

PROSCAN®

Video Cassette Recorder
Owner's Manual

Model PSVR64

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PROSCAN[®]

So advanced. Yet so simple.[™]

We're building our reputation on products that are so advanced, they're simple. If you want all the benefits of the latest technology, without the complexity, we have a very simple solution.

It's called ProScan. State-of-the-art technology that real people can use.

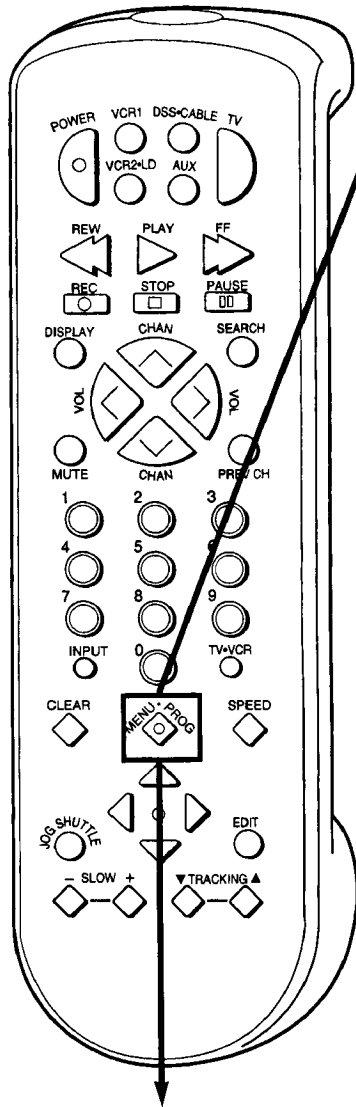
Thank you for choosing ProScan. And welcome to our company-wide commitment to your complete satisfaction and viewing enjoyment.

VCR Plus+ and Timer Recording Quick Reference

This quick reference outlines the procedures for setting up your VCR to record a program while you are away. Before the VCR is set up for VCR Plus+ programming, make sure a VCR Plus+ channel number is assigned for each broadcast or cable channel.

VCR Plus+ Programming

1. Press MENU•PROG to display the VCR MAIN MENU.
2. Press 1 to select VCR Plus+.
3. Enter the VCR Plus+ Code number.
4. Press MENU•PROG.
5. Choose how often you want to record the program.
6. Press MENU•PROG.
7. Select a recording speed by pressing SPEED.
8. Press MENU•PROG to enter your program.
9. Turn off the VCR before recording time.



```

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

```

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

```

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

```

Program 1 (One Time)
Channel 08
Start Time 02:10 PM
End Time 03:35 PM
Start Date 11/18/95 SAT
Tape Speed SLP
Press CLEAR to correct
Press MENU to save
    
```

```

Program 1
has been saved
    
```

Timer Programming

1. Press MENU•PROG to display the VCR MAIN MENU.
2. Press 2 to select the TIMER RECORDINGS menu.
3. Press 1 to display Create a New Program menu.
4. Choose how often you want to record the program.
5. Enter the channel number, start time (including AM or PM), end time, start date, and recording speed of the recording.
6. Press MENU•PROG to enter your program.
7. Turn off the VCR before recording begins.

```

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

```

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

```

How often should this
Program record?
1 One Time
2 Daily (every day)
3 Weekdays (Mon - Fri)
4 Weekly (Once per week)
0 Exit to Main Menu
    
```

```

Program 1 (One Time)
Channel 06 CABLE
Start Time 03:10 PM
End Time 04:35 PM
Start Date 11/18/95 SAT
Tape Speed SLP
Press CLEAR to correct
Press MENU to save
    
