



# SAFETY INFORMATION

## WARNING

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

## WARNING

RISK OF ELECTRIC SHOCK  
DO NOT OPEN



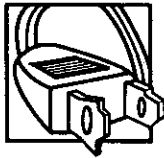
This symbol indicates important instructions accompanying the product.



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

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

## Cautions



**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.

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.

## Care and Cleaning:

Use a soft cloth or the dusting attachment of your vacuum cleaner to dust your VCR. Remove dust from both top and bottom ventilation holes.

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. A nonabrasive, antistatic cleaner/polisher is recommended.

## Product Registration

Please fill out the product registration card and return it immediately. Returning the 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 receiver.

Model No. VR354

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

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

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

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The VCR Plus+ System is manufactured under the license from Gemstar Development Corporation.

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# FIRST THINGS FIRST

## WELCOME TO YOUR NEW VCR...

To help you get started using your VCR with as little reading possible, we've put all the basic information needed in the first three sections.

To help you along, there's even an initial setup feature the first time you turn on your VCR which walks you through several set up steps at once.

## GETTING STARTED

Before this first step, though, learning about the time and date, your remote control's features, working with channels, and basic video tape operations are essential to get all you can out of the VCR. Once you are comfortable with these features, feel free to refer to other sections because they cover the more detailed information.

## WHAT REMAINS?

The final sections of this manual contain playback and recording information, a detailed connections section, and a reference section including troubleshooting tips, warranty information, and an index.

**1** FIRST THINGS FIRST



**2** SETTING UP THE VCR



**3** VCR BASICS



**4** RECORDING



**5** PROGRAM THE REMOTE



**6** OTHER FEATURES



**7** CONNECTIONS



**8** REFERENCES

### READ ME!

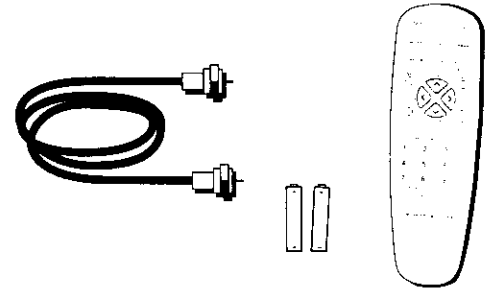
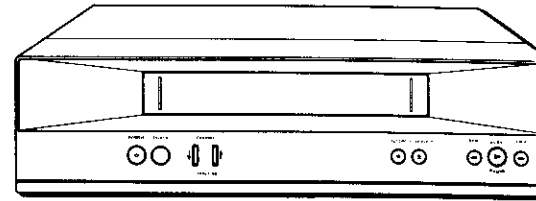
These note boxes give you tips for your new video cassette recorder.

# FIRST THINGS FIRST

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

The following items come packed in the box:

- VCR
- Remote control
- RF coaxial cable
- AAA Batteries



## 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 the batteries into the remote's back panel. Match the positive (+) and negative (-) ends of each battery to the diagram inside the battery compartment.
3. Replace the cover.

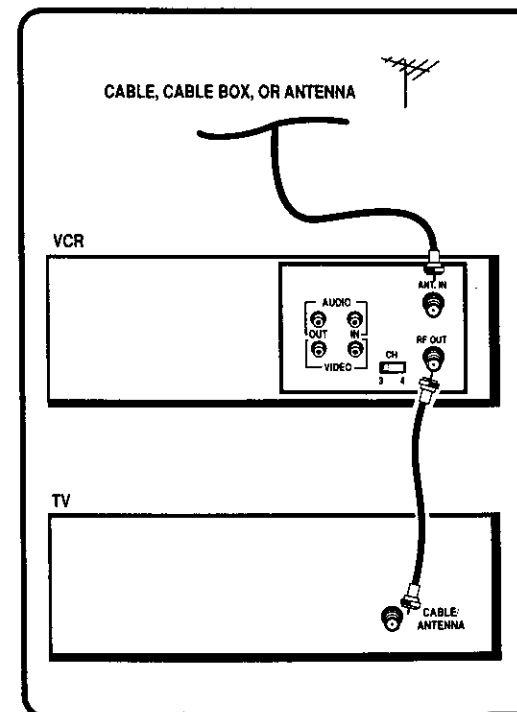
## STEP 3: CONNECT YOUR VCR

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

If you have a TV with AUDIO/VIDEO jacks, use the jacks for a better connection. Refer to the section, *Connections*, toward the back of the manual, for additional connection options.

## STEP 4: PLUG IN THE VCR

Your VCR's power cord has a plastic band strung through the blades. **Remove plastic band before plugging the cord into the power outlet.** To remove band, cut with a pair of scissors and pull it free of the blades. Once the plastic is removed, match the wide blade of the power cord to the wide slot in the AC outlet. Be sure to insert the plug completely.



# FIRST THINGS FIRST

## 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 ANTENNA connectors with RF coaxial cable, set the 3 CH. 4 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 with the remote control's INPUT button to see the signal. For more information about finding the TV's video Line INPUT, see "How to Find the TV's Video Input Channel" in the *References* section of this manual.

## STEP 6: TURN ON THE VCR

Press POWER on the VCR's front panel or the VCR button on the remote control to turn on the VCR. The first time you turn the VCR on, a menu screen appears. This is the start of an interactive set up which helps you select specific features of your VCR. You can cancel out of this initial set up once you are past the first screen (see next step), but this process walks you through a series of screens reducing the time needed to program your VCR.

## STEP 7: INITIAL SETUP

The first on-screen menu during the initial set up asks which language you prefer to use for your VCR. Use the remote control's number buttons to select options.

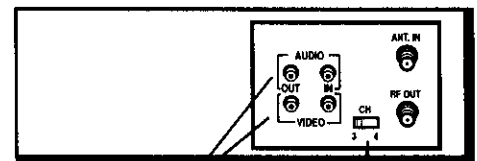
1. Press 1 for English, 2 for Español (Spanish), or 3 for Français (French).

Select a Language.  
Seleccione un idioma.  
Choisissez une langue.

- 1 English
- 2 Español
- 3 Français

The remaining menus throughout the set up will appear in the chosen language. Follow the on-screen instructions to complete the initial set up process.

### INPUT Viewing Channel



A/V input/output jacks

Channel 3/4 switch

When using the ANT IN and RF OUT jacks to connect your VCR, tune your TV to channel 3 or 4.

The 3-4 switch on the back of the VCR determines which TV channel is used to see VCR output.

When using the AUDIO/VIDEO jacks to connect your VCR, tune your TV to the its Line INPUT channel with the INPUT button on your remote control. For more information about selecting the TV's video input source channel, see "Finding the TV's Video Input Channel" in the *References* section of this manual.

# FIRST THINGS FIRST

## STEP 8: ACCESSING MENUS

The MENU and number buttons let you access, select, and change your VCR's preferences individually. For example, to select a different preferred on-screen language than the one selected during the initial set up, do the following:

1. Press MENU to display the VCR MAIN MENU.

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

2. Press 7 to display the LANGUAGE menu.

```
LANGUAGE
Select a language.
1>English
2 Español
3 Français
Press MENU to continue
```

3. On the remote control, press one (1) for English, two (2) for Spanish, and three (3) for French.

All other on-screen menus are handled in similar ways using the remote control to follow on-screen instructions.

See *Additional Set-Up Features* in the next section for detailed information about accessing menus.



# SETTING UP THE VCR

## ON-SCREEN GUIDE AND ADDITIONAL SETUP FEATURES

Below is a list of features, many of which need to be set up before using your VCR for the first time. Essential features are handled during the initial setup, but all features can be accessed through the Preferences menu.

