012,027,	Sharp .....	011,020,025,027,037
.....	038,068,086,089,091,116	.....	052,053,059,060,108
Goldstar .....	003,004,006,011,019,	Signature .....	005,094,108
.....	027,037,050	Sony .....	002
Hallmark .....	011,027	Soundesign .....	011,027,033
Hitachi .....	009,011,027,036,037,040,	Sylvania .....	006,007,010,011,013,016,
.....	047,048,063,080,094,097,098	.....	027,033,035,043,049,066,087,089
Infinity .....	013	Symphonic .....	064,076,115
JBL .....	013	Tatung .....	038
JC Penney .....	000,008,011,019,027,040,	Technics .....	012
.....	068,077,086,088	Techwood .....	011,027
Jensen .....	011,027	Teknika .....	011,019,027,033,036,
JVC .....	012,024,036,037,040,048,051,074	.....	037,040,066
Kawasho .....	002,011,027	Telecaption .....	090
Kenwood .....	006,011,014,027	TMK .....	011,027
Kloss Novabeam .....	035,043	Toshiba .....	018,021,023,040,071,
KTV .....	078	.....	077,085,090
Loewe .....	013	Universal .....	008,009
Luxman .....	011,027	Victor .....	051
LXI .....	000,013,018,021,023,054	Vidtech .....	019,027
Magnavox .....	006,007,010,011,013,016,	Wards .....	000,005,006,007,008
.....	027,033,035,043,049,066,087,089	.....	009,010,011,013,019,025,027,028,
Marantz .....	011,013,027,069	.....	035,043,059,066,076,082,089
Memorex .....	005	Yamaha .....	006,014,019,027
MGA .....	006,011,014,019,022,	Zenith .....	001,099,114
.....	027,041,056,061,068		

# PROGRAMMING THE REMOTE

## PROGRAMMING THE REMOTE TO CONTROL A SATELLITE RECEIVER OR CABLE BOX

The remote is programmed to control an RCA, GE, or ProScan digital satellite receiver.

If you have another brand of cable box or satellite receiver with its own remote, you may be able to use the VCR's remote to operate it.

1. Turn on the cable box or satellite receiver.
2. Look up your brand and its code number(s) in the code list on the right.
3. Press and hold the SAT•CABLE button on the remote.
4. Enter the three-digit code from the code list.
5. Release the SAT•CABLE button and press PWR or CHAN up or down to see if the cable box or receiver responds to the remote commands.
6. Repeat these steps using the next code listed for your brand until the cable box responds to the remote commands.

## OPERATE THE CABLE BOX OR SATELLITE RECEIVER

After you have set up your remote, see which buttons will operate your cable box or satellite receiver.

1. Point the remote at the box or receiver, and press SAT•CABLE. If it does not turn on, press SAT•CABLE and then PWR.
2. You may want to experiment to see which buttons will operate your cable box or satellite receiver. Try pressing buttons, such as CHAN up or down.

### Cable Box Codes

ABC .....	022,046,053,054
Anvision .....	007,008
Cablestar .....	007,008
Diamond .....	056
Eagle .....	007,008
Eastern International .....	002
General Instrument .....	004,005, ..... 015,023,024,025,030,036,046
Hamlin .....	003,012,013,034,048
Hitachi .....	037,043,046
Jerrold .....	004,005,015,023, ..... 024,025,030,036,045,046,047,062,065
Macom .....	037,043
Magnavox .....	007,008,019,021, ..... 026,028,029,032,033,040,041
NSC .....	009
Oak .....	001,016,038
Oak Sigma .....	016
Panasonic .....	003,027,039,061
Philips .....	007,008,019,021,026,028, ..... 029,032,033,040,041
Pioneer .....	018,020,044
Randtek .....	007,008
RCA .....	000,027,060
Regal .....	003,012,013
Regency .....	002,033
Samsung .....	044
Scientific Atlanta ....	003,022,035,063,064
Signature .....	046
Sprucer .....	027
Starcom .....	046
Stargate 2000 .....	058
Sylvania .....	011,059
Teknika .....	006
Texscan .....	010,011,059
Tocom .....	017,021,049,050,055
Unika .....	031,032,041
Viewstar .....	007,008,019,021,026, ..... 028,029,032,033,040,041
Warner Amex .....	044
Zenith .....	014,042,057,061

### Satellite Receiver Codes

GE .....	000
Panasonic .....	097
ProScan .....	000
RCA .....	000
Toshiba .....	096
Sony .....	095

This remote may not operate all models of the brands that are shown.

# PROGRAMMING THE REMOTE

## PROGRAMMING THE REMOTE TO CONTROL AN AUXILIARY COMPONENT

Your remote can also control the brands of the equipment listed, such as a radio, CD player, tape player, turntable, amplifier, digital satellite receiver, or digital video disc player.

1. Turn on the component to be programmed.
2. Look up your component's code number on the code list below.
3. Press and hold the AUX button.
4. Enter the code from the code list.
5. Release the AUX button and press PWR or CHAN up or down to see if the auxiliary component responds to the remote commands.

## OPERATING THE AUXILIARY COMPONENT

After you have programmed your remote, see which buttons will operate your component.

1. Point the remote at the component, and press AUX. If it does not turn on, press AUX and then PWR.
2. You may want to experiment to see which buttons will operate your component. Try pressing buttons, such as PLAY, REV, and FWD.

### Auxiliary Component Codes

<b>RCA/ProScan/Dimensia</b>	
AM/FM .....	003
<b>Auxiliary Component</b> .....	004
CD .....	007
DVD .....	010
Phono .....	005
<b>Digital Satellite Receiver</b> .....	008
Tape 1 .....	006
Tape 2 .....	009

This remote may not operate all models of the brands that are shown.

# PROGRAMMING THE REMOTE

## PROGRAMMING THE REMOTE TO CONTROL A LASER DISC PLAYER OR DVD COMPONENT

The VCR2•DVD button on the remote is programmed to control a VCR set to respond to the VCR2 button or an RCA, ProScan, or GE laser disc player.

If you have an RCA DVD component, you can program the VCR2•DVD button to operate it.

1. Turn on the component.
2. Look up your component and its code number in the code list on the right.
3. Press and hold the VCR2•DVD button on the remote.
4. Enter the three-digit code from the code list.
5. Release the VCR2•DVD button, and press PWR. If the component turns off, setup is complete.