```

```

Program 1
has been saved
    
```


For detailed information on programming your VCR, see pages 36-40.


Important Information

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

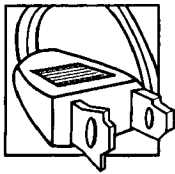
WARNING TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

RISK OF ELECTRIC SHOCK
DO NOT OPEN

 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.

Cautions



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.

Do not defeat the safety feature of the plug. The wide blade fits into the wall socket only one way. If you need an extension cord, make sure it matches the plug of the VCR.
For U.S.A. — Operate VCR only on 120 volts, 60Hz AC power (normal house power).
FCC Regulations state that unauthorized changes or modifications to this equipment may void the user's authority to operate it.

Note To 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 VCR.

Model No. PSVR64

Serial No. _____

Purchase Date: _____

Dealer/Address/Phone: _____

Hooking Up the VCR

The hookups on pages 2 through 7 are divided into two hookup types: Basic (A) and Advanced (B and C).

The basic hookup shows the backs of TVs that have only an antenna/cable connection. It is the easier of the two and additional accessories may not be needed.

The advanced hookup shows the VCR hooked up to a monitor/receiver (TV with audio and video jacks). This connection may improve the picture quality as well as convenience of operation.

Choosing a Hookup

Answer the questions to choose the hookup for your VCR.

1. How do you receive your TV signals?

Choose one answer from below.

- A. Outside antenna – Turn to page 2.
- B. Rabbit ears (set-top) and/or bow tie antenna – Turn to page 2.
- C. Cable System – Go to question 2.
- D. RCA brand DSS[®] Satellite System and another source (A, B, C) – Go to question 3.

2. What type of Cable-TV system* do you have?

Choose one answer from below.

- A. Cable without a box – Turn to page 2.
- B. Cable box to unscramble all the channels – Turn to page 3.
- C. Cable box to unscramble only pay channels, such as HBO, Showtime, Cinemax, etc. – Turn to page 4.

*You may need to contact your local cable company for assistance.

3. What type of RCA DSS[®] satellite system do you have?

Choose one answer from below.

- A. Satellite receiver connected to TV without audio/video inputs – Turn to page 5.
- B. Basic satellite receiver connected to TV with audio/video inputs – Turn to page 6.
- C. Deluxe satellite receiver connected to TV with audio/video inputs – Turn to page 6.

Optional Hookups

How to Hook Up Two VCRs for Copying Tapes

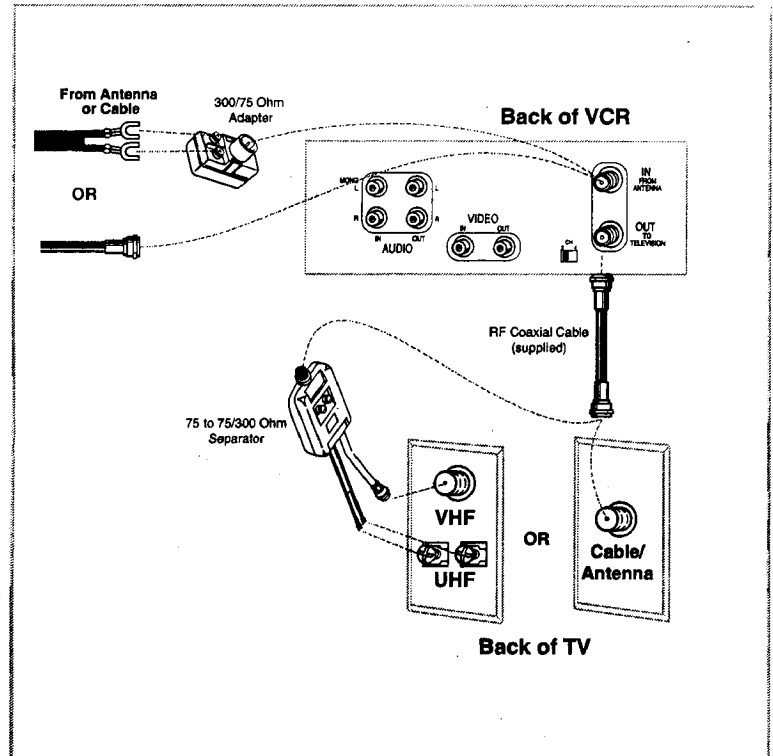
1. Select a hookup by answering the questions above.
2. Then modify the connections as shown on page 7.

Antenna or Cable System Without a Cable Box

Basic Hookup

Use this hookup for a simple connection which requires fewer accessories.

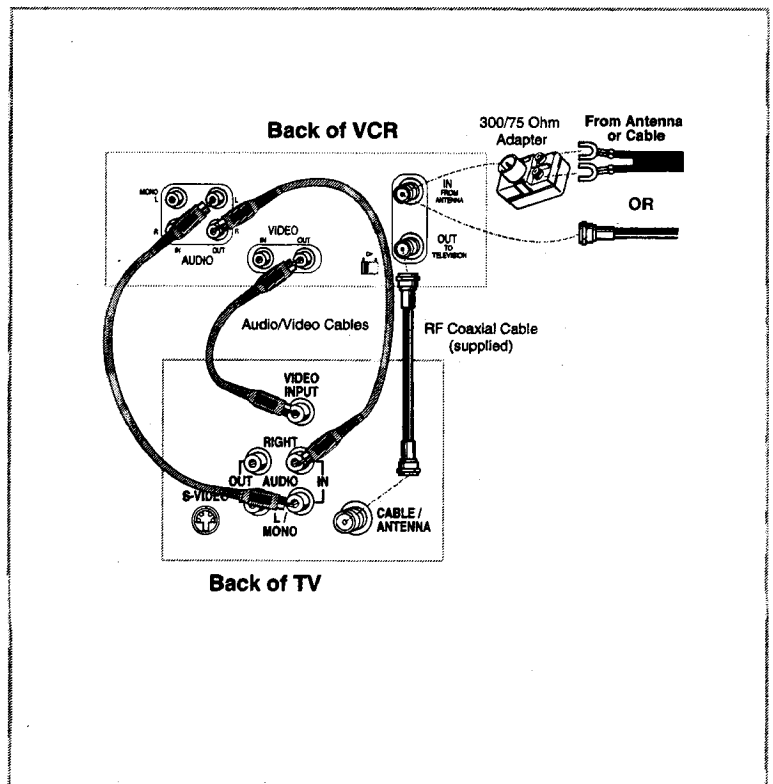
1. Set the CH3 CH4 switch on back of VCR to either channel 3 or 4.
Tune the TV to this channel and use the TV•VCR button to watch the VCR.
2. Connect as shown.
This connection may require additional accessories not provided.
3. Plug in power cords of VCR and TV.
4. Go to page 8 for VCR setup information.



Advanced Hookup

Use this hookup for slightly improved picture quality, hi-fi stereo playback, and more convenient operation — use of TV•VCR button not required.

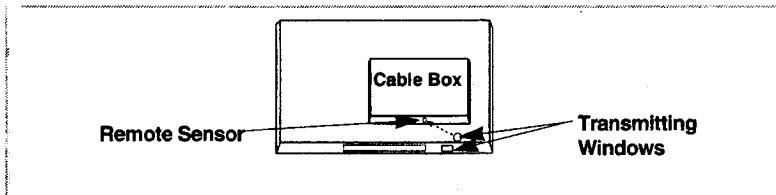
1. Connect as shown.
This connection requires additional accessories not provided.
If your TV is not stereo, a Y-adapter may be required to hear sound from both channels.
2. Plug in power cords of VCR and TV.
3. Go to page 8 for VCR setup information.
You will tune the TV to its video input to watch the VCR.
Set the Auto TV/VCR feature to OFF.
(See page 15.)



Cable System with Cable Box to Unscramble All Channels

Position Cable Box

Position the remote-controllable cable box on top of the VCR. You may need to position it at different angles before the VCR can control it. Make sure the cable box does not cover the transmitting window on top of the VCR.



Basic Hookup

Use this hookup for a simple connection which requires fewer accessories.

1. Set the CH3 CH4 switch on back of VCR to either channel 3 or 4.

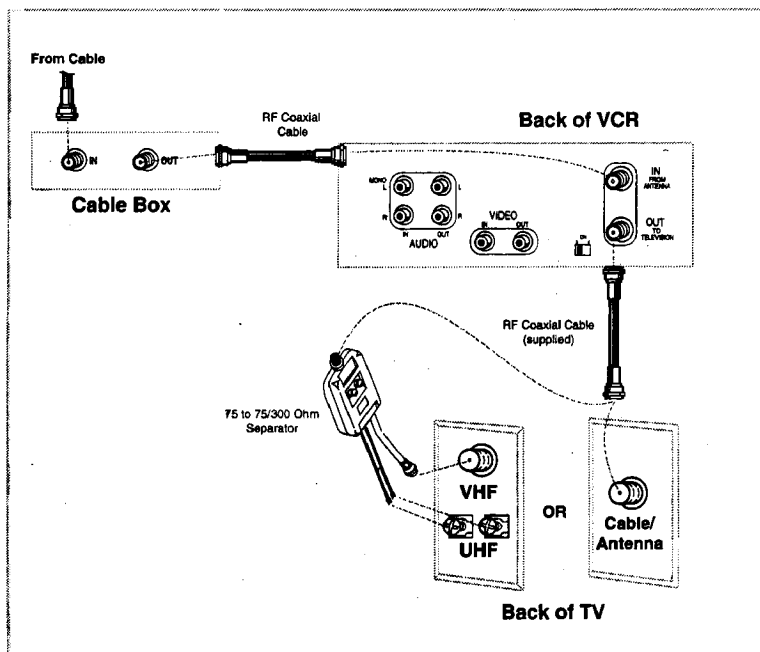
You will tune the TV to this channel and use the TV•VCR button to watch the VCR.

2. Connect as shown.

This connection may require additional accessories not provided.

3. Plug in power cords of VCR, TV, and cable box.

4. Go to page 8 for VCR setup information.



Advanced Hookup

Use this hookup for slightly improved picture quality, hi-fi stereo playback, and more convenient operation — use of TV•VCR button not required.

1. Connect as shown.

This connection requires additional accessories not provided.

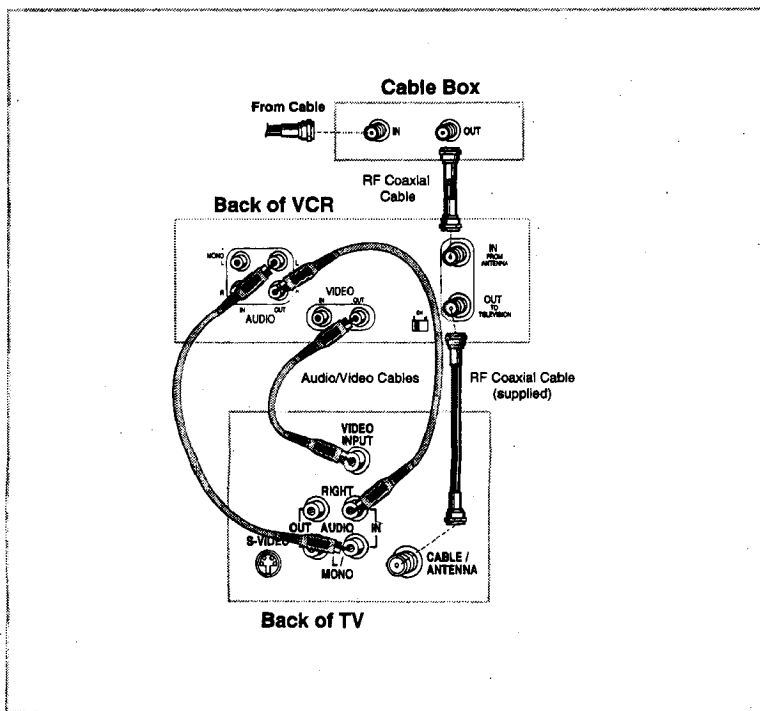
If your TV is not stereo, a Y-adapter may be required to hear sound from both channels.

2. Plug in power cords of VCR, TV, and cable box.

3. Go to page 8 for VCR setup information.

You will tune the TV to its video input to watch the VCR.

Set the Auto TV/VCR feature to OFF. See page 15.



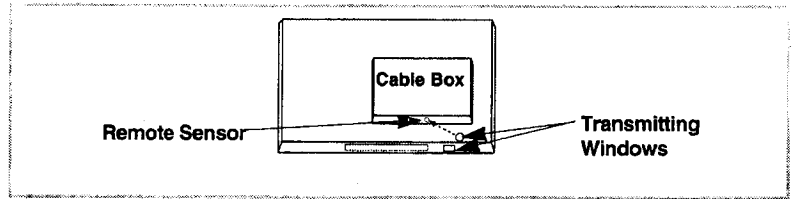
Caution: The unauthorized recording of satellite broadcasts, television programs, or other materials may infringe the rights of others.

Hooking Up the VCR

Cable System with Cable Box to Unscramble Only Pay Channels (such as HBO, Showtime, Pay-Per-View, etc.)

Position Cable Box

Position the remote-controllable cable box on top of the VCR. You may need to position it at different angles before the VCR can control it. Make sure the cable box does not cover the transmitting window on top of the VCR.



Basic Hookup

Use this hookup for a simple connection which requires fewer accessories.

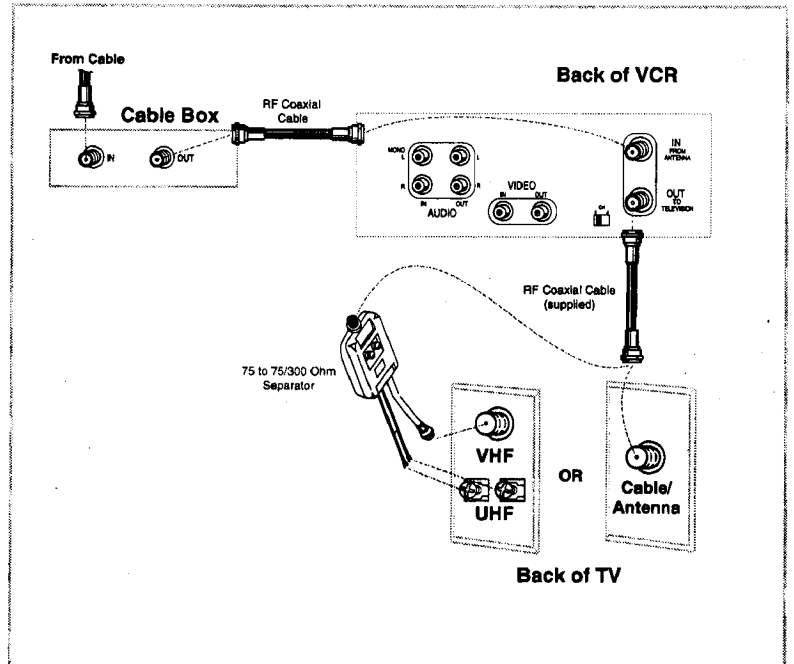
1. Set the CH3 CH4 switch on back of VCR to either channel 3 or 4.

You will tune the TV to this channel and use the TV•VCR button to watch the VCR.

2. Connect as shown.

This connection may require additional accessories not provided.

3. Plug in power cords of VCR, TV, and cable box.
4. Go to page 8 for VCR setup information.



Advanced Hookup

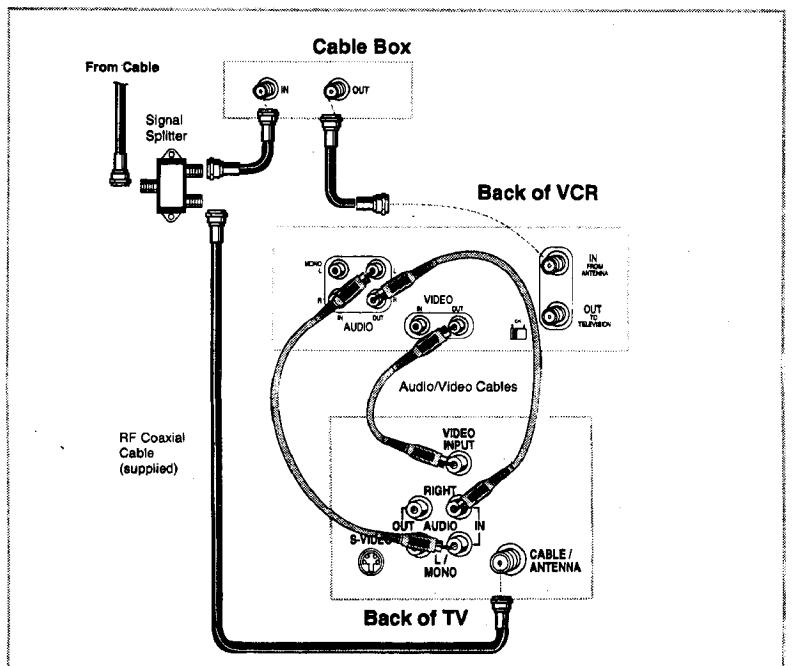
Use this hookup for slightly improved picture quality, hi-fi stereo playback, and more convenient operation — use of TV•VCR button not required.

1. Connect as shown.

This connection requires additional accessories not provided.

If your TV is not stereo, a Y-adaptor may be required to hear sound from both channels.

2. Plug in power cords of VCR, TV, and cable box.
 3. Go to page 8 for VCR setup information.
- You will tune the TV to its video input to watch the VCR. All pay channels are viewed through the VCR.

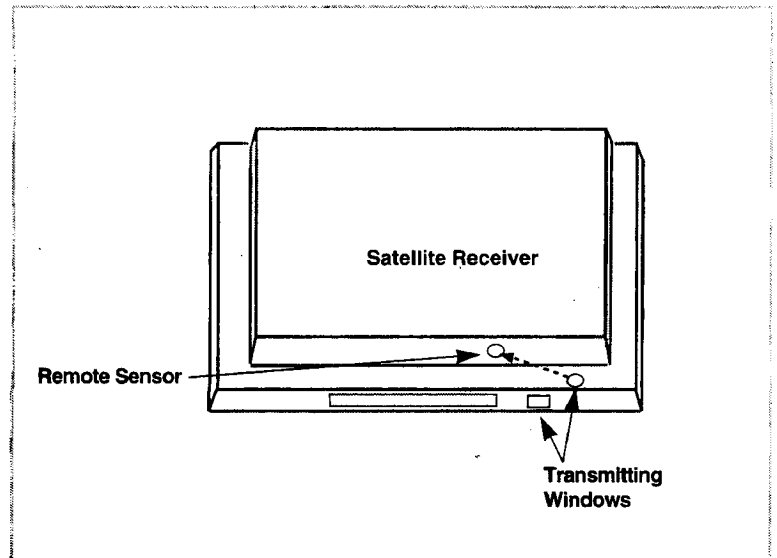


RCA DSS® Satellite Receiver

Position RCA DSS® Receiver

Position the receiver on top of the VCR. You may need to position it at different angles before the VCR can control it. Make sure the receiver does not cover the transmitting window on top of the VCR.

Do not stack electronic components or other objects on top of the RCA DSS® receiver. The slots on top of the receiver must be left uncovered to allow proper airflow to the unit. Blocking the airflow to the unit could impair performance or damage your receiver and other components. Also, do not stack the RCA DSS® receiver on top of a "hot component" such as an audio power amplifier.



Basic Hookup

Use this hookup if your TV does not have audio/video jacks.

1. Set the CH3 CH4 switch on back of satellite receiver to either channel 3 or 4.

You will tune the VCR to this channel or its line input (L1) to record from the receiver.

To watch the satellite receiver, turn off the VCR.

If you want to watch or record the signal from your antenna, cable, or cable box, make sure the satellite receiver is turned off.

2. Set the CH3 CH4 switch on back of VCR to either channel 3 or 4.

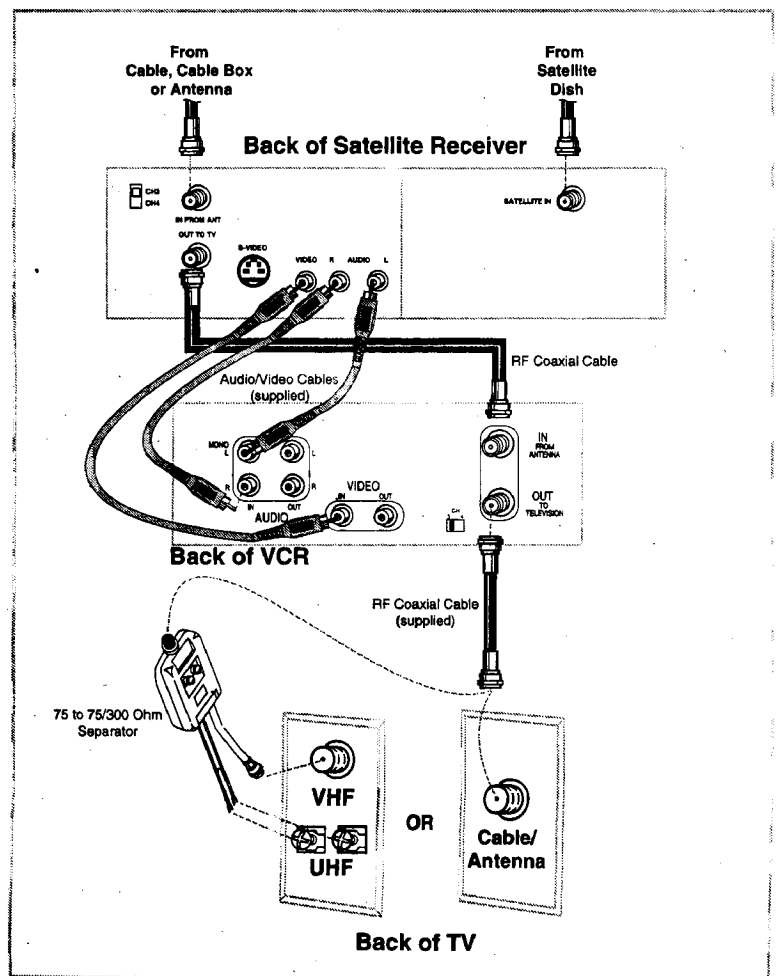
You will tune the TV to this channel and use the TV•VCR button to watch the VCR.

3. Connect as shown.

This connection may require additional accessories not provided.

4. Plug in power cords of VCR, TV, and receiver.

5. Go to page 8 for VCR setup.



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

RCA DSS[®] Satellite Receiver

Advanced Hookup with Basic Receiver

Use this hookup if your TV has audio/video jacks and your receiver has one set of AUDIO/VIDEO jacks.

1. Set the CH3 CH4 switch on back of receiver to either channel 3 or 4.

You will tune the VCR to this channel to record from the satellite receiver.

To watch the satellite receiver, tune your TV to its video input channel.

If you want to watch or record the signal from your antenna, cable, or cable box, make sure the satellite receiver is turned off.

2. Set the CH3 CH4 switch on back of receiver to either channel 3 or 4.

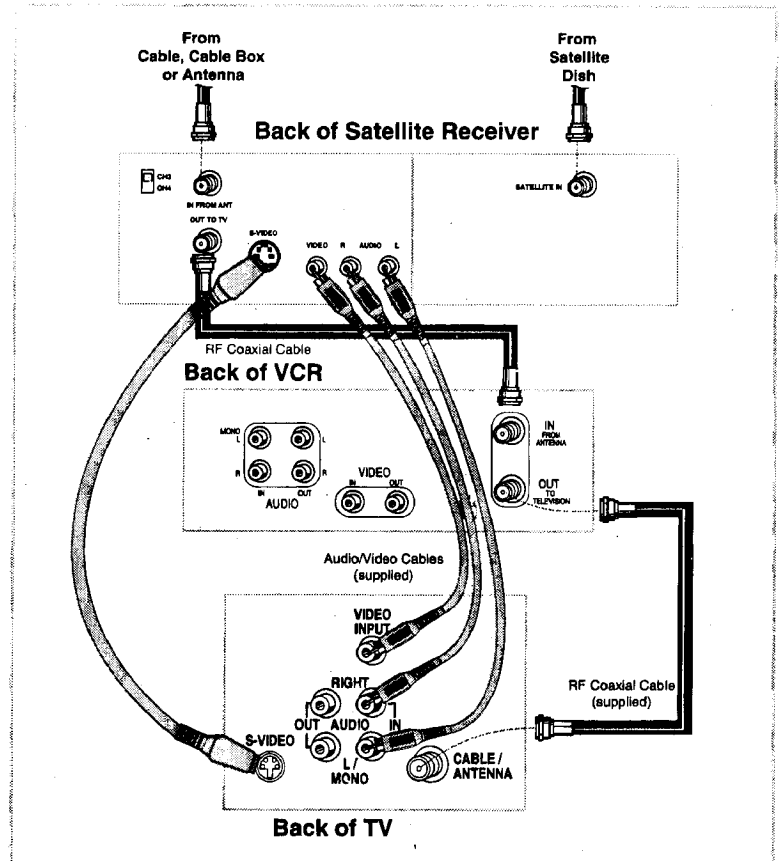
You will tune the TV to this channel and use the TV•VCR button to watch the VCR.

3. Connect as shown.

This connection may require additional accessories not provided.

4. Plug in power cords of VCR, TV, and receiver.

5. Go to page 8 for VCR setup information.



Advanced Hookup with Deluxe Receiver

Use this hookup if your TV has audio/video jacks and your receiver has two sets of AUDIO/VIDEO jacks.

1. Set the CH3 CH4 switch on back of receiver to either channel 3 or 4.

You will tune the TV to this channel and use the TV•VCR button to watch the VCR.

To record from the satellite receiver, you will tune the VCR to its line input (L1).

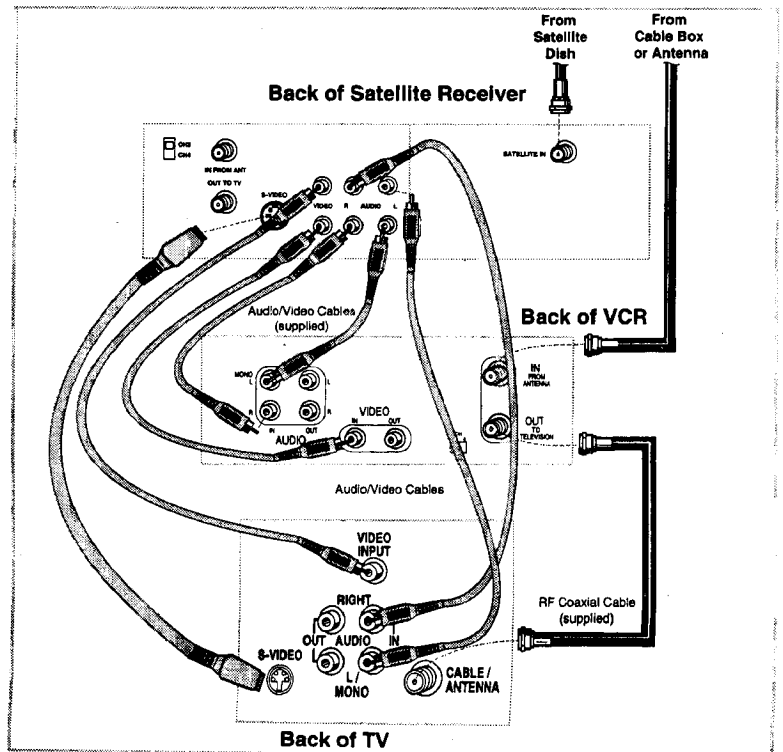
To watch the satellite receiver, tune your TV to its video input channel.

2. Connect as shown.

This connection may require additional accessories not provided.

3. Plug in power cords of VCR, TV, and receiver.

4. Go to page 8 for VCR setup information.



Connecting Two VCRs for Copying Tapes

Basic Hookup

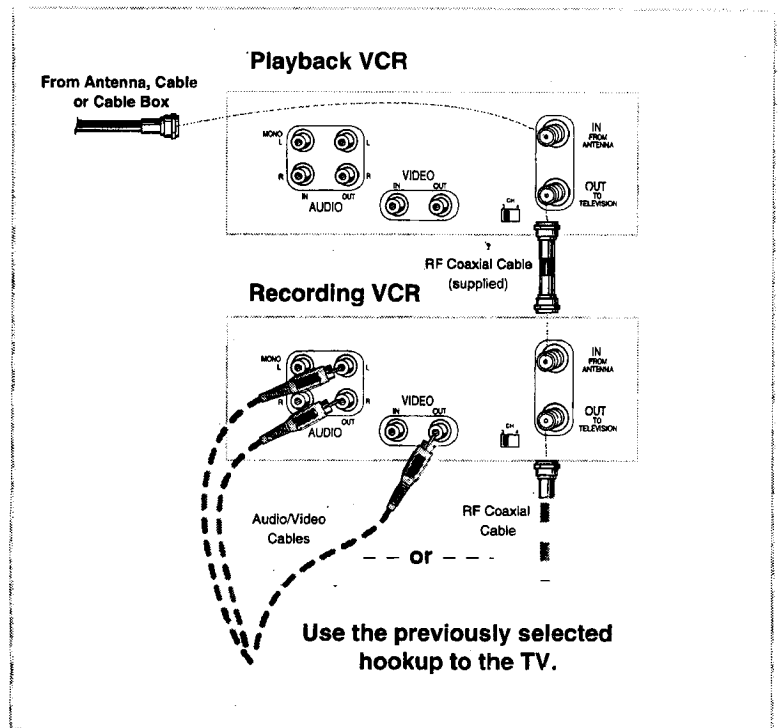
Use this hookup for a simple connection which requires fewer accessories.

1. Select a hookup from pages 2 - 6, and then modify with this connection.
2. Set the CH3 CH4 switch on the playback VCR to either channel 3 or 4.

You will tune the recording VCR to this channel to receive the signal from the playback VCR.

3. Connect as shown.
This connection may require additional accessories not provided.
4. Plug in power cords of VCRs and TV.
5. Go to page 8 for VCR setup information.

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



Advanced Hookup

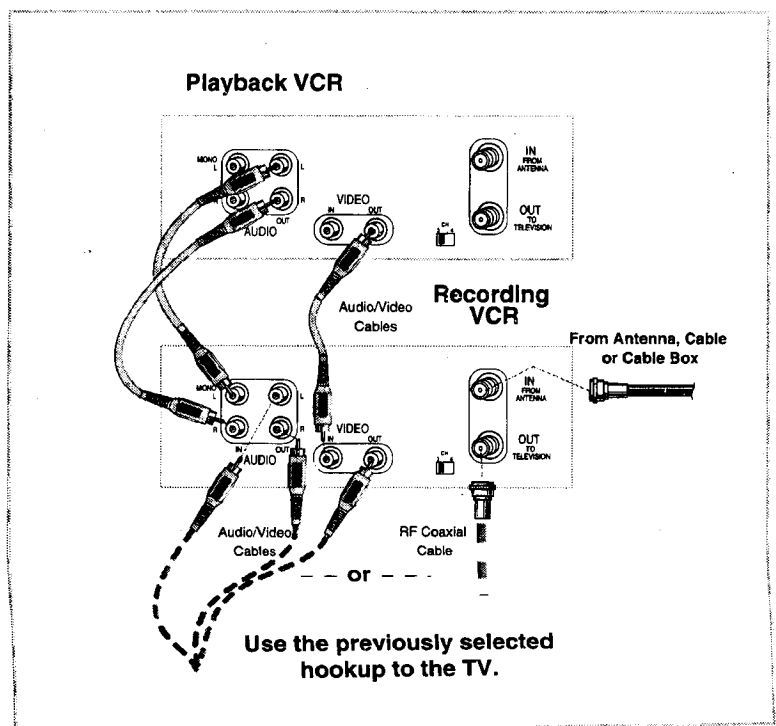