To get the most out of the VCR, make sure to refer to this section.

- Language \*
- Cable Box Set Up \*
- VCR Channel List \*  
(Auto Channel Search)
- Daylight-Saving Time \*  
and Time Zone
- Time and Date \*
- VCR Plus+ System Channels \*
- Remote VCR1/VCR2 \*
- Auto Play
- EnergySaver
- Front Panel Brightness
- Preferred Tape Speed

### 1 FIRST THINGS FIRST



### 2 SETTING UP THE VCR



### 3 VCR BASICS



### 4 RECORDING



### 5 PROGRAM THE REMOTE



### 6 OTHER FEATURES



### 7 CONNECTIONS



### 8 REFERENCES

\* Features handled during the VCR's Initial Setup

# SETTING UP THE VCR

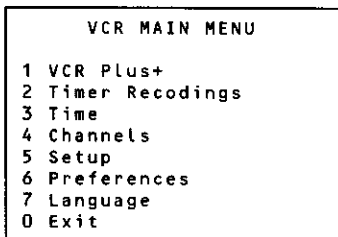
## USING THE MENU TO SET UP FEATURES

You can set up your VCR's features by using the remote control's buttons to enter your choices from on-screen instructions. Each menu item is explained in this section. For each numbered selection on the menus, use the same numbered button on the remote control to select it.

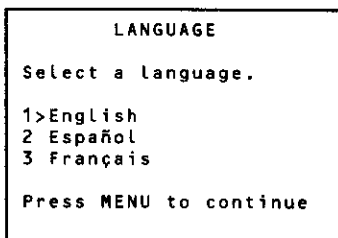
### LANGUAGE SELECTION

If you did not complete this step in the previous section during the initial set up, it is time to select your preferred language. Once this step is complete, all on-screen displays will appear in that language.

1. On your remote control, press the MENU button to display the VCR MAIN MENU.



2. Press 6 to select the LANGUAGE menu.



3. Select 1) English, 2) Español (Spanish), or 3) Français (French) by pressing the appropriate number on the remote control's key pad. An arrow indicates the selection you've made. Once you have made your choice, press MENU on the remote to continue back to the MAIN MENU screen.

#### Is Something Missing?

Not all the VCR screens will always be shown in this manual when explaining the features.

# SETTING UP THE VCR

## CABLE BOX SETUP

This set up applies **only** when all channels are received through a cable box. In this case, the VCR will automatically enter the channel used to view cable box programming. Your VCR will use this channel for all future timer recordings.

1. Press MENU to display the VCR MAIN MENU.

```
VCR MAIN MENU
1 VCR Plus+
2 Timer Recodings
3 Time
4 Channels
5 Setup
6 Preferences
7 Language
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
5 Cable Box Setup
0 Exit
```

3. Press 5 to display CABLE BOX SETUP. Then select one of the three choices.

```
CABLE BOX SETUP
Do you use your cable
box to receive ALL
channels or only SOME
Channels?
1 ALL channels
2 Only SOME channels
3 Cancel setup
```

4. If you selected ALL CHANNELS, enter the output channel of your cable box (usually 03 or 04), or press the INPUT button on your remote control for video line input if you use AUDIO/VIDEO jacks.

```
CABLE BOX SETUP
On what channel does
the VCR receive signals
from the cable box?
(usually 3, 4, or Video)
--
Enter 01-13 or INPUT
Press MENU to cancel
```

### Choosing the right set up for your cable box

If you use your cable box to receive:  
**ALL channels**– enter two numbers for output channel of your cable box or press INPUT if you connect your cable box with AUDIO/VIDEO jacks

**Only SOME channels**– chose this option if you only use the cable box to unscramble premium channels only.

Cancel setup will take you to a menu screen stating your VCR will not control the cable channel during timer recordings.

### Video Line INPUT

For more information about the video Line INPUT channel, refer to "How to Find the TV's Video INPUT Channel" in the *References* section of this manual.

# SETTING UP THE VCR

```
CABLE BOX SETUP
On what channel does
the VCR receive signals
from the cable box?
(usually 3, 4 or video)

04

Press CLEAR to correct
Press MENU to continue
```

5. Once you complete the setup, the VCR confirms that the VCR will now receive all signals on the designated channel. For example:

```
CABLE BOX SETUP

The VCR will now
receive all signals
from the cable box
on channel 04.

Press MENU to continue
```

Once completed, you will see the conformation:

```
CABLE BOX SETUP

The Cable Box Setup
is complete.
The VCR will NOT control
the cable box channel
during timer recording.

Press MENU to continue
```

## 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, but you may want to add or delete some channels depending on whether they are active.

## AUTO CHANNEL SEARCH

1. Press MENU to display the VCR MAIN MENU.

```
VCR MAIN MENU

1 VCR Plus+
2 Timer Recodings
3 Time
4 Channels
5 Setup
6 Preferences
7 Language
0 Exit
```

2. Press 4 to display the CHANNELS menu.

### 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

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

4. Select one of the three AUTO CHANNEL SEARCH options, your choice will be marked with an arrow symbol at the left:
  - *Cable TV* searches for cable stations from a single channel.
  - *Antenna* searches for local broadcast stations on all channels.
  - *Detect Automatically* will make this decision for you

```
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. When the scan is complete, the VCR tunes to the lowest channel number available. At this point, pressing CHAN up or down should only select the active channels.

## CHANGING THE SIGNAL TYPE

1. Press MENU to display the VCR MAIN MENU.
2. Press 4 to display the CHANNELS menu.
3. Press 3 to change the Signal Type between CABLE and ANTENNA.

### Detect Automatically

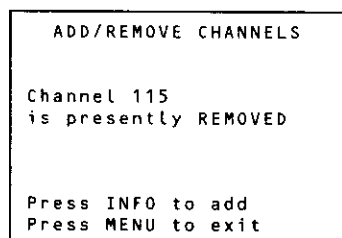
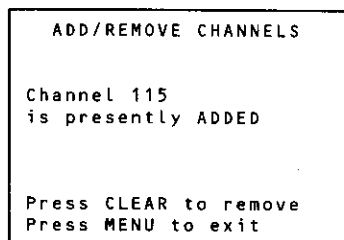
A strong cable or antenna signal in your area may cause Auto Detect to mis-detect. If this should happen, select 1 or 2 for the system you have.

# SETTING UP THE VCR

## ADDING OR REMOVING 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 CHAN up or down or number buttons to go to the channels you want to remove or add.



4. Follow the on-screen instructions to finish this set up.

## TIME AND DATE

The VCR gives you two ways to set the time and date: manually, and the Auto Clock Feature. The Auto Clock Feature enables the VCR to update the clock each time the VCR is turned off. The Auto Clock is advantageous because it updates the time for you automatically.

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

## AUTO CLOCK SET FEATURE

The Auto Clock Set feature is set to ON at the factory. In the ON setting, the VCR looks for a channel carrying XDS (Extended Data Services) information. XDS updates the clock using the Coordinated Universal Time. There are certain steps that are required, such as Auto Channel Search, setting the Time Zone, and setting the Daylight Saving feature before the Auto Clock feature works.

### 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.

# SETTING UP THE VCR

## SETTING THE TIME ZONE

1. Press MENU on the remote control to display the VCR's MAIN MENU.

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

2. Press 3 to display TIME menu

```
TIME
1 Set Time and Date
2 Auto Clock Set: ON
3 Set Time Zone
4 Set Daylight Savings

XDS Time Data was found
on channel 20.