## OPERATE THE COMPONENT

After you have set up your remote, see which buttons will operate it.

1. Point the remote at the component, and press VCR2•DVD. If it does not turn on, press VCR2•DVD and then PWR.
2. You may want to experiment to see which buttons will operate your component. Try pressing buttons, such as CHAN up or down.

### RCA, ProScan, and GE Codes

VCR .....	037
LaserDisc Player .....	037
DVD .....	078

This remote may not operate all models of the brands that are shown.



# OTHER FEATURES

## FEATURES TO ENHANCE VCR OPERATION

- Picture Search Options
- Tracking
- Time Counter
- On-Screen Displays
- Audio Reception
- Audio Tape Playback

**1** FIRST THINGS FIRST



**2** SETTING UP THE VCR



**3** VCR BASICS



**4** RECORDING



**5** PROGRAMMING THE REMOTE



**6** OTHER FEATURES



**7** CONNECTIONS

# OTHER FEATURES

## PICTURE SEARCH OPTIONS

The most basic way to search during playback is using the FWD and REV buttons. This section contains several other options available for searching a tape.

### FORWARD AND REVERSE SEARCH

You can search a tape during playback. Sound is turned off during picture search. Search works best for tapes recorded at the SP or SLP speed.

1. Press FWD to search forward or REV to search in reverse.
2. Press FWD or REV a gain or press PLA Y to return to normal playback.

### VARIABLE SPEED PICTURE SEARCH AND FRAME ADVANCE USING JOG SHUTTLE AND ARROW (◀▶) BUTTONS ON REMOTE

You can also use the JOG SHUTTLE and arrow (◀▶) buttons on the remote to search a picture during playback. Turning on JOG SHUTTLE (the light in the middle of the arrow buttons turns on) enables you to search forward and backward through a tape while in the PLAY or STILL mode .

Sound is turned off during picture search and frame advance. Tapes recorded in SP or SLP speed give the best picture.

#### Variable Speed Picture Search


When the VCR is playing a tape, press JOG SHUTTLE to have the VCR enter the still (pause) mode. STILL appears in the display panel.

1. Press ▶ to search forward slowly. The speed is increased with each press of the ▶ button. As the speed increases, the display changes from SLOW+ to SRCH+. Pressing the ◀ button decreases the speed. Press PLA Y to return to normal playback and turn off jog shuttle.
2. Press ◀ to search in reverse slowly. The speed is increased with each press of the ◀ button. As the speed increases, the

#### Insert Tape



Don't forget to insert a recorded tape when using the search features.

# OTHER FEATURES

display changes from SLOW- to SRCH-. Pressing the  button decreases the speed. Press PLA Y to return to normal playback and turn off jog shuttle.

## Frame Advance

When you turn on JOG SHUTTLE during playback, you are in the STILL (pause) mode. From this mode, you can advance the tape frame by frame.

1. Press  to advance or  to reverse the picture one frame at a time. The display switches between STILL and SLOW- or SLOW+. Press PLA Y or PAUSE to return to normal playback and turn off jog shuttle.

## SLOW MOTION

You can view a tape during play or play-pause using slow motion. Slow motion works best for tapes recorded at the SP or SLP speed.

1. During play or play-pause, press SLOW + or - on the remote to begin slow-motion playback. During play-pause, you can also press FWD or REV to begin slow-motion playback.
2. Press SLOW + or FWD to increase or SLOW - or REV to decrease the speed of the search.
3. Use TRACKING up or down to remove any streaks from the picture.
4. Press PLA Y to return to normal playback.

The VCR switches automatically from slow-motion playback to stop after a few minutes.

## COMMERCIAL SCAN (SEARCH BUTTON)

This is useful for skipping commercials or short program segments.

- Press SEARCH once during playback to advance the tape approximately 60 seconds of recorded material.
- Press SEARCH twice during playback to advance the tape approximately 120 seconds of recorded material.

# OTHER FEATURES

## INDEX SEARCH

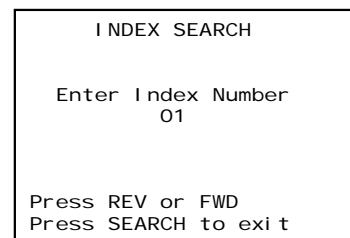
The VCR has a "VHS Index Search System" that automatically records an index mark on the tape every time you start a recording. During playback you can locate the program you want to play by the number of index marks or by scanning. The VCR will search forward or reverse from the location you are on the tape.

### To Search:

1. Press **STOP**.
2. Press **SEARCH** on the remote until the **INDEX SEARCH** menu appears on the TV screen.
3. If you want to search a certain number of index marks, press two number buttons to enter the number of marks you want to search. Press **CLEAR** on the remote to correct an entry.
4. Press **FWD** on the remote to search forward or **REV** on the remote to search in reverse. The VCR will locate your index mark and begin playback. If you did not enter a specific index number, the VCR will locate the next index mark and begin playback.
5. Press **STOP** to stop index searching.

Some index marks may be missed by the VCR:

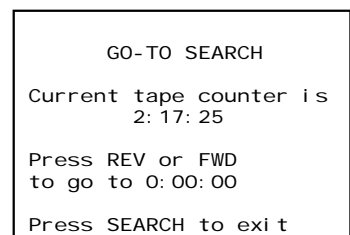
- A mark too close to your location on the tape.
- The mark at the beginning of a recorded segment of five minutes or less.
- The first index mark on the tape when you start at the beginning of the tape.



## GO-TO SEARCH

The Go-To search feature enables the VCR to quickly locate a counter reading anywhere on the tape. When the VCR locates the counter reading, it will begin playback.

1. Press **STOP**.
2. Press **SEARCH** on the remote until the **GO-TO SEARCH** menu appears on the screen.
3. Press number buttons to enter the hour(s) and/or minutes of the counter reading you want the VCR to "go to". Press **CLEAR** on the remote to correct an entry.



