

**SONY**

3-800-553-12(1)

# ***Video Cassette Recorder***

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## **Operating Instructions**

### **Owner's record**

The model number is located at the rear and front of the unit and the serial number on the top. Record these numbers in the spaces provided below. Refer to them whenever you call upon your Sony dealer regarding this product.

Model No.

Serial No.

**VHS**

**Hi-Fi**

**VCR** *plus+*

**SLV-960HF**

**SLV-960HF CS**

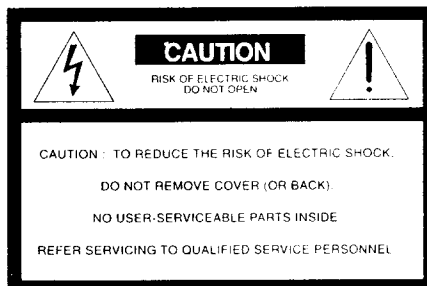
**SLV-960HF MX**

**SLV-960HF PX**

©1995 by Sony Corporation

## WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.



 This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

 This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

### CAUTION (SLV-960HF)

To prevent electric shock, do not use this polarized AC plug with an extension cord, receptacle or other outlet unless the blades can be fully inserted to prevent blade exposure.

### Precautions

#### Safety

- For SLV-960HF/960HF MX, operate the unit only on 120 V AC, 60 Hz. For SLV-960HF PX/960HF CS, operate the unit on 110 to 240 V AC, 50/60 Hz.
- If anything falls into the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.
- (SLV-960HF) One blade of the plug is wider than the other for the purpose of safety and will fit into the power outlet only one way. If you are unable to insert the plug fully into the outlet, contact your Sony dealer.
- (SLV-960HF) Unplug the unit from the wall outlet if you do not intend to use it for an extended period of time. To disconnect the cord, pull it out by the plug, never by the cord.

#### Installing

- Allow adequate air circulation to prevent internal heat buildup.
- Do not place the unit on surfaces (rugs,

blankets, etc.) or near materials (curtains, draperies) that may block the ventilation slots.

- Do not install the unit near heat sources such as radiators or air ducts, or in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.
- Do not install the unit in an inclined position. It is designed to be operated in a horizontal position only.
- Keep the unit and cassettes away from equipment with strong magnets, such as microwave ovens or large loudspeakers.
- Do not place heavy objects on the unit.
- If the unit is brought directly from a cold to a warm location, moisture may condense inside the VCR and cause damage to the video head and tape. When you first install the unit, or when you move it from a cold to a warm location, wait for about one hour before operating the unit.

### Information

#### For customers in the USA (SLV-960HF/960HF PX)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

#### Caution

Television programs, films, video tapes and other materials may be copyrighted. Unauthorized recording of such material may be contrary to the provisions of the copyright laws. Also, use of this recorder with cable television transmission may require authorization from the cable television transmission and/or program owner.

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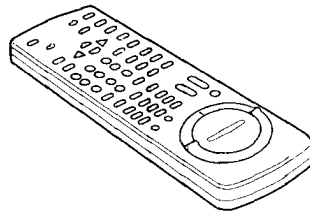
\* VCR Plus+ and PlusCode are trademarks of Gemstar Development Corporation. VCR Plus+ system is manufactured under license from Gemstar Development Corporation.

## Step 1

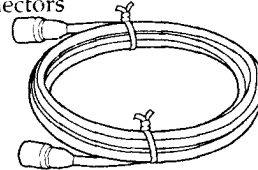
# Unpacking

Check that you have received the following items with the VCR:

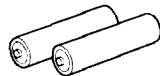
- Remote commander



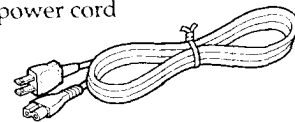
- 75-ohm coaxial cable with F-type connectors



- Size AA (R6) batteries

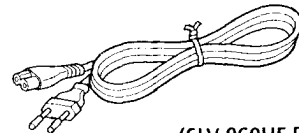
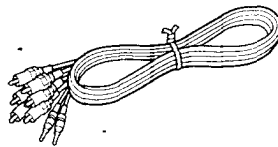


- AC power cord



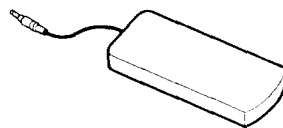
(SLV-960HF/960HF MX)

- Audio/video cable (3-phono, 1 mini to 3-phono, 1-mini)

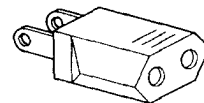


(SLV-960HF PX/  
960HF CS)

- Cable Mouse (cable box controller)



- Plug adaptor (SLV-960HF PX/960HF CS)

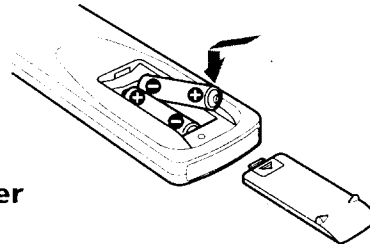


## Step 2

# Setting up the remote commander

### Inserting the batteries

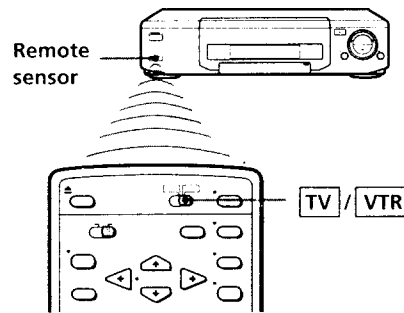
Insert two size AA (R6) batteries by matching the + and - on the batteries to the diagram inside the battery compartment.



### Using the remote commander

You can use this remote commander to operate this VCR and a Sony TV. The POWER, VOL +/-, CH +/-, TV/VTR, channel number, ENTER, DISPLAY, and AUDIO MONITOR buttons on the remote commander can be used to operate your Sony TV.

| To operate Set TV/VTR to |                                                |
|--------------------------|------------------------------------------------|
| the VCR                  | VTR, and point at the remote sensor on the VCR |
| a Sony TV                | TV, and point at the remote sensor on the TV   |



### Notes

- With normal use, the batteries should last for approximately three to six months.
- If you do not use the remote commander for an extended period of time, remove the batteries to avoid possible damage from battery leakage.
- Do not use a new battery with an old one.
- Do not use different types of batteries.

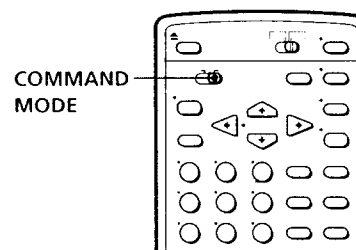
### Setting the COMMAND MODE switch

To remotely control the VCR with the commander, set COMMAND MODE on the remote commander to the same position as that on the VCR. Usually set to VTR 3. Change the position as shown below to control other Sony VCRs:

**VTR 1:** For Sony Betamax format VCRs

**VTR 2:** For Sony 8mm format VCRs

**VTR 3:** For Sony VHS format VCRs



continued

## Step 2: Setting up the remote commander (continued)

### Controlling other TVs with the remote commander

The remote commander is preprogrammed to control non-Sony TVs. If your TV is listed in the table below, set the appropriate manufacturer's code number.

- 1 Set **[TV]/[VTR]** at the top of the remote commander to **[TV]**.
- 2 Hold down POWER, and enter your TV's code number(s) using the number buttons. Then release POWER.

Now you can use the POWER, VOL +/-, CH +/- and TV/VTR buttons to control your TV. You can also use the buttons marked with a dot (•) to control a Sony TV. To control the VCR, reset **[TV]/[VTR]** to **[VTR]**.

### Code numbers of controllable TVs

If more than one code number is listed, try entering them one at a time until you find the one that works with your TV.

| Manufacturer     | Code number | Manufacturer   | Code number | Manufacturer | Code number |
|------------------|-------------|----------------|-------------|--------------|-------------|
| Sony             | 01          | KMC            | 03          | RCA          | 04,10       |
| Akai             | 04          | Magnavox       | 03,08,12    | Sampo        | 12          |
| AOC              | 04          | Marantz        | 04,13       | Sanyo        | 11          |
| Centurion        | 12          | MGA/Mitsubishi | 04,12,13,17 | Scott        | 12          |
| Coronado         | 03          | NEC            | 04,12       | Sears        | 07,10,11    |
| Curis-Mathes     | 12          | Panasonic      | 06,19       | Sharp        | 03,05,18    |
| Daytron          | 12          | Philco         | 03,04       | Sylvania     | 08,12       |
| Fisher           | 11          | Philips        | 08          | Teknika      | 03,08,14    |
| General Electric | 06,10       | Pioneer        | 16          | Toshiba      | 07          |
| Hitachi          | 02,03       | Portland       | 03          | Wards        | 03,04,12    |
| J.C.Penny        | 04,12       | Quasar         | 06,18       | Yorx         | 12          |
| JVC              | 09          | Radio Shack    | 05,14       | Zenith       | 15          |

### Notes

- If the TV uses a different remote control system from the one programmed to work with the VCR, you cannot control your TV with the remote commander.
- If you enter a new code number, the code number previously entered will be erased.
- When you replace the batteries of the remote commander, the code number automatically resets to 1 (Sony). Reset the appropriate code number.

## Step 3

# Hookups

### Selecting the best hookup option

There are many ways in which your VCR can be hooked up. To hook up your VCR so that it works best for you, first scan through the table below. Then use the accompanying diagrams and procedures on the following pages to set up your VCR.

| If you have                                                                    | Use                                                                     | Refer to              |
|--------------------------------------------------------------------------------|-------------------------------------------------------------------------|-----------------------|
| TV that has audio/video inputs                                                 | <b>Audio/video (A/V) hookup</b> , then follow one of the hookups below. | <b>Pages 8 to 9</b>   |
| Cable box that is compatible with the VCR's cable box control feature          | <b>Hookup 1</b>                                                         | <b>Pages 10 to 12</b> |
| No cable box or incompatible cable box with only a few scrambled channels      | <b>Hookup 2</b>                                                         | <b>Pages 13 to 15</b> |
| Antenna only, no cable TV                                                      | <b>Hookup 3</b>                                                         | <b>Pages 16 to 18</b> |
| Incompatible cable box with many scrambled channels                            | <b>Hookup 4</b>                                                         | <b>Pages 19 to 21</b> |
| DSS** receiver                                                                 | <b>Hookup 5</b>                                                         | <b>Pages 22 to 24</b> |
| Incompatible cable box with only a few scrambled channels, using an A/B switch | <b>Hookup 6</b>                                                         | <b>Pages 25 to 28</b> |

After you've completed the connections, follow the instructions for setup. During setup, if you need more details on the procedure described, page numbers are provided where you can find complete, step-by-step instructions.

After you've completed the setup, you're ready to use your VCR. Procedures differ depending on the hookup you used. For an overview, refer to "Quick reference to using the VCR" on the back cover.

#### Before you get started

- Turn off the power to all equipment.
- Do not connect the AC power cords until all of the connections are completed.
- Be sure you make connections firmly. Loose connections may cause picture distortion.
- If your TV doesn't match any of the examples provided, see your nearest Sony dealer or qualified technician.

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

**continued**

### Step 3: Hookups (continued)

#### Audio/video (A/V) hookup

Pages 8 to 9

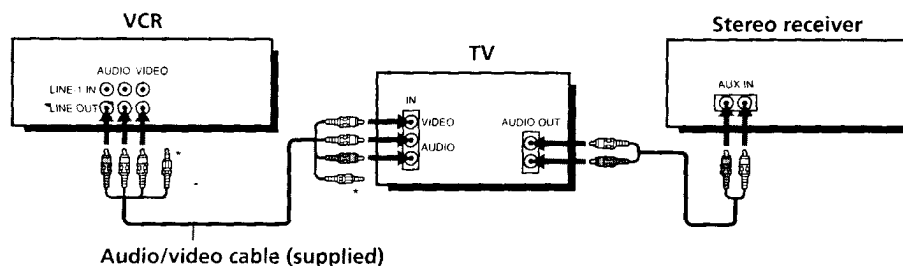
If your TV has audio/video (A/V) input jacks, you will get a better picture and sound if you hook up your VCR using these connections. In addition, for a true "home theater" experience, you should connect the audio outputs of your VCR or TV to your stereo system. If your TV doesn't have A/V inputs, see the following pages for antenna or cable hookups.

If your TV has the S-Link™\* (A/V bus control) function, hook up your VCR using the connection shown on page 9. Your TV will automatically switch to the A/V inputs for your VCR when you play back or operate menu on the VCR.

If you're not planning to use your VCR to record programs, you're finished setting up the VCR after you've made the connections shown on pages 8 and 9. If you want to record off-air or off your cable TV system, complete these connections first, and then go to the following pages for antenna or cable hookups.

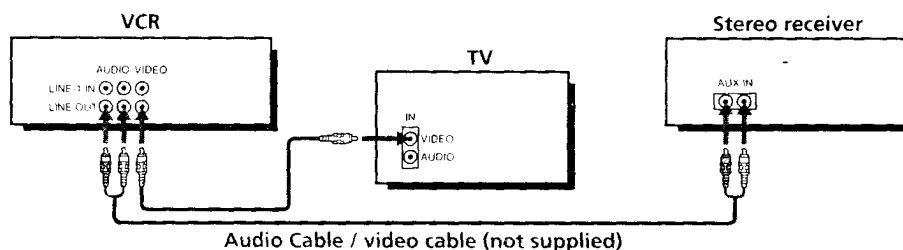
\* S-Link™ is a trademark of Sony Corporation.

#### A Use this hookup if your TV has stereo jacks



\* Do not connect the miniplugs for this hookup.

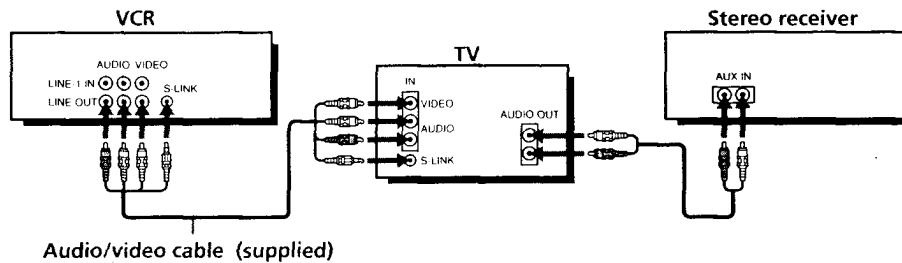
#### B Use this hookup if your TV doesn't have stereo jacks



#### Note

To play a tape in stereo, you must use the A/V connection.

**C** Use this hookup if your TV has the S-Link™ function



**A/V hookup: VCR setup**

After you've connected your TV and completed antenna or cable hookup, use the following procedure to set up the VCR.

Press **MENU** and select **ADVANCED OPTIONS**.

| MENU                                                      |
|-----------------------------------------------------------|
| TIMER SET / CHECK                                         |
| TUNER PRESET                                              |
| CLOCK SET                                                 |
| LANGUAGE                                                  |
| SET VCR Plus+ CHANNELS                                    |
| CABLE BOX CONTROL                                         |
| <b>ADVANCED OPTIONS</b>                                   |
| Use <b>↑↓</b> to select an item, then push <b>EXECUTE</b> |

Set **AUTO ANT SEL** to **OFF** and press **EXECUTE**.

| ADVANCED OPTIONS |           |
|------------------|-----------|
| AUTO ANT SEL     | ON OFF    |
| AUTO STEREO      | ON OFF    |
| DIMMER           | ON OFF    |
| AUDIO MIX        | ON OFF    |
| NORMAL AUDIO     | MAIN SAP  |
| TAPE SELECT      | -120 -160 |
| AUTO TAPE SPEED  | ON OFF    |
| APC              | ON OFF    |
| SHARPNESS        | L - - H   |

For details, see page 66.

**Caution**

Connections between the VCR's VHF/UHF connector and the antenna terminals of the TV receiver should be made only as shown in the following instructions. Failure to do so may result in operation that violates the regulations of the Federal Communications Commission regarding the use and operation of RF devices. Never connect the output of the VCR to an antenna or make simultaneous (parallel) antenna and VCR connections at the antenna terminals of your receiver.