0 Exit
```

\* Screen shown is used for example only. XDS data may be received on a different channel in your area, or not available at all.

3. Press 3 to display the TIME ZONE menu
4. Select the appropriate time zone from the list.

If you select Automatic for your time zone, the VCR sets the clock using the first Coordinated Universal Time information it finds. If the time is not correct, select another time zone or set the time and date through the menu system.

## SETTING DAYLIGHT-SAVING TIME

1. Press MENU to display the VCR MAIN MENU.
2. Press 3 to display the TIME menu.
3. Press 4 to display the SET DAYLIGHT SAVINGS menu.

```
SET DAYLIGHT SAVINGS

Does your area observe
Daylight Savings Time
from April to October?

1 Yes, DST is observed
2 No
3 Automatic
Press MENU to continue
```

4. Select one of the options.
- DST is the acronym for Daylight Saving Time.
  - If you chose AUTOMATIC, the VCR sets the clock using the DST information broadcast in the signal (channel).

### Spring forward; Fall back

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

## SETTING THE TIME AND DATE MANUALLY

1. Press MENU to display the VCR MAIN MENU.

```
VCR MAIN MENU
1 VCR Plus+
2 Timer Recodings
3 Time
4 Channels
5 Setup
6 Preferences
7 Language
0 Exit
```

2. Press 3 to display the TIME menu.

```
TIME
1 Set Time and Date
2 Auto Clock Set:  ON
3 Set Time Zone
4 Set Daylight Savings

XDS Time Data was found
on channel 20.

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 and date display

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



# SETTING UP THE VCR

## VCR PLUS+® SYSTEM CHANNELS

Using the VCR Plus+ system makes 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 are provided.

1. Press MENU to display the VCR MAIN MENU.

```

VCR MAIN MENU
1 VCR Plus+
2 Timer Recordings
3 Time
4 Channels
5 Setup
6 Preferences
7 Language
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
5 Cable Box Setup

0 Exit
    
```

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

```

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

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

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. Channels are different in different areas.

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

See next page for Canadian 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

## VCR Plus+ System 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

## ADDITIONAL SETUP 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 Setup
6 Preferences
7 Language
0 Exit
```

2. Press 6 to display the PREFERENCES menu.

```
PREFERENCES
1 Remote Control: VCR1
2 Auto Play: OFF
3 Auto TV/VCR: OFF
4 EnergySaver: 2:00
5 Front Panel: AUTO
6 Tape Speed: SLP
7 Set Auto Repeat
0 Exit
```

Now you are ready to select a category from the menu to set up.

### REMOTE VCR1/VCR2 OPTION

If you own a compatible RCA, GE, or ProScan remote that has a VCR2, VCR2•LD, or VCR2•DVD button, this feature allows you to set this VCR to respond to that button.

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

PREFERENCES	PREFERENCES
(PRESS VCR2 TO CHANGE)	1 Remote Control: VCR2
2 Auto Play: OFF	2 Auto Play: OFF
3 Auto TV/VCR: OFF	3 Auto TV/VCR: OFF
4 EnergySaver: 2:00	4 EnergySaver: 2:00
5 Front Panel: AUTO	5 Front Panel: AUTO
6 Tape Speed: SLP	6 Tape Speed: SLP
7 Set Auto Repeat	7 Set Auto Repeat
0 Exit	0 Exit

The VCR only responds to a compatible remote control's VCR2, VCR2•LD, or VCR2•DVD button. If you change the remote setting to VCR2, the remote that came with your VCR will no longer control it.

*Continued on Next Page*

#### Remote Control Option

Changing the remote option to VCR2 disables the remote that came with your VCR.

# SETTING UP THE VCR

Use the compatible remote to change the remote setting back to VCR1. Display the PREFERENCES menu, press 1, and then press VCR on the VCR's 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 or 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

To view a signal from a VCR connected to a TV with a standard RF coaxial cable, the TV/VCR button on the remote control must be pressed in order to see the signal.

When Auto TV/VCR is turned on, the signal will be changed to VCR automatically, eliminating the need to press the remote control button.

- The TV must be tuned to the VCR viewing channel (usually 3 or 4) to see the signal.
- Select OFF if you *do not* want the VCR's signal to change automatically to VCR when a tape is inserted and played.

## ENERGYSAVER

By default, this VCR automatically turns off after two hours of inactivity. Press 3 to change the time delay, or to disable the feature.

- OFF: The VCR will remain turned on until you shut it off.
- 1:00, 2:00, or 3:00: The VCR turns off after one, two, or three hours of inactivity.

Thirty seconds before shutting off, the VCR will warn you with a screen reading, "The VCR will turn off in 30 seconds. Press any key to cancel."

If you use the VCR's tuner instead of your TV to tune channels, you may want to turn this feature off.

### PREFERENCES

1	Remote Control:	VCR1
2	Auto Play:	OFF
3	Auto TV/VCR:	OFF
4	EnergySaver:	2:00
5	Front Panel:	AUTO
6	Tape Speed:	SLP
7	Set Auto Repeat	
0	Exit	

*The PREFERENCES menu allows you to access settings for your remote control, EnergySaver and front panel brightness options.*

### Auto Play

**For a tape to be able to start playing automatically, it must have the safety tab removed. All rented movies and purchased movies should have this tab removed.**

# SETTING UP THE VCR

## FRONT PANEL BRIGHTNESS (VCR DISPLAY)

You can change the brightness level of the fluorescent display panel on the front of the VCR. Press 4 on the remote control repeatedly to switch between the options.

- AUTO brightens the display when the VCR is on and dims the display when the VCR is off.
- BRIGHT keeps the display bright.
- DIM keeps the display at a low brightness level.

## PREFERRED TAPE SPEED

You can set the preferred tape speed. Press 5 repeatedly to switch between the options.

- SP sets the preferred recording speed to SP.
- SLP sets the preferred recording speed to SLP.

## SET AUTO REPEAT

A tape can be set to play the same segment over and over in a repeating loop with the Set Auto Repeat feature. Set Auto Repeat uses the VCR's memory counter to determine the duration of the loop.

The Set Auto Repeat dialog box will ask for a loop end time to be specified:

```
AUTO REPEAT
Set the length of time
you want the tape to
play in a repeating loop
Loop from 0:00 to --:--
                    (h:mm)
Press CLEAR to turn off
Press MENU to exit
```

- The CLEAR key will erase all three numbers entered and move the cursor back to the first position (hours).
- The "Press CLEAR to turn off" message will appear only after the first number has been entered into the end time.
- Auto Repeat is set back to --:-- by resetting the dialog box, by cassette ejecting or insertion, by powering off the VCR, by power interruption, or by recording start.

### PREFERENCES

```
1 Remote Control: VCR1
2 Auto Play: OFF
3 Auto TV/VCR: OFF
4 EnergySaver: 2:00
5 Front Panel: AUTO
6 Tape Speed: SLP
7 Set Auto Repeat
0 Exit
```

*The PREFERENCES menu allows access to settings for your front panel brightness feature and preferred tape speed.*

## 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.

### 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	SLP
T-120	2Hr	6Hr
T-160	2Hr	8Hr

*Continued on Next Page*

# SETTING UP THE VCR

When a duration time has been set:

- The VCR will automatically switch to rewind if the counter meets or goes past the Auto Repeat set duration.
- The VCR will automatically switch to playback during rewind if the counter equals or is less than 0:00.
- The Auto Repeat may be adjusted by setting the counter to 00:00. This can be done by pressing the CLEAR button while the tape counter is on screen or on the front panel display.
- The counter will not reset while rewinding in an Auto Repeat loop.

```
AUTO REPEAT
Set the length of time
you want the tape to
play in a repeating loop
Loop from 0:00 to --:--
                               (h:mm)
Press CLEAR to turn off
Press MENU to exit
```

*The Auto Repeat dialog box allows a segment of tape to be set to play in an indefinite loop over and over.*

# 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.

This section shows you the basics of using your VCR. It discusses things like using the remote control, playing a tape, and recording programs.