# OTHER FEATURES

4. Press FWD to search forward or REV to search in reverse.
5. Press STOP to stop Go-To searching.

## TRACKING

Your VCR has automatic tracking which removes the streaks or snow from the picture. Automatic tracking is activated when you insert a tape or turn on the VCR. Occasionally you may need to manually adjust tracking, especially if the tape was recorded on a different VCR. Just use the TRACKING buttons to remove the streaks or snow. You can also use tracking when you pause a tape to reduce jittering of the picture.

When you manually adjust the picture, automatic tracking is turned off. To turn automatic tracking back on, press both TRACKING buttons on the VCR at the same time, or eject the tape and re-insert it.

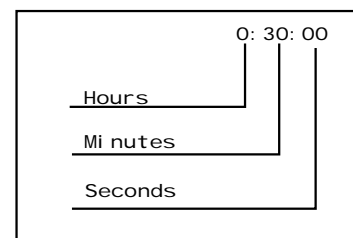
Tracking has no effect during recording--only playback.

## TIME COUNTER

The time counter shows the actual time it takes to record a program or play back a segment of a recorded tape. It helps locate the beginning or end of programs you taped. The time counter resets to 0:00:00 whenever the tape is ejected from the VCR.

For example, if you record a 30-minute program at the beginning of the tape and you want to go to the end of that program to begin another recording, you would:

1. Press INFO **twice** on the remote to display the time counter.
2. Press CLEAR to reset the time counter to 0:00:00.
3. Press FWD to forward the tape until the time counter reads 0:30:00.
4. Press STOP. This is the approximate end of the program. (You may want to press PLAY to verify.) Now, you can begin recording at this spot.
5. Press INFO twice to remove the time counter from the screen and return to the normal display mode.



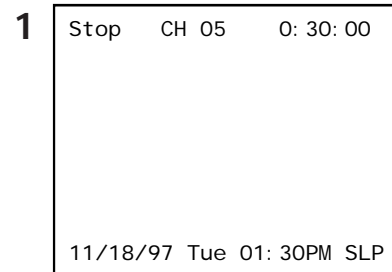
# OTHER FEATURES

## ON-SCREEN DISPLAYS

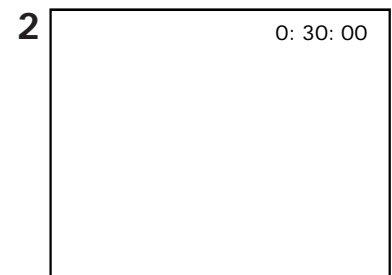
The INFO button shows the status of the VCR (STOP, PLAY, RECORD, etc.), channel number, time counter, date, time, and tape speed on the TV screen. The date and time must be set before they can be displayed.

1. Press INFO to see the on-screen displays. The time appears in the display.
2. Press INFO again to have only the time counter remain on the screen. The time counter will appear instead of the time in the display.
3. Press INFO again to have no displays appear on the TV screen. The time counter will remain in the display. This is useful for dubbing tapes.
4. Press INFO again to return to the normal display mode. The time will appear in the display.

Turning off the VCR also resets the displays.



*Normal display  
(times out)*



*Time counter only  
(does not time out)*

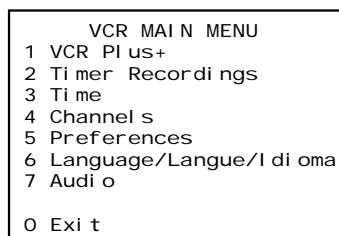


*No displays will appear  
(useful for dubbing tapes)*

## AUDIO SET-UP FEATURES

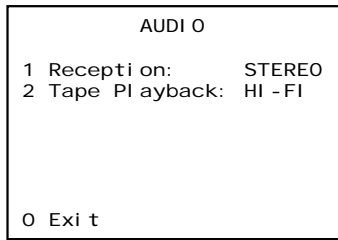
The audio set-up features enhance your tape playback and recordings. The features in this section are accessed through the AUDIO menu and are shown in the displays below.

1. Press MENU to bring up the VCR MAIN MENU.



2. Press 7 to display the AUDIO menu.

# OTHER FEATURES



Now you are ready to select an item from the menu to set up.

## RECEPTION

Some TV programs are broadcast with stereo audio or a second audio program (SAP) which offers a second language. The Reception feature lets you select the type of audio you want to record. Press 1 to switch between Reception: STEREO, MONO, and SAP.

- Select STEREO for normal or stereo broadcast TV recording. STEREO indicator lights when the station you are tuned to is broadcasting stereo.
- Select MONO if the stereo signal is weak and the sound is too noisy.
- Select SAP to record a second audio program instead of the normal audio on both the hi-fi and linear tracks. The SAP indicator (■) lights in the display when SAP is selected.

## TAPE PLAYBACK

The VCR records the same audio on both the Hi-Fi and linear tracks on the tape. Hi-Fi sound is recorded on separate left and right stereo channels. Monaural sound is recorded on the linear track. Press 2 to switch between Tape Playback: HI-FI, LINEAR, and MIX.

To enjoy Hi-Fi sound, connect your VCR to a stereo television or amplifier/receiver using the audio/video jacks. The Tape Playback feature lets you select which audio you play back.

- Select HI-FI to play back sound recorded on the Hi-Fi track and for normal use. The HIFI indicator lights when you playback hi-fi.
- Select LINEAR to play back the sound recorded on the linear monaural track, such as a second audio program, (SAP) or a dubbed voice-over.
- Select MIX to play back the sound recorded on both the linear track and the Hi-Fi track, sound-on-sound.





# CONNECTIONS

## THINGS TO KNOW BEFORE CONNECTING COMPONENTS

### Protect Your Components from Power Surges

- Connect all components before plugging any power cords into the wall outlet.
- Always turn off the TV and other components before you connect or disconnect any cables.

### Position Cables Correctly to Avoid Audio Hum or Interference

- Insert all cable plugs firmly into their jacks.
- Place the audio/video cables to the sides of the TV's back panel instead of straight down the middle after you connect your components.
- Try not to coil any twin-lead cables and keep them away from the audio/video cables as much as possible.
- Make sure all antennas and cables are properly grounded. Refer to the Safety Tips sheet packed with your unit.

### Protect Your Components from Overheating

- Do not block ventilation holes in any of the components. Arrange the components so that air can circulate freely.
- Do not stack components.
- Allow adequate ventilation when placing your components in a stand.
- Place an amplifier or satellite receiver on the top shelf of the stand so heated air rising from it will not flow around other components.