**Note to CATV system installer**

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

### Step 3: Hookups (continued)

#### Hookup 1

Pages 10 to 12

#### Using cable box control

##### Recommended use

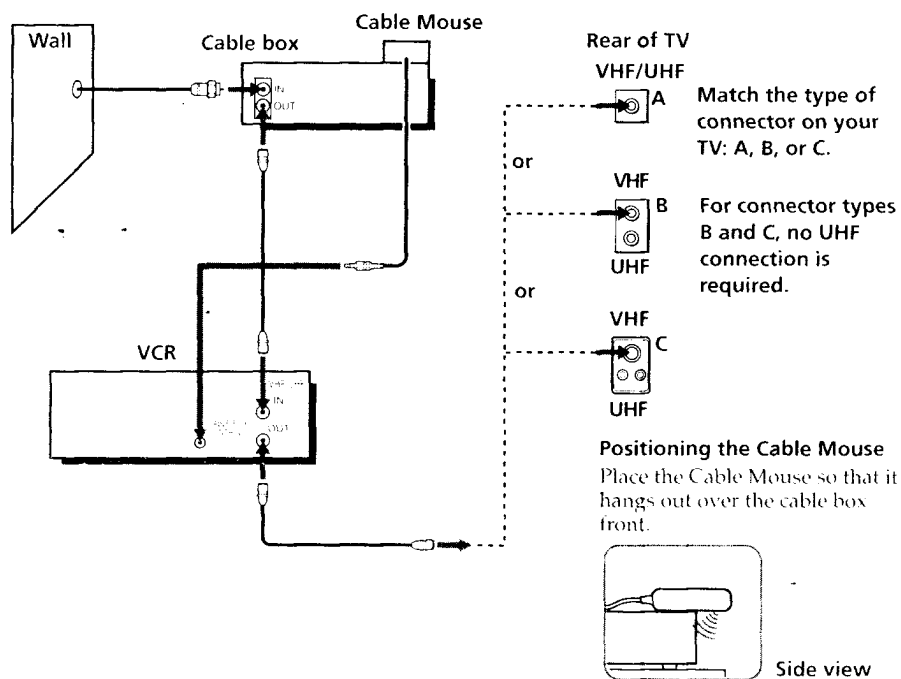
You should use this hookup if you have a cable box, especially if your cable system scrambles all or most channels. This hookup allows the VCR's cable box control feature to control the channel on the cable box, simplifying the recording process. A list of compatible cable boxes is on page 37.

##### What you can do with this hookup

- Record any channel using the VCR's cable box control feature to select channels on the cable box

##### What you can't do

- Record with the cable box turned off
- Record one channel while watching another channel

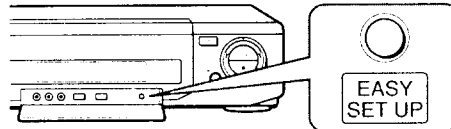
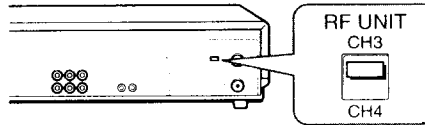


## Hookup 1: VCR setup

- 1 Set the RF UNIT switch to CH 3 or CH 4, whichever channel is not used in your area. If both are used, set the switch to either channel.

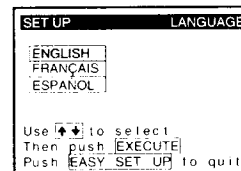
For details, see page 72.

If you made A/V connections (from page 8), you can skip this step.

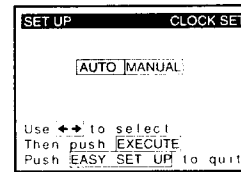


- 2 Turn on your cable box.
- 3 Press EASY SET UP on the VCR.

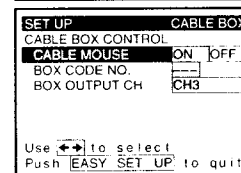
- 1 The LANGUAGE menu appears. Change the on-screen display language to French (FRANÇAIS) or Spanish (ESPAÑOL) if desired, and press EXECUTE. For details, see page 29.



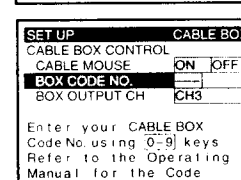
- 2 The CLOCK SET menu appears. Select AUTO and press EXECUTE. For details, see page 30.



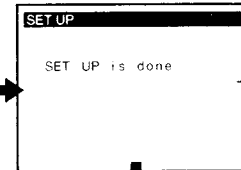
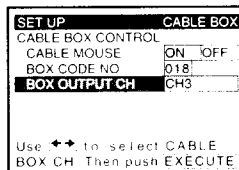
- 3 The CABLE BOX CONTROL menu appears. Select ON. For details, see page 36.



- 4 Enter your cable box code number and press CURSOR↓.



- 5 Select your cable box output channel and press EXECUTE.



Normal display

continued

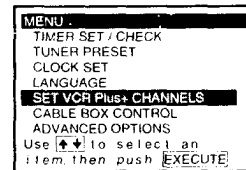
Getting Started

### Step 3: Hookups (continued)

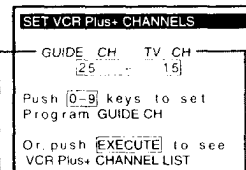
#### Hookup 1: VCR Plus+ channel setup

- 1 Find the VCR Plus+ Channel Listing in your program guide. For details, see page 45.
- 2 If the channels in the program guide are different from the channels that you actually use on your TV, set the channels that are different as follows. For details, see page 46.

- 1 Press MENU and select SET VCR Plus+ CHANNELS.



- 2 Enter the program guide channel, then the channel you use on your TV.



- 3 Press EXECUTE.

Program guide channel

Your actual TV channel

#### Automatic clock setting

Once you've set up the VCR, it automatically sets the clock the first time you turn off the VCR. After that, whenever you turn off the VCR, it checks the time and adjusts the clock, even for Daylight Saving Time. The VCR sets the clock by picking up a time signal provided by some TV channels.

If you want to use the timer to record right away, or if the channels in your area do not carry time signals, set the clock manually. For details, see pages 34-35.

#### Note

To use the automatic clock setting feature, leave the cable box on.

### No cable box, or incompatible cable box with only a few scrambled channels

#### Recommended use

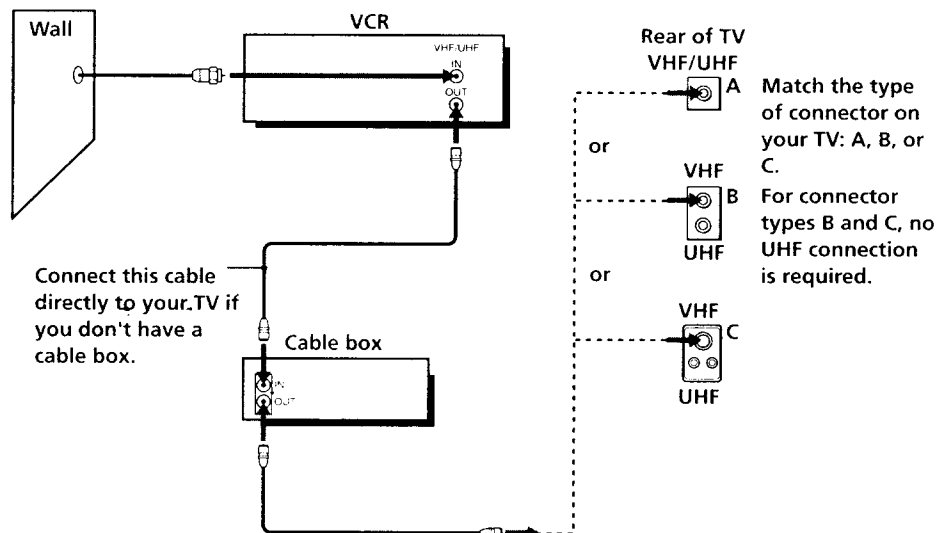
Use this hookup if you do not have a cable box. Also use this hookup if your cable company cannot supply a cable box that is compatible with the VCR's cable box control feature, and your cable system scrambles only a few channels.

#### What you can do with this hookup

- Record any unscrambled channel by selecting the channel on the VCR

#### What you can't do

- Record scrambled channels that require a cable box



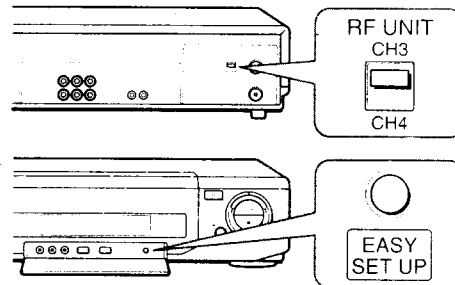
continued

### Step 3: Hookups (continued)

#### Hookup 2: VCR setup

- 1 Set the RF UNIT switch to CH 3 or CH 4, whichever channel is not used in your area. If both are used, set the switch to either channel.

For details, see page 72.  
If you made A/V connections (from page 8), you can skip this step.

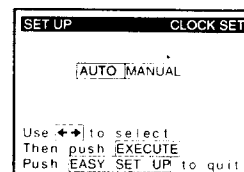


- 2 Press EASY SET UP on the VCR.

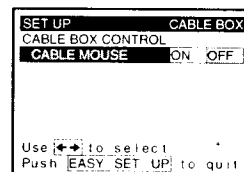
- 1 The LANGUAGE menu appears. Change the on-screen display language to French (FRANÇAIS) or Spanish (ESPAÑOL) if desired, and press EXECUTE. For details, see page 29.



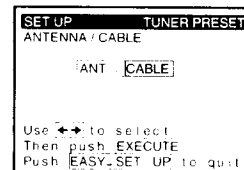
- 2 The CLOCK SET menu appears. Select AUTO and press EXECUTE. For details, see page 30.



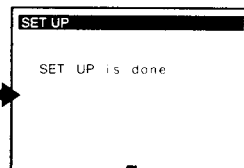
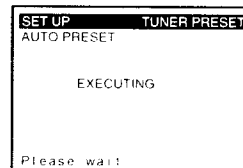
- 3 The CABLE BOX CONTROL menu appears. Select OFF and press EXECUTE. For details, see page 36.



- 4 The TUNER PRESET menu appears. Set ANTENNA/CABLE to CABLE and press EXECUTE. For details, see page 41.



- 5 The AUTO PRESET starts.

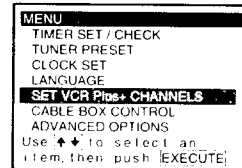


Normal display

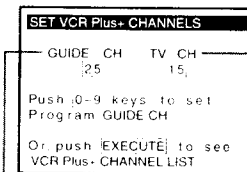
## Hookup 2: VCR Plus+ channel setup

- 1 Find the VCR Plus+ Channel Listing in your program guide. For details, see page 45.
- 2 If the channels in the program guide are different from the channels that you actually use on your TV, set the channels that are different as follows. For details, see page 46.

- 1 Press MENU and select SET VCR Plus+ CHANNELS.



- 2 Enter the program guide channel, then the channel you use on your TV.



- 3 Press EXECUTE.

Program guide channel

Your actual TV channel

### Automatic clock setting

Once you've set up the VCR, it automatically sets the clock the first time you turn off the VCR. After that, whenever you turn off the VCR, it checks the time and adjusts the clock, even for Daylight Saving Time. The VCR sets the clock by picking up a time signal provided by some TV channels.

If you want to use the timer to record right away, or if the channels in your area do not carry time signals, set the clock manually. For details, see pages 34-35.

### Step 3: Hookups (continued)

## Hookup 3

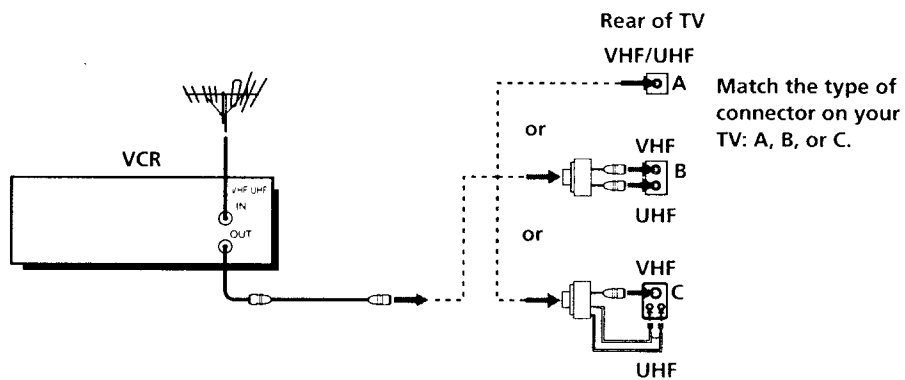
Pages 16 to 18

### Antenna hookup

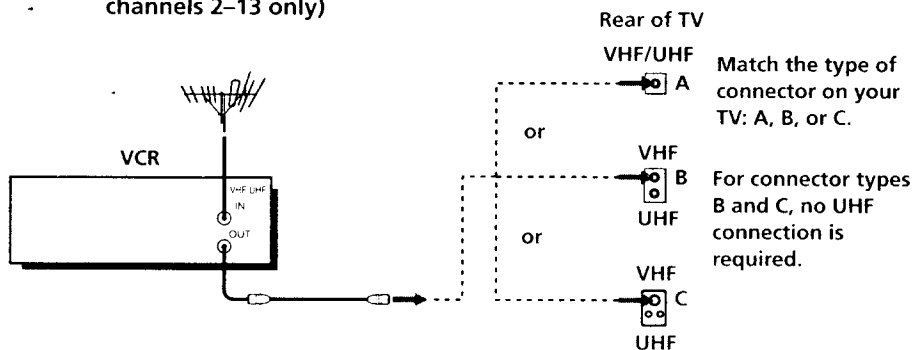
Make the following connections if you're using an antenna (if you don't have cable TV).

**A** Use this hookup if you're using:

- VHF/UHF antenna (you get channels 2–13 and channels 14 and higher)
- UHF-only antenna (you get channels 14 and higher)
- Separate VHF and UHF antennas



**B** Use this hookup if you're using a VHF-only antenna (you get channels 2–13 only)



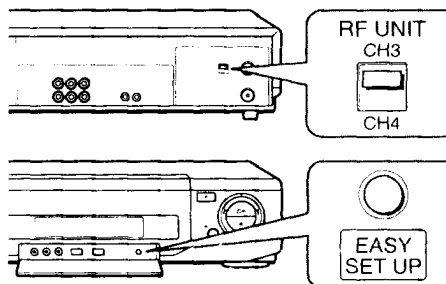
**If you cannot connect your antenna cable to the VCR directly**

If your antenna cable is a flat cable (300-ohm twin lead cable), attach an external antenna connector (not supplied) so you can connect the cable to the VHF/UHF IN connector. If you have separate cables for VHF and UHF antennas, you should use a U/V band mixer (not supplied). For details, see page 72.

### Hookup 3: VCR setup

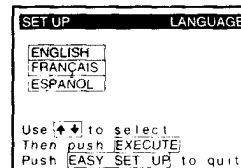
- 1 Set the RF UNIT switch to CH 3 or CH 4, whichever channel is not used in your area. If both are used, set the switch to either channel.

For details, see page 72. If you made A/V connections (from page 8), you can skip this step.

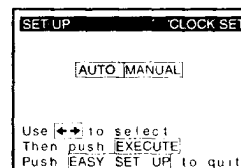


- 2 Press EASY SET UP on the VCR.

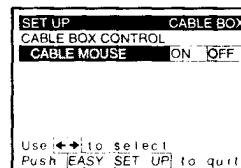
- 1 The LANGUAGE menu appears. Change the on-screen display language to French (FRANÇAIS) or Spanish (ESPAÑOL) if desired, and press EXECUTE. For details, see page 29.



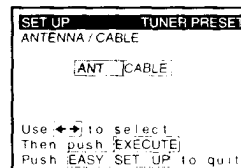
- 2 The CLOCK SET menu appears. Select AUTO and press EXECUTE. For details, see page 30.



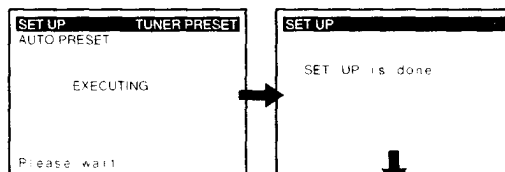
- 3 The CABLE BOX CONTROL menu appears. Select OFF and press EXECUTE. For details, see page 36.



- 4 The TUNER PRESET menu appears. Set ANTENNA/CABLE to ANT and press EXECUTE. For details, see page 41.



- 5 The AUTO PRESET starts.



Normal display

continued

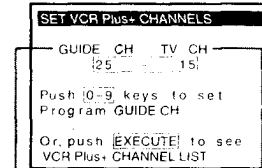
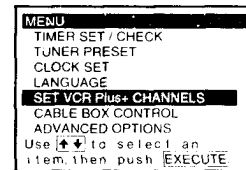
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Getting Started

### Step 3: Hookups (continued)

#### Hookup 3: VCR Plus+ channel setup

- 1 Find the VCR Plus+ Channel Listing in your program guide. For details, see page 45.
- 2 If the channels in the program guide are different from the channels that you actually use on your TV, set the channels that are different as follows. For details, see page 46.
  - 1 Press MENU and select SET VCR Plus+ CHANNELS.
  - 2 Enter the program guide channel, then the channel you use on your TV.
  - 3 Press EXECUTE.