Use this hookup for slightly improved copy quality and more convenient operation — use of TV•VCR button not required.

1. Select a hookup from pages 2 - 6, and then modify with this connection.

2. Connect as shown.
This connection requires additional accessories not provided.

If your other VCR is not stereo, plug it into the AUDIO L MONO jack of this VCR to hear sound from both channels.

3. Plug in power cords of VCRs and TV.
4. Go to page 8 for VCR setup information.
You will select the line input (audio/video) on the recording VCR to receive the signal from the playback VCR.



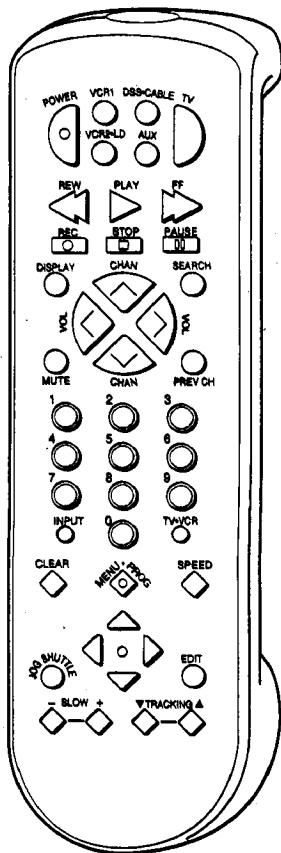
Setting Up the VCR

Now that you have properly connected the TV and VCR, you are ready to set up the VCR to meet your personal needs. This section discusses the basic setup necessary for your VCR to operate properly.

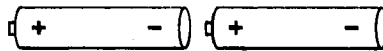
Startup

Check Accessories with VCR

Contact your dealer if any items are missing.



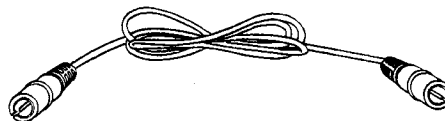
Remote
(Stock No. 221402)



2 "AAA" Batteries

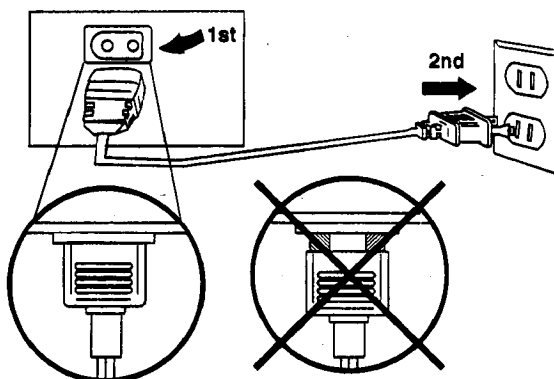


Power Cord
(Stock No. 218104)

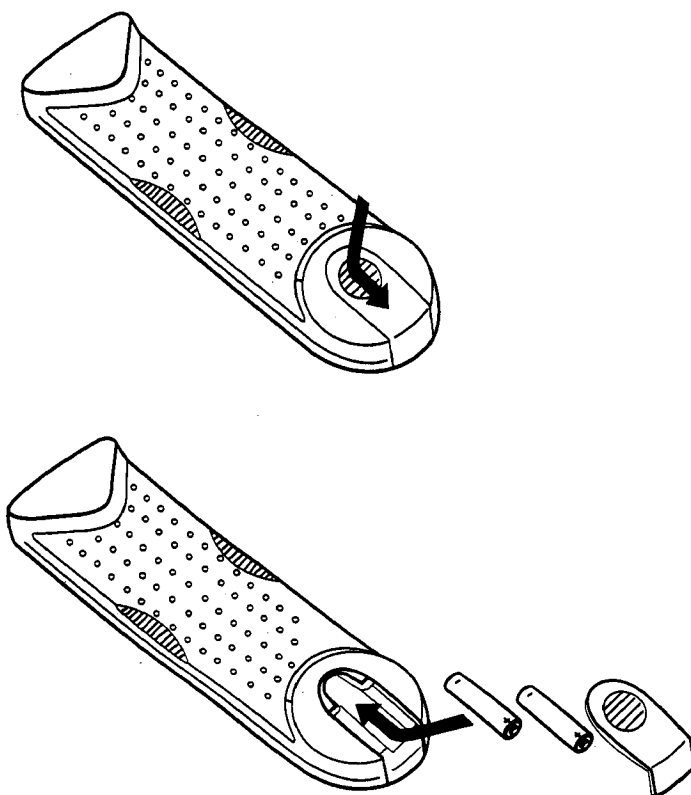


RF Coaxial Cable
(Stock No. 221396)

Attach Power Cord to Back of VCR



Insert Batteries In Remote



Setting Up the VCR

Use the On-Screen Menu System

Point and Select is the method you use to move through the menu system. There are two ways to select (or change) a menu or feature. Although there are two ways to access the menu system, only the number buttons are referenced throughout this manual to explain the VCR features and operations.

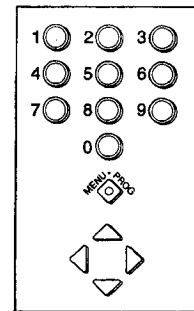
Using the Number Buttons

Press **MENU•PROG** to display the VCR MAIN MENU. Then use the number button on the remote that corresponds to the number on the menu to select (or change) an item. Using the number button allows you to point and select a menu item at the same time.

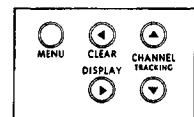
Using the Arrow Buttons

Press **MENU•PROG** on the remote or **MENU** on the VCR to display the VCR MAIN MENU. Then use the \triangle or ∇ arrow button to point to a menu or item. Press **MENU•PROG** on the remote or **MENU** on the VCR to select (or change) the item.

The left and right arrow buttons move from one location to another. Use these buttons to select a function such as minutes or hours during clock set. Then use the up and down arrows to change.



Remote



Buttons Located Behind Left Control Door of VCR

Turn On the TV

1. Turn on the TV.
2. If you use one of the basic hookups, tune the TV to the channel selected with the CH3 CH4 switch on back of VCR.

If you used one of the advanced hookups, tune the TV to the TV's video input. (See TV owner's manual for details.)

Turn On the VCR

1. Press **VCR1** on the remote.

The first time you turn on the VCR, the **SETUP** menu will appear. Follow the steps on the screen to automatically set-up the cable box or RCA DSS® satellite receiver, auto channel search, automatically set the time, and select some feature options.

- Press number button 1 on the remote to Begin setup. Proceed to Auto Cable/DSS Box Setup.
- Press number button 2 on the remote to Cancel the setup.

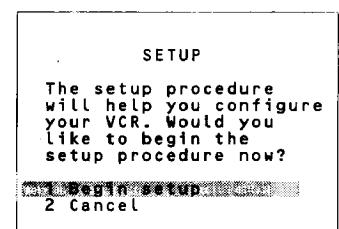
If you choose not to use the **SETUP** menu, follow the steps in this section to manually set up the VCR so it will operate properly.

If you skip auto channel search during setup the auto clock set feature will not be performed.

If the **SETUP** menu does not appear or you prefer, you can manually select the **SETUP** menu. Each of these features (except the automatic clock set) may also be performed individually.

To manually select the **SETUP** menu.

- Press **MENU•PROG** to display the VCR MAIN MENU.
- Press 5 to display the **SETUP** menu.



Auto Cable/DSS Box Setup

The cable/DSS box setup allows the VCR to record programs from the cable box or RCA DSS® receiver.

- If your cable box can be controlled by a remote, the VCR may be able to tune it to the channel you want to record during VCR Plus+ and timer recordings. Position the remote-controllable cable box on top of the VCR to receive the infrared remote signal. (See pages 3-4.)
- The VCR will turn on an RCA DSS® receiver and tune it to the channel you want to record during timer recordings. Position the receiver on top of the VCR to receive the infrared remote signal. (See pages 5-7.)

1. Cable box or satellite receiver not used for all channels:

Press 2. You are finished with Cable Box Setup. Skip to Auto Channel Search and Auto Clock Set.

Cable box or RCA DSS® receiver used for all channels:

Press 1 to continue.

- ### 2. Press two numbers on the remote to enter the output channel of your cable box or satellite receiver. Press 0 before a single-digit number. Valid numbers are 01 – 99.

If you connected your cable box or satellite receiver to the VCR using the box's AUDIO/VIDEO OUT jacks, press INPUT to select the VIDEO1 or VIDEO2 option.

Press CLEAR on the remote to correct an entry.

- ### 3. Press MENU•PROG to proceed.

The VCR now automatically enters the output channel of your cable box or satellite receiver as the channel to be recorded in the VCR PLUS+ and Timer Recordings menus.

- ### 4. Press MENU•PROG to proceed.

- ### 5. Manually Controlled Cable Box: You are finished with cable box setup. Press MENU•PROG to exit. Proceed to Auto Channel Search and Auto Clock Set.

RCA DSS® Receiver or Remote Controlled Cable Box:

- RCA DSS® Receiver: Enter 00 for the code. The receiver should turn on and tune to channel 200.

The VCR will now tune your receiver to the correct channel during timer recordings. --- DSS will appear for the channel in the timer program menu.

Auto clock set is not supported by DSS. Proceed to Manual Clock Set, and manually set the clock.

Remote Controlled Cable Box: Enter your cable box code from the chart on page 21 and follow the on-screen directions.

The VCR changes the cable box from channel 02 to channel 09 when you enter the correct code for your cable box.

If the cable box changes channels, press 1. Proceed to Auto Channel Search and Auto Clock Set.

If none of the codes work, try repositioning the cable box and entering the codes again. If the codes still do not work, this VCR cannot control your cable box during timer recordings or automatically set the clock. Press MENU•PROG. Proceed to Auto Channel Search and Auto Clock Set.

SETUP

Is a cable box or DSS receiver being used with the VCR for all channels?

- 1 Yes
- 2 No, skip this step

CABLE/DSS BOX SETUP

Enter the output channel of the cable box or DSS receiver.



Press 01-99 or INPUT
Press MENU to exit

CABLE/DSS BOX SETUP

The VCR will now receive all channels from the cable box or DSS receiver on VCR Ch 03

Press MENU to proceed

CABLE/DSS BOX SETUP

Enter the code for your cable box or DSS receiver from the list in your User's Manual.



Press MENU to proceed

Did the DSS receiver turn on and tune to channel 200?

- 1 YES, setup complete
- 2 NO, try another code

CABLE/DSS BOX SETUP

Please turn on the cable box and tune it to channel 2.

Press MENU to proceed

CABLE/DSS BOX SETUP

Did the cable box tune to channel 9?

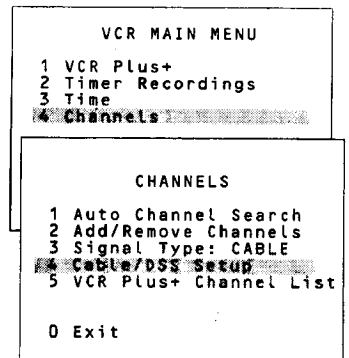
- 1 YES, setup complete
- 2 NO, try another code

Setting Up the VCR

Manual Cable Box Setup

If you ever want to manually set up the cable box:

1. Press **MENU•PROG** to display the VCR MAIN MENU on the TV screen.
2. Press **4** to select CHANNELS menu.
3. Press **4** to select Cable/DSS Setup.
4. Perform steps 1-5 as shown in Auto Cable/DSS Box Setup.



Auto Channel Search and Auto Clock Set

Follow the steps on the screen to auto channel search and automatically set the clock.* You can also perform each of these operations separately from the VCR MAIN MENU.

RCA DSS® Receiver: If you receive all channels through an RCA DSS® satellite receiver, set the clock manually.

Cable Box: The VCR will proceed to automatic clock set.

No Cable Box: Follow the directions on the screen to automatically auto search channels and set the clock using the Coordinated Universal Time information transmitted by some broadcast stations.

If the SET TIME ZONE screen appears, follow these steps to place the channels in the VCR's memory and set the clock.

1. Press a number (1-6) on the remote corresponding to the "standard" time zone you live in. If you do not know your time zone, press 7 and an automatic setting will be made.

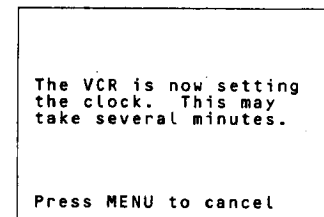
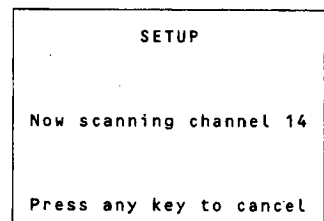
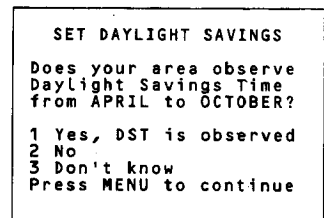
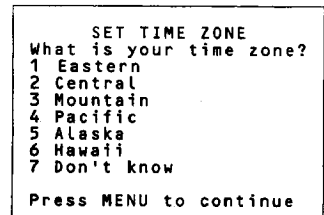
If you select Don't know for your time zone, the VCR will set the clock using the first Coordinated Universal Time information it finds. If the time is not correct, select a time zone or set the clock manually.

2. Set daylight savings. When the SET DAYLIGHT SAVINGS screen appears, press 1 if your area observes daylight savings time from April to October, or press 2 if it does not. If you do not know, press 3.
3. Press **MENU•PROG** on the remote if all antenna or cable connections are completed. The auto channel search will be performed, followed by automatic clock set.

If The Auto Clock Set was unsuccessful message appears, then set the clock manually. The clock must be set before you can use the VCR Plus+ or timer recording feature.

If you receive all channels through a cable box, the VCR will not reset the clock after a power outage unless the cable box is set to the channel carrying the broadcast signal. (Call your local cable operator to find out what channel carries the broadcast signal.)

* Signal might not be available in some areas.

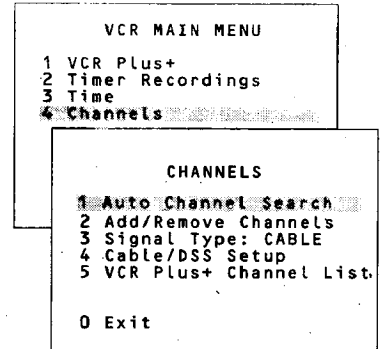


Manual Channel Search

If you ever need to manually Auto Channel Search because you change cable or antenna signals:

1. Press **MENU•PROG** to display the **VCR MAIN MENU** on the TV screen. If this menu does not appear:
 - Make sure TV is tuned to same channel as the CH3 CH4 switch on the back of the VCR or the TV's video input (refer to TV's manual).
 - Press **VCR1**, then press **MENU•PROG** again.
 - If you use a basic hookup, check **VCR** indicator in display panel – it should be on. Press **TV•VCR** to turn it on.
 - Check the connections.
2. Press **4** to display the **CHANNELS** menu.
3. Press **1** to begin Auto Channel Search.

The VCR automatically selects **CABLE** (cable TV) or **ANTENNA**. If you need to change the setting manually, press **3**.

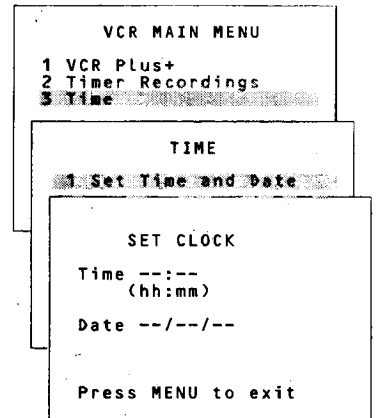


Manual Clock Set