## 1 FIRST THINGS FIRST



## 2 SETTING UP THE VCR



## 3 VCR BASICS



## 4 RECORDING



## 5 PROGRAMMING THE REMOTE



## 6 OTHER FEATURES



## 7 CONNECTIONS

# CONNECTIONS

## CONNECTING YOUR VCR

Refer to these pages to help you connect your VCR.

### JACKS AND CABLES

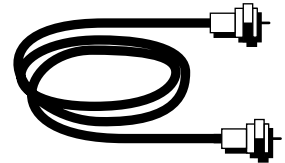
#### RF Jacks and Coaxial Cables (F-type)

The RF jacks provide good picture and mono sound quality, and must be used if audio/video connections are not available for your TV.

These jacks are required for antenna or cable-TV connections. The RF jacks on the VCR are labeled IN FROM ANTENNA and OUT TO TELEVISION. The coaxial cable supplied with your VCR is used to connect the VCR's OUT TO TELEVISION jack and your TV's antenna input.



RF Jack



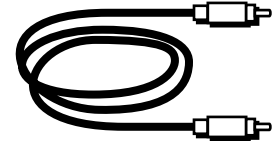
#### Audio/Video Jacks and Cables (RCA-type)

The audio/video jacks provide very good picture and sound quality, and can be used if your TV has audio/video input jacks.

These jacks must be used for stereo sound. The VCR audio/video jacks are color coded (yellow for video, red for right audio, and white for left audio). If your TV has only one input for audio (mono), you may need a Y-adaptor to hear sound from both channels.



Audio/Video Jack



# CONNECTIONS

## CHOOSING A VCR CONNECTION

There are several different ways to connect your VCR, depending on whether or not you have cable service, and if you have a cable box, and whether some of the channels are scrambled, and maybe you have a satellite receiver along with cable (but no cable box), or a satellite receiver and no cable or...well, you get the picture.

Five connections are described in this section and one of them should provide you with a VCR connection that works.

- TV with RF jack only
- TV with audio/video jacks
- TV with audio/video jacks and cable box to unscramble pay channels only
- TV with RF jack and satellite receiver
- TV with audio/video jacks and satellite receiver

If you need to connect additional components not shown in the diagrams here (and are unsure of how to connect them), refer to the instruction manual that came with that particular component.

## ADVANTAGES OF AUDIO/VIDEO CABLE CONNECTIONS

Using a simple coaxial cable connection gives you good picture quality. If your television has audio/video jacks, I highly recommend using them to get even better picture quality and to hear stereo sound when recording and playing back videotapes. These connections give you more convenient operation by not having to share the TV's antenna signal.

## DON'T FORGET ABOUT THE AUTO TV/VCR FEATURE

The TV/VCR switch controls whether the picture signal is coming from the VCR or the TV.

You can change the setting manually by using the TV•VCR button on the remote or you can set the Auto TV/VCR feature to ON when using only IN FROM ANTENNA and OUT TO TELEVISION jacks and OFF when using the AUDIO/VIDEO output jacks--so your TV signal is not interrupted when the VCR is turned on.

# CONNECTIONS

## TV WITH RF JACK ONLY

This connection assumes:

- You are connecting antenna, cable, or cable box system.
- Your television has only an RF input jack.

This connection provides:

- Mono sound playback from VCR.
- Record one channel while watching another (except when using a cable box for all channels).

To use this connection, you must have:

- (1) coaxial cable for cable or antenna connection; (2) for cable box

To connect:

1. Connect cables as shown.
2. Return to *First Things First*, then follow the steps.

## Using This Connection

Tune your TV to channel 3 or 4 whichever one you selected with the 3CH4 switch on the back of the VCR.

Auto TV/VCR Setting:

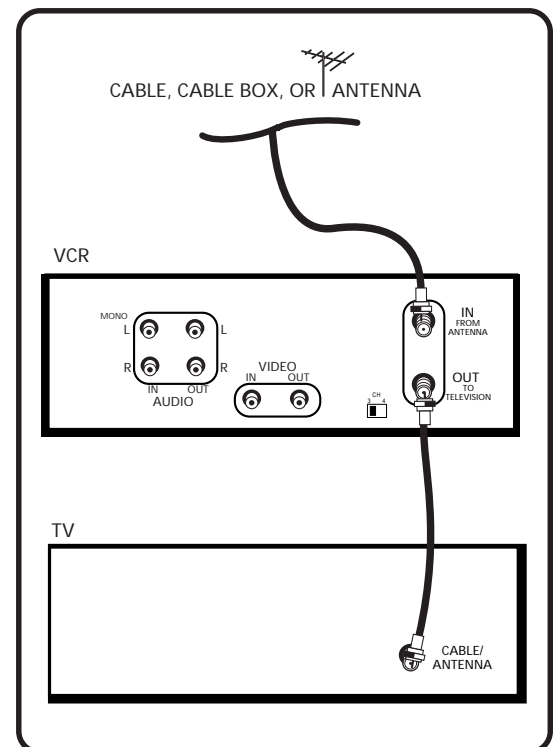
- Set the Auto TV/VCR feature to ON.

To play a tape:

1. Insert a tape.
2. If necessary, press PLAY.

To record one program and watch another:

1. Begin recording a program using one of the recording features.
2. Press the TV•VCR button and select a different channel on the TV.



# CONNECTIONS

## TV WITH AUDIO/VIDEO JACKS

This connection assumes:

- You are connecting an antenna, cable, or cable box system.
- Your television has audio/video jacks.

This connection provides:

- Stereo sound playback from VCR.
- Record one channel while watching another (except when using a cable box for all channels).

To use this connection, you must have:

- (1) coaxial cable for cable/antenna connection; (2) for cable box
- (3) audio/video cables

To connect:

1. Connect cables as shown.
2. Return to *First Things First*, then follow the steps.

## Using This Connection

Tune your TV to its video input channel. Use of TV•VCR button is not required.