Program guide channel

Your actual TV channel

#### Automatic clock setting

Once you've set up the VCR, it automatically sets the clock the first time you turn off the VCR. After that, whenever you turn off the VCR, it checks the time and adjusts the clock, even for Daylight Saving Time. The VCR sets the clock by picking up a time signal provided by some TV channels.

If you want to use the timer to record right away, or if the channels in your area do not carry time signals, set the clock manually. For details, see pages 34-35.

### Incompatible cable box with many scrambled channels

#### Recommended use

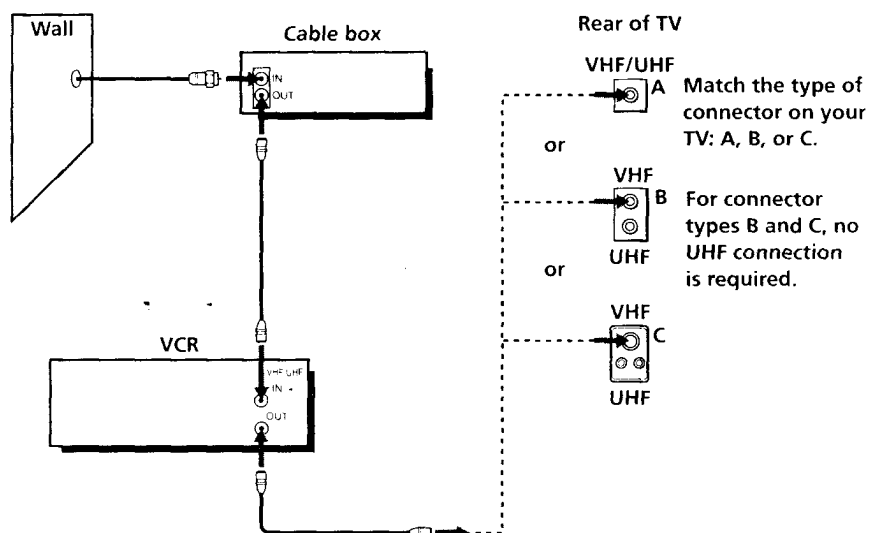
Use this hookup if your cable company cannot supply a cable box that is compatible with the VCR's cable box control feature, and your cable system scrambles all or most channels.

#### What you can do with this hookup

- Record any channel by selecting the channel on the cable box

#### What you can't do

- Record with the cable box turned off
- Record one channel while watching another channel
- Select channels directly on the VCR

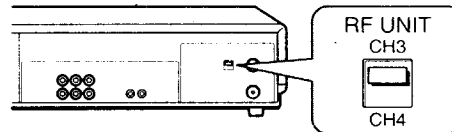


continued

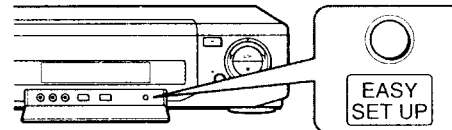
### Step 3: Hookups (continued)

#### Hookup 4: VCR setup

- 1 Set the RF UNIT switch to CH 3 or CH 4, whichever channel is not used in your area. If both are used, set the switch to either channel.

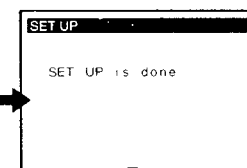
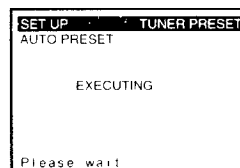
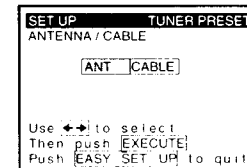
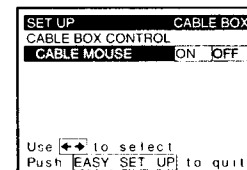
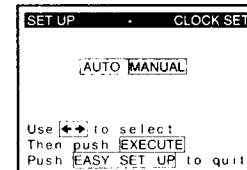
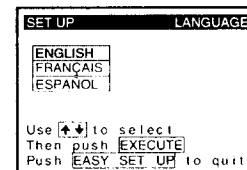


For details, see page 72. If you made A/V connections (from page 8), you can skip this step.



- 2 Turn on your cable box.
- 3 Press EASY SET UP on the VCR.

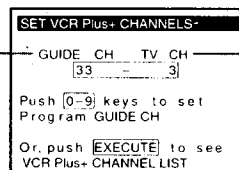
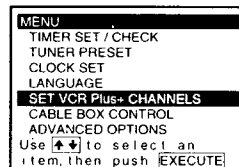
- 1 The LANGUAGE menu appears. Change the on-screen display language to French (FRANÇAIS) or Spanish (ESPAÑOL) if desired, and press EXECUTE. For details, see page 29.
- 2 The CLOCK SET menu appears. Select MANUAL and press EXECUTE. For details, see page 30.
- 3 The CABLE BOX CONTROL menu appears. Select OFF and press EXECUTE. For details, see page 36.
- 4 The TUNER PRESET menu appears. Set ANTENNA/CABLE to ANT and press EXECUTE. For details, see page 41.
- 5 The AUTO PRESET starts.



Normal display

## Hookup 4: VCR Plus+ channel setup

- 1 Find the VCR Plus+ Channel Listing in your program guide. For details, see page 45.
- 2 Enter all the channels you want to record and the cable box output channel (usually 2, 3, or 4). For details, see page 46.
  - 1 Press MENU and select SET VCR Plus+ CHANNELS.
- 2 Enter the program guide channel, then the cable box output channel.
- 3 Press EXECUTE.



Program guide channel

Cable box output channel

### Automatic clock setting

To use the Auto Clock Set feature with this hookup, you need to manually select a channel that carries a time signal:

- 1 Tune the cable box to a channel that carries a time signal.
- 2 Select AUTO in the CLOCK SET menu to turn on the Auto Clock Set feature.
- 3 Turn off the VCR. It automatically sets the clock and adjusts for Daylight Saving Time by picking up the time signal.

If you want to use the timer to record right away, or if the channels in your area do not carry time signals, set the clock manually. For details, see pages 34–35.

### Note

To use the automatic clock setting feature, leave the cable box on.

### Step 3: Hookups (continued)

#### Hookup 5

Pages 22 to 24

#### DSS (Digital Satellite System) receiver

##### Recommended use

Use this hookup if you have a DSS receiver. It allows the VCR's cable box control feature to control the channel on the DSS receiver, simplifying the recording process. A list of compatible DSS receivers is on page 38.

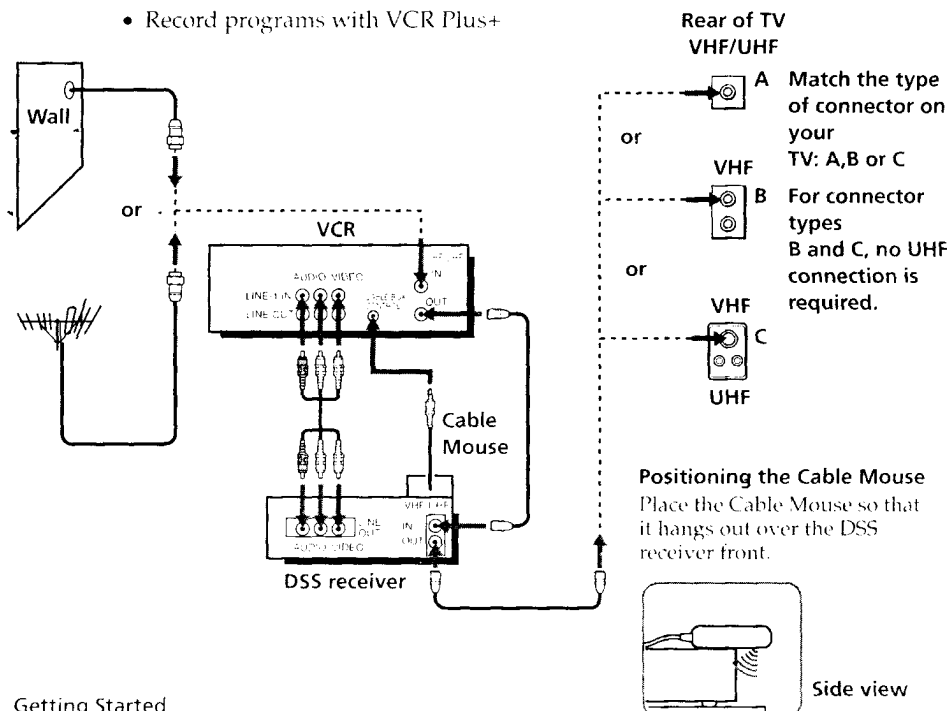
DSS (Digital Satellite System) is a satellite broadcast that provides superior digital-quality video and crisp digital-quality audio. A variety of program packages are available through your program providers. It also has program guides that are sorted by program categories.

##### What you can do with this hookup

- Record any channels using the VCR's cable box control feature to select channels on the DSS receiver.

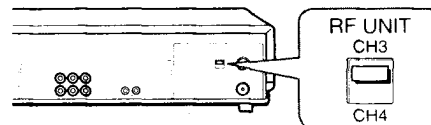
##### What you can't do

- Record with the DSS receiver turned off
- Record any channels from cable or an antenna  
(To record channels from cable or an antenna, turn off the cable box control feature.)
- Use a cable box
- Record programs with VCR Plus+



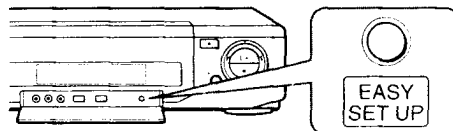
## Hookup 5: VCR setup

- 1 Set the RF UNIT switch to CH 3 or CH4, whichever channel is not used in your area. If both are used, set the switch to either channel.

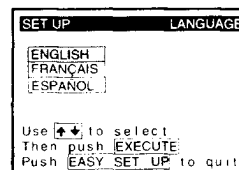


For details, see page 72.  
If you made A/V connections (from page 8), you can skip this step.

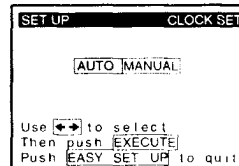
- 2 Turn on your DSS receiver.
- 3 Press EASY SET UP on the VCR.



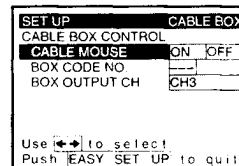
- 1 The LANGUAGE menu appears. Change the on-screen display language to French (FRANÇAIS) or Spanish (ESPAÑOL) if desired, and press EXECUTE.  
For details, see page 29.



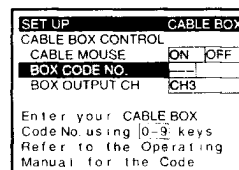
- 2 The CLOCK SET menu appears. Select AUTO and press EXECUTE. For details, see page 30.



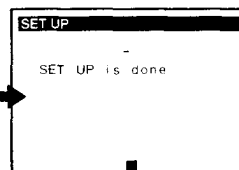
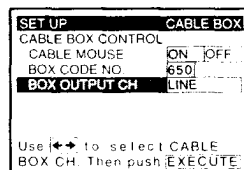
- 3 The CABLE BOX CONTROL menu appears. Select ON. For details, see page 36.



- 4 Enter your DSS receiver code number and press CURSOR↓.  
For details, see page 36.



- 5 Set your DSS receiver output channel (BOX OUTPUT CH) to LINE and press EXECUTE.



Normal display

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### **Step 3: Hookups (continued)**

#### **Hookup 5: VCR setup**

##### **Automatic clock setting**

Once you've set up the VCR, it automatically sets the clock the first time you turn off the VCR. After that, whenever you turn off the VCR, it checks the time and adjusts the clock, even for Daylight Saving Time. The VCR sets the clock by picking up a time signal provided by some TV channels.

If you want to use the timer to record right away, or if the channels in your area do not carry time signals, set the clock manually. For details, see pages 34-35.

##### **Notes**

To successfully record a program from the DSS receiver, proceed as follows:

- Leave the DSS receiver on all the time.
- Turn off the display (menu screen, channel number, etc.) of the DSS receiver.
- To record or receive locked channels, unlock the channel before the VCR starts recording.
- To set pay-per-view programs in the timer setting, order the pay-per-view program before the VCR starts recording.
- Some programs are copy protected. You cannot record these programs.

### Incompatible cable box with only a few scrambled channels, using an A/B switch

#### Recommended use

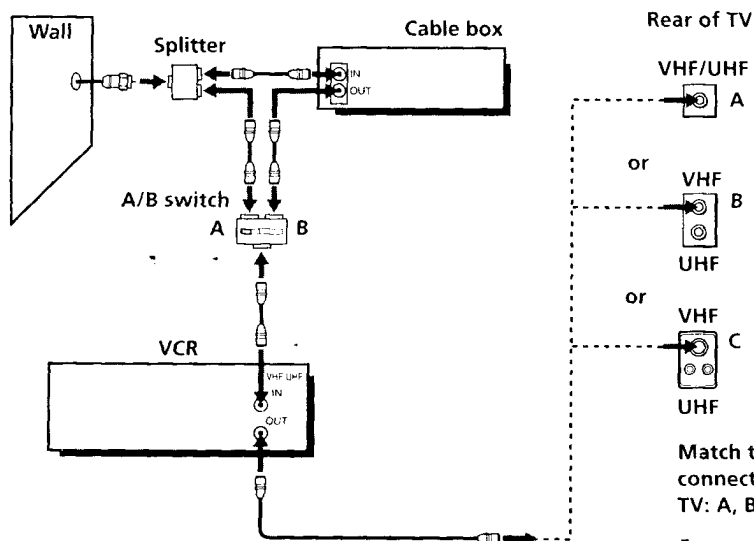
By using an A/B switch (not supplied), this hookup allows you to record both scrambled and unscrambled channels conveniently.

#### What you can do with this hookup

- Record any unscrambled channel by selecting the channel directly on the VCR (the A/B switch is set to A)
- Record any scrambled channel by selecting the channel on the cable box (the A/B switch is set to B)

#### What you can't do

- Record one scrambled channel while watching another channel (the A/B switch is set to B)



Match the type of connector on your TV: A, B, or C.

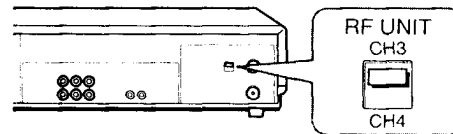
For connector types B and C, no UHF connection is required.

continued

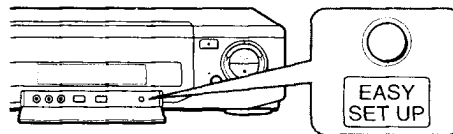
## Step 3: Hookups (continued)

### Hookup 6: VCR setup

- 1 Set the RF UNIT switch to CH 3 or CH 4, whichever channel is not used in your area. If both are used, set the switch to either channel.

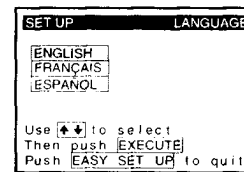


For details, see page 72. If you made A/V connections (from page 8), you can skip this step.

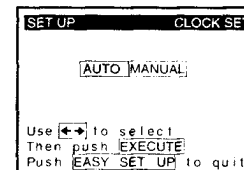


- 2 Set the A/B switch to "A."
- 3 Press EASY SET UP on the VCR.

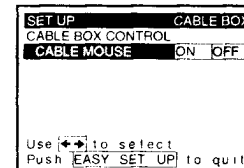
- 1 The LANGUAGE menu appears. Change the on-screen display language to French (FRANÇAIS) or Spanish (ESPAÑOL) if desired, and press EXECUTE. For details, see page 29.



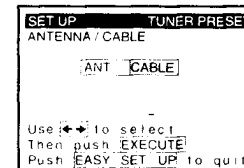
- 2 The CLOCK SET menu appears. Select AUTO and press EXECUTE. For details, see page 30.



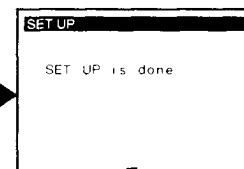
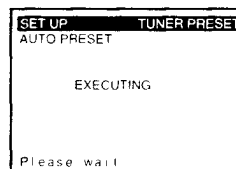
- 3 The CABLE BOX CONTROL menu appears. Select OFF and press EXECUTE. For details, see page 36.



- 4 The TUNER PRESET menu appears. Set ANTENNA/CABLE to CABLE and press EXECUTE. For details, see page 41.



- 5 The AUTO PRESET starts.

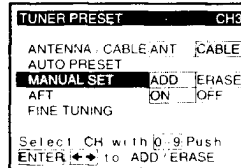
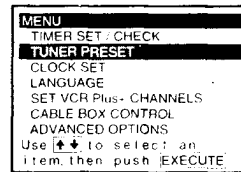


Normal display

- 4** Preset the cable box output channel (usually 2, 3 or 4). For details, see page 36.