If the auto clock set was unsuccessful or you want to manually set the clock, follow the steps below.

If you set the clock manually during setup, Auto Clock Set will be set to OFF.

1. Press **MENU•PROG** on remote to display the **VCR MAIN MENU** on the TV screen.
2. Press **3** to point and select the **TIME** menu.
3. Press **1** to display Set Time and Date.
4. Enter the time and date with the number buttons on the remote.
 - Press **0** before single-digit numbers.
Example: press **0**, then **5**, then **0**, then **7** for a time of 5:07. Press **1** for AM or **2** for PM.
 - Press **CLEAR** on the remote to change incorrect entries.
5. Press **MENU•PROG** on remote to remove **SET CLOCK** from the TV screen and start the clock. The time will appear in the VCR's display panel and the time and date will appear on the TV screen when you press **DISPLAY**.



Setting Up the VCR

Setup VCR Plus+ Channels

The VCR must be setup with the VCR Plus+ channels before you can record using VCR Plus+. This can be done now or at a later time. Details are on page 36.

Program VCR for VCR1 or VCR2•LD Button

You can program this VCR to respond to the VCR1 or VCR2•LD button on the remote. Details are on page 19.

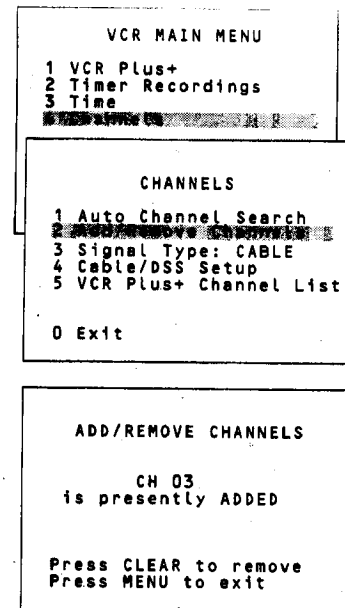
Remember you must press VCR1 or VCR2•LD on the remote — whichever you selected in the menu — before the remote will operate this VCR.

Add or Remove Channels from the VCR's Memory

You may want to add or remove channels if some of the channels are not active, have weak signals, or you do not want to watch them.

We recommend channels be placed in memory using the Auto Channel Search feature described earlier before adding or removing channels. Channels 2-13, L1, and L2 are preset at the factory.

1. Press VCR1 on the remote.
2. Press MENU•PROG on the remote to see the VCR MAIN MENU on the TV screen.
3. Press 4 to display the CHANNELS menu.
4. Press 2 to display the ADD/REMOVE CHANNELS menu.
5. Follow the directions on the screen.
6. Add or remove more channels by entering channel numbers or using CHAN up or down.



Use TV•VCR Button

Skip this step if you used one of the advanced hookups.

When using one of the basic hookups, the TV•VCR button lets you switch between the picture coming from the VCR or the picture from the TV channel. This button lets you record a program on the VCR while watching another channel on the TV. (Details are on page 34.)

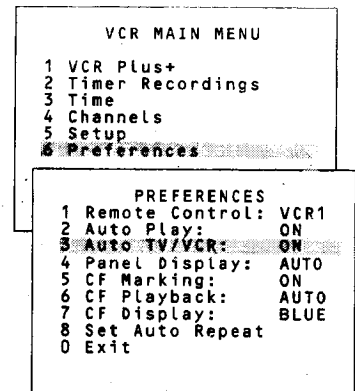
1. Press **VCR1** to set the remote to control the VCR.
2. Make sure the **VCR** indicator appears in the display panel.
If it does not appear, press **TV•VCR**.
3. Press **CHANNEL up** or **down** on the **VCR** or **CHAN** on **VCR's** remote to change channels on the VCR.
The channel number changes in the display panel.
4. Press **TV•VCR** to see the **TV** channels.
The **VCR** indicator does not light in the display panel. Change channels using the TV's remote.
5. Return the **TV** to the **VCR** viewing channel — **CH3** or **CH4**.
6. Press **VCR1**, then **TV•VCR** to switch back to the picture from the **VCR**.

Set Auto TV/VCR Feature

If you used one of the basic hookups and did not connect the audio/video jacks of the VCR to the TV, leave the Auto TV/VCR feature set to ON.

If you have connected your VCR using the audio/video input of your TV, you can prevent the **VCR** indicator from turning on automatically and interrupting the cable or antenna signal to your TV.

1. Press **MENU•PROG** on remote to see **VCR MAIN MENU** on the **TV** screen.
 2. Press **6** to display **PREFERENCES**.
 3. Press **3** to select **Auto TV/VCR: ON** or **OFF**.
 - Select **ON** if you used one of the basic hookups and watch your **VCR** on channel **3** or **4** of your **TV**. The **VCR** will automatically switch the **TV•VCR** setting to **VCR** every time the **VCR** is turned on, a tape with the safety tab removed is inserted, or you press **PLAY**.
 - Select **OFF** if you used one of the advanced hookups and watch your **VCR** on the video input channel of your **TV**. The **VCR** indicator will not turn on automatically and the signal from your antenna or cable to your **TV** will not be interrupted.
- Pressing **TV•VCR** on the remote will still turn the **VCR** indicator on or off and switch the antenna signal.



Using the Remote Control

This section discusses the buttons and features of the remote control, including the following:

- Component Buttons
- VCR Function Buttons
- TV Function Buttons
- Cable Box or RCA DSS® Satellite Receiver Function Buttons
- Controlling the VCR
- Controlling a TV
- Controlling a Cable Box or an RCA DSS® Receiver
- Controlling an RCA Auxiliary Component

Component Buttons

Press one of the following buttons to set the remote to operate that component:

AUX (Auxiliary)

Used with POWER button to turn on compatible RCA audio component. (See page 22.)

DSS•CABLE

Turns on a compatible RCA cable box or RCA DSS® satellite receiver. (See page 21.)

Used with POWER button to turn on another brand of cable box, other than RCA, when the remote is programmed to control that cable box. (See page 21.)

TV

Turns on a compatible ProScan, RCA, or GE TV and sets the remote to control the TV. Used with POWER button to turn on another brand of TV, other than ProScan, when the remote is programmed to control that TV. (See page 20.)

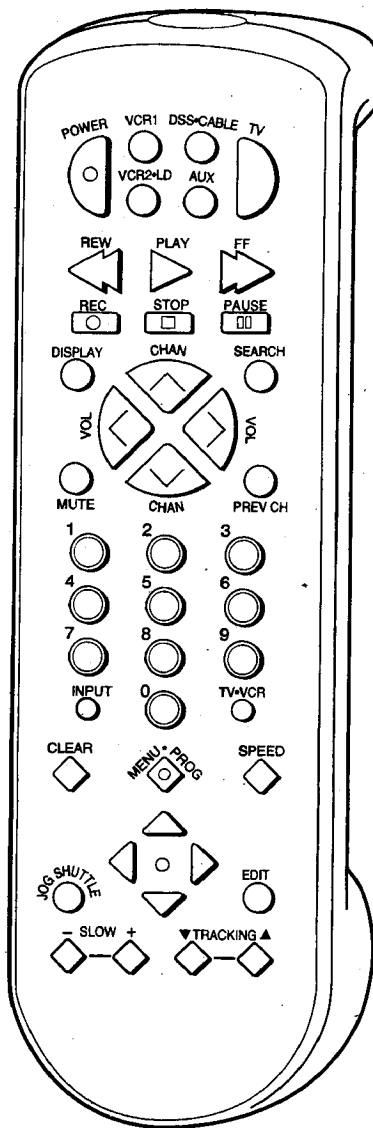
VCR1

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

VCR2•LD

Turns on a compatible ProScan, RCA, or GE VCR and sets remote to control VCR when it has been setup. (See page 19.)

Used with POWER button to turn on compatible ProScan or RCA laserdisc player.



VCR Function Buttons

Press VCR1 (VCR2•LD) to set remote to control the VCR to use the function buttons.

Arrow Buttons ()

Allow you to move through the menus, enter data and change settings of selected features. (See page 10.)

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 VCR for a VCR Plus+ or timer recording.

DISPLAY

Shows VCR operating displays on the TV screen.
Displays the time counter.

EDIT

Signals two properly connected compatible VCRs to begin copying a tape. (See page 44.)

FF (Fast Forward)

Fast forwards the tape when the VCR is stopped.
Searches the picture in forward motion during playback.

INPUT

Turns the line input on or off.

L1 or L2 appears in VCR's display panel and VIDEO1 or VIDEO2 appears on TV screen.

Line input refers to the signal coming from the component connected to the audio/video input jacks on the back (L1) or front (L2) of the VCR.

JOG SHUTTLE and Indicator Light

Used with arrow buttons for frame advance and variable speed search. (See page 26.)

The indicator in the middle of the arrow buttons lights when JOG SHUTTLE is turned on.

MENU•PROG

Displays the VCR MAIN MENU on the TV screen.
Removes a menu from the 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 action for viewing during playback.

Pauses recording to prevent recording of unwanted scenes.

PLAY

Plays a tape.

POWER

Turns off VCR when remote is set to control the VCR.

PREV CH (Previous Channel)

Switches between two channels.

Select one channel and then use the number buttons to select another. Press PREV CH to switch between the two channels.

REC

Starts VCR recording.

Used for express recording (XPR). (See page 41.)

REW (Rewind)

Rewinds the tape when the VCR is stopped.

Searches the picture in reverse motion during playback.

SEARCH

Accesses INDEX, TIME, ZERO, and BLANK SEARCH displays on TV screen when VCR is stopped.

Used during playback with the COMMERCIAL▶▶ ADVANCE™ feature. (See pages 32-33.)

SLOW - / +

Used for slow-motion playback.

SPEED (Tape Speed)

Selects a recording speed (SP, LP, or SLP).

STOP

Stops the normal functions such as record, playback, rewind, fast forward, and pause.

TRACKING Up and Down

Lets you manually reduce the streaks that may appear on the picture during play or pause.

Reduces picture "jitter" during stop-action playback.

TV•VCR

Switches the picture signal so that it either comes from the VCR or the TV channel. (See page 15.)

TV Function Buttons

Press the TV button to set remote to control a compatible TV. Some buttons may not work with the TV.

Arrow Buttons (\triangle ∇ \blacktriangleright \blacktriangleleft)

Allow you to move through the menus, enter data and change settings of selected features.

CHAN Up or Down

Selects next higher or lower channel in the TV's channel memory when remote is set to control a TV.

CLEAR

Removes menus or status displays from the screen.

DISPLAY

Shows the status displays on the screen.
Removes menus or displays from the screen.

MUTE

Turns the TV sound on or off.

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.

POWER

Turns off a compatible TV when remote is set to control TV.

Used with TV button to turn on a compatible TV, other than ProScan, when the remote is programmed to control that TV. (See page 20.)

PREV CH (Previous Channel)

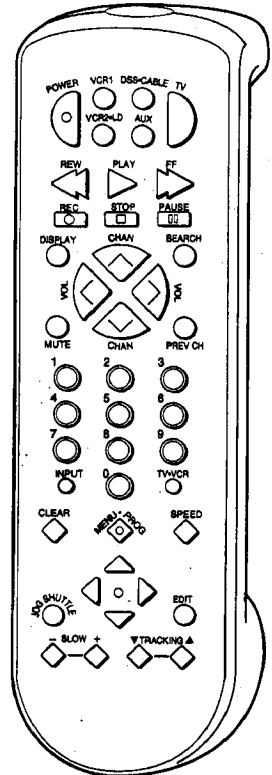
Switches between two channels.
Select one channel and then use the number buttons to select another. Press PREV CH to switch between the two channels.

SLOW - / +

Used with the TV's menus to select and adjust features.

VOL Up and Down

Raises and lowers sound.



Cable Box or RCA DSS[®] Satellite Receiver Function Buttons

Press the DSS•CABLE button to set remote to control a compatible cable box or RCA DSS[®] satellite receiver. Some buttons may not work with every cable box. If you have an RCA DSS[®] receiver, test the "TV Function Buttons" to see which ones operate the RCA DSS[®] receiver.

CHAN Up or Down

Selects next higher or lower channel.

Numbers (0 through 9)

Select a channel using the number buttons.

POWER

Turns off a compatible cable box or satellite receiver.

Controlling a VCR

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

Program the VCR for Remote Control

Set the Remote Control feature of the VCR to the VCR1 or VCR2 position. The remote then controls the VCR with either the VCR1 or VCR2•LD button — whichever position you select in the menu.

1. Press MENU•PROG to display the VCR MAIN MENU.
2. Press 6 to display PREFERENCES.
3. Press 1 to activate the Remote Control feature.
4. Press VCR1 or VCR2•LD to change the setting and program this VCR to respond to the VCR1 or VCR2•LD button — whichever you select.

Important Reminder: Remember you must press VCR1 or VCR2•LD on the remote — whichever you selected in the menu — before the remote will operate this VCR.

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