**1 FIRST THINGS FIRST**



**2 SETTING UP THE VCR**



**3 VCR BASICS**



**4 RECORDING**



**5 PROGRAM THE REMOTE**



**6 OTHER FEATURES**



**7 CONNECTIONS**



**8 REFERENCES**

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

# VCR BASICS

## REMOTE BUTTONS

The remote control is capable of controlling your VCR and many brands of televisions. If you have an RCA, GE, or PROSCAN TV, you may be able to control it without having to program the remote.

## COMPONENT BUTTONS

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

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

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

## VCR FUNCTION BUTTONS

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

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

**F.ADV** Lets you view one frame with each press of the button when tape is in pause.

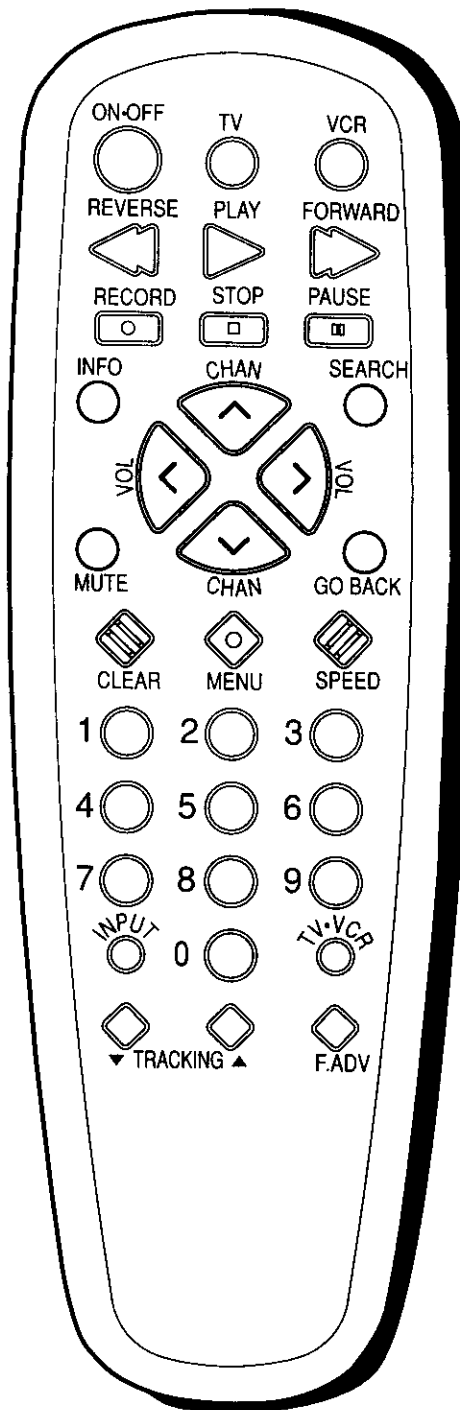
**FORWARD** Fast forwards the tape when the VCR is stopped. Searches forward through a tape during playback. Starts slow motion during play-pause and increases slow-motion speed.

**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. In menu mode, press to go back to a previous menu.

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

**INPUT** Selects between the VCR's line input or tuner. Line input refers to the signal coming from the component connected to the AUDIO/VIDEO IN jacks on the back (L1) or front (L2) of the VCR.

**MENU** Brings up VCR MAIN MENU on the TV screen.





# VCR BASICS

**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.

**RECORD** Starts VCR recording. Also used for Express recording.

**REVERSE** 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 30 seconds of recorded material during playback. Each press advances the tape an additional 30 seconds up to five minutes.

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

**STOP** Stops the current VCR function such as record, playback, rewind, or fast forward. To eject a tape, press and hold the STOP button for three seconds while in STOP mode.

**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.

**INPUT** Selects between the TV's input channel or tuner. Press to see the VCR signal if you connected your VCR using the AUDIO/VIDEO jacks.

### TV Buttons

The TV buttons may not control all features on the model of TV you have.

# VCR BASICS

**MUTE** Reduces volume to minimum level.

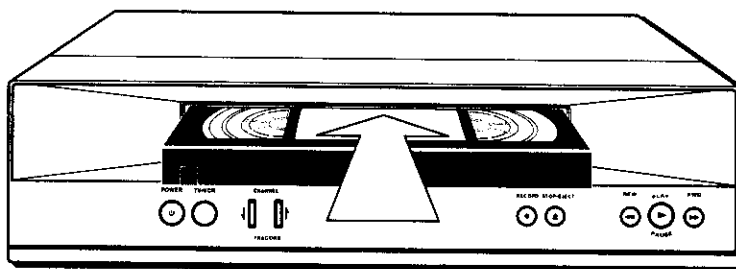
**Numbers (0 through 9)** Select a channel up to 99 by pressing two numbers. Select a cable channel over 99 by pressing and holding 1 until 1 -- appears on the screen. Then press the other two numbers.

**ON•OFF** Turns a compatible TV off and on.

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

## 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 (FORWARD or REVERSE on remote) to position the tape.
- Press PLAY•PAUSE (if necessary) on the VCR (PLAY on remote) to begin tape play.
- Press PLAY•PAUSE (PAUSE on remote) for stop action.
- Press TRACKING up or down to remove any streaks from the picture, if necessary.
- Press STOP•EJECT on VCR (STOP on remote) to stop playback.

If you have trouble getting a picture on the screen, see "How to Find Your TV's Video Input Channel" or "Troubleshooting." Both are located in the *References* section of this manual..

### Pause

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

# VCR BASICS

## AUTOMATIC REWIND

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

## TAPE EJECT

Press **STOP•EJECT** on the VCR (**STOP** on remote) when it is stopped to eject the tape.

## RECORDING

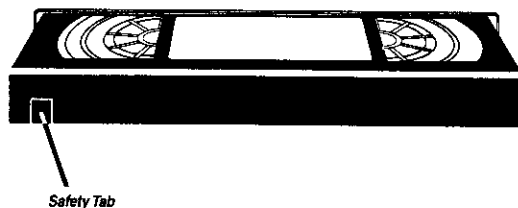
If you want to record something that you're watching, you can use basic recording. For more detailed information, refer to the next section of the manual, *Recording*.

1. Set the tape speed by pressing the **SPEED** button on the remote (see "Tape Speed" in *Setting Up the VCR* section for information about tape speed settings).
2. Press the **RECORD** button to begin recording.
3. Press **STOP** to stop recording.

If you just want to pause the recording for a short time (such as 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.