**1** Press MENU and select TUNER PRESET.

**2** Enter the cable box output channel. Set MANUAL SET to ADD and press EXECUTE.



Getting Started

continued

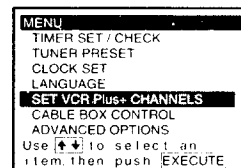
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### Step 3: Hookups (continued)

#### Hookup 6: VCR Plus+ channel setup

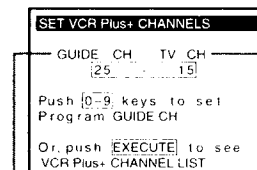
- 1 Find the VCR Plus+ Channel Listing in your program guide. For details, see page 45.
- 2 For unscrambled channels, if the channels in the program guide are different from the channels that you actually use on your TV, set the channels that are different as follows. For details, see page 46.

- 1 Press MENU and select SET VCR Plus+ CHANNELS.



- 2 Enter the program guide channel, then the channel you use on your TV.

- 3 Press EXECUTE.

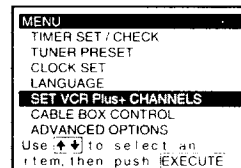


Program guide channel

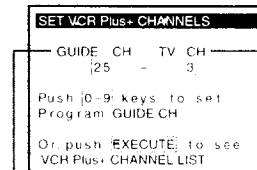
Your actual TV channel

- 3 For scrambled channels, enter all the scrambled channels you want to record and the cable box output channel (usually 2, 3, or 4). For details, see page 46.

- 1 Press MENU and select SET VCR Plus+ CHANNELS.



- 2 Enter the program guide channel, then the cable box output channel.

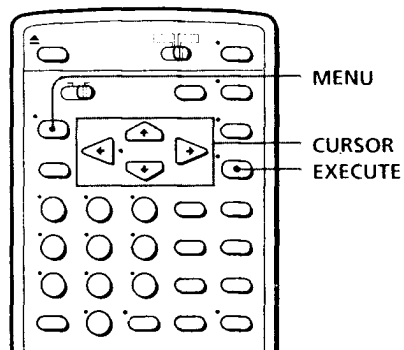


Program guide channel

Cable box output channel

## Selecting a language

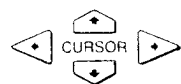
If you prefer French or Spanish to English, you can change the on-screen display language.



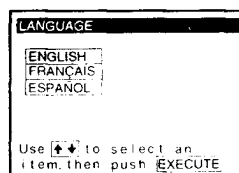
Getting Started

**1** MENU

Press MENU, then press CURSOR  $\uparrow/\downarrow$  to move the cursor (■) to LANGUAGE and press EXECUTE.



When using the EASY SET UP procedure, skip this step.



**2** CURSOR

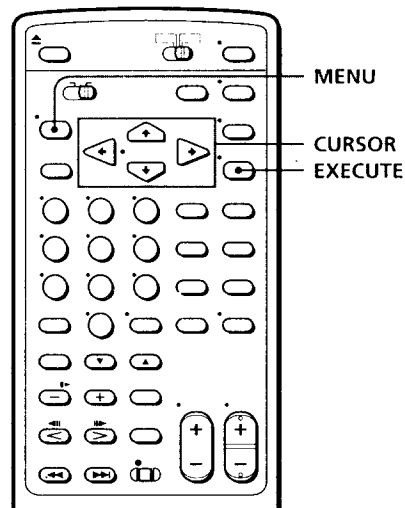
Press CURSOR  $\uparrow/\downarrow$  to select ENGLISH, FRANÇAIS or ESPAÑOL, then press EXECUTE.

## Setting the clock

### Using the Auto Clock Set feature

Some TV and cable channels transmit time signals with their broadcasts. Your VCR can pick up this time signal to automatically set the clock.

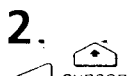
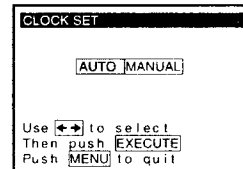
The Auto Clock Set feature works only if a channel in your area is broadcasting a time signal. If broadcasters in your area are not yet sending time signals, set the time manually (page 34).



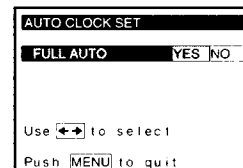
Press MENU, then press CURSOR  $\uparrow/\downarrow$  to move the cursor (■) to CLOCK SET and press EXECUTE.



When using the EASY SET UP procedure, skip this step.



Press CURSOR  $\leftarrow/\rightarrow$  to select AUTO, then press EXECUTE.



Press CURSOR  $\leftarrow/\rightarrow$  to select YES, then press EXECUTE.



---

## 4

To activate the Auto Clock Set function, turn off the VCR.

The VCR automatically sets the clock by searching for a channel that carries a time signal and sets your time zone and Daylight Saving Time (if applicable).

If your clock is set to the wrong time zone or Daylight Saving Time, you can adjust these settings without turning off the Auto Clock Set feature (page 32).

### Notes

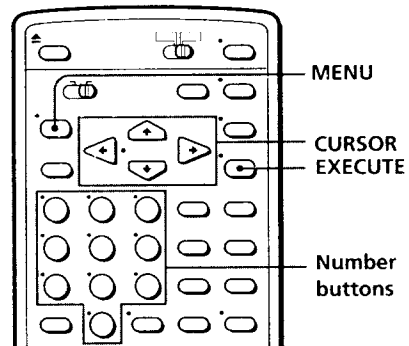
- The clock cannot be set automatically if you don't receive a channel that carries a time signal in your area. If so, set the clock manually.
- If there are only a few channels in your area that carry time signals, setting the clock automatically may take up to about 30 minutes. If nothing happens even after you wait about 30 minutes, set the clock manually.
- If you use Hookup 1 or Hookup 4, make sure you leave the cable box on.

**continued**

---

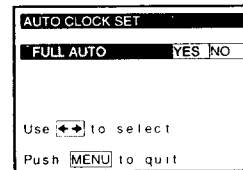
## Setting the clock (continued)

### If the clock is not activated



1

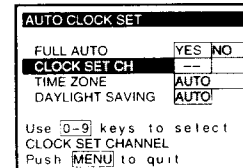
Follow steps 1 and 2 in "Using the Auto Clock Set feature."  
The AUTO CLOCK SET menu is displayed.



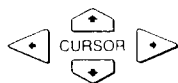
2



Press CURSOR ←/→ to select NO for FULL AUTO.



3



Press CURSOR  $\uparrow/\downarrow$  to highlight the item you want to set, then press CURSOR  $\leftarrow/\rightarrow$  to make the setting.

- For CLOCK SET CH  
Leave the setting to “--” to have the VCR automatically search for a channel that carries a time signal.  
Press the number buttons to select a channel that carries a time signal.  
Use this option if you know of a channel that carries a time signal. Most PBS member stations broadcast a time signal. For the fastest response, select your local PBS station.

- For TIME ZONE  
Select the time zone of your area, or select AUTO to have the VCR automatically set your time zone.  
The options are: AUTO  $\rightarrow$  ATLANTIC  $\rightarrow$  EASTERN  $\rightarrow$  CENTRAL  $\rightarrow$  MOUNTAIN  $\rightarrow$  PACIFIC  $\rightarrow$  ALASKA  $\rightarrow$  HAWAII  $\rightarrow$  AUTO.

- For DAYLIGHT SAVING  
Select ON or OFF (standard time), or AUTO to have the VCR automatically set the daylight saving time.

| AUTO CLOCK SET                         |         |
|----------------------------------------|---------|
| FULL AUTO                              | YES NO  |
| CLOCK SET CH                           | 123     |
| TIME ZONE                              | EASTERN |
| DAYLIGHT SAVING                        | ON      |
| Use $\leftarrow/\rightarrow$ to select |         |
| Push MENU to quit                      |         |

Getting Started

4



Press EXECUTE.

5

To activate the Auto Clock Set function, turn off the VCR.

#### Note

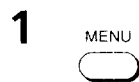
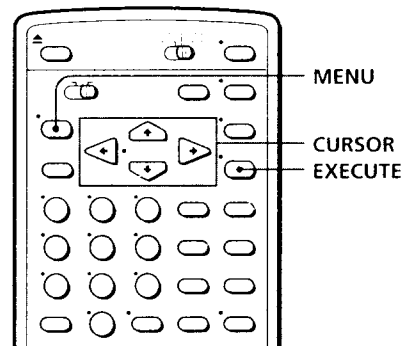
- If you use both the cable box control feature and the Auto Clock Set feature, the VCR automatically changes channels on the cable box until a channel that carries a time signal is found, whenever you turn off the VCR.  
If you want to stop the search, change the channel on the cable box with the channel buttons either on the VCR or on the remote commander.

continued

Getting Started | 33

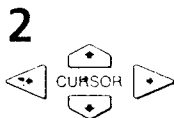
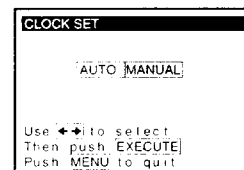
## Setting the clock (continued)

### Using Manual Clock Set

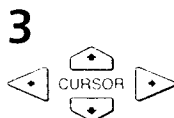
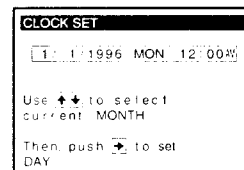


Press MENU, then press CURSOR  $\uparrow/\downarrow$  to move the cursor (I) to CLOCK SET and press EXECUTE.

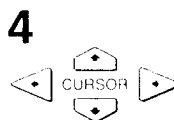
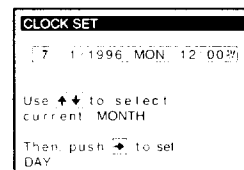
When using the EASY SET UP procedure, skip this step.



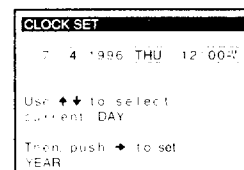
Press CURSOR  $\leftarrow/\rightarrow$  to select MANUAL, then press EXECUTE.



Press CURSOR  $\uparrow/\downarrow$  to set the month.

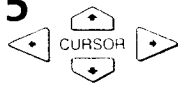


Press CURSOR  $\rightarrow$  to highlight the day and press CURSOR  $\uparrow/\downarrow$  to set the day. The day of the week is set automatically.



---

5



Set the year, hour and minutes in the same way as the day.

6



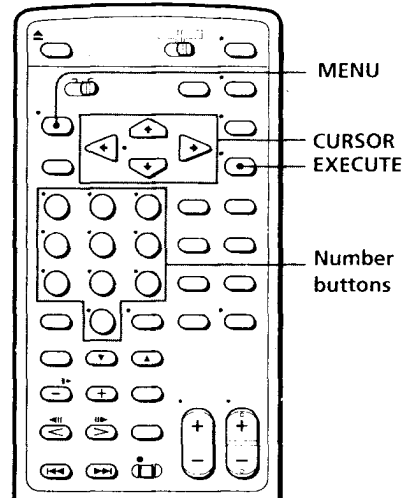
Press EXECUTE to start the clock.

Getting Started

## Setting up cable box control

(Skip this section if you are using Hookup 2, 3, 4 or 6.)

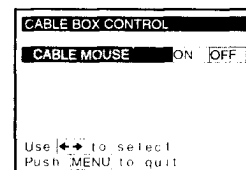
Your VCR includes a cable box control feature that allows the VCR to control most brands of cable boxes/DSS receivers via the Cable Mouse. With cable box control, the VCR controls channels on the cable box/DSS receiver for timer recording. You can also use the VCR's remote commander to change channels on the cable box/DSS receiver whenever the cable box/DSS receiver is turned on even if the VCR is turned off. To use cable box control, you need to connect the Cable Mouse (pages 10 and 22) and set the code number and output channel.

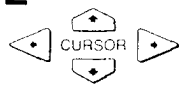


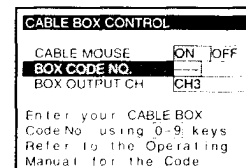
This VCR is programmed with codes necessary to control channel selection on most brands of cable boxes at the time this VCR was manufactured. It is possible that new cable boxes may be introduced that cannot be controlled with this VCR's Cable Mouse. If you have a cable box that is incompatible with this VCR, contact your cable operator — they may be able to provide you with a compatible cable box.

- 1  Press MENU, then press CURSOR  to move the cursor (I) to CABLE BOX CONTROL and press EXECUTE.

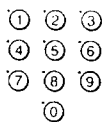
When using the EASY SET UP procedure, skip this step.



- 2  Press CURSOR  to select ON.

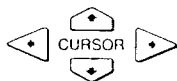


3



Press the number buttons to enter the cable box/DSS receiver code number, then press CURSOR ↓.

Find your cable box/DSS receiver code number from the chart below.



| CABLE BOX CONTROL |        |
|-------------------|--------|
| CABLE MOUSE       | ON OFF |
| BOX CODE NO       | 123    |
| BOX OUTPUT CH     | CH3    |

Use ←→ to select CABLE BOX CH Then push EXECUTE

4



If you want to control a cable box, press CURSOR ←/→ to select the output channel for the cable box, then press EXECUTE.



If you want to control a DSS receiver, select LINE, then press EXECUTE.

### Cable box and DSS receiver brand and the corresponding code numbers

If more than one code number is listed, try entering them one by one, until you come to the correct code for your equipment.

| Cable box brand   | Code numbers            |
|-------------------|-------------------------|
| ABC               | 018, 022, 024, 028, 217 |
| Antronix          | 218                     |
| Archer            | 033, 050, 164, 218      |
| BBT               | 278                     |
| Cable Star        | 067                     |
| Cabletenna        | 033                     |
| Cable time        | 172, 282, 388, 459      |
| Century           | 164                     |
| Citizen           | 164, 326, 327           |
| Clyde Cablevision | 097                     |
| Colour Voice      | 036, 042                |
| Comband           | 243, 244                |
| Comtronics        | 051, 071                |
| Decsat            | 434                     |
| Diamond           | 046                     |
| Eagle Comtronics  | 051                     |

| Cable box brand    | Code numbers                                     |
|--------------------|--------------------------------------------------|
| Eastern            | 013, 285                                         |
| Electricord        | 089                                              |
| Electus            | 055                                              |
| Filmnet            | 454                                              |
| Focus              | 411                                              |
| Garrard            | 164                                              |
| GC Electronics     | 027, 067, 341                                    |
| GE                 | 243, 244                                         |
| GEC                | 097                                              |
| Gemini             | 026, 068, 081, 253                               |
| General Instrument | 022, 287, 487                                    |
| Hamlin             | 020, 031, 045, 270, 284                          |
| Hitachi            | 022                                              |
| Jasco              | 164, 326                                         |
| Jerrold            | 014, 022, 025, 026, 035, 037, 058, 109, 287, 487 |

continued

### Setting up cable box control (continued)

| Cable box brand     | Code numbers                                |
|---------------------|---------------------------------------------|
| Linsay              | 451                                         |
| Macom               | 044                                         |
| Magnavox            | 038, 043, 080, 345                          |
| Memorex             | 011                                         |
| Movie Time          | 089, 167, 214                               |
| Northcoast          | 325                                         |
| Novaplex            | 629                                         |
| NSC                 | 074, 081, 167, 214                          |
| Oak                 | 018, 030, 259                               |
| Omniview            | 382                                         |
| Panasoric           | 032, 118                                    |
| Paragon             | 011                                         |
| Philips             | 036, 038, 039, 040, 041, 042, 071, 301, 345 |
| Philips ECG         | 253                                         |
| Pioneer             | 034, 155, 271, 544                          |
| Popular Mechanics   | 411                                         |
| Pulsar              | 011                                         |
| RCA                 | 032                                         |
| Realistic           | 218                                         |
| Recoton             | 411                                         |
| Regal               | 031, 270, 284, 290                          |
| Regency             | 013                                         |
| Rembrandt           | 081                                         |
| RK                  | 315, 317, 490                               |
| Samsung             | 051, 155                                    |
| Satbox              | 386                                         |
| Scientific Atlanta  | 017, 019, 028, 288, 338                     |
| Seam                | 521                                         |
| Sharp               | 324                                         |
| Signal              | 051                                         |
| Signature           | 022                                         |
| SL Marx             | 051                                         |
| Spectravision       | 069                                         |
| Sprucer             | 032, 318                                    |
| Standard Components | 107, 166                                    |
| Starcom             | 014, 026, 058, 109                          |