```
PREFERENCES
1 Remote Control: VCR1
```

```
PREFERENCES
1 Remote Control: VCR1
2 Auto Play: ON
3 Auto TV/VCR: ON
4 Panel Display: AUTO
5 CF Marking: ON
6 CF Playback: AUTO
7 CF Display: BLUE
8 Set Auto Repeat
Press VCR2 to change
```

```
PREFERENCES
1 Remote Control: VCR2
2 Auto Play: ON
3 Auto TV/VCR: ON
4 Panel Display: AUTO
5 CF Marking: ON
6 CF Playback: AUTO
7 CF Display: BLUE
8 Set Auto Repeat
0 Exit
```

Controlling a TV

The VCR's remote is preprogrammed to control the basic functions of a compatible ProScan, RCA, or GE TV. The remote can also be setup to control other manufacturer's brands. To program the remote, use the remote buttons that correspond to your brand.

Program the Remote for a TV

1. Turn on the TV.
2. Point the VCR remote at the TV.
3. Hold the TV button and press two number buttons for your brand. If the TV changes channels when the CHAN up or down button is pressed, setup is complete.
4. Release the buttons.
5. Repeat steps 2 - 4 with two other buttons if the first ones do not work.

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

*The remote may not be able to control every TV model of the brands listed.

Operate the TV

After you have set up your remote to control your TV, test the TV buttons to see which ones operate your TV.

1. Point the remote at the TV and press TV.
2. If the TV does not turn on in step 1, press TV and then POWER.
3. Use the "TV Function Buttons" as described on page 18.

Helpful Hint: Notice the difference between the TV and VCR on-screen displays. This is one way to tell if the remote is set to control the VCR or the TV.

Controlling a Cable Box or an RCA DSS® Receiver

The DSS•CABLE button on the VCR's remote is preprogrammed to control either a compatible RCA cable box or RCA DSS® satellite receiver. If your cable box is another manufacturer's brand and has its own remote, you will probably be able to program the VCR's remote to control your cable box. To program the VCR's remote, enter the code that corresponds to your brand.

Program the Remote for a Cable Box

1. Turn on the cable box.
2. Point the VCR remote at the cable box.
3. Hold the DSS•CABLE button and press two number buttons to enter the code for your brand.
4. Release the buttons.
5. Press POWER on the remote. If the cable box turns off, setup is complete.
6. Repeat steps 2 – 5 with a different code if the first one does not work.

Cable Code List			
Brand *	Code Number(s)	Brand *	Code Number(s)
ABC	53,54	Pioneer	18,20,44
Anvision	07,08	Randtek	07,08
Cablestar	07,08	RCA	00,27
Eagle	07,08	Regal	12,13
Eastern International	02	Regency	02,33
General Instrument	04,05,15,23,24,25,30,36	Samsung	44
Hamlin	12,13,34,48	Scientific Atlanta	03,22,35
Hitachi	37,43	Sylvania	11
Jerrold	04,05,15,23,24,25,30,36, 45,46,47	Teknika	06
MACOM	37,43	Texscan	10,11
Magnavox	07,08,19,26,28,29,32,33,40,41	Tocom	17,21,49,50
NSC	09	Unika	31,32,41
Oak	01,16,38	Universal	51,52
Oak Sigma	16	Viewstar	07,08,19,26,28,29,32,33,40,41
Panasonic	03,27,39	Warner Amex	44
Philips	07,08,19,26,28,29,32,33,40,41	Zenith	14,42

* The remote may not be able to control every cable box model of the brands listed.

Operate the Cable Box or RCA DSS® Satellite Receiver

After you have setup your remote (if required) to control your cable box, test the buttons to see which ones operate your cable box or satellite receiver.

1. Point the remote at the cable box or satellite receiver and press DSS•CABLE.
2. If the cable box does not turn on in step 1, press DSS•CABLE and then POWER.
If the RCA DSS® satellite receiver does not turn on in step 1, reprogram the remote using 00.
3. Use the "Cable Box or RCA Receiver Function Buttons" for the cable box and test the "TV Function Buttons" to see which ones operate the satellite receiver box. (See page 18.)

DSS® is a registered trademark of DIRECTV, Inc., a unit of Hughes Electronics Corporation.

Controlling an RCA Auxiliary Component

The remote that came packed with your VCR is also capable of controlling one compatible RCA audio component, such as an AM/FM radio, CD player, tape player, or phonograph. The remote must be programmed for the specific component it is to control. To program the remote, use the code that corresponds to your component.

Program the Remote for an Auxiliary Component

1. Turn on the component.
2. Point the VCR remote at the component.
3. Hold the AUX button and press two number buttons to enter the code for your component.
4. Release the buttons.
5. Press POWER on the remote. If the component turns off, setup is complete.

Type of Auxiliary Equipment and Code*				
	AM/FM	CD	TAPE	PHONO
RCA	03	07	06	05

* The remote may not be able to control every RCA model of the auxiliary equipment listed.

Operate the Auxiliary Component

After you have setup your remote to control your component, test the buttons to see which ones operate the component.

1. Point the remote at the component and press AUX.
2. If the component does not turn on in step 1, press AUX and then POWER.
3. Test the buttons on the remote to see which ones operate your component.

Playing a Tape

This section introduces you to the basic operation of your VCR and discusses the following playback features:


- | | | |
|---------------------------------------|--------------------------------------|--------------------------|
| ■ Pause for Stop Action | ■ Auto Play | ■ Pro-Tect Plus™ Locking |
| ■ Slow Motion | ■ Auto Repeat | ■ Index Search |
| ■ Automatic Tracking | ■ DISPLAY Button | ■ Time Search |
| ■ Manual Tracking | ■ Time Counter | ■ Blank Search |
| ■ Picture Search and
Frame Advance | ■ Tape Playback:
HI-FI/LINEAR/MIX | ■ Zero Search |

Operating Instructions

To Play a Tape

1. Turn on the TV and tune it to channel 3, 4, or TV's video input to see the picture from the VCR.

2. Insert a tape in the VCR.

VCR automatically turns on. The cassette-in  indicator lights, and the VCR indicator lights if the Auto TV/VCR feature is set to ON. The tape automatically begins playback if the safety tab on the cassette has been removed and the auto play feature is turned on.

3. Press PLAY, if necessary. PLAY appears in the VCR's display panel.

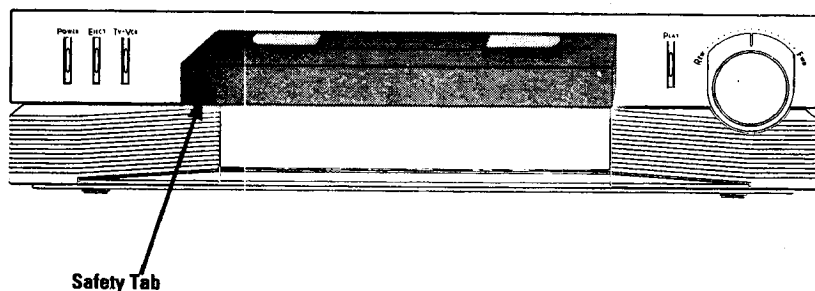
4. Press TRACKING up or down to remove any streaks from the picture, if necessary. (Details are on page 24.)

5. Press STOP.

6. Press REW on the remote or turn the shuttle ring toward REW on the VCR.

The VCR will automatically rewind 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.

7. Press EJECT on the VCR to eject the tape once it is completely rewound.



Using the Playback Features

Pause for Stop Action

This feature stops the tape in action and enables you to examine the details of the scene. Stop action works best with tapes recorded in the SP and SLP speeds.

1. Press **PAUSE** during playback to stop the action.
STILL appears in the VCR's display panel.
2. Press **TRACKING** up or down to reduce any jittering of the picture.
3. Press **PAUSE** or **PLAY** to return to playback.
The VCR will automatically switch from stop-action playback to stop after a few minutes.

Slow Motion

You can view the picture in slow motion during play or play pause. SLOW – and + allow you to change the speed. Sound is turned off during slow-motion playback. Slow motion works best in the SP or SLP speed.

1. During playback, Press **SLOW +** or **–** to start slow-motion playback.
SLOW+ appears in the VCR's display panel.
2. Press **SLOW +** to increase the speed or **–** to decrease the speed.
3. Use **TRACKING** up or down to remove any streaks from the picture.
4. Press **PLAY** to return to playback.
The VCR will automatically switch from slow-motion playback to stop after a few minutes.

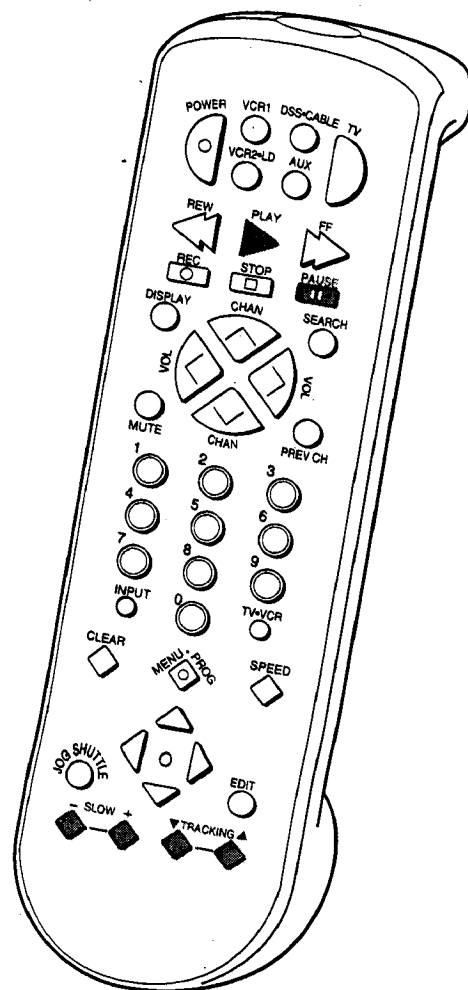
Automatic Tracking

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.

Manual Tracking

Occasionally, you may need to manually adjust tracking on a tape recorded on a different VCR or camcorder. The **TRACKING** buttons on the remote or VCR are used when playing a tape. They have no effect during recording.

- When streaks or snow appear, press **TRACKING** up or down for the best possible picture.
- Press **TRACKING** up or down during stop-action pause to reduce picture "jitter".
- Press both **TRACKING** buttons at the same time to turn automatic tracking back on.



Picture Search

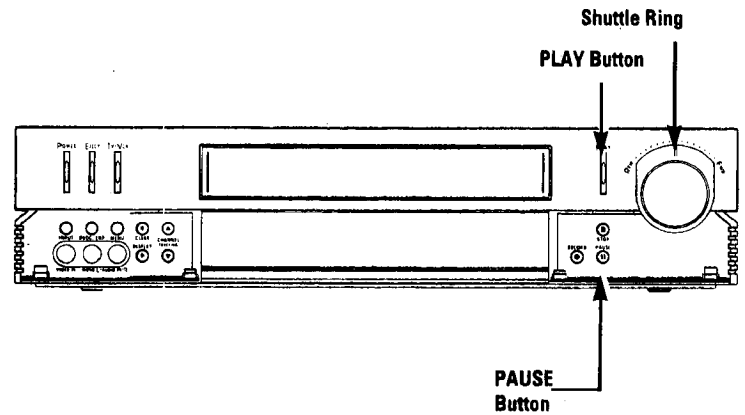
You can search a picture during playback by fast forwarding or rewinding the tape. Sound is turned off during picture search. The picture is best for tapes recorded in the SP or SLP speed.

Fast Forward Search

1. Press FF on the remote or turn the shuttle ring clockwise toward FWD on the VCR to search forward at a faster-than-normal speed.
2. To return to playback, press FF on the remote, PLAY, or turn the shuttle ring again.

Rewind Search

1. Press REW on the remote or turn the shuttle ring counterclockwise toward REW on the VCR to search in reverse at a faster-than-normal speed.
2. To return to playback, press REW on the remote, PLAY, or turn the shuttle ring again.



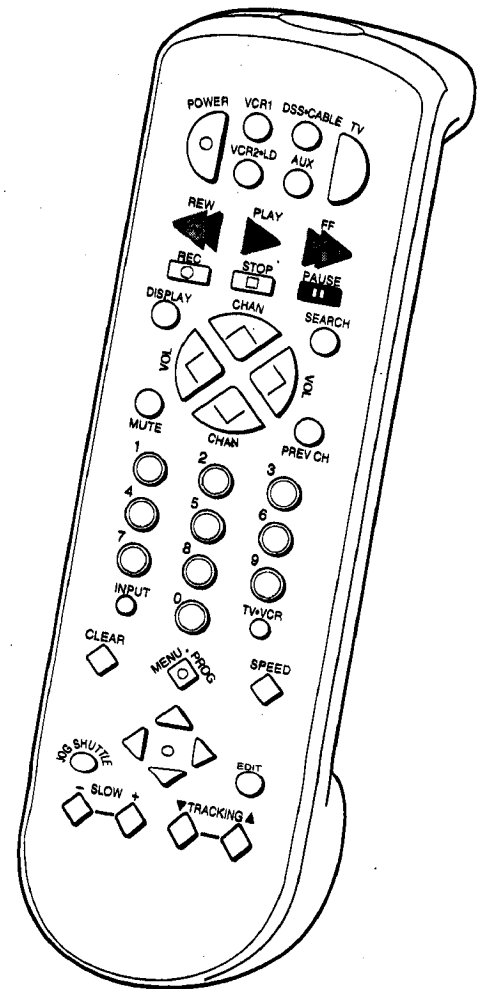
Variable Speed Picture Search Using Shuttle Ring on VCR

1. Press PAUSE during playback to stop the action.
2. Turn the shuttle ring on the front of the VCR either direction.

The speed of the search increases with the amount the shuttle ring is turned.

3. Release the shuttle to return to pause.
4. Press PAUSE or PLAY to return to playback.

The VCR will automatically switch from stop-action playback to stop after a few minutes.



Playing a Tape

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 the JOG SHUTTLE feature (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.

Searching in PLAY Mode

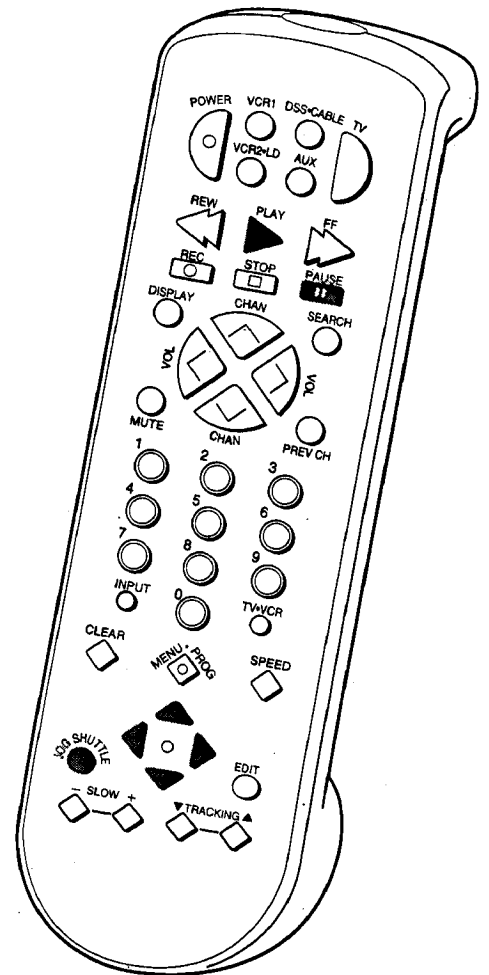
When the VCR is playing a tape, press JOG SHUTTLE to have the VCR enter the still mode. **STILL** appears in the display panel.

- Press ▶ and release 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 **PLAY** to return to normal playback and turn off JOG SHUTTLE.
- Press ◀ and release to search in reverse slowly. The speed is increased with each press of the ◀ button. As the speed increases, the display changes from **SLOW-** to **SRCH-**. Pressing ▶ decreases the reverse speed. Press **PLAY** to return to normal playback and turn off JOG SHUTTLE.

Searching in STILL Mode (Frame Advance)

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

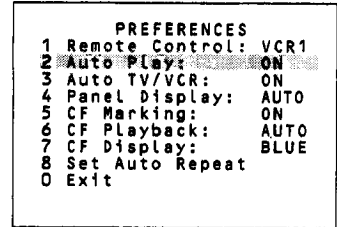
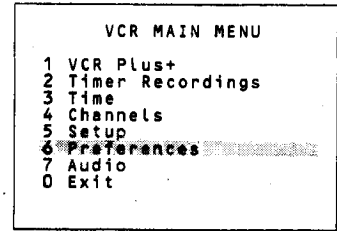
- Press △ to advance or ▽ to reverse the picture one frame at a time. The display switches between **STILL** and **SLOW-** or **SLOW+**. Press **PLAY** or **PAUSE** to return to normal playback and turn off JOG SHUTTLE.



Auto Play Feature

This feature lets you tell the VCR whether you want it to automatically start playing a tape that is inserted with the safety tab removed.

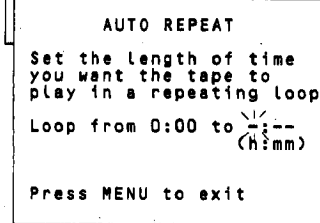
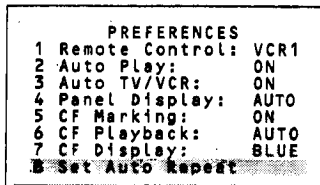
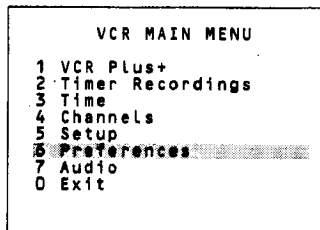
1. Press **MENU•PROG** on the remote to see the **VCR MAIN MENU**.
2. Press **6** to display the **PREFERENCES** menu.
3. Press **2** to select **Auto Play: ON or OFF**.
 - Select **ON** to have a tape with the safety tab removed play automatically.
 - Select **OFF** if you do not want the tape with its safety tab removed to start playing automatically.



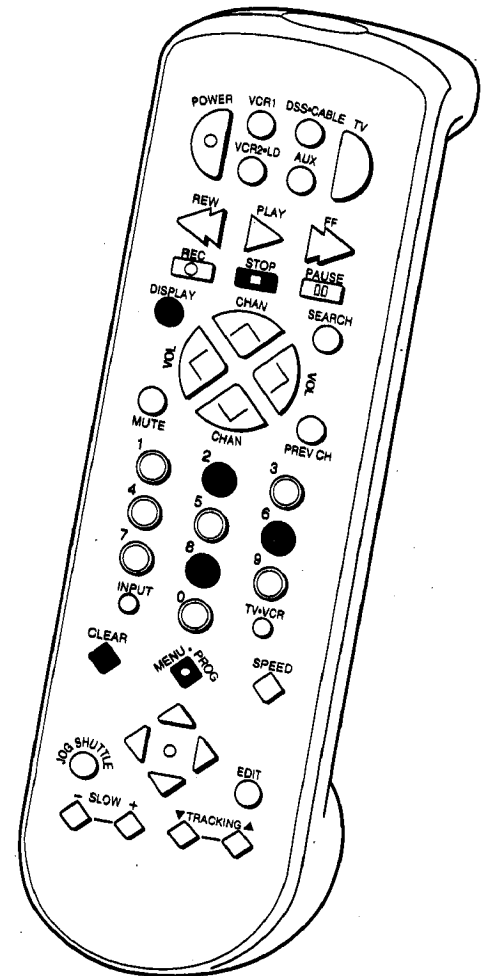
Auto Repeat Feature

The VCR will automatically repeat a segment of tape.

1. Locate the beginning of the segment you want the VCR to repeat, and press **STOP**.
2. Press **DISPLAY** to display the time counter, and press **CLEAR** to reset it to 0:00:00.
3. Press **MENU•PROG** on the remote to see the **VCR MAIN MENU** on the TV screen.
4. Press **6** to display the **PREFERENCES** menu.
5. Press **8** to display the **AUTO REPEAT** menu.
6. Use the number buttons to enter the length of time of the segment you want the VCR to repeat.
7. Press **MENU•PROG** to remove the menu from the screen.



- The VCR will play the tape until the specified counter reading is reached, rewind the tape and replay the segment over and over.
8. To stop auto repeat, display the **AUTO REPEAT** menu and press **CLEAR**.



DISPLAY Button

1. Press DISPLAY to display the status of the VCR, channel number, time counter, date, time, and tape speed on the TV screen. The time will appear in the display panel.

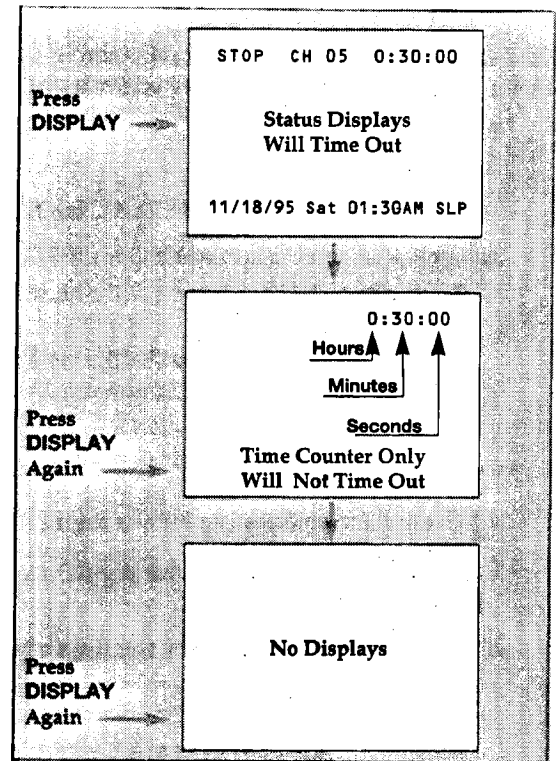
The time and date must be set before they are displayed. If you do not press DISPLAY again, these displays will time out.

2. Press DISPLAY again to have only the time counter remain on the TV screen. The time counter will appear instead of the time in the VCR's display panel.
3. Press DISPLAY again to remove the time counter from the TV screen.

The time counter will remain in the VCR's display panel and no status displays will appear on the TV screen. This is convenient for editing tapes.

4. Press DISPLAY again to return to the normal status displays.

Turning off the VCR automatically returns the displays to normal.



Time Counter

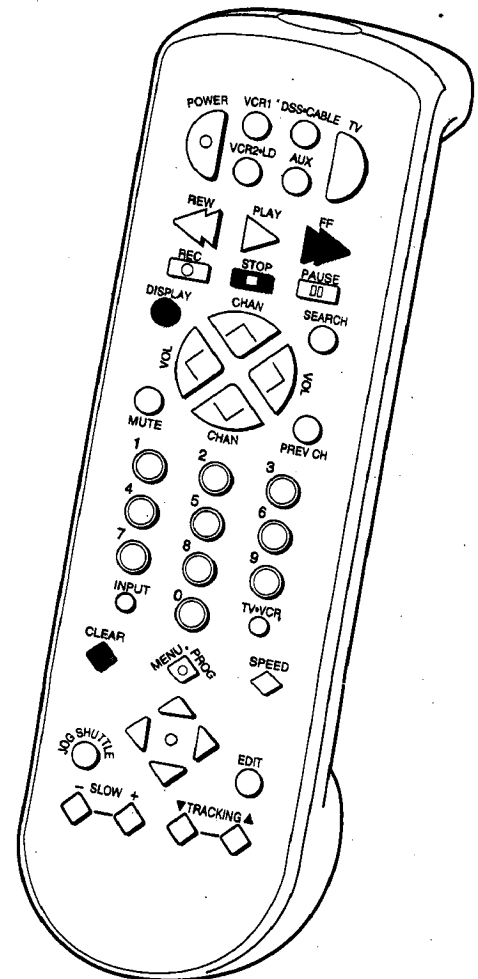
The time counter shows the actual time it takes to record a program or play back a segment of a prerecorded tape. It helps locate the beginning or end of programs you taped. The time counter resets to 0:00:00 whenever the tape is ejected from the VCR.

For example, if a 30-minute program was recorded at the beginning of the tape, you would:

1. Insert the prerecorded tape. Press STOP. Make sure the tape is rewound.
2. Press DISPLAY twice to display only the time counter on the TV screen.
3. Press CLEAR to reset the time counter to 0:00:00.
4. Press FF on remote or turn the shuttle on the VCR clockwise to fast forward the tape until the time counter reads 0:30:00. Press STOP.

This is the approximate end of the program and you can begin recording at this spot.