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

### 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.



# RECORDING

## SEVERAL RECORDING OPTIONS

Now that you've gone through the necessary steps to operate your VCR, it's time to explain the different recording features available to suit your needs including:

- Recording (explained in *VCR Basics* section)
- Express Recording (XPR)
- Timer recording
- Timer recording with the VCR Plus+ system
- Copying and editing tapes

**1** FIRST THINGS FIRST



**2** SETTING UP THE VCR



**3** VCR BASICS



**4** RECORDING



**5** PROGRAM THE REMOTE



**6** OTHER FEATURES



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# RECORDING

## RECORDING FEATURES

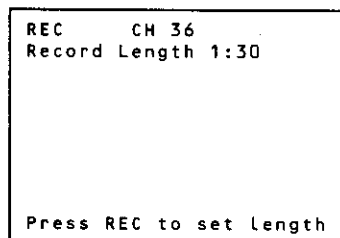
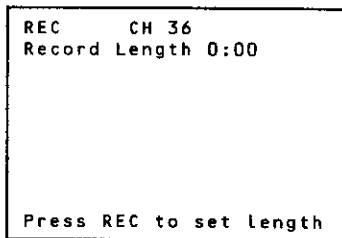
There are four ways to record programs:

- **Recording** one button to press to start recording a program. (See *VCR Basics* section.)
- **Express Recording (XPR)** starts recording a program you are watching. You can then set the VCR to automatically stop recording after a designated period of time.
- **Timer Recording** programming the VCR to automatically start and stop recording at a predetermined time.
- **VCR Plus+ System** a timer program allowing the VCR to record just by entering a PlusCode programming number found in TV program listings.

## EXPRESS RECORDING (XPR)

Use Express recording 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 control
2. Press the RECORD button (REC on the remote) to begin recording
3. Repeatedly press the RECORD button to set up the recording duration.



Each time you press the RECORD 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.

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

### 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.

# 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 Setup
6 Preferences
7 Language
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 and end time (including AM or PM). The start date is automatically entered based on the VCR clock. The date and/or speed can be changed when flashing.

### Timer Recording Information

The 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.

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

When recording from a cable box or satellite receiver, turn it on and tune it to the channel you want to record before the recording is to begin. The VCR channel should be set to the cable box's output channel, usually Channel 3 or 4.

# 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 11/15/99 MON
Tape Speed SLP
           1=SP 2=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.
Remember to leave your
cable box on and tuned
to the desired channel.
```

## TIMER RECORDING WITH THE VCR PLUS+ SYSTEM

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

### SETTING UP THE CHANNEL LIST

If you did not set up the VCR Plus+ programming 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+ SYSTEM

- Press MENU to bring up the VCR MAIN MENU.

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

- Press 1 to display the VCR Plus+ system menu.

```
VCR MAIN MENU
1 VCR Plus+
2 Timer Recordings
3 Time
4 Channels
5
6
7
0
CHANNELS
1 Auto Channel Search
2 Add/Remove Channels
3 Signal Type: CABLE
4 VCR Plus+ Channel List
5
VCR+ Channel My Channel
5 46
4 --
0 3 -> -> -> 23
2 --
1 --
Use CH+/- to select
Press 0-9 to change
Press MENU to save
```

If you receive all channels through your cable box on Channel 3 or 4, you must use the regular Timer Recording method to record programs.



# RECORDING

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

3. Enter the 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 10/24/98 SAT
Tape Speed SLP
Press CLEAR to adjust
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.

*PlusCode is a registered trademark of the Gemstar Development Corporation.  
The VCR Plus+ system is manufactured under the license from Gemstar Development Corporation.*

## VCR Plus+ System Recording

The clock must be set correctly.

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

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

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

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

Timer recordings will not be lost in the event of an extended power outage.

# RECORDING

Program 1 has been saved

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

Remember to leave your cable box on and tuned to the desired channel.

## STOPPING A TIMER RECORDING

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

- Press and hold the STOP button for a few seconds.

## REVIEWING AND CLEARING PROGRAMS

To review programs that you have already set up:

1. Press MENU to display the VCR MAIN MENU.

```
VCR MAIN MENU
1 VCR Plus+
2 Timer Recordings
3 Time
4 Channels
5 Setup
6 Preferences
7 Language
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
```

2. Press 2 to display the REVIEW EXISTING PROGS. screen.

# RECORDING

```
Program 1 (One time)
Channel      104 Cable
Start Time   12:00 AM
End Time     01:30 AM
Start Date   12/31/99 FRI
Tape Speed   SLP

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

3. Press CLEAR to erase items or MENU to see the next program.

## USING TWO VCRS FOR COPYING AND EDITING TAPES

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

1. Connect the VCRs using the diagram below.
2. Turn on both VCRs and TV.
3. Tune the TV to the VCR viewing channel (either 3, 4, or TV's video input).
4. If you are using coaxial cables for the connection, tune *recording VCR* to channel 3 or 4—the one selected on the *playback VCR*.

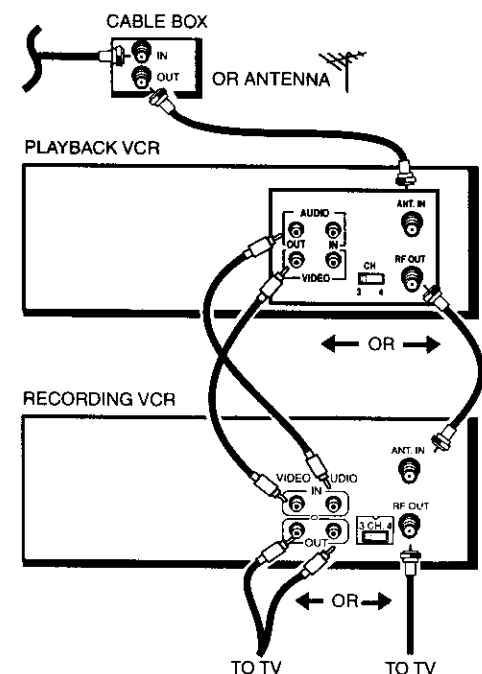
If you are using audio/video cables, select the line input on the *recording VCR*.

5. Insert the tape you want to copy into *playback VCR*. Insert a blank tape with its safety tab in place into *recording VCR*.
6. Using visual search, locate the segment you want to copy on the *playback VCR*. Pause the tape at this location.
7. Press RECORD on the *recording VCR*, then PAUSE.
8. Press PAUSE on both VCRs to begin copying.
9. Press PAUSE on both VCRs to stop copying.
10. Repeat steps 6–9 to copy or edit additional segments.

### Caution:

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

### Two VCR Connection





# PROGRAM THE REMOTE

## CONTROL YOUR TELEVISION

The remote can be programmed to control a television.

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

**1** FIRST THINGS FIRST



**2** SETTING UP THE VCR



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**5** PROGRAM THE REMOTE



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# PROGRAM THE REMOTE

## ABOUT PROGRAMMING THE REMOTE

The remote can be programmed to control other brands or remote controllable TVs, digital satellite receivers, and cable boxes. It is already programmed to operate most RCA, GE, and ProScan televisions and digital satellite receivers.