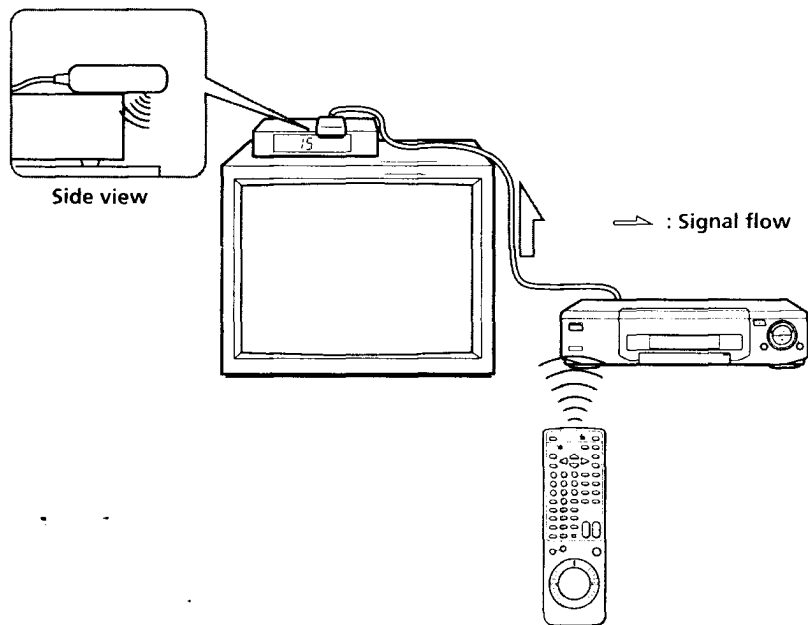
| Cable box brand   | Code numbers                                |
|-------------------|---------------------------------------------|
| Stargate          | 026, 051                                    |
| STS               | 167                                         |
| Sylvania          | 012                                         |
| T-Cable Teletext  | 116                                         |
| Tandy             | 269                                         |
| Tatung            | 108                                         |
| Teknica           | 157                                         |
| Tele +1           | 454                                         |
| TeleCaption       | 232                                         |
| Teleservice       | 292                                         |
| Texscan           | 012, 107                                    |
| TFC               | 321                                         |
| Timeless          | 429                                         |
| Tocom             | 023, 024, 070                               |
| Toshiba           | 011                                         |
| Tudi              | 297                                         |
| TV86              | 074                                         |
| TV COM            | 018, 030, 259                               |
| Uniden            | 236                                         |
| Unika             | 033, 164, 218                               |
| United Artists    | 018                                         |
| United Cable      | 014                                         |
| Universal         | 033, 050, 067, 088, 089, 164, 202, 218, 333 |
| Videoway          | 261                                         |
| Vidtech           | 255                                         |
| Viewstar          | 038, 071, 074, 122, 222, 269, 300           |
| Westminster cable | 116                                         |
| Zenith            | 011, 065, 536                               |
| Zentek            | 411                                         |
| Wave Master       | 576                                         |

| DSS receiver brand | Code numbers |
|--------------------|--------------|
| Sony               | 650          |
| RCA                | 577          |

### 38 Getting Started

**To ensure correct operation**

- Place the Cable Mouse so that it hangs out over the cable box/DSS receiver front.
- Do not place the cable box/DSS receiver on top of the VCR.
- Position the cable box/DSS receiver away from the VCR.
- Point the remote commander at the VCR, not at the cable box/DSS receiver.

**To check the cable box control setting**

- 1** Press CH +/- on the remote commander. Does the channel indicator on the cable box/DSS receiver change? (Point the remote commander at the VCR, not at the cable box/DSS receiver.)
- 2** Press all 10 number buttons (0 to 9) on the remote commander. Does the channel indicator on the cable box/DSS receiver change?

If the answer to both 1 and 2 is "yes," you have made the correct setting.

continued

---

### **Setting up cable box control (continued)**

#### **If you cannot get your VCR to control the cable box/DSS receiver**

- Check that the Cable Mouse is connected to the CABLE BOX CONTROL jack on the VCR.
- Check the position of the Cable Mouse.
- Place the cable box/DSS receiver and VCR away from each other. Do not place the cable box/DSS receiver on top of the VCR.
- Try the setup again making sure to use the correct control code. If the cable box still does not respond, try the other codes that are listed.

If your cable box still does not operate with the Cable Mouse, contact your cable company to see if they can provide you with a compatible cable box.

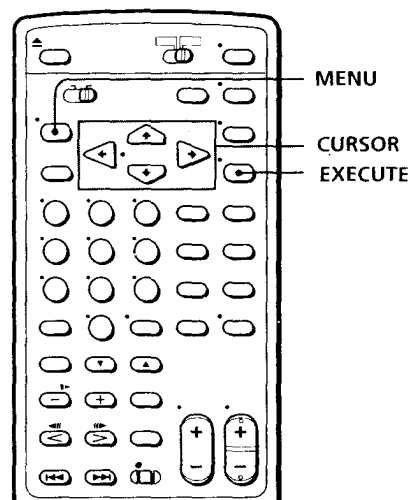
#### **Note**

- Make sure you turn off the VCR when you plug in or unplug the Cable Mouse. If you unplug the Cable Mouse and plug it in again, turn on the VCR before you use the cable box/DSS receiver control feature.

## Presetting channels

(Skip this section if you are using cable box/DSS receiver control.)

This VCR is capable of receiving VHF channels 2 to 13, UHF channels 14 to 69 and unscrambled CATV channels 1 to 125. First, we recommend that you preset the receivable channels in your area using automatic presetting. Then, if there are any unwanted channels, disable them manually. If you have decided which channels you wish to preset, set them directly using manual presetting.



Getting Started

### Before you start...

- Turn on the VCR and the TV.
- Set the TV to the VCR channel (channel 3 or 4). If your TV is connected to the VCR using A/V connections, set the TV to video input.
- Press TV/VTR to display the VTR indicator in the VCR's display window.
- Press INPUT SELECT so that a channel number appears in the VCR's display window.

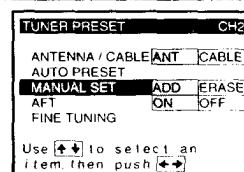
### Presetting all receivable channels automatically

1



Press MENU, then press CURSOR  $\uparrow/\downarrow$  to move the cursor (I) to TUNER PRESET and press EXECUTE.

When using the EASY SET UP procedure, skip this step.



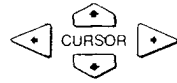
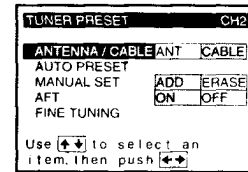
continued

## Presetting channels (continued)

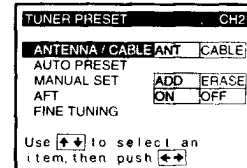
2



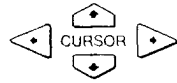
- To preset cable TV channels:  
Press CURSOR  $\leftarrow/\rightarrow$  to set ANTENNA/CABLE to CABLE.



- To preset VHF and UHF channels:  
Press CURSOR  $\leftarrow/\rightarrow$  to set ANTENNA/CABLE to ANT.



3

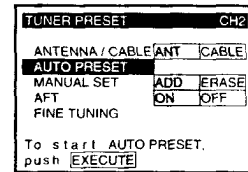


- Press CURSOR  $\uparrow/\downarrow$  to select AUTO PRESET then press EXECUTE.

EXECUTE

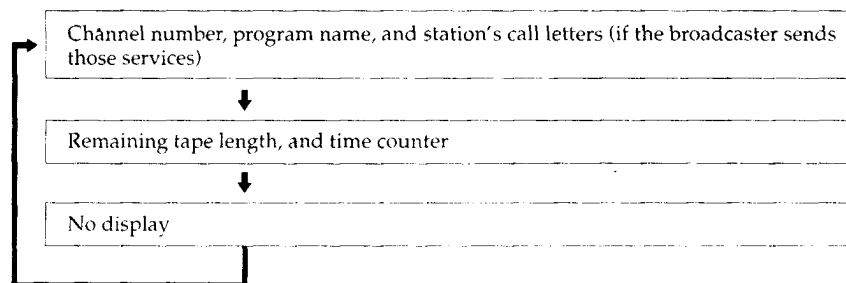


All receivable channels are preset in numerical sequence. When no more receivable channels can be found, presetting stops and the picture from the lowest numbered channel is displayed on the TV screen.



### Tip

- When receiving a VHF, UHF or CATV channel, the display changes as follows each time you press the DISPLAY button.



5

TAPE  
SPEED

Press TAPE SPEED to select the tape speed, SP or EP.

EP provides recording time three times as long as SP, however, SP produces better picture quality.



6



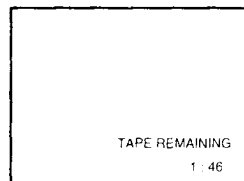
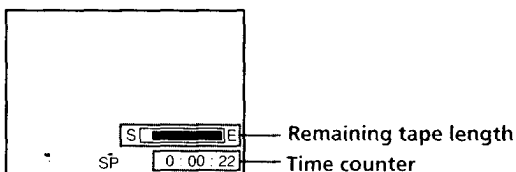
Press ●REC to start recording.

**To stop recording**

Press ■ STOP.

**To check the remaining tape length**

Press DISPLAY. The white bar indicates the approximate length of tape remaining. With the display on, press COUNTER/REMAIN to check the remaining time. Each time you press COUNTER/REMAIN, the time counter and the remaining time appear alternately. The remaining time also appears in the display window.



To check the remaining time of a tape more than two hours long, set TAPE SELECT in the ADVANCED OPTIONS menu to “~160.” (For details, see page 66.)

**To watch another TV program while recording**

- 1 Press TV/VTR to turn off the VTR indicator in the display window.
- 2 If the TV is connected to the VCR's LINE OUT jacks, set the TV to TV input; if not, skip this step.
- 3 Select another channel on the TV.

**To save a recording**

To prevent accidental erasure, break off the safety tab as illustrated. To record on a tape again, cover the tab hole with adhesive tape.

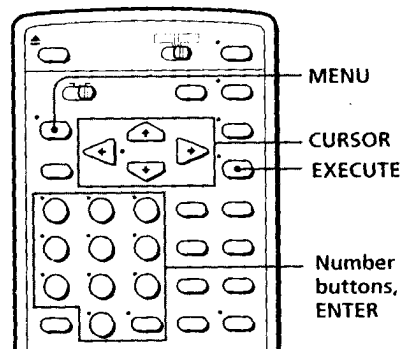


Safety tab

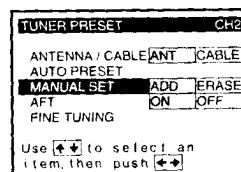
continued

## If the picture is not clear

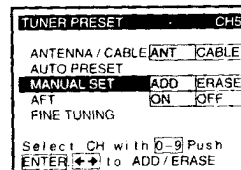
Normally, the Auto Fine Tuning (AFT) function automatically tunes in channels clearly. If, however, the picture of a channel is not clear, you can also use the manual tuning function.



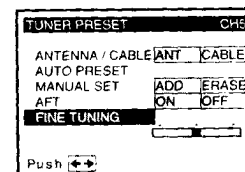
- 1** MENU Press MENU and select TUNER PRESET.



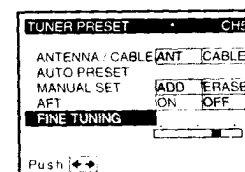
- 2** ENTER Press the number buttons to select the channel you want to fine-tune, then press ENTER.



- 3** CURSOR Press CURSOR [UP/DOWN] to select FINE TUNING. The fine tuning meter appears.



- 4** CURSOR Press CURSOR [LEFT/RIGHT] to adjust to a clearer picture. Note that the AFT setting switches to OFF.



# Setting up VCR Plus+

## How VCR Plus+ works

Whenever you want to record a TV program, all you need to do is look up the program's "PlusCode," a number assigned to each program that's published in the TV section of most newspapers, cable TV listings, and even *TV GUIDE* magazine. Then, just enter the PlusCode of the program you want and the VCR is automatically programmed to record that show. It's that simple.

## How to set up your VCR

Setting up your VCR involves coordinating the TV channel number (the number you turn to on your TV or VCR to watch a program) with the guide channel (the number that's assigned to that channel in your program guide). To get the guide channel numbers, find the "Channel Line-up Chart" in the program guide for your area that features VCR PlusCodes. It usually looks like the example to the right.

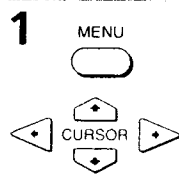
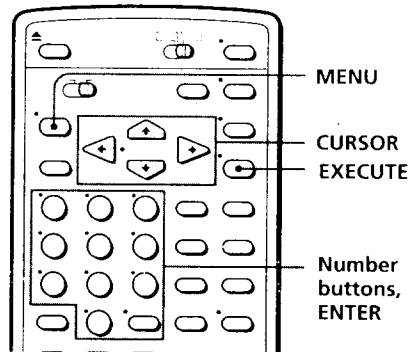
For each channel your VCR receives, use the Channel Line-up Chart to check that the channel numbers match. For example, if HBO is listed in the Channel Line-up Chart on channel 33, and your VCR receives HBO on channel 5, you need to coordinate these numbers using the following procedure. For channels in which the numbers are the same, you can skip this procedure.

### Example of "PlusCode"

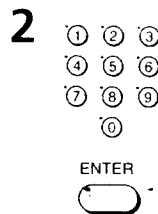
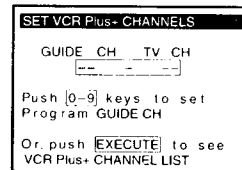
|      |                                 |                    | PlusCode     |
|------|---------------------------------|--------------------|--------------|
| 5:30 | <b>14</b> MOVIE                 | Musical (2hrs.)    | <b>33044</b> |
|      | <b>2</b> SPORT                  | Golf (1hr. 25min.) | <b>42060</b> |
|      | <b>CNN</b>                      | -- WS 9974         |              |
| 6:30 | <b>2 3 4</b> DRAMA              | Comedy (2hrs.)     | <b>17390</b> |
|      | <b>5</b> SCIENCE AND TECHNOLOGY | (1hr. 15min.)      | <b>73457</b> |

### Example of "Channel Line-up Chart"

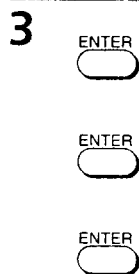
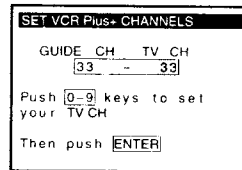
| CABLE CH | CABLE TV                             | VCR Plus+ GUIDE CH |
|----------|--------------------------------------|--------------------|
| 16       | <b>AMC</b> American Movie Classics   | 35                 |
| 17       | <b>BRV</b> Bravo (program grid only) | 54                 |
| 20       | <b>CNN</b> Cable News Network        | 42                 |
| 21       | <b>CSP</b> C-SPAN                    | 28                 |
| 22       | <b>DIS</b> The Disney Channel        | 53                 |
| 25       | <b>DSC</b> The Discovery Channel     | 37                 |
| 34       | <b>ESN</b> ESPN                      | 34                 |
| 35       | <b>FAM</b> The Family Channel        | 47                 |
| 5        | <b>HBO</b> Home Box Office           | 33                 |
| 27       | <b>LIF</b> Lifetime                  | 46                 |
| 29       | <b>MAX</b> Cinemax                   | 45                 |
| 30       | <b>MTV</b> Music Television          | 48                 |
| 31       | <b>NIK</b> Nickelodeon               | 38                 |
| 38       | <b>SC</b> Sports Channel             | 59                 |
| 39       | <b>SCA</b> Sports Channel America    | 70                 |
| 45       | <b>SHO</b> Showtime                  | 41                 |
| 17       | <b>TBS</b> TBS SuperStation          | 43                 |
| 44       | <b>TMC</b> The Movie Channel         | 58                 |
| 49       | <b>TNN</b> The Nashville Network     | 49                 |
| 50       | <b>TNT</b> Turner Network Television | 52                 |
| 51       | <b>USA</b> USA Network               | 44                 |



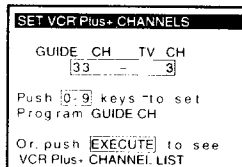
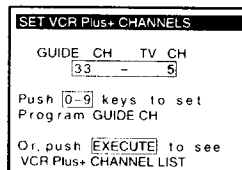
**1** Press MENU, then press CURSOR  $\uparrow/\downarrow$  to move the cursor (I) to SET VCR Plus+ CHANNELS and press EXECUTE.



**2** Enter the channel number assigned in the program guide and press ENTER.



- If you made Hookup 1, 2 or 3: Enter the actual number on your TV (and VCR) and press ENTER.
- If you made Hookup 4: Enter the cable output channel (usually 2, 3 or 4) and press ENTER.
- If you made Hookup 6: Enter the actual number on your TV (and VCR) for an unscrambled channel and press ENTER. For a scrambled channel, enter the cable box output channel (usually 2, 3 or 4) and press ENTER.