Auto TV/VCR Setting:

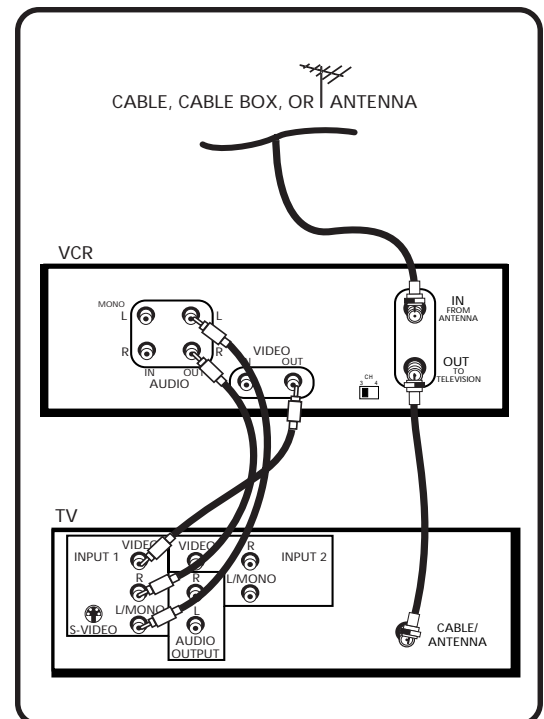
- Set the Auto TV/VCR feature to OFF.

To play a tape:

1. Insert a tape.
2. If necessary, press PLAY.

To record one program and watch another:

1. Begin recording a program using one of the recording features.
2. Select a different channel on the TV.



# CONNECTIONS

## TV WITH AUDIO/VIDEO JACKS AND CABLE BOX TO UNSCRAMBLE PAY CHANNELS ONLY

This connection assumes:

- You are using a cable box only to unscramble premium channels.
- Your TV has audio/video input jacks.

This connection provides:

- Stereo sound playback from VCR.
- Recording a scrambled or unscrambled channel through the cable box while watching an unscrambled channel.

To use this connection, you must have:

- (3) coaxial cables
- (3) audio/video cables
- (1) splitter

To connect:

1. Connect cables as shown.
2. Return to *First Things First*, then follow the steps.

### Using This Connection

Tune your TV to its video input channel. Use of TV•VCR button is not required.

Auto TV/VCR Setting:

- Set the Auto TV/VCR feature to OFF.

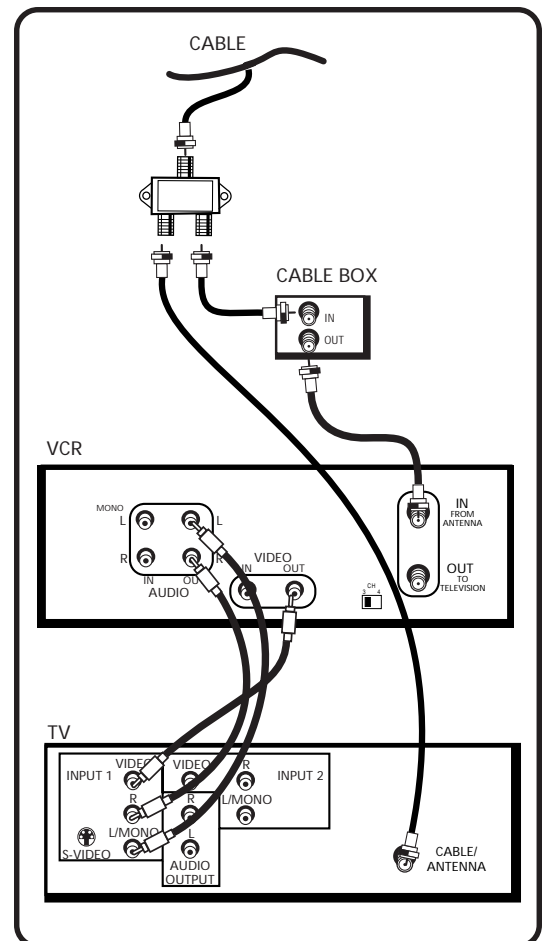
To play a tape:

1. Insert a tape.
2. If necessary, press PLAY.

To record a scrambled or unscrambled program and watch another unscrambled program:

1. Begin recording a scrambled or unscrambled program through the cable box using one of the recording features.
2. Select an unscrambled channel on the TV.

All scrambled channels must be viewed through the VCR.



# CONNECTIONS

## TV WITH RF JACK AND SATELLITE RECEIVER

This connection assumes:

- You have a basic satellite system.
- Your TV does not have audio/video input jacks.

This connection provides:

- Mono sound playback from VCR.
- Recording from a satellite receiver.
- Recording one off-air or cable channel while watching another.

To use this connection, you must have:

- (4) coaxial cables and (3) audio/video cables

To connect:

1. Connect cables as shown.
2. Return to the *First Things First Section*, then follow the steps.

### Using This Connection

- Tune your TV to channel 3 or 4, whichever one you selected with the 3 CH.4 switch on the back of the VCR.
- To record and watch off-air or cable, tune your VCR to channel 3 or 4 whichever one you selected with the CH3/CH4 switch on the back of the receiver. Turn off receiver.
- To watch and/or record from the satellite receiver, tune your VCR to its line input ("L1" appears in display).

**Auto TV/VCR Setting:**

- Set the Auto TV/VCR feature to ON.

**To play a tape:**

1. Insert a tape.
2. If necessary, press VCR and then PLAY.

**To record one off-air or cable program and watch another:**

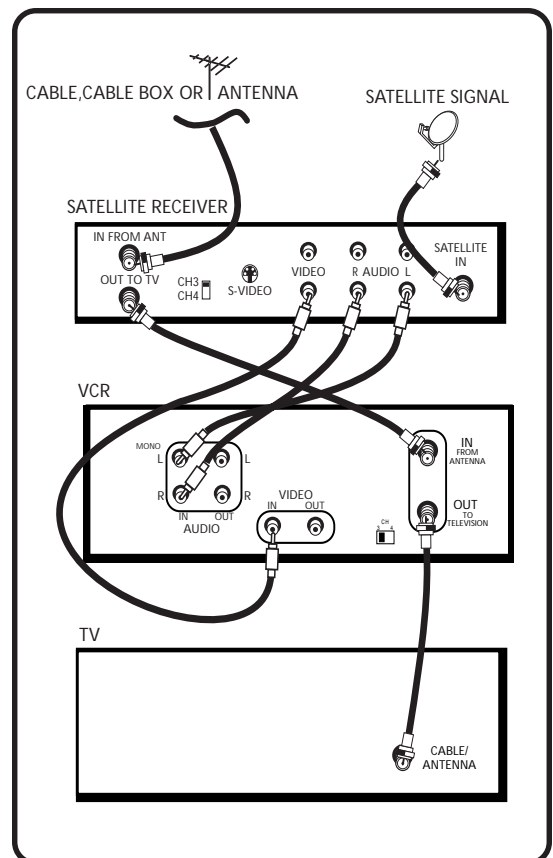
1. Turn off the satellite receiver and begin recording a program using a recording feature.
2. Press TV•VCR and select a different channel on the TV.