## 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 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 listed for your TV's brand

## OPERATING 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 Basics* 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.**

# PROGRAM THE REMOTE

## TV Codes

Akai .....	03	NAD .....	07
AOC .....	06,12	NEC .....	06
Candle .....	06	Panasonic .....	04,08,11
Citizen .....	06	Philco .....	04,06,12
Colortyme .....	06	Philips .....	03,04,06,12
Concerto .....	06	Pioneer .....	06
Curtis Mathes .....	01,06	Portland .....	06,12
Daewoo .....	06,12	ProScan .....	01
Daytron .....	06	Proton .....	06
Electrohome .....	06,12	Quasar .....	11
Emerson .....	06	Radio Shack .....	01,05,13
Envision .....	05,06	RCA .....	01,06,12
Fisher .....	05,08	Realistic .....	05
GE .....	00,01,06,11	Sampo .....	06
Goldstar .....	06,12	Samsung .....	06,09,12
Hallmark .....	06	Sanyo .....	05,08
Hitachi .....	06,14	Sears .....	01,05,06,07, 08,10,12
Infinity .....	04	Sharp .....	06,13
J C Penney ....	00,01,06,09,12	Sony .....	03
JBL .....	04	Soundesign .....	06
Jensen .....	06	Sylvania .....	04,06,12
JVC .....	10,11	Technics .....	11
Kawasho .....	03,06	Techwood .....	06
Kenwood .....	06,12	Teknika .....	06
Loewe .....	04	TMK .....	06
Luxman .....	06	Toshiba .....	05,07,08,09
LXI .....	04,05,07	Universal .....	00
Magnavox .....	04,06,12	Victor .....	10
Marantz .....	04,06	Wards .....	00,01,04,06,12,13
MGA .....	06,12	Yamaha .....	12
Mitsubishi .....	06,12	Zenith .....	02
MTC .....	06		





# OTHER FEATURES

## FEATURES TO ENHANCE VCR OPERATION

- Picture Search Options
- Pro-Tect Plus™ Locking
- Tracking
- Time Counter
- On-Screen Displays

**1** FIRST THINGS FIRST



**2** SETTING UP THE VCR



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# OTHER FEATURES

## PICTURE SEARCH OPTIONS

The most basic way to search during playback is using the FORWARD (FWD on the VCR) or REVERSE (REV on the VCR) 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 well for tapes recorded at the SLP speed.

1. Press FORWARD (FWD) to search forward or REVERSE (REV) to search in reverse.
2. Press FORWARD (FWD) or REVERSE (REV) again or press PLAY to return to normal playback.

### COMMERCIAL SCAN (SEARCH BUTTON)

This is useful for skipping commercials or short program segments.

1. Press SEARCH once during playback to advance the tape approximately 30 seconds of recorded material.
2. Each press of the SEARCH button adds an additional 30 seconds up to five minutes.

### FRAME ADVANCE

Frame advance lets you view one-stop action frame after another during playback. Frame advance works well for tapes recorded at the SLP speed.

1. Press PAUSE to "freeze" the action.
2. Press F ADV each time you want to view a frame of the scene.
3. Press PAUSE or PLAY to return to normal playback.

# 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 to display the INDEX SEARCH menu on the TV screen.
3. If you want to search through 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 to search forward or REV 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.

```
INDEX SEARCH
Press REV OR FWD
to begin scanning
OR
enter a specific
index number
--
Press SEARCH to exit
```

```
INDEX SEARCH
Searching for
index number 12...
Press STOP to cancel
```

```
INDEX SEARCH
Searching for
index marks...
Press STOP to cancel
```

# OTHER FEATURES

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

```
GO-TO SEARCH
Current tape counter is
      2:17:25
Press REV or FWD
to go to -:--:00
Press SEARCH to exit.
```

```
GO-TO SEARCH
Current tape counter is
      2:17:25
Press REV or FWD
to go to 0:00:00
Press SEARCH to exit.
```

## PRO-TECT PLUS™ LOCKING FEATURE

To disable the usage of the VCR, or to protect your timer recordings, you can lock the VCR so that the buttons on the VCR or remote won't work.

- To Lock: Press and hold either the remote's POWER or OFF button. All lighted digits on the front panel will flash when activated. The digits will also flash if you turn on the VCR when this feature is activated.
- To Unlock the feature and turn on the VCR: Press and hold either the remote's POWER or VCR button for six seconds.

### Locking Your VCR

If a timer recording is programmed, make sure your VCR is turned off. Locking your VCR prevents the VCR from being accidentally turned on.

# OTHER FEATURES

## 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 TRACK buttons to remove the streaks or snow. You can also use tracking when you pause a tape to reduce jittering of the picture.

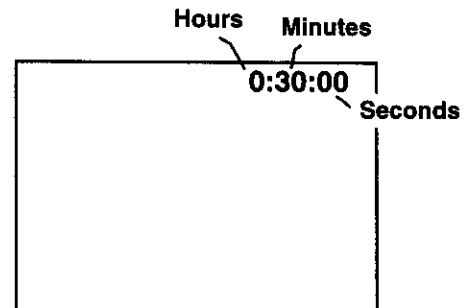
When you manually adjust the picture, automatic tracking is turned off. To turn automatic tracking back on, press both TRACK buttons on the front of the VCR at the same time, or eject the tape and re-insert it. Tracking has no effect during recording—only playback.

## 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** 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.



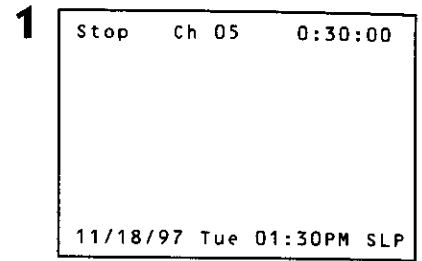
# OTHER FEATURES

## ON-SCREEN DISPLAYS

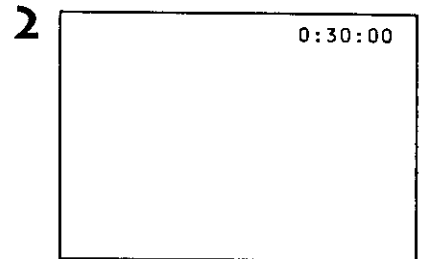
The INFO button shows the status of the VCR (STOP, PLAY, RECORD, etc.), channel number, time counter, date, time, and tape speed on the TV screen. The date and time must be set before they can be displayed.

1. Press INFO to see the on-screen displays.
2. Press INFO again to have only the time counter remain on the screen.
3. Press INFO again to have no displays appear on the TV screen. This is useful for dubbing tapes.

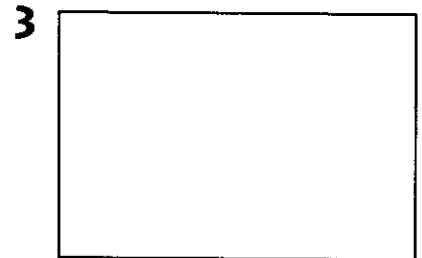
Turning off the VCR also resets the displays.



*On-screen display (times out)*



*Time counter only  
(does not time out)*



*No displays will appear  
(useful for dubbing)*

# 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 back panel of the TV 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 PROGRAM THE REMOTE



## 6 OTHER FEATURES



## 7 CONNECTIONS



## 8 REFERENCES

# CONNECTIONS

## CONNECTING YOUR VCR

Refer to these pages to help you connect your VCR.

### JACKS AND CABLES

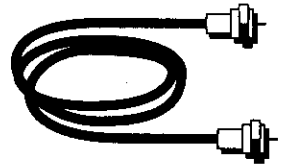
#### RF JACKS AND COAXIAL CABLES (F-TYPE)

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 ANT IN and RF OUT. The coaxial cable supplied with your VCR is used to connect the VCR's RF OUT jack and your TV's antenna input.



Prise RF



#### AUDIO/VIDEO JACKS AND CABLES (RCA-TYPE)

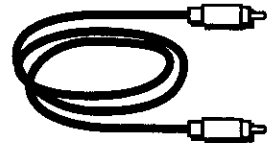
The AUDIO/VIDEO jacks provide very good picture quality and sound, and can be used if your TV has audio/video input jacks.

These jacks are used for most audio/video connections between components. The VCR AUDIO/VIDEO jacks are color coded (yellow for video, white for audio). If your TV has two inputs for audio (stereo), use the one labeled MONO.

Otherwise, you may need a Y-adaptor to hear sound from both channels.



Prise Audio/Vidéo





# CONNECTIONS

## CHOOSING A VCR CONNECTION

There are several different ways to connect your VCR, depending on whether or not you have cable service, if you have a cable box to see this service, whether some of the cable channels are scrambled, and so on.