**4** Repeat steps 2 and 3 for each channel whose numbers don't match.

5

EXECUTE



When you have set all channels, press EXECUTE to confirm your channel settings.

| VCR Plus+ CHANNEL LIST |    |       |     |
|------------------------|----|-------|-----|
| [page 1]               |    |       |     |
| GUIDE                  | TV | GUIDE | TV  |
| 2                      | 73 | 59    | 47  |
| 5                      | 4  | 61    | 3   |
| 17                     | 55 | 77    | 35  |
| 28                     | 9  | 86    | 120 |
| 33                     | 51 | 90    | 22  |

Use **←** **→** to change page  
Push **MENU** to quit

6

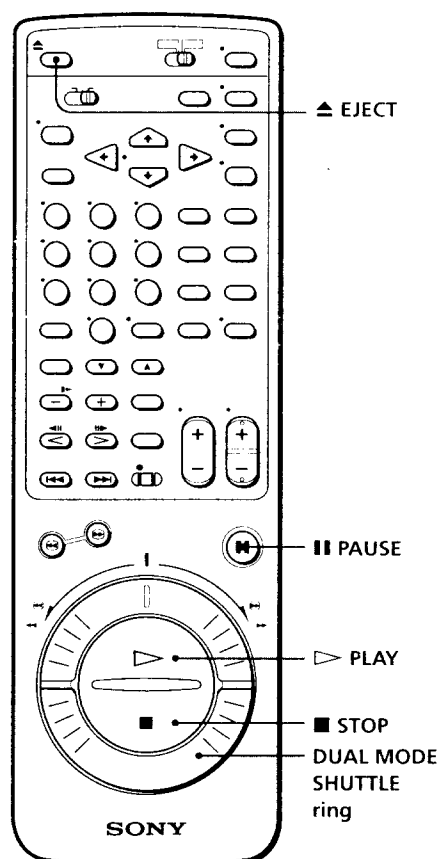
MENU



When you've finished, press MENU to exit.

Getting Started

## Playing a tape



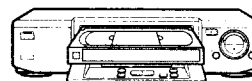
**1**

Turn on your TV and set it to the video channel.

**2**

Open the drop down panel and insert a tape.

The VCR turns on and starts playing automatically if you insert a tape with its safety tab removed.



**3**



Press  PLAY.

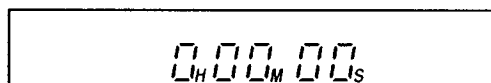
When the tape reaches the end, it will rewind automatically.

### Additional tasks

| To                      | Press                                                      |
|-------------------------|------------------------------------------------------------|
| Stop play               | ■ STOP                                                     |
| Pause play              | PAUSE                                                      |
| Resume play after pause | PAUSE or ▷ PLAY                                            |
| Search forward          | Turn the DUAL MODE SHUTTLE (DMS) ring to ⏭ during playback |
| Search backward         | Turn the DMS ring to ⏮ during playback                     |
| Fast-forward the tape   | Turn the DMS ring to ⏭ FF during stop                      |
| Rewind the tape         | Turn the DMS ring to ⏮ REW during stop                     |
| Eject the tape          | ▲ EJECT                                                    |

### To use the time counter

At the point on the tape that you want to find later, press COUNTER RESET. The counter in the display window resets to "0H00M00S." Search for the point afterwards by referring to the counter.

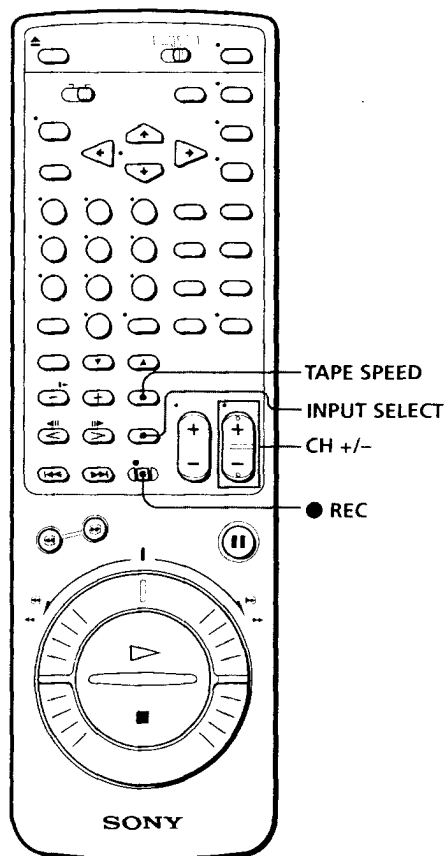


To display the counter on the TV screen, press DISPLAY.

### Notes

- Tapes recorded in the LP mode on other VCRs can be played back on this VCR but the picture quality cannot be guaranteed.
- The counter resets to "0H00M00S" whenever a tape is reinserted.
- The counter stops counting when it comes to a portion with no recording.

## Recording TV programs



- 1 Turn on your TV and set it to the video channel.  
To record from a cable box, turn it on.
- 2 Insert a tape with its safety tab in place.
- 3  Press INPUT SELECT until a channel number appears in the display window.  

- 4  Press CH +/- to select the channel you want to record.  


5

TAPE  
SPEED

Press TAPE SPEED to select the tape speed, SP or EP.

EP provides recording time three times as long as SP, however, SP produces better picture quality.



6



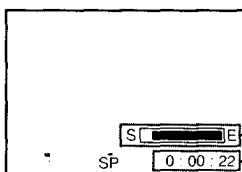
Press ●REC to start recording.

### To stop recording

Press ■ STOP.

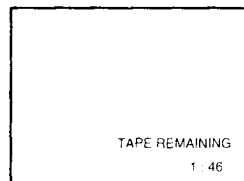
### To check the remaining tape length

Press DISPLAY. The white bar indicates the approximate length of tape remaining. With the display on, press COUNTER/REMAIN to check the remaining time. Each time you press COUNTER/REMAIN, the time counter and the remaining time appear alternately. The remaining time also appears in the display window.



Remaining tape length

Time counter



To check the remaining time of a tape more than two hours long, set TAPE SELECT in the ADVANCED OPTIONS menu to “~160.” (For details, see page 66.)

### To watch another TV program while recording

- 1 Press TV/VTR to turn off the VTR indicator in the display window.
- 2 If the TV is connected to the VCR's LINE OUT jacks, set the TV to TV input; if not, skip this step.
- 3 Select another channel on the TV.

### To save a recording

To prevent accidental erasure, break off the safety tab as illustrated. To record on a tape again, cover the tab hole with adhesive tape.



Safety tab

Basic Operations

continued

---

## **Recording TV programs (continued)**

### **Tips**

- To select a channel, you can use the number buttons on the remote commander. Enter the channel number, then press ENTER.
- To cut out an unwanted scene while recording, press ■■ PAUSE and turn the DUAL MODE SHUTTLE ring on the VCR to rewind the tape to the beginning of the unwanted scene, then press ■■ PAUSE to resume recording.
- The display appears on the TV screen indicating information about the tape, but the information won't be recorded on the tape.
- If you don't want to watch TV while recording, you can turn off the TV. When using a cable box, make sure to leave it on.

### **Notes**

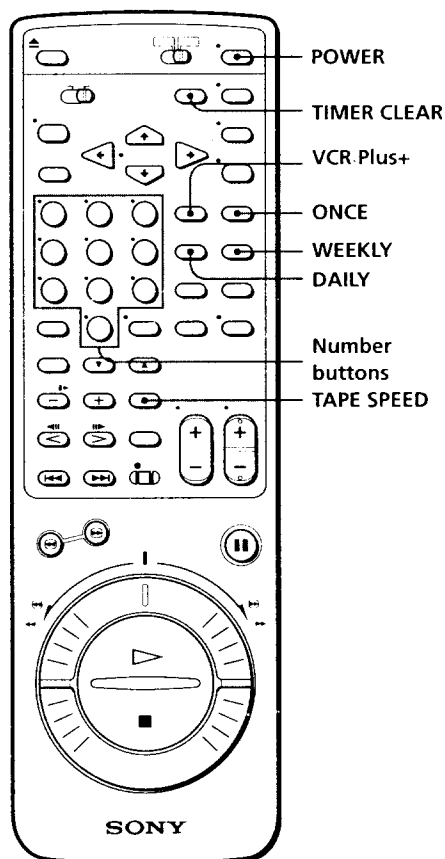
- The remaining time may not be indicated accurately for short tapes such as T-20 or T-30, or tapes recorded in the LP mode.
- The display does not appear during still mode or slow-motion playback.

## Recording TV programs using VCR Plus+

Just enter the program's PlusCode listed in the TV program guide. The date, times and channel number of that program are set automatically. You can preset up to eight programs at a time.

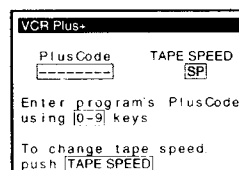
### Before you start...

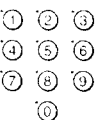
- Check that the VCR clock is set to the correct time.
- Turn on your TV and set it to the video channel. When using a cable box, turn it on.
- Insert a tape with its safety tab in place. Make sure the tape is longer than the total recording time.

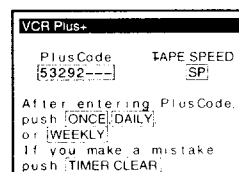


Basic Operations

- 1**  Press VCR Plus+.



- 2**  Press the number buttons to enter the program's PlusCode.
-  If you make a mistake, press **TIMER CLEAR** and re-enter the correct number.

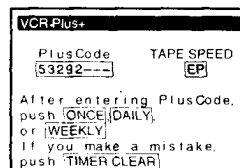


**continued**

3



Press TAPE SPEED to select SP or EP.

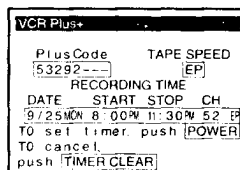


4



Press ONCE, DAILY or WEEKLY:

| To record                 | Press  |
|---------------------------|--------|
| Only once                 | ONCE   |
| Everyday Monday to Friday | DAILY  |
| Once a week               | WEEKLY |



The date, start and stop times, channel number and tape speed appear on the TV screen. If the information is not correct, press TIMER CLEAR to cancel the setting.

5

To enter another setting, repeat steps 1 to 4.

6



Press POWER to turn off the VCR.

The TIMER indicator on the VCR lights up and the VCR stands by for recording. When using a cable box, leave it on.

#### To stop recording

To stop the VCR while recording, press ■STOP.

#### To use the VCR after setting the timer

To use the VCR before a timer recording begins, just press POWER. The "TIMER" indicator turns off and the VCR switches on. Remember to press POWER to reset the VCR in timer recording standby after using the VCR.

You can also do the following tasks while the VCR is recording:

- Reset the counter.
- Display tape information on the TV screen.
- Check the timer settings.
- Watch another TV program.

#### To lock the VCR after setting the timer

Hold down POWER on the VCR until the VCR beeps. The VCR turns off and the "LOC" indicator appears on the display window. The VCR will not work except for timer recording.

To unlock the VCR, hold down POWER on the VCR until the VCR beeps.

---

**Tips**

- To cancel the procedure, press VCR Plus+ before pressing ONCE, DAILY or WEEKLY.
- When you are recording a program in the SP mode and the remaining tape becomes shorter than the recording time, the tape speed is automatically changed to the EP mode. Note that some noises will appear on the picture when the tape speed is changed. If you want to keep the tape speed, set AUTO TAPE SPEED to OFF in the ADVANCED OPTIONS menu (page 66).

**Notes**

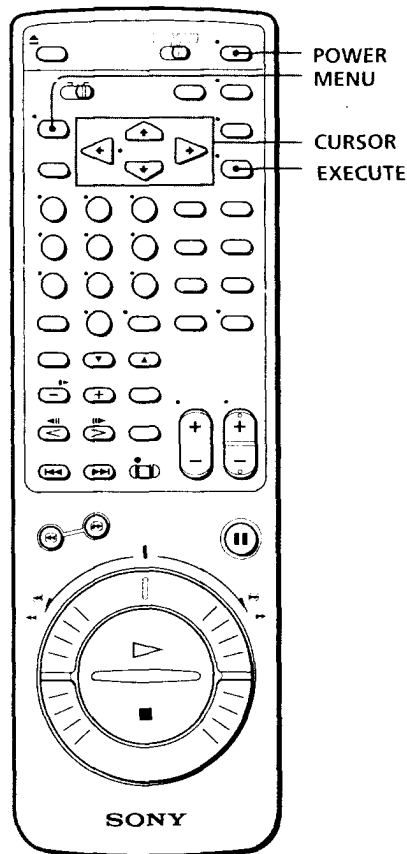
- If the VCR beeps, this means that:
  - The PlusCode is incorrect.
  - ONCE, DAILY or WEEKLY was selected incorrectly. You cannot select DAILY or WEEKLY for a program that airs more than seven days ahead.
- The VCR will be unlocked when:
  - you stop timer recording by pressing ■ STOP
  - you insert a tape
  - the AC power cord is disconnected or power supply stops

## Setting the timer manually

If VCR Plus+ is not available in your area, follow the instructions below to set the timer to record programs.

### Before you start...

- Check that the VCR clock is set to the correct time.
- Turn on your TV and set it to the video channel. When using a cable box, turn it on.
- Insert a tape with its safety tab in place. Make sure the tape is longer than the total recording time.



1



Press MENU and select TIMER SET / CHECK.

| TIMER SET / CHECK |       |       |    |
|-------------------|-------|-------|----|
| DATE              | START | STOP  | CH |
| - / -             | - : - | - : - | -  |
| - / -             | - : - | - : - | -  |
| - / -             | - : - | - : - | -  |
| - / -             | - : - | - : - | -  |
| - / -             | - : - | - : - | -  |
| - / -             | - : - | - : - | -  |
| - / -             | - : - | - : - | -  |

2



Set the date, start and stop times, channel number and tape speed:

- 1 Press CURSOR → to highlight each item in turn.
  - 2 Press CURSOR ↓/↑ to set each item.
- To correct a setting, press CURSOR ← to return to that setting and reset.

| TIMER SET / CHECK |       |      |    |
|-------------------|-------|------|----|
| DATE              | START | STOP | CH |
| 7/4 THU           |       |      |    |
| 7/5 FRI           |       |      |    |
| 7/6 SAT           |       |      |    |
| 7/7 SUN           |       |      |    |
| 7/8 MON           |       |      |    |
| 7/9 TUE           |       |      |    |
| 7/10 WED          |       |      |    |
| 7/11 THU          |       |      |    |
| 7/12 FRI          |       |      |    |
| 7/13 SAT          |       |      |    |
| 7/14 SUN          |       |      |    |

To record the same program every day or the same day every week, press CURSOR ↓. For details, see "Daily/weekly recording" on page 55.

To record from a source connected to the LINE -1 IN or LINE -2 IN jacks, press INPUT SELECT to display "L1" or "L2" in the "CH" position.

3



Press CURSOR → to confirm the setting.

The cursor (I) appears at the top of the line. To enter another setting, move the cursor to the next line and repeat step 2.

4



Press EXECUTE.

5



Press POWER to turn off the VCR.

The TIMER indicator on the VCR lights up and the VCR stands by for recording.

When using a cable box, leave it on.

#### Daily/weekly recording

In step 2 above, press CURSOR ↓ to select the recording pattern. Each time you press CURSOR ↓, the indication changes as shown below. Press CURSOR ↑ to change the indication in reverse order.

the current date → SUN-SAT → MON-SAT → MON-FRI → EVERY SAT .....  
→ EVERY MON → EVERY SUN → 1 month later → (cycles backward) →  
the current date

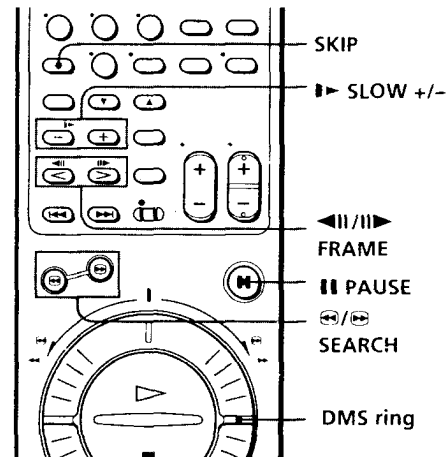
#### Tips

- To set the channel, you can also use the CH+/- or number buttons.
- To set the tape speed, you can also use TAPE SPEED.
- When you are recording a program in the SP mode and the remaining tape becomes shorter than the recording time, the tape speed is automatically changed to the EP mode. Note that some noises will appear on the picture when the tape speed is changed. If you want to keep the tape speed, set AUTO TAPE SPEED to OFF in the ADVANCED OPTIONS menu (page 66).
- To lock the VCR after setting the timer, see page 54.

#### Note

- If you are using cable box control, you cannot select "L1" or "L2."