5. Press DISPLAY twice to remove the time counter from the screen and return to the normal displays.



Tape Playback: HI-FI/LINEAR/MIX Feature

The VCR records the same audio on both the Hi-Fi and linear tracks on the tape. The Hi-Fi sound is recorded on separate left and right stereo channels. Monaural sound is recorded on the linear track.

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

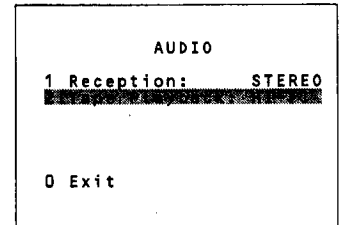
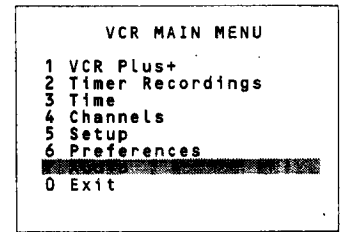
To Select Playback Sound

1. Press MENU•PROG to see the VCR MAIN MENU on the TV screen.
2. Press 7 to see the AUDIO menu on the TV screen.
3. Press 2 to switch between HI-FI, LINEAR, or MIX sound.

- Select HI-FI to play back sound recorded on the Hi-Fi track and for normal use.

The H I F I indicator is lit in the VCR's display panel during Hi-Fi playback.

- Select LINEAR to play back the sound recorded on the linear monaural track, such as a second audio program (SAP).
- Select MIX to play back the sound recorded on both the linear track and the Hi-Fi track, sound-on-sound.



Pro-Tect Plus™ Locking Feature

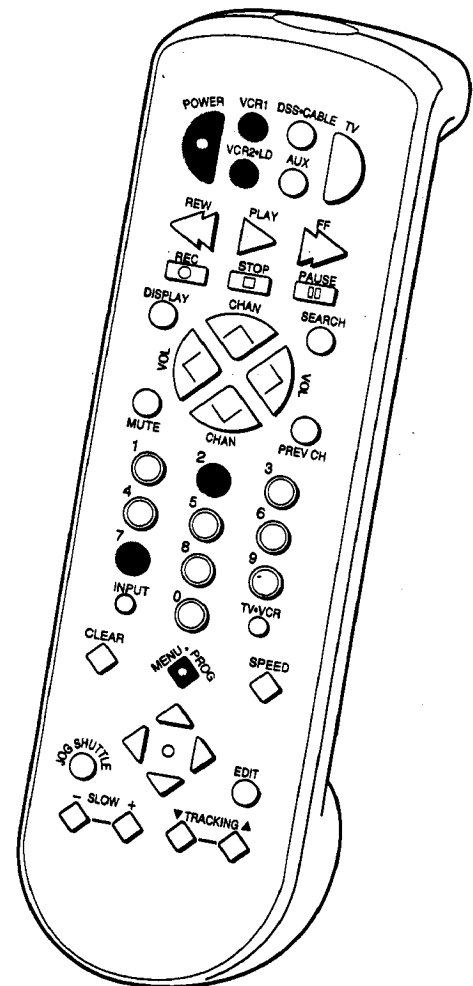
To protect your timer recordings from any unwanted changes, lock the VCR. The buttons on the VCR and remote will not operate the VCR. Just follow the directions below.

To Lock the VCR

1. Set up your VCR for a timer recording.
2. Insert a cassette with safety tab intact.
3. Place VCR in stop mode.
4. Press and hold POWER on the remote for at least six seconds until LOCK appears in the VCR's display panel.

To Unlock the VCR

Press and hold VCR1 (VCR2•LD) on the remote until H E L L O appears in the VCR's display panel to unlock the controls.



Playing a Tape

Index Search

The VCR has a "VHS Index Search System" that automatically records an index mark on the tape every time you start a new recording. During playback you can locate the program you want to play by the number of index marks.

The VCR will automatically locate the index number you select. The VCR will search forward or reverse from the location you are on the tape.

1. Insert the prerecorded tape and press STOP.
2. Press SEARCH on the remote to display the INDEX SEARCH menu on the TV screen.
3. Press two number buttons to enter the number of index marks you want the VCR to search.

Press CLEAR to correct an entry.

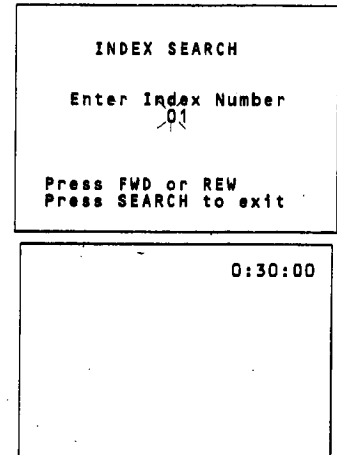
4. Press FF on remote or turn the shuttle ring clockwise toward FWD on the VCR to search forward.

Press REW on remote or turn the shuttle ring counterclockwise toward REW on the VCR to search in reverse.

5. Press STOP to stop index searching.

Some index marks may be missed by the VCR.

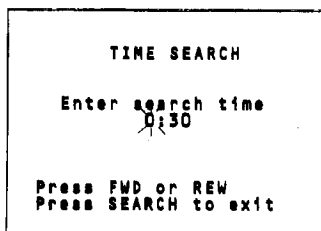
- A mark too close to your location on the tape.
- The mark at the beginning of a recorded segment of five minutes or less.
- The first index mark on the tape when you start at the beginning of the tape.



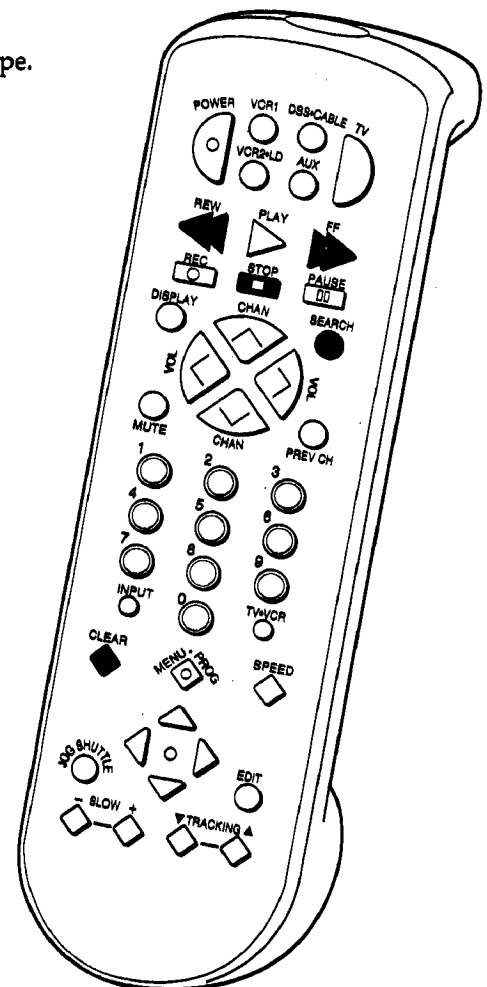
Time Search

The VCR will search forward or reverse the amount of time you select from the location you are on the tape.

1. Insert the prerecorded tape, and press STOP.
2. Press SEARCH on the remote twice to display the TIME SEARCH menu on the TV screen.



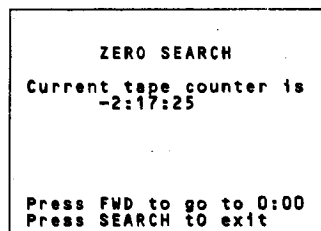
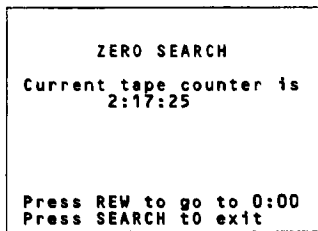
3. Press number buttons to enter the hour(s) and minute(s) of the time counter reading you want the VCR to search.
Press CLEAR to correct an entry.
4. Press FF on remote or turn the shuttle ring clockwise toward FWD on the VCR to search forward.
Press REW on remote or turn the shuttle ring counterclockwise toward REW on the VCR to search in reverse.
5. Press STOP to stop time searching.



Zero Search

The zero search feature allows you to quickly return to a counter reading of 0:00:00 at any spot on the tape. This is convenient when you want to watch a segment of the tape several times.

1. Insert the prerecorded tape, and press STOP.
2. Press DISPLAY twice to display only the time counter on the TV screen.
3. Locate the point on the tape that you want to return to quickly.
4. Press CLEAR to reset the time counter to 0:00:00.
5. You can continue to play the tape or perform other functions. When you are finished, press STOP.
6. Press SEARCH three times to display the ZERO SEARCH menu. The current tape counter is displayed.



7. Press REW on the remote or turn the shuttle ring counterclockwise toward REW on the VCR to return to 0:00:00.

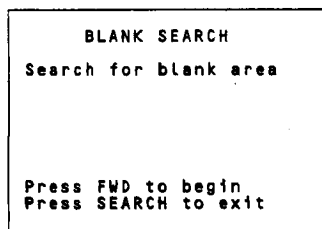
The time counter is displayed in the upper right corner of the TV screen during search.

If the time counter has a minus (-) in front of it, press FF on the remote or turn the shuttle ring clockwise toward FWD to return to a reading of 0:00:00.

Blank Search

The VCR searches forward for blank portions of the tape that are more than six seconds in length.

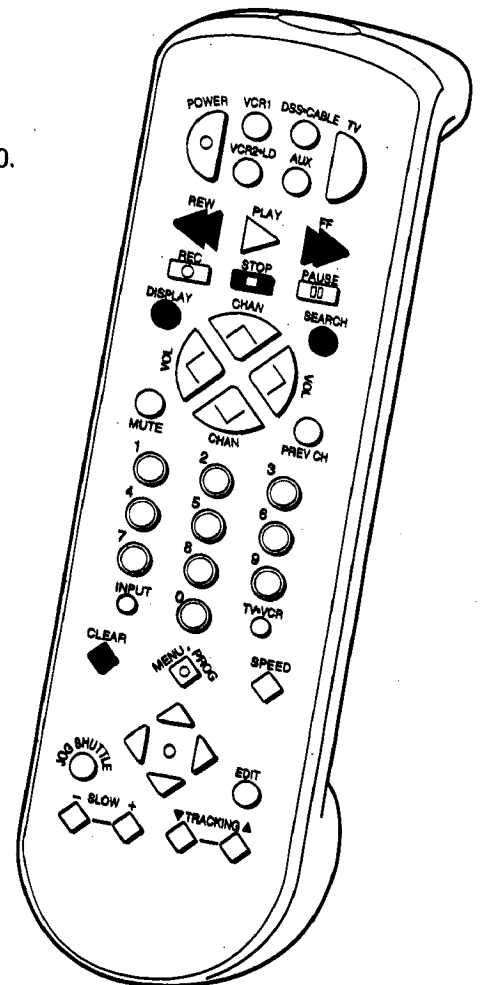
1. Insert the tape and press STOP.
2. Press SEARCH on the remote four times to display the BLANK SEARCH menu on the TV screen.



3. Press FF or turn the shuttle ring clockwise toward FWD to start the VCR searching for six seconds of blank tape.

A message appears on the TV screen if a blank area is not found.

4. Press STOP to stop blank searching.



Recording and Playback

COMMERCIAL▶▶ADVANCE™ is a patented technology that detects and marks most commercials on your tape for any recording that is more than 15 minutes long. During playback, the VCR automatically skips the detected commercial segments or you can choose to manually skip them. This feature reduces three minutes of commercials into approximately 8-12 seconds of fast forwarding in the SLP mode. You can select a background of blue or see the video as the commercials are skipped.

After recording, the VCR rewinds the tape and determines where the commercials are located. It then marks the beginning and end of the detected commercial segments and returns the tape to the end of the recording. *It does not erase the commercials from the tape.*

Because television signals do not indicate where commercials are located, this feature finds and marks them through a set of formulas based on how television is broadcasted today. Since television stations broadcast differently and insert their own commercials, you may experience some variations in this feature's effectiveness. Station promotions, identifications, and announcements are not considered commercials.

See page 51 for answers to common questions about COMMERCIAL▶▶ADVANCE™.

COMMERCIAL▶▶ADVANCE™ Marking

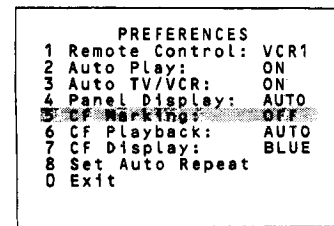
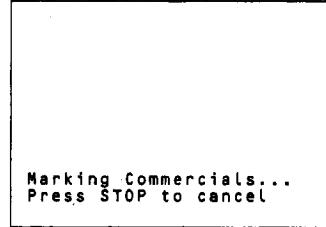
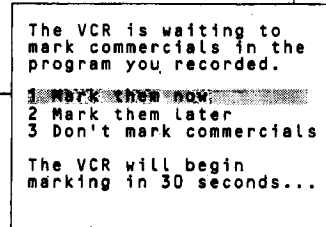
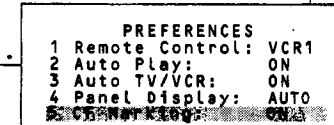
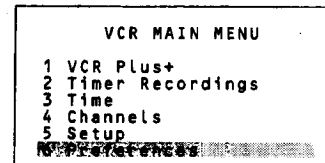
1. Press MENU•PROG to display the VCR MAIN MENU.
2. Press 6 to display the PREFERENCES menu.
3. Make sure CF Marking is set to ON. If not, press 5.

The VCR will mark most commercials for the following types of recording.

VCR Plus+, Timer, or Express Recording: The VCR will automatically mark the commercials after the power is turned off.

Manual Recording: When you press STOP to stop recording, the VCR will ask you if you want to mark the commercials. Just follow the on-screen display.

MARK and COMM alternate in the display panel while the VCR is marking commercials.



To Stop COMMERCIAL▶▶ADVANCE™ Marking

Press STOP to cancel commercial marking.

To Turn Off Marking

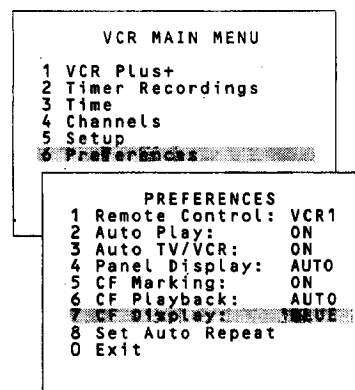
For special VCR use (editing or copying) or if you decide not to use this feature, turn COMMERCIAL▶▶ADVANCE™ marking (CF marking) off.

1. Press MENU•PROG to display the VCR MAIN MENU.
2. Press 6 to display the PREFERENCES menu.
3. Press 5 to select CF Marking: OFF.

COMMERCIAL▶▶ADVANCE™ is a trademark of Arthur D. Little Enterprises, Inc. A Jerry Iggulden invention licensed by Arthur D. Little Enterprises, Inc.

To Select a Background for Playback

1. Press MENU•PROG to display the VCR MAIN MENU.
2. Press 6 to display the PREFERENCES menu.
3. Press 7 to select CF Display: BLUE or VIDEO.
 - Select BLUE to have the VCR display a blue screen while it advances through the block of marked commercials.
 - Select VIDEO to have the VCR display the video as it advances through the block of marked commercials.



To Play Back a Recording Made Using COMMERCIAL▶▶ADVANCE™

1. Press MENU•PROG to display the VCR MAIN MENU.
2. Press 6 to display the PREFERENCES menu.
3. Press 6 to select CF Playback: AUTO or MANUAL.
 - Select AUTO to have the VCR automatically advance through the blocks of marked commercials.

It works with most 30, 45, and 60-second commercials.

A commercial group starting within the first two minutes or last two minutes of a recording will not be automatically skipped.

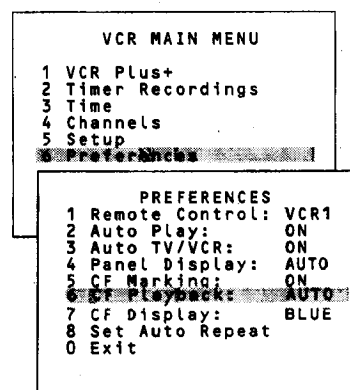
A commercial will not be skipped if the recording starts in the middle of a commercial segment, one isolated commercial is shown without others, or a commercial is longer than one minute. Press FF to scan through the commercial.

It is possible that part of a recorded program might be skipped if the program segment is between commercials and less than one minute or there are frequent dark and quiet scenes. If part of the program is skipped, rewind the tape to the beginning of the skipped program segment and press PLAY.

- Select MANUAL and the VCR will not advance through the blocks of marked commercials until you press SEARCH.

The VCR will resume playback when it reaches the end of the marked commercials.

If you press SEARCH during playback of material other than commercials, the VCR will still advance to the end of the next "marked" commercial block and resume playback.



Recording a Program

This section explains the available recording options, including the following:

- Basic Recording
- VCR Plus+ Recording
- Timer Recording
- Express (XPR) Recording
- Broadcast Stereo TV or SAP (Second Audio Program) Recording
- Audio Only Recording
- Using Two VCRs for Copying and Editing Tapes

Basic Recording

To Make a Recording

Turn on the TV and tune it to the VCR viewing channel, either 3, 4, or TV's video input channel.

1. **Insert a tape with safety tab in place.**
2. **Press VCR1 (VCR2•LD) to set remote to control VCR.**
3. **If using one of the basic hookups, make sure the VCR indicator appears in the VCR's display panel. If not, press TV•VCR to turn it on.**
4. **Select recording speed by using SPEED on remote.**
The tape speed indicator appears in the VCR's display panel and on the TV screen.
5. **Select the channel to be recorded.**
The channel number appears in the VCR's display panel and on the TV screen.
6. **Press RECORD on the VCR or REC on the remote to begin recording. REC appears in the VCR's display panel while the VCR is recording.**

Watch a TV Channel While VCR is Recording a Different Channel

1. **Follow steps 1 through 6 above.**
2. **If using one of the basic hookups, press TV•VCR to switch to the TV channel.**
The VCR indicator will turn off in the display panel.
3. **Press TV to set the remote to control TV functions for a compatible TV.**
4. **Select the channel you want to watch with the TV's channel buttons.**
5. **Press STOP when recording is finished.**

Recording Features

Recording Speeds

Press **SPEED** on the remote to select a recording speed (SP, LP, or SLP). The speed you select appears on the TV screen and in the VCR's display panel. The VCR automatically selects the playback speed (SP, LP, or SLP).

- **SP** (Standard Play) gives the best quality recording. That is why most prerecorded, rental tapes are recorded in SP. Fewer programs can be recorded on the tape. Special effects such as pause, slow motion, picture search, and frame advance work well.
- **LP** (Long Play) gives twice the recording time of tapes recorded in SP. Special effects in playback are not recommended in LP.
- **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.

Cassette	Recording Time		
	SP	LP	SLP
T-120	2Hr	4Hr	6Hr
T-160	2Hr 40Min	5Hr 20Min	8Hr

Recording Pause

This feature allows you to prevent recording short passages of unwanted material.

- Press **PAUSE** during recording to stop and start recording.
REC P appears in the VCR's display panel.
- The VCR will automatically switch from pause to stop after a few minutes.

Recording While You're Away (VCR Plus+* Recording)

VCR Plus+ Setup for Antenna or Unscrambled Cable Systems (Not Requiring a Cable Box or Cable Box VCR Can Control)

A VCR Plus+ channel number is assigned for each broadcast or cable channel. These numbers are listed in most publications that list PlusCode* numbers.

1. Prepare the worksheet located on the back cover flap for the VCR Plus+ channels that are different than the channels you receive them on. Refer to the chart on the back cover flap for standardized VCR Plus+ channel numbers.

Broadcast or Cable-TV Station Name	VCR Plus+ Channel Number	Channel Number You Receive This Station On
HBO	33	See Note 1
ESPN	34	See Note 1
ABC	See Note 2	See Note 1
FOX	See Note 2	See Note 1

Note 1: Check your local or cable listing for the channel number you receive this station on.
Note 2: Check your local listing for the broadcast or VCR Plus+ channel number assigned to this station.

The back cover flap contains a blank worksheet and a List of the Standardized VCR Plus+ Channel Numbers for you to use.

2. Press MENU•PROG on the remote to display the VCR MAIN MENU on the TV screen.
3. Press 4 to display CHANNELS menu.
4. Press 5 to display VCR Plus+ Channel List menu.
5. Using your worksheet, press two numbers to enter each channel number you receive on a different channel than the assigned VCR Plus+ channel number.

Press CHAN up or down to move the numbers up or down on the menu.

Press CLEAR on the remote to erase a number.

6. Press MENU•PROG when you are finished.
Auto channel search must be performed before setting the VCR Plus+ channel list.