Three 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

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 mono sound when recording and playing back videotapes. These connections give you more convenient operation by not having to share the TV's antenna signal.

# 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:

- one coaxial cable for cable/antenna connection
- coaxial cable for cable box connection.

### TO CONNECT:

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

## USING THIS CONNECTION

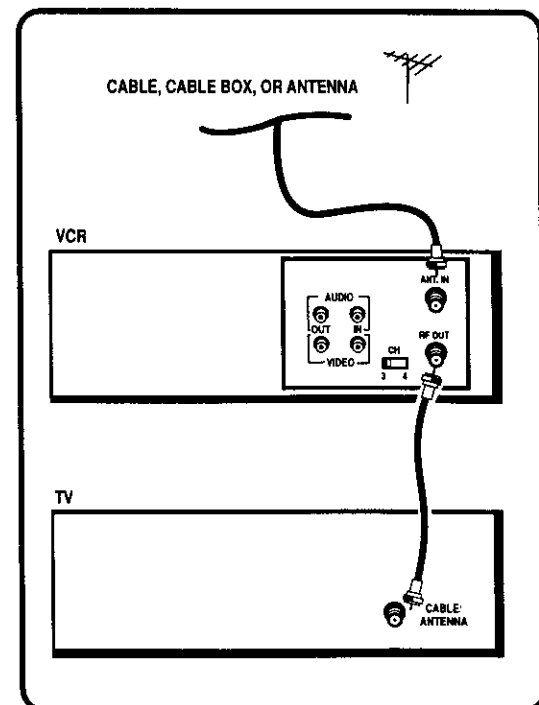
Tune your TV to channel 3 or 4, whichever one you selected with the 3 CH. 4 switch on the back of the VCR.

### 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:

- 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:

- one coaxial cable for a cable/antenna connection, or two coaxial cables for cable box connection
- two audio/video cables

### TO CONNECT:

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

## USING THIS CONNECTION

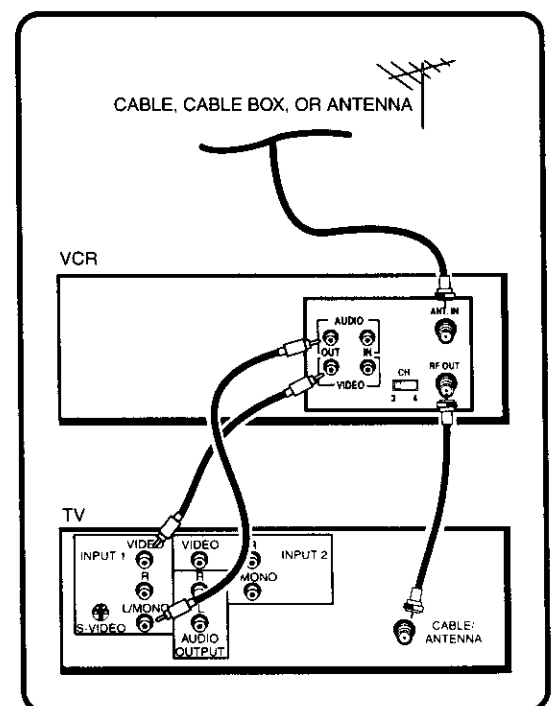
Tune your TV to its video input channel.

### 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:

- Mono 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
- (2) 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.

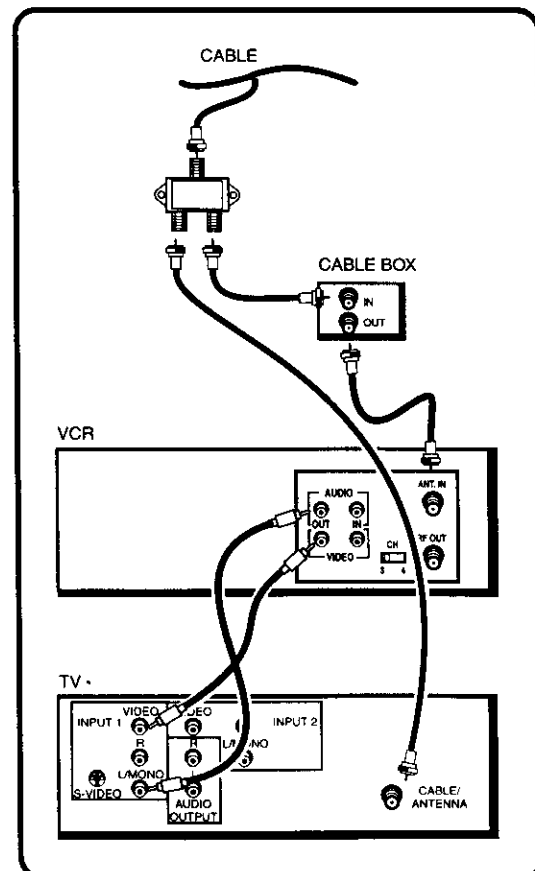
### TO PLAY A TAPE:

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.



# REFERENCES

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.

**1 FIRST THINGS FIRST**



**2 SETTING UP THE VCR**



**3 VCR BASICS**



**4 RECORDING**



**5 PROGRAM THE REMOTE**



**6 OTHER FEATURES**



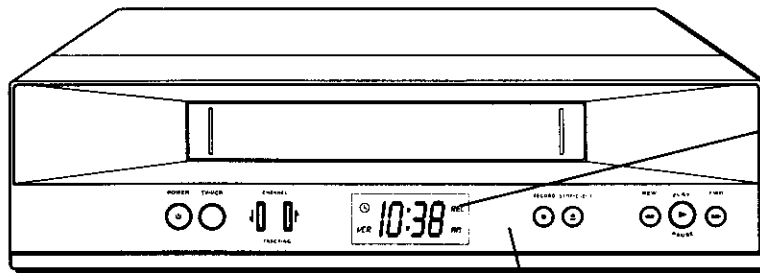
**7 CONNECTIONS**



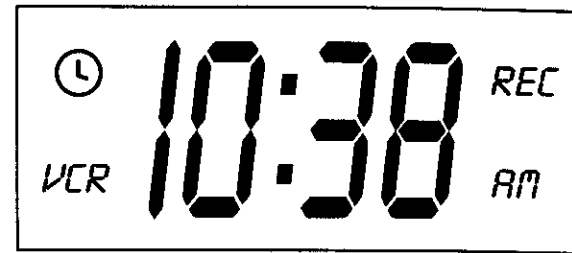
**8 REFERENCES**

# REFERENCES

## FRONT PANEL



Remote Sensor



Clock/Counter Display

**CHANNEL/TRACKING Up or Down** Selects next higher or lower channel in the VCR's channel memory. Adjusts tracking when a tape is playing. Press both together to re-center tracking.

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

**PLAY•PAUSE** Plays a tape. Pauses action for viewing during playback. Pauses recording to prevent recording of unwanted scenes.

**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.

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

**STOP•EJECT** Stops the normal functions such as record, playback, rewind, fast-forward, or pause. Ejects the tape when the VCR is stopped.

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

## CLOCK/COUNTER DISPLAY

**TIME** The current time appears. Only an AM indicator appears with the time. There is no indicator for PM.

**TIME COUNTER** This shows the actual time it takes to play back a segment of a recorded tape. This counter helps locate the beginning or end of programs taped.