## Playing/searching at various speeds



| Playback options                               | Operation                                                                                                                             |
|------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| Play at various speeds                         | During playback, turn the DMS ring and hold at the speed you want.                                                                    |
| Fast-forward/rewind                            | During stop, turn the DMS ring to ►►FF or ◀◀REW and release.                                                                          |
| View the picture during fast-forward or rewind | During fast-forward, turn the DMS ring to ►►FF. During rewind, turn the DMS ring to ◀◀REW.                                            |
| Play at twice the normal speed                 | During playback, turn the DMS ring to ×2.                                                                                             |
| Play at high speed                             | During playback or pause, press ◀SEARCH or ►SEARCH. To change direction, press ►►FRAME or ◀◀FRAME.                                    |
| Play in slow motion                            | During playback or pause, press ►►SLOW+/- . Press the +/- buttons to change the speed. To change direction, press ►►FRAME or ◀◀FRAME. |
| Play frame by frame                            | During pause, press ►►FRAME or ◀◀FRAME. Hold the button down to play one frame each second.                                           |
| Play in reverse                                | During playback, press ◀◀FRAME.                                                                                                       |
| Skip a scene                                   | During playback, press SKIP. Pressing once skips about a minute.                                                                      |
| Rewind and start play                          | During stop, press ►PLAY on the VCR while holding the DMS ring on the VCR at the ◀◀REW position.                                      |

---

### To resume normal playback

Press ▷PLAY.

#### Tip

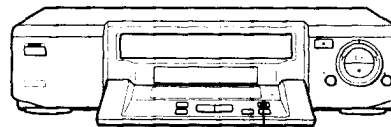
- Adjust the picture using the ▼/▲ TRACKING/STILL ADJUST buttons if:
  - Streaks appear while playing in slow motion.
  - Bands appear at the top or bottom while pausing.
  - The picture shakes while pausing.

#### Notes

- The sound is muted during these operations.
- Tapes recorded in the LP mode on other VCRs can be played back on this VCR but the picture quality cannot be guaranteed.

---

## Recording TV programs using the quick timer



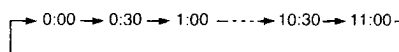
QUICK TIMER

After starting recording in the normal way, you can have the VCR stop recording automatically after a specified duration.

- 1 While recording, press QUICK TIMER once.



- 2 Press QUICK TIMER repeatedly to set the duration.  
Each press advances the time in increments of 30 minutes.



### To check or extend the duration

Press QUICK TIMER once. The duration is displayed for 10 seconds. If you want to extend the time, press QUICK TIMER within 10 seconds to set to the new duration.

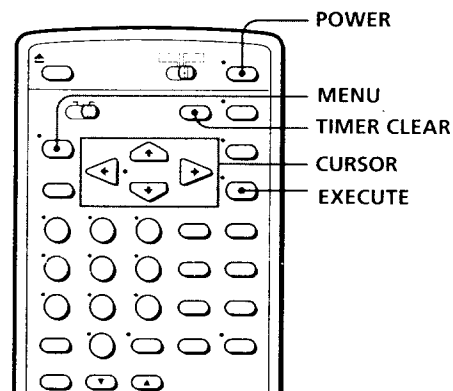
### To stop while recording

Press ■STOP.

## Checking/ changing/ cancelling timer settings

### Before you start...

- Turn on your TV and set it to the video channel.



- 1 Press POWER to turn on the VCR.
- 2 Press MENU and select TIMER SET/CHECK:
  - If you want to change a setting, go on to the next step.
  - If you do not need to change the settings, press EXECUTE, then turn off the VCR to return to recording standby.

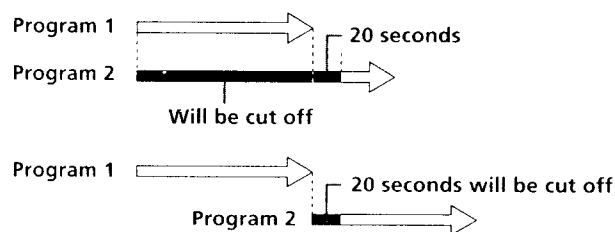
| TIMER SET / CHECK |           |           |      |    | 7 / 4 TH |
|-------------------|-----------|-----------|------|----|----------|
| DATE              | START     | STOP      | CH   |    |          |
| 7 / 5 FRI         | 7 : 00AM  | 8 : 00AM  | 6    | SP |          |
| 7 / 12 FRI        | 10 : 30PM | 11 : 15PM | 50   | EP |          |
| MON - SAT         | 1 : 00AM  | 3 : 00AM  | LINE | EP |          |
| EVERY SUN         | 12 : 55PM | 1 : 30PM  | 12   | SP |          |
| -- / --           | -- : --   | -- : --   | --   | -- | --       |
| -- / --           | -- : --   | -- : --   | --   | -- | --       |
| -- / --           | -- : --   | -- : --   | --   | -- | --       |
| -- / --           | -- : --   | -- : --   | --   | -- | --       |

- 3 Press CURSOR ↓/↑ to select the setting you want to change:
  - To change the setting, press CURSOR ←/→ to highlight the item you want to change, and press CURSOR ↓/↑ to reset it. Then, press CURSOR → repeatedly until the cursor (I) appears at the top of the line.
  - To cancel the setting, press TIMER CLEAR.
- 4 Press EXECUTE.
 

If any timer settings remain, turn off the VCR to return to recording standby.

### When the timer settings overlap

The program that starts first has priority and the second program starts recording only after the first program has finished. If the programs start at the same time, the program listed first in the menu has priority.



---

## Recording stereo and bilingual programs

### Recording stereo programs

This VCR automatically receives and records stereo programs. When a stereo program is received, the STEREO indicator lights up. If there is noise in the stereo program, set AUTO STEREO in the ADVANCED OPTIONS menu to OFF. The sound will be recorded in monaural (on both hi-fi and normal audio tracks) but with less noise. For details, see page 66.

### Recording bilingual programs

Normally, this VCR records only the main sound on both hi-fi and normal audio tracks. To record SAP (Second Audio Program) sound on the normal audio track, set NORMAL AUDIO in the ADVANCED OPTIONS menu to SAP (the SAP indicator lights up). For details, see page 66.

#### To select the bilingual sound while recording

Press AUDIO MONITOR to select the sound you want.

#### Selecting the sound during playback

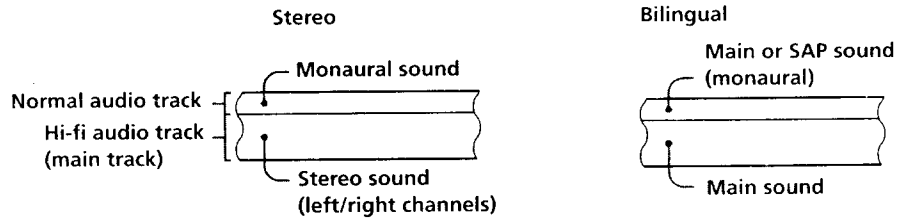
Press AUDIO MONITOR to select the sound you want.

| To listen to                             | On-screen display | Display window |
|------------------------------------------|-------------------|----------------|
| Stereo/main<br>(left and right channels) | STEREO            | STEREO         |
| Left channel only                        | LEFT CH           | STEREO         |
| Right channel only                       | RIGHT CH          | STEREO         |
| Monaural (SAP)                           | No indicator      | No indicator   |

---

## How sound is recorded on a video tape

The VCR records sound onto two separate tracks. Hi-fi audio is recorded onto the main track along with the picture. Monaural sound is recorded onto the normal audio track along the edge of the tape.

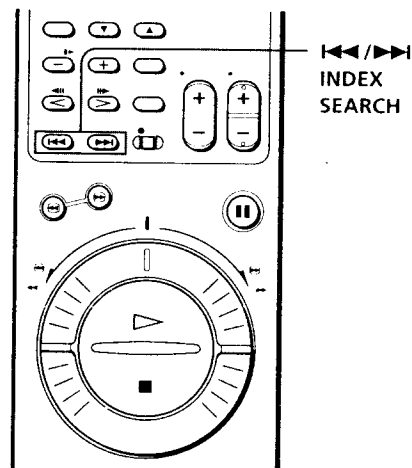


### Notes

- To play a tape in stereo, you must use the A/V connections.
- When you play a tape recorded in monaural, the sound is heard in monaural regardless of the AUDIO MONITOR setting.
- If the AUDIO MONITOR button does not function, check that AUDIO MIX in the ADVANCED OPTIONS menu is set to OFF.
- Set NORMAL AUDIO to MAIN when not recording SAP sound, or no sound is recorded on the normal audio track. If no sound is recorded on the normal audio track and you play the tape on a mono VCR, you will see only video — no audio will be heard.

## Searching using the index function

The VCR marks the tape with an index signal at the point where each recording begins. Use these signals as references to find a specific recording. The VCR can search up to 99 index signals ahead of or behind the current position.

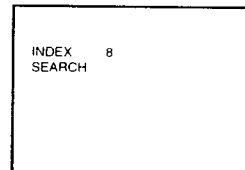


- 1 Insert an indexed tape into the VCR.
- 2 Press ◀▶/▶▶INDEX SEARCH repeatedly to specify how many index signals ahead or behind you want to search:

- To search ahead, press ▶▶INDEX SEARCH.
- To search backwards, press ◀▶INDEX SEARCH.

The VCR starts searching and the index number on the TV screen counts down to

- zero. Playback starts automatically from that point.



### To stop searching

Press ■STOP.

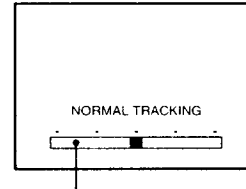
---

## Adjusting the picture

### Adjusting the tracking

Although the VCR automatically adjusts the tracking when playing a tape (the AUTO TRACKING indicator flashes in the display window, then lights steadily), distortion may occur if the tape was recorded in poor condition. If so, manually adjust the tracking.

Press the ▼/▲TRACKING NORMAL/SLOW buttons to display the tracking meter. The distortion should disappear as you press one of the two buttons. If you cannot get a clear picture with manual adjustment, press TRACKING AUTO/MANUAL to return to automatic adjustment.



Tracking meter

### About Adaptive Picture Control (APC)

Adaptive Picture Control (APC) automatically improves recording and playback quality by adjusting the VCR to the condition of the video heads and tape. To maintain better picture quality, we recommend that you set APC to ON in the ADVANCED OPTIONS menu (with the APC indicator in the display window lit).

#### APC playback

The APC function automatically works on all types of tapes, including rental tapes and tapes that were not recorded with APC.

#### APC recording

Whenever you insert a tape and first start recording, the VCR adjusts to the tape using the APC function (the APC indicator flashes rapidly). This adjustment is retained until the tape is ejected.

#### Notes

- Auto tracking adjustment cannot be used on tapes recorded in the LP mode on other VCRs.
- The APC function does not work if the tape speed is automatically changed from the SP to EP mode during a timer recording, unless the tape has been recorded in the EP mode with the APC function.
- There is a delay of a few seconds before the VCR actually starts recording while the VCR analyzes the tape. To avoid the delay, first set the VCR to recording pause (the APC indicator flashes slowly) and press ●REC to have the VCR analyze the tape (the APC indicator flashes rapidly). After the APC indicator stops flashing, press ■PAUSE to start recording immediately.

If you want to start recording quickly without using the APC function, first set the VCR to recording pause (the APC indicator flashes slowly) and press ■PAUSE to start recording.

## Changing menu options

- 1 Press MENU and select ADVANCED OPTIONS.

| ADVANCED OPTIONS |      |      |
|------------------|------|------|
| AUTO ANT SEL     | ON   | OFF  |
| AUTO STEREO      | ON   | OFF  |
| DIMMER           | ON   | OFF  |
| AUDIO MIX        | ON   | OFF  |
| NORMAL AUDIO     | MAIN | SAP  |
| TAPE SELECT      | ~120 | ~160 |
| AUTO TAPE SPEED  | ON   | OFF  |
| APC              | ON   | OFF  |
| SHARPNESS        | L    | - H  |

- 2 Press CURSOR  $\uparrow/\downarrow$  to select the option to change, then press CURSOR  $\leftarrow/\rightarrow$  to change the setting.
- 3 Press EXECUTE to return to the original screen.

### Menu choices

Initial settings are indicated in bold print.

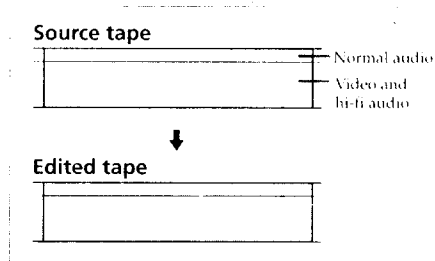
| Menu option     | Set this option to                                                                                                                                                                                                                                                |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AUTO ANT SEL    | <b>ON</b> if your TV is connected only to VHF/UHF OUT on the VCR. To play a tape, set the TV to the VCR channel (channel 3 or 4).<br><b>OFF</b> if your TV is connected to both VHF/UHF OUT and LINE OUT on the VCR. To play a tape, set the TV to the VCR input. |
| AUTO STEREO     | <b>ON</b> to receive stereo programs, <b>OFF</b> to reduce noise. The sound changes to monaural.                                                                                                                                                                  |
| DIMMER          | <b>ON</b> to make the display window dim, <b>OFF</b> to make it brighter.                                                                                                                                                                                         |
| AUDIO MIX       | <b>ON</b> to listen to the sound recorded on hi-fi and normal audio tracks at the same time. The AUDIO MONITOR button will not function.<br><b>OFF</b> to listen to hi-fi and normal audio tracks separately. Select the sound using the AUDIO MONITOR button.    |
| NORMAL AUDIO    | <b>MAIN</b> to record the main sound on both hi-fi and normal audio tracks. SAP to record the SAP (Second Audio Program) sound on the normal audio track. The main sound is recorded on the hi-fi audio track.                                                    |
| TAPE SELECT     | "~120" or "~160" to select the tape length and display the remaining time correctly.                                                                                                                                                                              |
| AUTO TAPE SPEED | <b>ON</b> to change the timer recording tape speed automatically to the EP mode when the remaining tape becomes shorter than the recording time, <b>OFF</b> to keep the tape speed.                                                                               |
| APC             | <b>ON</b> to switch on the APC (Adaptive Picture Control) function and improve picture quality, <b>OFF</b> to switch off APC.                                                                                                                                     |
| SHARPNESS       | L (Low) through H (High) to adjust the sharpness of the picture. L to turn off the sharpness control.                                                                                                                                                             |

## Editing methods

This section introduces you to various ways to edit tape recordings.

### Basic editing

You can make a copy of a tape.



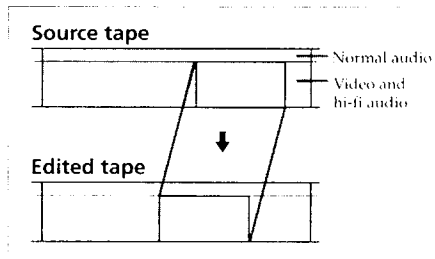
### Insert editing

You can replace an existing scene with material from another recording. There are three kinds of insert editing.

#### Video insert

Replaces the original video and hi-fi audio. The monaural sound on the normal audio track is retained.

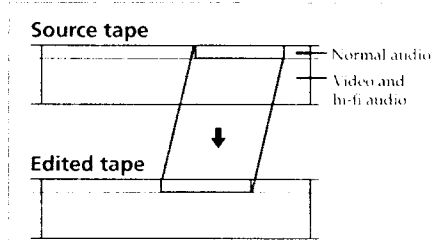
#### Video insert



#### Audio insert

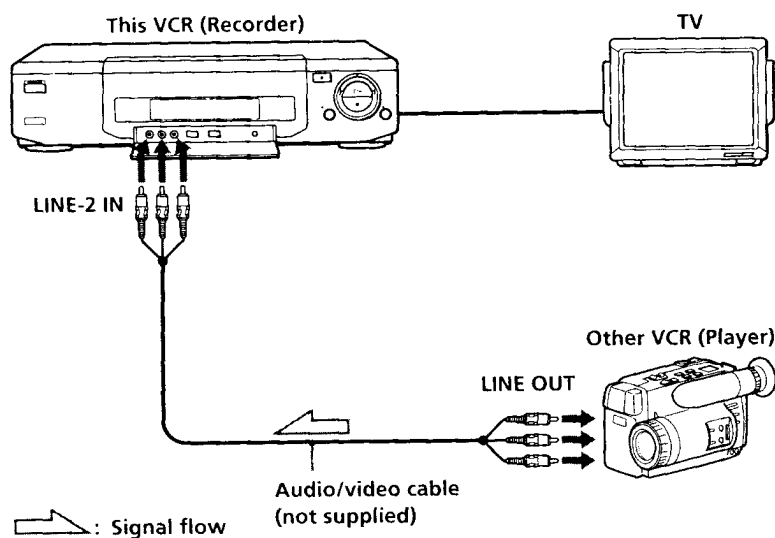
Replaces the original monaural sound on the normal audio track. The video and hi-fi sound are left intact. For example, you can use this feature to add commentary to a tape recorded on a camcorder.