```

VCR MAIN MENU
1 VCR Plus+
2 Timer Recordings
3 Time
4 CHANNELS
5 VCR PLUS+ CHANNEL LIST

CHANNELS
1 Auto Channel Search
2 Add/Remove Channels
3 Signal Type: ANTENNA
4 Cable/DSS Setup
5 VCR PLUS+ CHANNEL LIST
0 Exit

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

Use CHAN up/dn to select
Press 0-9 to change
Press MENU to exit
    
```

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

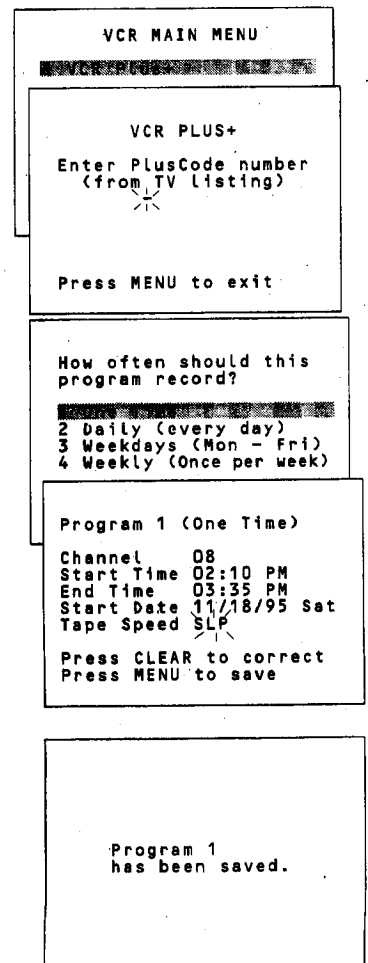
VCR Plus+ Recording (continued)

The VCR Plus+ and timer program features let you program the VCR to record up to eight different programs within a one year period. Before using VCR Plus+ to record a program, make sure that:

- The clock is set correctly.
- A tape with safety tab has been inserted with enough tape to record the programs.
- The remote is set to control the VCR — using VCR1 (VCR2•LD).
- The VCR is setup for VCR Plus+ programming.
- If you receive all channels through a cable box, setup the cable box as shown on pages 11-12.
- If you do not use a cable box or RCA DSS® satellite receiver for all channels, complete VCR Plus+ setup on page 36.

Setting a VCR Plus+ Recording

1. Press **MENU•PROG** on the remote to display the **VCR MAIN MENU** on the TV screen.
2. Press **1** to display the **VCR Plus+** menu.
3. Press numbers on the remote to enter the **PlusCode** number for the program you want to record. **PlusCode** numbers are found in most local TV listings.
Press **CLEAR** on the remote to correct an entry.
4. Press **MENU•PROG** to enter the program.
If the VCR does not recognize the **PlusCode** number, **Unrecognized number...** Please re-enter appears on the TV screen. Check the number and enter it again.
5. Press **1, 2, 3, or 4** to select type of program.
 - 1 One Time – single program recorded once.
 - 2 Daily – program recorded at same time every day.
 - 3 Weekdays – program recorded at same time Monday through Friday.
 - 4 Weekly – program recorded at same time once a week.
6. Select recording speed using **SPEED** on the remote.
7. Press **CLEAR** if you want to change the program end time.
This feature allows you to extend the recording time on VCR Plus+ programs. This option may be useful when recording programs such as sporting events that could go past scheduled broadcast times.
8. Press **MENU•PROG** to enter your program. A reminder appears which will time out.
PROGRAMS OVERLAP may appear on the screen if you entered two programs where the times overlap.
9. The **TIMER RECORDINGS** menu appears. Press **3** to enter an additional VCR Plus+ program, or press **0** to exit.
10. Turn off the VCR before recording time.
TIMER appears in the VCR's display panel when the timer has been programmed.
11. If using a cable box, leave it turned on. If the VCR cannot control the cable box, tune it to the channel you want to record.



Recording While You're Away (Timer Recording)

The VCR Plus+ and timer program features let you program the VCR to record up to eight different programs within a one year period. Before setting the timer, make sure that:

- The clock is set correctly.
- A tape with safety tab has been inserted with enough tape to record the programs.
- The remote is set to control the VCR — using VCR1 (VCR2•LD).
- If you receive all channels through a cable box or RCA DSS® satellite receiver, setup the cable box or RCA DSS® satellite receiver on pages 11-12.

Setting a Timer Recording (Using On-Screen Menus)

1. Press MENU•PROG on remote to display VCR MAIN MENU.
2. Press 2 to display TIMER RECORDINGS menu.
3. Press 1 to display Create a New Program menu.
4. Press 1, 2, 3, or 4 to select type of program.
 - 1 One Time — single program recorded once.
 - 2 Daily — program recorded at same time every day.
 - 3 Weekdays — program recorded at same time Monday through Friday.
 - 4 Weekly — program recorded at same time once a week.
5. Press number buttons on the remote to enter the channel number (or INPUT to select line input), start time including AM or PM, end time, and start date of the recording. Just follow the on-screen prompts.

Press CLEAR to correct an entry.

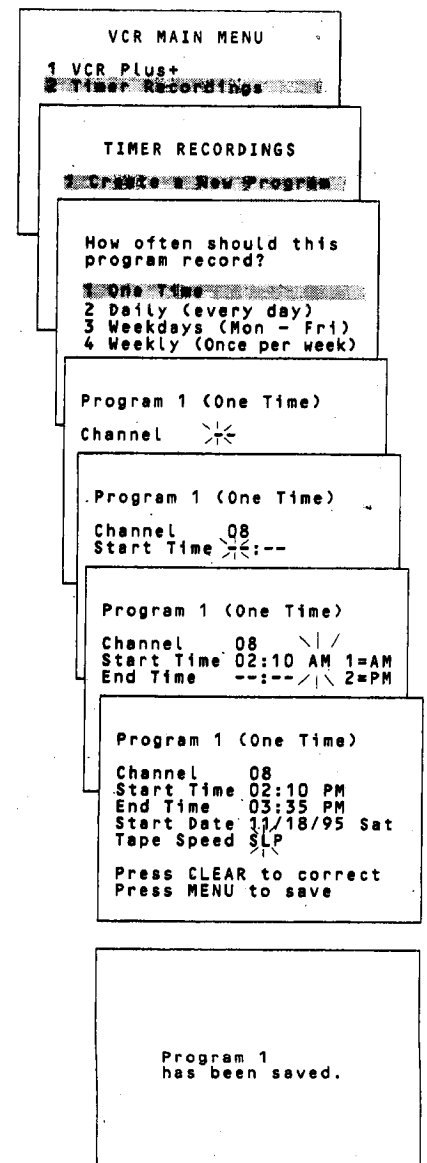
If you receive all channels from a cable box or satellite receiver and have completed Cable/DSS Box Setup, the output channel of your cable box or satellite receiver will automatically appear on the menu.

Channels with numbers less than 100 will record from the DSS antenna connection. Channels with numbers 100 and over will record from the corresponding DSS channel.

6. Select recording speed using SPEED on the remote.
7. Press MENU•PROG to enter your program. A reminder appears which will time out.

PROGRAMS OVERLAP may appear on the screen if you have entered two programs where the times overlap.
8. The TIMER RECORDINGS menu appears. Press 1 to enter an additional timer program, or press 0 to exit.
9. Turn off the VCR before recording begins.

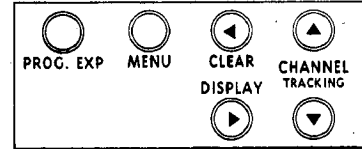
TIMER appears in the VCR's display panel when the timer has been programmed.
10. If using a cable box, leave it turned on.



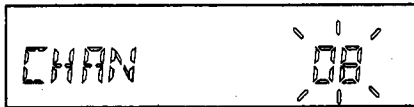
Important: If your cable box is not controlled by the VCR, turn on the cable box and tune it to the channel you want to record before the recording is to begin.

Setting a Timer Recording With TV Off (Clock On VCR)

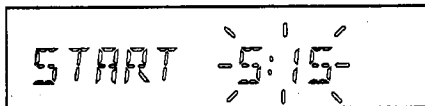
1. Use the **PROG. EXP** and the **CHANNEL up or down** buttons behind left front panel control door to enter the information.
2. Press **PROG. EXP** to bring up the display. The channel number flashes in the clock.



Buttons Located Behind Left Front Panel Control Door of VCR



3. Press the up or down arrow to select the channel number.
4. Repeat steps 2 - 3 to enter the **START, END, DATE,** and tape **SPEED.**



The time increases in increments of 30 minutes while the date increases in increments of one.

5. Press **PROG. EXP** when **SAVE** flashes in the display. **SAVED** appears to let you know the program is set.
6. Turn off VCR.

Recording a Program

Check, Edit, or Clear a VCR Plus+ or Timer Recording

1. Press MENU•PROG on remote to display VCR MAIN MENU on TV screen.
2. Press 2 to display the TIMER RECORDINGS menu.
3. Press 2 for Review Existing Progs. feature.

The first program in the timer is displayed.

- **Check the Programs:** Press MENU•PROG to display information for the next program.
- **Edit the Program:** Press DISPLAY to edit the program. The frequency menu appears first so you can change how often you want to record the program.

```
How often should this
program record?
1 One Time
2 Daily (every day)
3 Weekdays (Mon - Fri)
4 Weekly (Once per week)
D: Cancel
```

Press a number button to select the type of program you want to record.

```
Program 1 (One Time)
Channel 08
Start Time 02:10 PM
End Time 03:35 PM
Start Date 11/18/95 Sat
Tape Speed SLP
Press CLEAR to correct
Press MENU to save
```

Edit the rest of the program using the CLEAR and number buttons.

- **Clear the Program:** Press CLEAR when the program you want to remove appears on the TV screen.

```
VCR MAIN MENU
1 VCR Plus+
2 Timer Recordings

TIMER RECORDINGS
1 Create a New Program
2 Review Existing Progs

Program 1 (One Time)
Channel 08
Start Time 02:10 PM
End Time 03:35 PM
Start Date 11/18/95 Sat
Tape Speed SLP
Press DISPLAY to edit
Press CLEAR to delete
Press MENU for next prog
```

Timer Recording From the VCR's Line Input

The line input refers to the signal coming from the AUDIO and VIDEO IN jacks of the VCR. Recording from the line input is convenient if you have a satellite receiver or similar component attached to these jacks. To timer record from the component connected to the VCR's line input:

Press INPUT to enter the channel number when you program the timer. Enter VIDEO1 to record from the jacks on the back of the VCR or VIDEO2 to record from the jacks on the front of the VCR.