# REFERENCES

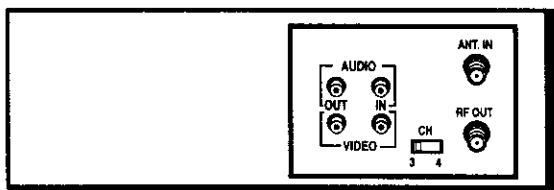
**REC INDICATOR** Lights when the VCR is recording.

**TIMER INDICATOR** (Ⓛ) Lights during an express or timer recording or when the VCR is set for a timer recording and the VCR is turned off. Flashes when the clock is not set. "TIMER" Flashes when the timer recording is set and there is no tape in the VCR.

**VCR INDICATOR** (Applies only if the VCR Viewing Channel is 3 or 4.) Press the TV•VCR button on the remote or front VCR panel to turn on or off.

- VCR Indicator on: Picture from VCR
- VCR Indicator off: Picture from the TV channel.

## BACK PANEL



**CH. 3/4 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 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 "L" to record

from these jacks. For more information about the VIDEO INPUT, see "How to Find the TV's Video INPUT Channel" on the next page.

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

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

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

# REFERENCES

## HOW TO FIND THE TV'S VIDEO INPUT CHANNEL

You need to tune your TV to the Video Input Channel if you are using the VCR's VIDEO/STEREO OUT jacks to connect to the TV's VIDEO/STEREO INPUT jacks. You must select this "channel" before you can see the VCR's menus, the cable or antenna reception, and the content that's on a tape.

The video channel on TVs varies for different brands and different models. Below are some steps to try:

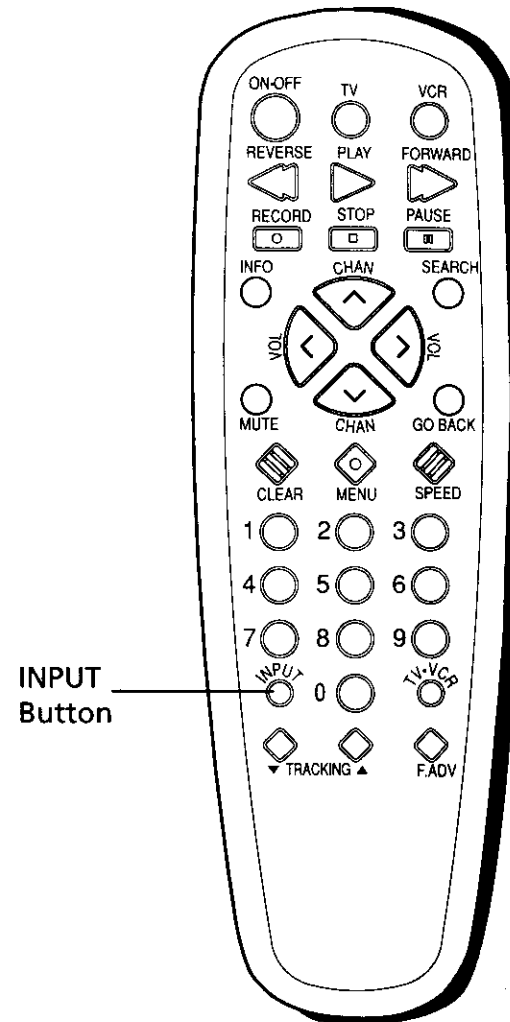
- If your TV brand is RCA, GE, or PROSCAN, press the TV button on the remote control that came with the VCR. Then press the INPUT button on the remote.
- If you have another brand of TV, consult the section, VCR BASICS, to see if the VCR's remote control can be set to control your TV. If so, follow the step above.

If those options do not work, try the following ideas. You might access the Video Input Channel by:

- pressing a button on the remote (see table below)
- selecting the channel from the TV's menu system (see table below)
- tuning directly to the channel by selecting a specific channel number (see table below)
- going through all the channels in the channel list by pressing the channel up or down buttons on the TV.

Some common scenarios are listed in the Video Input Channel Variations table that follows:

Video Input Channel Variations		
Button/Switch on the TV	Button on the TV Remote	Channel Number
VIDEO	VID 1	00
SIGNAL	LINE	90
VID 1	VID	91
VID 2	VIDEO	92
S-VID	S-VID	93
S-VIDEO	INPUT	VID 1
	S-VIDEO	VID 2
	SOURCE	
	AUX	





# REFERENCES

## 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 the Remote VCR1/VCR2 setting is set to VCR1 so the remote that came packed with your VCR can operate it.

### 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 3 CH. 4 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.
- 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.
- The time counter disappears during search; this is normal.

### WILL NOT RECORD OR PLAY

- Check to make sure there is a tape in the VCR.
- Try ejecting and reinserting the cassette.

*(Continued on next page)*

# REFERENCES

## TROUBLESHOOTING (CONT.)

- 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.
- Check the ProTect Plus™ feature.

### REWIND DOES NOT OPERATE

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

### VCR PLUS SYSTEM OR TIMER RECORDING NOT MADE OR WRONG PROGRAM RECORDED

- Check to make sure the correct VCR Plus+ system code 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+ system setup was completed correctly.

### 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.

### INTERNAL CLOCK SHOWS INCORRECT TIME OR DATE

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

### TIME DID NOT ADJUST FOR DAYLIGHT-SAVING TIME

- Check to make sure daylight-saving feature is set correctly.

### 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.

*(Continued on next page)*

# REFERENCES

## TROUBLESHOOTING (CONT.)

- If Detect Automatically was selected for the Signal Type in the AUTO CHANNEL SEARCH menu, try using either CABLE TV or ANTENNA instead.
- May not be necessary if using a cable box for all channels. Contact your local cable company for more information.

### **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/ANT

### **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.

### **TIMER INDICATOR FLASHES**

- Clock is not set.
- Check to make sure there is a cassette in the VCR when a timer recording is set.
- TIMER and RECORD indicators flash when the ProTect Plus™ Locking feature is activated.

### **TIME COUNTER DISAPPEARS DURING SEARCHING**

- This is normal.

### **ON-SCREEN MENUS APPEAR IN ENGLISH, FRENCH, OR SPANISH**

- Check LANGUAGE feature.

# REFERENCES

## SPECIFICATIONS

<b>Format:</b>	VHS
<b>Record/Playback System:</b>	Video: 2-head Audio: Mono 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>	17 watts (standby < 3 watts)
<b>Dimensions:</b>	3.54 inches high (90 mm) 14.1 inches wide (360 mm) 9.29 inches deep (236 mm)
<b>Weight:</b>	7.8 pounds (3.55 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.

# REFERENCE

## LIMITED WARRANTY

### WHAT YOUR WARRANTY COVERS:

- Any defect in materials 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 rental firm, whichever comes first

### WHAT WE WILL DO:

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

### HOW YOU GET SERVICE:

- Take your VCR to any Authorized RCA VCR Service Center To identify your nearest Auth VCR Service Center, ask your dealer, look in the Yellow Pages, or call 1-800-336-1900
- Show the Authorized Service Center Representative your evidence or purchase date or f
- 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 our 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
- Batteries
- A VCR that has been modified or incorporated into other products or is used for instituti 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 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 fr n 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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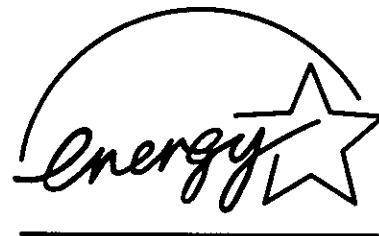
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If your VCR needs service, please contact your dealer or the nearest service center from the yellow pages. Please do not send any products to the Indianapolis address listed in this manual or on the carton. This will only add delays in service for your product.

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