**To record a satellite receiver program:**

1. Turn on the satellite receiver, tune the VCR to its line input, and begin recording a program using a recording feature.

### Caution

The unauthorized recording of satellite broadcasts, television programs, or other materials may infringe the rights of others.



# CONNECTIONS

## TV WITH AUDIO/VIDEO JACKS AND SATELLITE RECEIVER

This connection assumes:

- You have an advanced satellite system.
- Your TV has audio/video input jacks.

This connection provides:

- Stereo sound playback from VCR.
- Recording from receiver while watching cable or off-air channel.
- Recording one cable or off-air channel while watching another.

To use this connection, you must have:

- (3) coaxial cables, and (6) audio/video cables

To connect:

1. Connect cables as shown.
2. Return to the *First Things First*, then follow the steps.

### Using This Connection

- Tune your TV to its video input to record (or watch) the VCR or satellite receiver.
- To record from the satellite receiver, tune your VCR to its line input ("L1" appears in display).

Auto TV/VCR Setting:

- Set the Auto TV/VCR feature to OFF. Use of TV•VCR button is not required.

To play a tape:

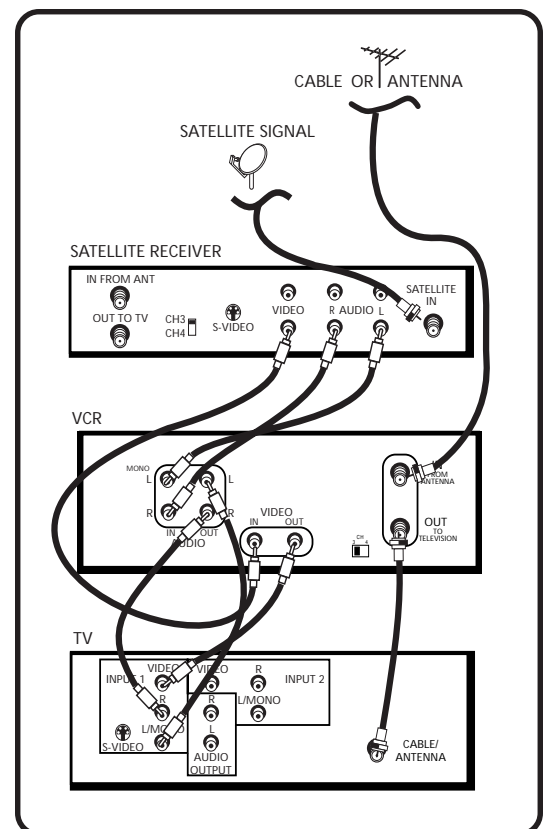
1. Insert a tape.
2. If necessary, press VCR and then PLAY.

To record one off-air or cable program and watch another:

1. Begin recording a program using a recording feature.
2. Select a different channel on the TV.

To record a satellite receiver program and watch a cable or off-air channel:

1. Turn on the satellite receiver, tune the VCR to its line input (L1), and begin recording a program using a recording feature.
2. Select a different channel on the TV.





# APPENDIX A: REFERENCE

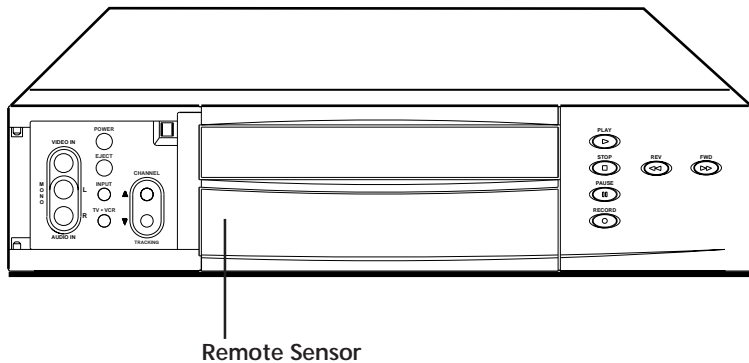
This section gives you some additional information about the VCR, including a description of the unit's controls and display.

You also will find a Troubleshooting Tips section in this Appendix, which might help to resolve some of those simple problems.

Finally, this section contains your warranty information.

# APPENDIX A: REFERENCE

## FRONT PANEL



**AUDIO (R and L MONO) and VIDEO IN Jacks** Receives signals from another component, like a VCR or camcorder, when it is connected to these jacks. Use INPUT on the remote to select L2 to record from these jacks.

**CHANNEL•TRACKING Up or Down** Selects next higher or lower channel in the VCR's channel memory. Adjusts tracking when a tape is playing.

**EJECT** Ejects the tape when the VCR is stopped.

**FWD** Forwards the tape when the VCR is stopped. Searches the picture forward during playback. Starts slow-motion playback when in play-pause and increases speed of slow-motion playback.

**INPUT** Selects between the line inputs and VCR's tuner. L1 or L2 appears in the display panel and VIDEO1 or VIDEO2 appears on the TV screen.

**PAUSE** Pauses action for viewing during playback. Pauses recording to prevent recording of unwanted scenes.

**PLAY** Plays a tape.

**POWER** Turns the VCR on or off.

**RECORD** Starts VCR recording. Used for express recording.

**Remote Sensor** Receives signals from the remote control. Aim the remote at this sensor.

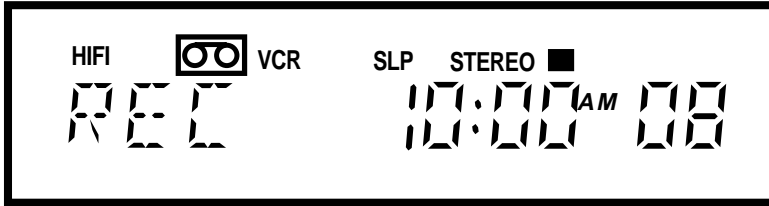
**REV** Rewinds the tape when the VCR is stopped. Searches the picture in reverse during playback. Starts slow-motion playback when in play-pause and decreases speed of slow-motion playback.