```
Program 1 (One Time)
Channel VIDEO1
Start Time --:--
End Time --:--
Start Date --/--/--
Tape Speed SLP
Press CLEAR to correct
Press MENU to save
```

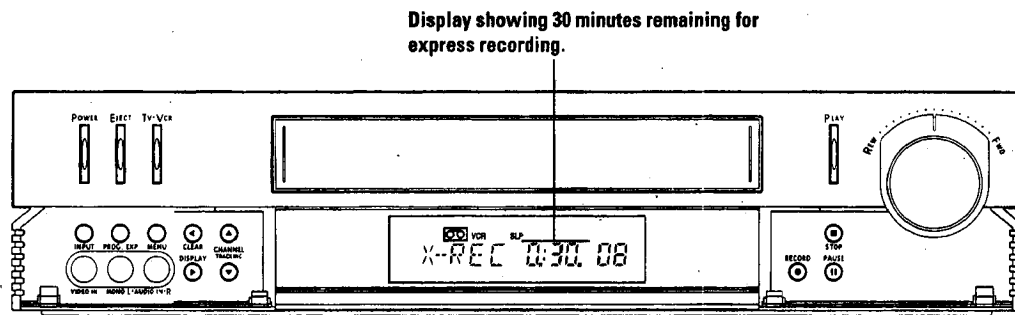
Stopping a Recording in Progress

With the VCR: Press POWER and then STOP within a few seconds.

With the Remote: Press VCR1 (VCR2•LD) and then STOP within a few seconds.

Express Recording (XPR)

Express recording enables you to record up to four hours of programming without using the timer program feature. The VCR will turn off automatically at the end of the recording.



Operating Instructions

1. Turn on the VCR.
2. Insert a tape with safety tab in place.
3. Select the channel you want to record.
4. Select the desired recording speed using SPEED on the remote.
5. Press RECORD on the VCR or REC on the remote to activate recording.
6. Press RECORD on the VCR or REC on the remote repeatedly until the amount of recording time for the program is displayed in the VCR's display panel or on the TV screen.

Each press increases the time — 30 minutes up to four hours.

Press RECORD	Recording Time
0:30	(30 Min)
1:00	(1 Hr)
1:30	(1 Hr, 30 Min)
2:00	(2 Hrs)
3:00	(3 Hrs)
4:00	(4 Hrs)
0:00	(XPR Turns Off)

RECORD LENGTH 0:00
CH 04
Press REC to set length

Express Display on TV Screen

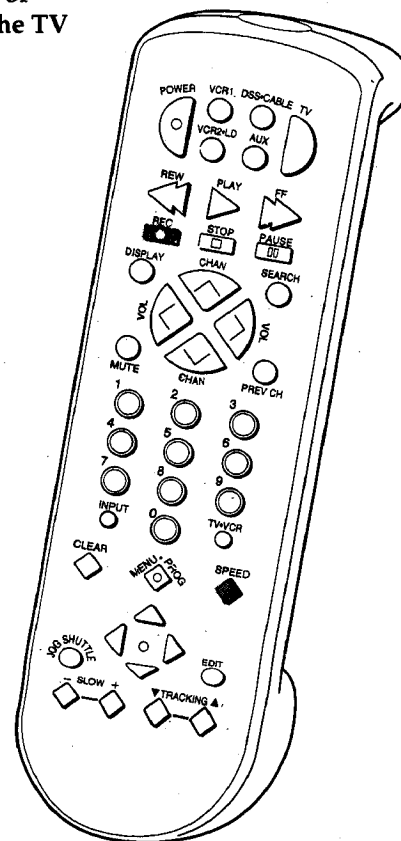
The amount of time the VCR will record and X-REC will appear in the VCR's display panel.

You can increase the amount of recording time by pressing REC on the remote or RECORD on the VCR.

Stopping a Recording in Progress

With the VCR: Press POWER and then STOP within a few seconds.

With the Remote: Press VCR1 (VCR2•LD) and then STOP within a few seconds.



Recording Broadcast Stereo TV or SAP (Second Audio Program)

Some TV programs are broadcast with stereo audio or a second audio language (SAP). The Reception: STEREO/MONO/SAP feature lets you select the type of audio you want to record.

To enjoy Hi-Fi playback, you must connect your VCR to a stereo television or amplifier/receiver using the audio/video jacks as shown in the advanced hookups.

To Record Stereo Broadcast TV or SAP

Turn on the TV and tune it to the VCR viewing channel, either 3, 4, or TV's video input.

1. Insert a tape with safety tab in place.
2. If using one of the basic hookups, make sure the VCR indicator appears in the VCR's display panel. If not, press TV•VCR to turn it on.
3. Use SPEED on the remote to select a recording speed.

The tape speed indicator appears in the VCR's display panel and on the TV screen.

4. Select the channel or line input to be recorded.

The channel number or VIDEO1 or VIDEO2 appears on the TV screen.

5. Set the Reception: STEREO/MONO/SAP feature for the type of audio you want to record.

A. Press MENU•PROG to display the VCR MAIN MENU on the TV screen.

B. Press 7 to display the AUDIO menu.

C. Press 1 to select the type of audio Reception: STEREO, MONO, or SAP.

- Set to stereo for normal recording and to record broadcast stereo TV.

The STEREO indicator lights in the VCR's display panel when the station you are tuned to is broadcasting stereo.

- Set to MONO if the stereo signal is weak and the sound is too "noisy".

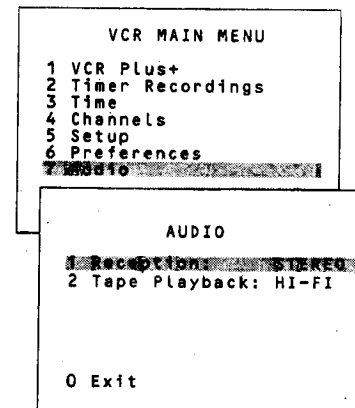
- Set to SAP to record SAP (second audio program) instead of the normal audio on both the Hi-Fi and linear tracks.

The SAP indicator (■) lights in the VCR's display panel.

Set the Tape Playback: HI-FI/LINEAR/MIX feature to LINEAR to hear SAP. Details are on page 29.

D. Repeatedly press 0 to remove the menus from the TV screen.

6. Press REC on remote or RECORD on the VCR to start recording. REC appears in the VCR's display panel.
7. 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.

To Record Audio Only

1. Press the INPUT button to select a line input.

Press INPUT once to record from the back AUDIO IN jacks. L1 appears in the VCR's display panel and VIDEO1 appears on the TV screen.

Press INPUT twice to record from the front AUDIO IN jacks. L2 appears in the VCR's display panel and VIDEO2 appears on the TV screen.

The VCR will record audio from the audio equipment connected to the AUDIO IN jacks.

2. Use SPEED on the remote to select the recording speed.

The tape speed indicator appears in the VCR's display panel and on the TV screen.

3. Make sure the Reception: STEREO/MONO/SAP feature is set to STEREO.

A. Press MENU•PROG to display the VCR MAIN MENU on the TV screen.

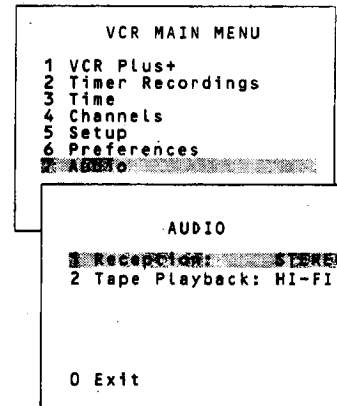
B. Press 7 to display the AUDIO menu.

C. Press 1 to select Reception: STEREO.

4. Start audio source playing and press REC on remote or RECORD on the VCR to begin recording.

REC appears in the VCR's display panel.

5. Press STOP when you are finished.



Using Two VCRs for Copying and Editing Tapes

Use this VCR as the playback VCR and the other VCR as the recording VCR. If you have two compatible VCR's, use the AutoEdit feature described below.

Operating Instructions

1. Turn on the TV and VCRs.
2. Tune TV to the VCR viewing channel, either 3, 4, or TV's video input.
3. If you have connected your VCR using the Basic Hookup (page 7), tune 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 Advanced Hookup (page 7), press INPUT on recording VCR to select the line input. Select L 1 to record from the jacks on the back or L 2 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.

To prevent recording on-screen displays from the playback VCR, press DISPLAY three times. (See page 28 for details.)

5. Press PLAY, then PAUSE on playback VCR when you reach the point on the tape or program where you want to begin copying. If the tape was not recorded on the playback VCR, streaks may appear and you may need to adjust tracking.
6. Press RECORD, then PAUSE, on recording VCR.
7. Press PAUSE buttons on both VCRs at the same time to begin copying the tape.*
8. Edit out segments that you do not want to copy by pressing PAUSE on recording VCR to stop copying the tape. Then locate the next segment you want to copy on the playback VCR by using FWD, REW, and PLAY. Press PAUSE on the playback VCR. Press PAUSE at the same time on both VCRs to resume copying.
9. Press STOP on both VCRs when you are finished.

* You may turn off the TV after the recording has started as it does not have to be on to copy a tape.

Caution: The unauthorized recording of television programs and other materials may infringe the rights of others.

Using Dual Remote with AutoEdit™

Use this VCR as the playback VCR and set it to respond to VCR2•LD on the remote as described on page 19. Use your other compatible VCR as the recording VCR, which should respond to VCR1.

1. Follow steps 1 – 4 in the "Operating Instructions" above.
2. Press VCR1 on remote to control recording VCR. Press RECORD, then pause, to put recording VCR in pause mode.
3. Press VCR2•LD on remote to control playback VCR.
4. Use FF, REW, 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 stop the tape from copying.
7. Repeat steps 4 – 6 as needed.
8. Press VCR1, STOP, then VCR2•LD, STOP, when you are finished.

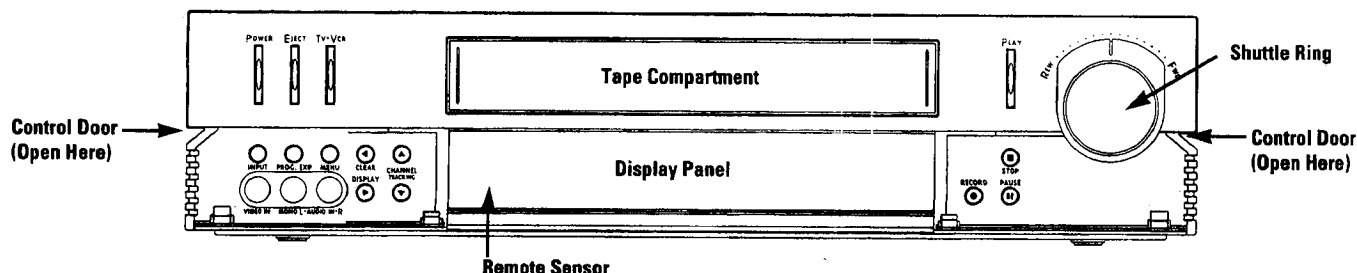
Reference

This reference section includes the following information:

- Controls
- Specifications
- Index
- Troubleshooting Guide
- Warranty Information

Controls

Front Panel



MONO L•AUDIO IN•R Jacks

Receives audio signals from another component, like a VCR or camcorder when it is connected to these jacks. Attach a component that is not stereo to the MONO L jack to hear sound on both channels. Select **L 2** 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. Allows you to change entries for selected menu features. Used to set a timer recording with the TV off.

CLEAR

Resets time counter to 0:00:00. Allows you to change entries for selected menu features.

DISPLAY

Displays VCR operating displays on the TV screen. Displays the time counter. Allows you to change entries for selected menu features.

EJECT

Press when the VCR is stopped to eject the cassette.

INPUT

Turns the line input on or off. **L 1** or **L 2** appears in VCR's display panel and **VIDEO 1** or **VIDEO 2** appears on the TV screen. Line input refers to the signal coming from the component connected to the AUDIO/VIDEO IN jacks on the back (**L 1**) or front (**L 2**) of the VCR.

MENU

Displays the VCR MAIN MENU on the TV screen. Selects features in the menu.

PAUSE

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

PLAY

Plays a tape.

PROG. EXP

Used to set a timer recording with the TV off.

POWER

Turns the VCR on or off.

RECORD

Starts VCR recording. Used for express recording (XPR).

Remote Sensor

Receives signals from the remote control. Aim the remote at this sensor with no objects between them.

Shuttle Ring

Rewinds and fast forwards the tape when VCR is stopped. Searches the picture in variable speed during play pause. Searches the picture in forward and reverse during playback.

STOP

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

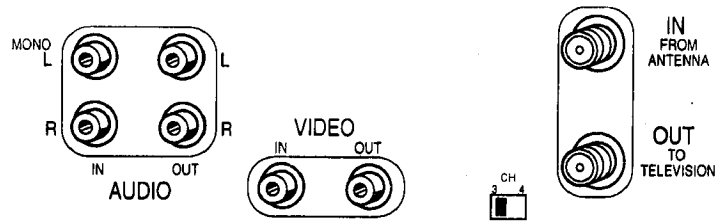
TV•VCR

Switches the picture signal so that it either comes from the VCR or the TV channel. (See page 15.)

VIDEO IN Jack

Receives video signals from another component, like a VCR or camcorder, when it is connected to this jack.

Back Panel



CH3 CH4 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.

IN FROM ANTENNA Connector

Receives the signal from an antenna, cable system, or satellite receiver that is attached to this connector.

OUT TO TELEVISION Connector

Passes signal to TV using the cable supplied.

VIDEO and AUDIO IN (R and MONO L) Jacks

Receives signals from another component, like a VCR or camcorder, when it is connected to these jacks. Use INPUT to select L 1 in the VCR's display panel.

Attach a component that is not stereo to the MONO L jack to hear sound on both channels.

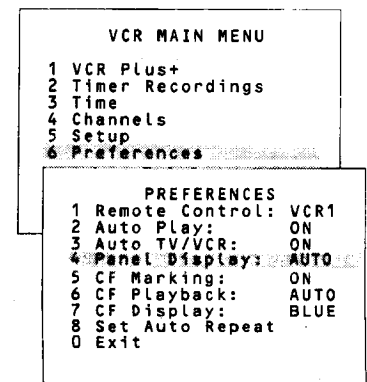
VIDEO and AUDIO OUT (R and L) Jacks

Sends signals from VCR to another component, like a TV monitor or VCR, when it is connected to these jacks.

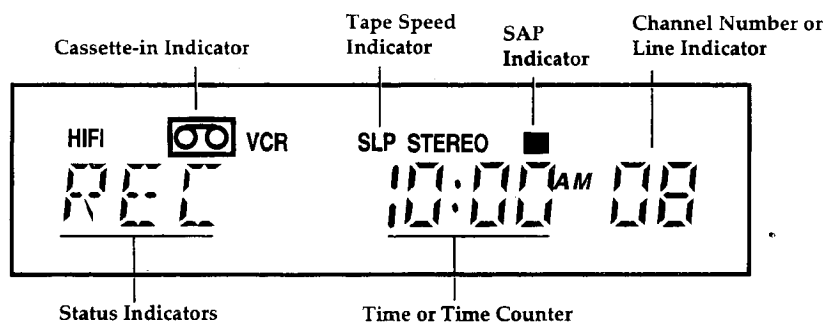
Display Panel

This VCR includes a feature that enables you to change the brightness level of the fluorescent display panel.

1. Press **MENU•PROG** on the remote to see the **VCR MAIN MENU** on the TV screen.
2. Press **6** to display the **PREFERENCES** menu.
3. Press **4** to select **Panel Display: AUTO, BRIGHT, or DIM.**
 - Select **AUTO** to keep the display panel bright when VCR is on and dim when it is off.
 - Select **BRIGHT** to keep the display panel bright.
 - Select **DIM** to keep the display panel dim.



Display Panel (continued)



Cassette-In Indicator (☉)

Lights when a tape is in the VCR.

Channel Number or L 1 or L 2

The channel number or line input is displayed.

Select L 1 to record from the jacks on the back of the VCR or L 2 to record from the jacks on the front of the VCR.

H I F I Indicator

Lights during hi-fi playback.

SAP Indicator (■)

Lights when the Reception: STEREO/MONO/SAP feature is set to SAP.

Status Indicators

Show what the VCR is doing.

COMM/	
MARK	CF marking in progress
EJECT	Ejecting Tape
FFWD	Fast forward
HELLO	Turned on or unlocked
LOCK	Pro-Tect Plus turned on
MARK 30	Marking process countdown
PLAY	Playback
REC	Record
REC P	Record pause
REW	Rewind

SAVE flashes/
SAVED

Shows timer program with TV turned off entered and saved

SRCH +

Forward search

SRCH -

Reverse search

SLOW +

Slow motion

SLOW -

Slow motion

STILL

Frame advance

STILL

Play pause

STOP

VCR stopped

TAPE flashes

Set for timer - no tape

TIMER

Timer recording set

TIMER FULL

Timer full

X-REC

Express recording in progress

STEREO Indicator

Lights when the station you are tuned to is broadcasting stereo.

Tape Speed Indicators (SP, LP, or SLP)

Press SPEED to change.

Time or Time Counter

Press DISPLAY to switch between the current time and elapsed-time counter.

VCR Indicator (Applies only to Basic Hookups)

Press TV•VCR to turn on or off.

VCR indicator on: Picture from VCR.

VCR indicator off: Picture from TV channel.

Trouble Shooting Guide

Sometimes problems can be easily solved by checking a few basic things. Check below before you call for help or take your VCR to an Authorized ProScan VCR Servicenter.

Trouble	Here's what to try:
No power	<ul style="list-style-type: none"> ■ Plug VCR into an operating outlet. ■ Check connections.
Clock shows incorrect time or date	<ul style="list-style-type: none"> ■ Make sure time zone and daylight savings information is entered correctly. <i>See page 12.</i> ■ Clock was not set accurately (check AM/PM and date). ■ Time counter display appears in display panel. Press DISPLAY on remote.
Remote locks up	<ul style="list-style-type: none"> ■ Remove batteries and hold down one or more buttons for several seconds to drain the microprocessor inside the remote to reset it. Reinstall the batteries and try remote again.
VCR does not respond to remote	<ul style="list-style-type: none"> ■ Press VCR1 (VCR2•LD) to set remote to control the VCR. <i>See page 19.</i> ■ Aim remote at VCR with no objects between them. ■ Change batteries.
Remote no longer controls a ProScan TV	<ul style="list-style-type: none"> ■ Press TV to set remote to control the corresponding compatible TV. <i>See page 20.</i> ■ Reprogram remote for ProScan TV. <i>See page 20.</i> ■ Aim remote at TV with no objects between them. ■ Change batteries.
Remote no longer controls a compatible TV, cable box, satellite receiver, or auxiliary component	<ul style="list-style-type: none"> ■ Press TV, AUX, or DSS•CABLE to set remote to control a compatible component. <i>See pages 20-22.</i> ■ Aim remote at component with no objects between them. ■ Reprogram remote after batteries have been changed. ■ Reprogram remote to 00 to operate RCA DSS[®] satellite receiver. ■ Change batteries.
VCR only responds to VCR2•LD button on remote	<ul style="list-style-type: none"> ■ Check setting of Remote Control: VCR1/VCR2 feature. <i>See page 19.</i>
No picture when VCR turned on – using a basic hookup	<ul style="list-style-type: none"> ■ Press TV•VCR to turn VCR indicator on. <i>See page 15.</i> ■ Check to see if Auto TV/VCR feature is set to OFF. <i>See page 15.</i>
Poor or no picture for normal TV viewing	<ul style="list-style-type: none"> ■ Press TV•VCR to turn VCR indicator off. ■ Switch TV to an active channel. ■ Check antenna connections.
Snowy or no picture during playback	<ul style="list-style-type: none"> ■ Press TV•VCR to turn VCR indicator on. ■ Check TV channel selected (3 or 4) to make sure it matches the channel selected with CH3 CH4 switch on back of VCR. ■ Check TV's fine tuning. ■ Check video cable connections between VCR and TV monitor. ■ Set TV monitor to video input channel. ■ Try another tape. ■ Some snow/streaks are normal during search, frame advance, slow-motion, or stop-action playback.

Trouble	Here's what to try:
Time counter not working	<ul style="list-style-type: none"> ■ 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	<ul style="list-style-type: none"> ■ No cassette in VCR. ■ Eject and re-insert cassette. ■ Broken tape — try another cassette.
Streaks in picture during normal playback	<ul style="list-style-type: none"> ■ Some snow/streaks are normal during search, frame advance, slow-motion, or stop-action playback.
Rewind does not operate	<ul style="list-style-type: none"> ■ Tape already rewound.
Will not record	<ul style="list-style-type: none"> ■ Safety tab removed from cassette. ■ Make sure the line indicator (L 1 or L 2) is turned off in VCR's display panel for normal recording from the VCR's tuner. Press INPUT to turn off the line indicator.
VCR is paused during playback	<ul style="list-style-type: none"> ■ VCR is in pause mode. Press PAUSE or PLAY. ■ JOG SHUTTLE on remote is turned on. Press JOG SHUTTLE again to turn off JOG SHUTTLE.
VCR Plus+ or timer recording not made or wrong program recorded	<ul style="list-style-type: none"> ■ Wrong PlusCode number entered. ■ Cable box or satellite receiver was not turned on at time recording was to begin. VCR cannot control cable box or satellite receiver, or component is positioned incorrectly. ■ Program entered incorrectly (wrong channel or times). ■ Power interruption. Clock area in display panel will show -:-:-. ■ Check to see if time and date are correct — including AM/PM. ■ Program exceeded tape's length or tape was not rewound beforehand. ■ VCR was not turned off at the time recording was to start. ■ No tape in VCR or cassette's safety tab broken off.
VCR makes noise when stopped	<ul style="list-style-type: none"> ■ 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 search active channels correctly	<ul style="list-style-type: none"> ■ Check antenna connections. ■ Check Signal Type: CABLE/ANTENNA feature. See page 13.
Cannot select channels over 69	<ul style="list-style-type: none"> ■ Cable channels over 69 can only be selected if Signal Type: CABLE/ANTENNA feature is set to CABLE. Details are on page 13.
Cassette with safety tab removed does not start to play automatically	<ul style="list-style-type: none"> ■ Set Auto Play ON/OFF feature to ON. Details are on page 27.

(continued on next page)

Trouble Shooting Guide (continued)

Trouble	Here's what to try:
Segment of tape plays over and over	<ul style="list-style-type: none"> ■ Auto Repeat feature turned on. Details are on page 27.
Stereo or SAP sound not recorded	<ul style="list-style-type: none"> ■ Reception: STEREO/MONO/SAP feature must be set to STEREO to record broadcast stereo. See page 42. ■ Reception: STEREO/MONO/SAP feature must be set to SAP to record SAP. See page 42. ■ STEREO indicator not on. Station not broadcasting stereo.
No stereo sound during playback	<ul style="list-style-type: none"> ■ Tape Playback: HI-FI/LINEAR/MIX feature must be set to HI-FI to hear stereo sound during playback. See page 29.
Stereo audio too noisy	<ul style="list-style-type: none"> ■ 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.
VCR forwards through commercials or momentarily displays a blue screen during playback	<ul style="list-style-type: none"> ■ COMMERCIAL▶▶ADVANCE™ CF Playback feature set to AUTO. See page 33.
COMMERCIAL▶▶ADVANCE™ feature does not mark commercials	<ul style="list-style-type: none"> ■ CF Marking: ON/OFF feature set to OFF. See page 32. ■ Recording was less than 15 minutes. ■ A single isolated commercial cannot be marked. ■ Recording started in the middle of a commercial segment. ■ The commercial is longer than one minute. ■ A commercial group starting within the first or last two minutes of a recording. ■ Accuracy and effectiveness can vary depending upon program content and the characteristics of the commercials. ■ Effectiveness may vary when local television stations insert their own commercials. ■ It does not mark commercials between 30-and-45 seconds and 45-and-60 seconds.
Commercials were recorded even though COMMERCIAL▶▶ADVANCE™ feature was turned on.	<ul style="list-style-type: none"> ■ COMMERCIAL▶▶ADVANCE™ is designed to record the commercials, mark them, and then skip over the marked commercials during playback.

Questions and Answers About **COMMERCIAL▶▶ADVANCE™**

Question	Answer
Will commercials be scanned through only on playback of recordings?	Yes. The VCR does not rewind and mark commercial segments until after recording.
How fast does the COMMERCIAL▶▶ADVANCE™ VCR scan through the commercial breaks?	In SLP tape speed, a 3-minute commercial break is scanned through in approximately 8-12 seconds. In SP, it takes about 25-35 seconds.
Are commercials still recorded if I want to watch them?	Yes. The recorded program, including commercials, can be viewed by setting the CF Playback feature to MANUAL .
What if the VCR scans forward through part of my program?	Simply rewind the tape to just before the skipped segment, and press PLAY to view the program.
Once a recording has been marked, does COMMERCIAL▶▶ADVANCE™ work each time the tape is played?	Yes. If the CF Playback feature is set to AUTO , the marked commercials should be skipped each time the tape is played in the COMMERCIAL▶▶ADVANCE™ VCR.
After marking commercials, is the tape left at the beginning or end of the recording?	The tape is left at the end of the recording so it is in position to begin additional programmed recordings.
Does the marking process interfere with other programmed recordings?	No. If two or more recordings are programmed together without sufficient time to mark the first recording, marking will take place after all recordings are complete.
What happens if the marking process is interrupted?	Marking can be interrupted to allow use of the VCR. Marking will resume again when the VCR's power is turned off as long as the tape has not been ejected from the VCR.
Does COMMERCIAL▶▶ADVANCE™ work in all recording speeds?	Yes, COMMERCIAL▶▶ADVANCE™ works in SP, LP, and SLP.
Will COMMERCIAL▶▶ADVANCE™ marked recordings work in non- COMMERCIAL▶▶ADVANCE™ VCRs?	A COMMERCIAL▶▶ADVANCE™ marked recording will play in a non- COMMERCIAL▶▶ADVANCE™ VCR, but commercials will not automatically be skipped.

Specifications

Format:	VHS
Record/Playback	Video: 4-Head
System	Audio: 2 Hi-Fi record/playback system
Video Signal System:	EIA standard: NTSC color
Antenna:	75-ohm external VHF/UHF combined antenna terminal
Tuner:	USA: 181 channels capability* (125 cable channels) Canada: 178 channels capability* (122 cable channels)
Type:	Autoprogramming frequency synthesis
Power Requirement:	120V AC, 60 Hz
Power Consumption:	22 watts
Dimensions:	3.5 inches high (90 mm) 15.43 inches wide (393 mm) 12.2 inches deep (314 mm)
Weight:	9.46 pounds (4.3 kg)
Storage Temperature Range:	- 22°F to +149°F
Operating Temperature Range:	+41°F to +104°F

*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 non-abrasive, anti-static cleaner and polisher.

Limited Warranty

What your warranty covers:

- Any defect in material or workmanship.

For how long after your purchase:

- Six months for labor charges
- One year for parts.

The warranty period for rental units begins with the first rental.

What we will do:

- Pay any Authorized ProScan VCR Servicenter the labor charges to repair your VCR.
- Pay any Authorized ProScan 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 ProScan VCR Servicenter. To identify your nearest Authorized ProScan VCR Servicenter, ask your dealer, look in the Yellow Pages, or call 1-800-PROSCAN.
- 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.

What if you purchased your VCR outside the United States:

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

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VCR Plus+ [™] Channel Worksheet

Use this worksheet to create a listing from which you can set up your VCR for VCR Plus+ programming.
(See page 36 for details.)

Broadcast or Cable TV Station Name <small>(Such as ABC, NBC, CBS, etc.)</small>	VCR Plus + Channel Number* <small>(See Standardized VCR Plus+ Channel Chart)</small>	Channel Number You Receive This Station On**

*Check your local listing for broadcast or VCR Plus+ channel numbers assigned to network stations.
**Check your local or cable listing for the channel numbers to enter in this column.

Standardized VCR Plus+™ Channel Numbers for Cable-TV

U.S.A.	Canada
American Movie Classics35	Allarcom Pay Television/Superchannel...67
Arts & Entertainment39	Arts & Entertainment44
Black Entertainment57	Cable News Network-Headline News...72
Bravo54	Cable News Network61
Cable News Network42	Canadian Home Shopping Network ...70
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The Disney Channel53	Country Music Television60
Entertainment Television63	Family Channel63
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Showtime41	The Sports Network43
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PROSCAN®

We are committed to your complete satisfaction and viewing enjoyment. Any time you have a question or want information about your ProScan product, call our friendly toll-free number listed below. We're always ready to help you Monday through Friday, 9 a.m. to 6 p.m. EST.

1-800-PROSCAN

If you would like a copy of this manual in French, please follow the instructions below:

Si un livret d'instructions en français n'est pas inclus avec votre appareil, vous pouvez en obtenir un (indiquer le numéro de modèle, votre nom, et votre adresse) en vous adressant à:

Thomson Electronique Grand Public du Canada
Service des données techniques
6540 Tomken Rd
Mississauga, Ontario L5T 2E9

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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