**STOP** Stops the normal functions such as record, playback, rewind, fast-forward, or pause.

**TV•VCR** Switches the picture signal so that it either comes from the VCR or the cable/antenna system.

# APPENDIX A: REFERENCE

## DISPLAY PANEL



**Channel Number or Line Input Indicator (L1 or L2)** The channel number or line indicator (L1 or L2) appears. Select L1 to record from back input jacks or L2 to record from the front jacks.

**HIFI Indicator** Lights during stereo playback when Tape Playback: HI-FI/LINEAR/MIX feature is set to HI-FI.

**SAP Indicator (■)** Lights when Reception: STEREO/MONO/SAP feature set to SAP.

**Tape Speed Indicators (SP, LP, or SLP)** Press SPEED on the remote to change the recording speed.

**Time or Time Counter** Time or time counter appears. Press INFO to change.

**Status Indicators** Show what the VCR is doing.

- **BYE and HELLO** Turned off and on
- **EJECT** Ejecting tape
- **F--FWD** Fast forward
- **PLAY** Playback
- **REC and REC P** Record and record pause
- **REW** Rewind
- **SRCH + and SRCH -** Forward and reverse search
- **SLOW + and SLOW -** Slow motion
- **STILL** Frame advance and play-pause
- **STOP** A tape is stopped
- **TIMER** Timer recording set
- **TAPE** Flashes when timer is set and no tape in VCR
- **X--REC** Express recording in progress

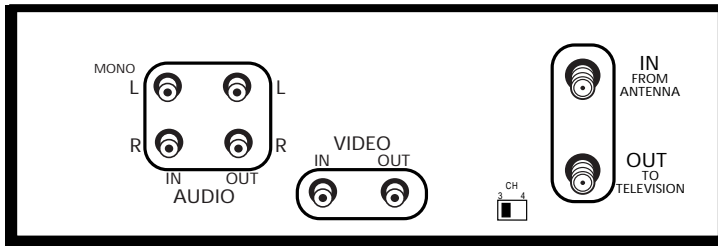
**STEREO Indicator** Lights when station you are tuned to is broadcasting stereo.

**VCR Indicator** (Applies only if the VCR viewing channel is 3 or 4). Press the TV•VCR button to turn on or off.

- VCR indicator on: Picture from VCR.
- VCR indicator off: Picture from TV channel.

# APPENDIX A: REFERENCE

## BACK PANEL



**3CH4 Switch** Selects the channel to which you will tune the TV to see the VCR picture if you connect the VCR using one of the basic hookups.

**AUDIO (R and L MONO) and VIDEO IN Jacks** Receives signals from another component, like a VCR or camcorder, when it is connected to these jacks. Use INPUT on the remote to select L1 to record from these jacks.

**AUDIO (R and L) and VIDEO OUT Jacks** Sends signals from VCR to another component, like a TV or VCR, when it is connected to these jacks.

**IN FROM ANTENNA Jack** Receives a signal from an antenna or cable system when attached.

**OUT TO TELEVISION Jack** Passes signal to TV using the cable supplied.

# APPENDIX A: REFERENCE

## TROUBLESHOOTING TIPS

### No power

- Check to make sure it is plugged into an operating outlet.
- Check to make sure your connections are correct.

### VCR does not respond to remote

- Press VCR to set remote to control the VCR.
- Check to make sure there are no objects between the VCR and remote.
- The batteries may need changing.
- Make sure to press the VCR1 or VCR2•DVD button that corresponds to the Remote VCR1/VCR2 setting to operate the VCR.
- Remove batteries and hold number button 1 for at least 60 seconds to drain the microprocessor inside the remote. Release number 1 and replace the batteries.
- Remove all batteries for approximately 12 hours. Then replace batteries.

### Remote no longer controls an RCA, ProScan, or GE TV

- Press TV to set remote to control a compatible TV.
- Check to make sure the remote is programmed to control an RCA, ProScan, or GE TV.

### Remote no longer controls a compatible TV, cable box, satellite receiver, or other components

- Press component button (TV, SAT•CABLE, VCR2•DVD, or AUX) that corresponds to the component you want to operate.
- Check to make sure there are no objects between the component and remote.
- The batteries may need changing.
- Reprogram remote after batteries have been changed.
- Remove batteries and hold number button 1 for at least 60 seconds to drain the microprocessor inside the remote. Release number 1, replace the batteries, and (if necessary) reprogram the remote.
- Remove all batteries for approximately 12 hours. Then replace batteries and (if necessary) reprogram the remote.

### Poor or no picture for normal TV viewing

- Check to make sure the VCR indicator is off.
- Check to make sure the TV is switched to an active channel.
- Check to make sure the antenna connections are secure and correct.

### Snowy or no picture during playback

- Press TV•VCR to turn VCR indicator on.
- Check TV channel selected (3 or 4) to make sure it matches the channel selected with 3CH4 switch on back of VCR.
- Check to make sure the TV's fine tuning is correct for the channel you have selected.
- Check video cable connections between VCR and TV monitor.

# APPENDIX A: REFERENCE

- Check to make sure the TV monitor is set to video input.
- Try another tape.
- Some snow/streaks are normal during search, stop action, frame advance, and slow-motion playback.

## Streaks in picture during normal playback

- Press one of the TRACKING buttons to move streaks up or down for the best picture.
- Check to make sure the tape is of good quality and not worn out.

## Time counter not working or time counter not working in search modes

- The time counter does not advance during unrecorded portions of tape. When an unrecorded segment of tape is encountered, the time counter will hold its count until recorded material is detected again.
- A minus (-) will appear in front of the time if you rewind the tape farther back than a counter reading of 0:00:00.

## Will not record or play

- Check to make sure there is a tape in the VCR.
- Try ejecting and reinserting the cassette.
- Check to make sure the tape is not broken.
- Check to make sure the VCR is not in pause mode. Press PAUSE or PLAY to return to normal playback.

## Will not record

- Check to make sure the safety tab is intact.
- Check to make sure the VCR is not in the line mode. Press INPUT on the remote.

## Rewind does not operate

- Check to make sure the tape is not already rewound.

## VCR Plus+ or timer recording not made or wrong program recorded

- Check to make sure the correct VCR PlusCode is entered.
- Check to make sure the cable box or satellite receiver was turned on when recording was to begin.
- Check to make sure the program was entered correctly (wrong channel or times).
- Power interruption. Reset the clock.
- Check to see if time and date are correct--including AM/PM.
- Check to make sure the program did not exceed the tape's length or the tape was not rewound beforehand.
- Check to make sure the VCR was turned off at the time recording was to start.
- Check to make sure there was a tape in the VCR and the cassette's safety tab was intact.
- VCR ejects cassette when the end of the tape is reached during a timer recording.
- Check to make sure VCR Plus+ channel setup was completed correctly.

# APPENDIX A: REFERENCE

## **Clock shows incorrect time or date**

- Power interruption.
- Check to make sure the clock is set accurately (check AM/PM and date).
- Check Auto DST setting. The clock may have adjusted for daylight-saving time.

## **VCR makes noise when stopped**

- VCR is removing tape from heads. This is normal. The head cylinder inside the VCR will continue to rotate for a few minutes after you put the VCR in the stop mode.

## **Will not Auto Channel Search active channels correctly**

- Check to make sure the antenna connections are secure and correct.
- Check to make sure the Signal Type: CABLE/ANTENNA feature is set correctly.
- If Detect Automatically was selected for the Signal Type in the Auto Channel Search menu, try using either CABLE TV or ANTENNA instead.

## **Tape plays back in slow motion**

- Press PLAY to return to normal playback.

## **Cannot select channels over 69**

- Cable channels over 69 can only be selected if Signal Type: CABLE/ANTENNA feature is set to CABLE.

## **Cassette with safety tab removed does not start to play automatically**

- Check to make sure the Auto Play ON/OFF feature is set to ON.

## **TAPE flashes in display**

- Check to make sure there is a cassette in the VCR when a timer recording is set.

## **Time counter disappears during searching**

- This is normal.

## **On-screen menus appear in English, French, or Spanish**

- Check Language feature.

## **No stereo sound during playback**

- Check to make sure the Playback: HI-FI/LINEAR/MIX feature is set to HI-FI to hear stereo sound during playback.
- Must use the AUDIO/VIDEO jacks on the back of the VCR to hear stereo sound.

## **Stereo audio too noisy**

- Stereo signal is weak. Set Reception: STEREO/MONO/SAP feature to MONO.
- Press one of the TRACKING up or down buttons to minimize the noise.

# APPENDIX A: REFERENCE

## SPECIFICATIONS

<b>Format:</b>	VHS
<b>Record/Playback System:</b>	Video: 4-head Audio: 2 Hi-Fi record/playback system
<b>Video Signal System:</b>	EIA standard: NTSC color
<b>Antenna:</b>	75-ohm external VHF/UHF combined antenna terminal
<b>Tuner:</b>	USA: 181 channels capability* (125 cable channels)  Canada: 178 channels capability* (122 cable channels)
<b>Type:</b>	AutoProgramming frequency synthesis
<b>Power Requirement:</b>	120V AC, 60 Hz
<b>Power Consumption:</b>	22 watts
<b>Dimensions:</b>	3.6 inches high (90 mm) 15.5 inches wide (393 mm) 12.6 inches deep (318 mm)
<b>Weight:</b>	9.5 pounds (4.3 kg)
<b>Storage Temperature Range:</b>	- 22°F to +149°F (-30°C to +65°C)
<b>Operating Temperature Range:</b>	+41°F to +104°F (+5°C to +40°C)

\*Check your cable company's compatibility requirements.

## CLEANING THE VCR

Use a soft cloth or dusting attachment of your vacuum cleaner to dust your VCR. Remove dust from the ventilation holes on the top, back, sides, and bottom of the cabinet.

Plastic surfaces are easily scratched and can be marred by alcohol and various solvents. Avoid excessive use of oil-based furniture polishes since the materials used in the cabinet will accumulate more dust. We recommend using a nonabrasive, antistatic cleaner and polisher.

Specifications are subject to change.



# APPENDIX A: REFERENCE

## LIMITED WARRANTY

### What your warranty covers:

- Any defect in material or workmanship.

### For how long after your purchase:

- Ninety days for labor charges.
- One year for parts.

The warranty period for rental units begins with the first rental or 45 days from date of shipment to the rental firm, whichever comes first.

### What we will do:

- Pay any Authorized RCA VCR Servicenter the labor charges to repair your VCR.
- Pay any Authorized RCA VCR Servicenter for the new or, at our option, refurbished replacement parts required to repair your VCR.

### How you get service:

- Take your VCR to any Authorized RCA VCR Servicenter. To identify your nearest Authorized RCA VCR Servicenter, ask your dealer, look in the Yellow Pages, or call 1-800-336-1900.
- Show the service technician your evidence of purchase date.
- Pick up your VCR when repairs are completed.

### What your warranty does not cover:

- Customer instruction. (Your Owner's Manual clearly describes how to install, adjust, and operate your VCR. Any additional information should be obtained from your Dealer.)
- Installation and related adjustments.
- Signal reception problems not caused by your VCR.
- Damage from misuse or neglect.
- Cleaning of video/audio heads.
- Remote control batteries.
- A VCR that has been modified or incorporated into other products or is used for institutional or other commercial purposes.
- A VCR purchased or serviced outside the USA.
- Acts of God, such as but not limited to lightning damage.

### Product Registration:

- Please complete and mail the Product Registration Card packed with your VCR. It will make it easier to contact you should it ever be necessary. The return of the card is not required for warranty coverage.

### How state law relates to this warranty:

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

### If you purchased your VCR outside the United States:

- This warranty does not apply. Contact your dealer for warranty information.

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If your VCR needs service, please contact your dealer or the nearest Servicenter from the yellow pages. Please do not send any products to the Indianapolis address listed in this manual or on the carton. This will only add delays in service for your product.

 **THOMSON CONSUMER ELECTRONICS**

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