#### Audio insert



## Hooking up to a VCR or stereo system

### How to hook up to record on this VCR



### If the other VCR has a CONTROL S OUT jack for synchronized editing

Hook up to record on the other VCR, then connect the VCRs via the CONTROL S jacks. The CONTROL S connection lets you control (pause and release pause) both VCRs from the recording VCR.

#### Notes

- Make sure you connect the plugs to jacks of the same color.
- If the other VCR is a monaural type, leave the red plugs unconnected.
- If you connected this VCR to both the LINE IN and LINE OUT jacks of the other VCR, select the input correctly to prevent a humming noise.
- If the CONTROL S IN jack is used for S-Link™ (A/V bus control) with a TV, the CONTROL S connection cannot be used for editing.
- You can also use the LINE-1 IN jacks instead.

### How to hook up to a stereo system

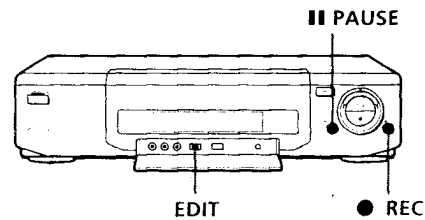
Connect LINE-2 IN AUDIO on this VCR to the audio output jacks on the stereo system, using the RK-C510KS audio cable (not supplied).

## Basic editing

(when recording on this VCR)

### Before you start editing

- Turn on your TV and set it to the video channel.
- Press INPUT SELECT to display "I2" in the display window.
- Press TAPE SPEED on the remote commander to select the tape speed, SP or EP.
- On this VCR, set the EDIT switch to ON. If the other VCR has a similar switch, set it to ON as well.



- 1 Insert a source tape with its safety tab removed into the other (playback) VCR. Search for the point to start playback and set it to playback pause.
- 2 Insert a tape into this (recording) VCR. Search for the point to start recording and press II PAUSE.
- 3 Press ● REC on this VCR and set it to recording pause.
- 4 To start editing, press the II PAUSE buttons on both VCRs at the same time.

### To stop editing

Press the ■ STOP buttons on both VCRs.

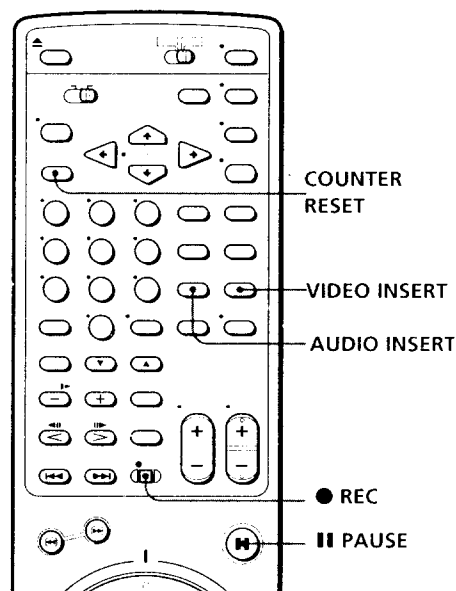
### Tips

- To edit more precisely, press the II PAUSE buttons on the VCRs to release pause.
- To cut out unwanted scenes while editing, press II PAUSE on this VCR when an unwanted scene begins. When it ends, press II PAUSE again to resume recording (Assemble Editing).

## Insert editing

### Before you start editing

- Turn on your TV and set it to the video channel.
- Press INPUT SELECT to display "L2" in the display window.
- Press TAPE SPEED on the remote commander to select the tape speed, SP or EP.
- On this VCR, set the EDIT switch to ON. If the other VCR has a similar switch, set it to ON as well.



- 1 Insert a source tape into the playback VCR or the stereo system. Search for the point to start playback and set it to playback pause.
- 2 Insert a prerecorded tape into this (recording) VCR. Search for the end of the scene to be replaced and press **PAUSE**.
- 3 Press COUNTER RESET on this VCR to reset the counter to "0H00M00S."
- 4 Rewind the prerecorded tape to the beginning of the scene to be replaced.  
The VCR pauses.
- 5 Press the INSERT buttons:

| To replace                        | Press                                                                                                                 |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| Picture and hi-fi sound           | INSERT VIDEO<br>"VID INS■" appears on the TV screen and "V INSERT" appears in the display window.                     |
| Monaural sound only               | INSERT AUDIO<br>"A INSERT" appears in the display window.                                                             |
| Picture, hi-fi and monaural sound | INSERT AUDIO, then INSERT VIDEO<br>"A/V INS■" appears on the TV screen and "AV INSERT" appears in the display window. |

- 6 To start editing, press the **PAUSE** buttons on this VCR and the other VCR (or stereo system) at the same time.

---

**To stop editing**

Press the ■STOP buttons on this VCR and the other VCR (or stereo system).

**To listen to both the hi-fi and normal audio**

Set AUDIO MIX to ON in the ADVANCED OPTIONS menu (page 66). Use this feature to listen to inserted audio together with the original hi-fi audio. When AUDIO MIX is set to ON, the AUDIO MONITOR button does not function. Remember to reset AUDIO MIX to OFF after playing the tape.

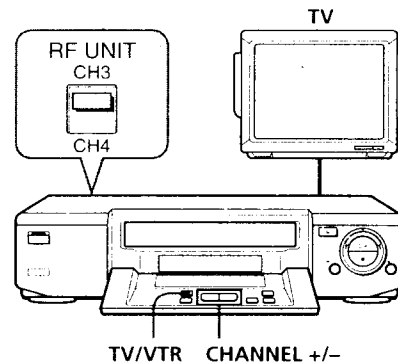
**Note**

- To use the INSERT function, this VCR must be set to playback pause, not recording pause.

## General setup information

### Setting the RF unit

When connecting the VCR to the TV using only the antenna cable, you must set the RF UNIT switch on the rear of the VCR so that the TV can receive the correct signal from the VCR.



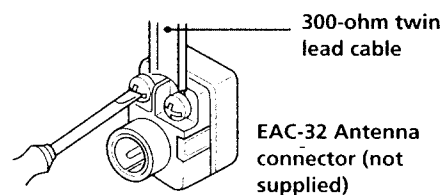
- 1 Set the RF UNIT switch on the rear of the VCR to CH3 or CH4, whichever channel is not used in your area. If both are used, set the switch to either channel.
- 2 Press POWER to turn on the VCR.
- 3 Press TV/VTR to turn on the VTR indicator in the VCR's display window.
- 4 Press CHANNEL +/- to display a channel number in the display window. Select an active channel number in your area.
- 5 Turn on your TV and set it to the channel you selected in step 1 (channel 3 or 4).

The selected TV channel broadcast appears on the TV screen. If the channels change when you press CHANNEL +/- on the VTR, you have made the correct setting.

Whenever you use the VCR, set the TV to the channel selected in step 1.

### Attaching the external antenna connector

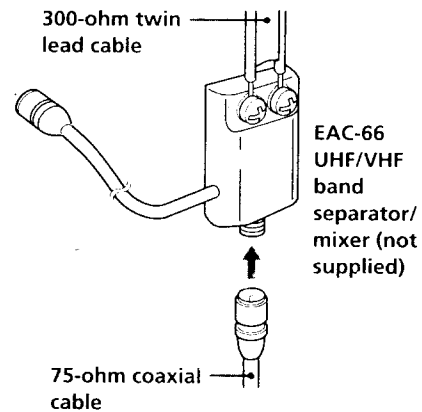
When using a 300-ohm twin lead cable for VHF/UHF antenna, use the EAC-32 antenna connector (not supplied) to connect the antenna to the VCR.



- 1 Loosen the screws on the antenna connector.
- 2 Wind the twin leads around the screws on the antenna connector.
- 3 Retighten the screws.

### Attaching a UHF/VHF band mixer

When using both 75-ohm coaxial cable and 300-ohm twin lead cable for VHF/UHF antenna, use the EAC-66 UHF/VHF band separator/mixer (not supplied) to connect the antenna to the VCR.



- 1 Loosen the screws on the mixer.
- 2 Wind the twin leads around the screws on the mixer.
- 3 Retighten the screws.
- 4 Connect the 75-ohm coaxial cable to the mixer.

# Troubleshooting

If you have any questions or problems not covered below, please consult your nearest Sony dealer.

|          | Symptom                                                         | Remedy                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------|-----------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Power    | The POWER switch does not function.                             | <ul style="list-style-type: none"> <li>• Connect the AC power cord securely.</li> <li>• Make sure the VCR is not locked. To unlock, hold POWER down until the VCR beeps.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|          | The power is turned on but the VCR does not operate.            | <ul style="list-style-type: none"> <li>• Moisture condensation occurs. Turn the power off, unplug the AC power cord and leave the VCR to dry for over an hour.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Clock    | The clock has stopped and "--:--" lights in the display window. | <ul style="list-style-type: none"> <li>• The clock stops if the VCR is disconnected from the wall outlet for more than three hours. Reset the clock (and timer).</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Playback | The playback picture does not appear on the TV screen.          | <ul style="list-style-type: none"> <li>• Make sure the TV is set to the channel for the VCR. If you are using a monitor, set it to video input.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|          | The picture is not clear.                                       | <ul style="list-style-type: none"> <li>• Adjust the tracking with the TRACKING NORMAL/ SLOW buttons.</li> <li>• The video heads are dirty (see below). Clean the video heads using the Sony T-25CL video head cleaning cassette. If this cleaning cassette is not available in your area, have the heads cleaned at your nearest Sony service facility (a standard service charge will be required.) Do not use a commercially available wet-type cleaning cassette, as it may damage the video heads.</li> <li>• The video heads may have to be replaced. Consult your local Sony dealer for more information.</li> </ul> |
|          | The picture rolls vertically during picture search.             | <ul style="list-style-type: none"> <li>• Adjust the vertical hold control on the TV or monitor.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|          | The picture has no sound.                                       | <ul style="list-style-type: none"> <li>• The tape is defective. Use a new tape.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|          | Both main and SAP sounds are heard.                             | <ul style="list-style-type: none"> <li>• When you play a bilingual tape, make sure the AUDIO MIX option in the ADVANCED OPTIONS menu is set to OFF.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|          |                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

## Symptoms caused by contaminated video heads

- Normal picture
- Rough picture
- Unclear picture
- No picture (or black & white screen appears)



|                 | Symptom                                            | Remedy                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------------|----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Recording       | A TV program does not appear on the TV screen.     | <ul style="list-style-type: none"> <li>• Make sure the TV is set to the channel for the VCR. If you are using a monitor, set it to video input.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                 | TV reception is poor.                              | <ul style="list-style-type: none"> <li>• Adjust the TV antenna.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                 | The tape starts playing as soon as it is inserted. | <ul style="list-style-type: none"> <li>• The safety tab has been removed. To record on this tape, cover the tab hole.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                 | The tape ejects when you press ● REC.              | <ul style="list-style-type: none"> <li>• Check that the safety tab has not been removed.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                 | Nothing happens when you press ● REC.              | <ul style="list-style-type: none"> <li>• Make sure the tape is not at its end.</li> <li>• Select the correct source with the INPUT SELECT button. Select a channel number when recording TV programs; select "L1" or "L2" when recording from other equipment.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                          |
| Timer recording | No sound is recorded on the normal audio track.    | <ul style="list-style-type: none"> <li>• When not recording SAP sound, make sure the NORMAL AUDIO option in the ADVANCED OPTIONS menu is set to MAIN.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                 | The timer does not operate.                        | <ul style="list-style-type: none"> <li>• Check that the clock is set.</li> <li>• Make sure a tape has been inserted.</li> <li>• Check that the safety tab has not been removed.</li> <li>• Make sure the tape is not at its end.</li> <li>• Make sure a program has been set for timer recording.</li> <li>• Make sure your timer settings have not already passed the current time.</li> <li>• Check that the cable box is turned on.</li> <li>• The clock stops if the VCR is disconnected from the wall outlet for more than three hours. Reset the clock and timer.</li> <li>• When you use cable box control, make sure the CABLE BOX CONTROL option is set to ON.</li> </ul> |

| Others | Symptom                                               | Remedy                                                                                                                                                                                                                                                                                                              |
|--------|-------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|        | A tape cannot be inserted.                            | <ul style="list-style-type: none"> <li>Check that a tape isn't already in the tape compartment.</li> </ul>                                                                                                                                                                                                          |
|        | The remote commander does not function.               | <ul style="list-style-type: none"> <li>Make sure you are pointing the remote commander at the remote sensor on the VCR.</li> <li>Replace all the batteries in the remote commander with new ones if they are weak.</li> <li>If you are not using S-Link™, make sure that both miniplugs are unconnected.</li> </ul> |
|        | The channels on the VCR cannot be changed.            | <ul style="list-style-type: none"> <li>Make sure the CABLE BOX CONTROL option is set to OFF.</li> </ul>                                                                                                                                                                                                             |
|        | The tracking indicator does not appear on the screen. | <ul style="list-style-type: none"> <li>The recording condition of the tape is very poor and tracking cannot be adjusted.</li> </ul>                                                                                                                                                                                 |
|        | You cannot control other TVs.                         | <ul style="list-style-type: none"> <li>Set your TV's code number. The code number resets to 1 when you replace the batteries of the remote commander.</li> </ul>                                                                                                                                                    |
|        | The VCR needs to be cleaned.                          | <ul style="list-style-type: none"> <li>Clean the cabinet, panel and controls with a dry, soft cloth, or a soft cloth slightly moistened with a mild detergent solution. Do not use any type of solvent, such as alcohol or benzine.</li> </ul>                                                                      |

---

# Specifications

## System

Format  
VHS NTSC standard  
Video recording system  
Rotary head helical scanning FM system  
Video heads  
Double azimuth four heads  
Video signal  
NTSC color, EIA standards  
Tape speed  
SP: 33.35 mm/s (1 3/8 inches/s)  
EP: 11.11 mm/s (7/16 inches/s)  
LP: 16.67 mm/s (11/16 inches/s),  
playback only  
Maximum recording/playback time  
8 hrs. in EP mode (with T-160 tape)  
Fast-forward and rewind time  
Approx. 3 min. (with T-120 tape)

## Tuner section

Channel coverage  
VHF 2 to 13  
UHF 14 to 69  
CATV A-8 to A-1, A to W, W+1 to W+84  
Antenna  
75-ohm antenna terminal for VHF/UHF

## Inputs and outputs

LINE-1 IN and -2 IN  
VIDEO IN, phono jack (1 each)  
Input signal: 1 V<sub>p-p</sub>, 75 ohms, unbalanced,  
sync negative  
AUDIO IN, phono jack (2 each)  
Input level: 327 mVrms  
Input impedance: more than 47 kilohms  
LINE OUT  
VIDEO OUT, phono jack (1)  
Output signal: 1 V<sub>p-p</sub>, 75 ohms, unbalanced,  
sync negative  
AUDIO OUT, phono jack (2)  
Standard output: 327 mVrms  
Load impedance: 47 kilohms  
Output impedance: less than 10 kilohms  
S-LINK (CONTROL S IN)  
Mini jack (1)  
CABLE BOX CONTROL (CONTROL S OUT)  
Stereo mini jack (plug in power) (1)

## Timer section

Clock  
Quartz locked  
Timer indication  
12-hour cycle  
Timer setting  
8 programs per month (max.)  
Power back-up  
Built-in self-charging capacitor  
Back-up duration: up to 3 hours at a time

## General

Power requirements  
120 V AC, 60 Hz (SLV-960HF/960HF MX)  
110 V AC to 240 V AC, 50/60 Hz  
(SLV-960HF PX/960HF CS)  
Power consumption  
27 W (max.) (SLV-960HF)  
24 W (max.) (SLV-960HF CS/960HF MX/  
960HF PX)  
Operating temperature  
5°C to 40°C (41°F to 104°F)  
Storage temperature  
-20°C to 60°C (-4°F to 140°F)  
Dimensions  
Approx. 430 × 109 × 323 mm (w/h/d)  
Approx. (17 × 4 1/8 × 12 3/4 inches) including  
projecting parts and controls  
Mass  
Approx. 4.5 kg (9 lb 15 oz)

## Supplied accessories

Remote commander (1)  
Size AA (R6) batteries (2)  
75-ohm coaxial cable with F-type connectors (1)  
AC power cord (1)  
Audio/video cable (3 phono, 1 mini to 3 phono,  
1 mini) (1)  
Cable Mouse (cable box controller) (1)  
Plug adaptor (1) (SLV-960HF PX/960HF CS)

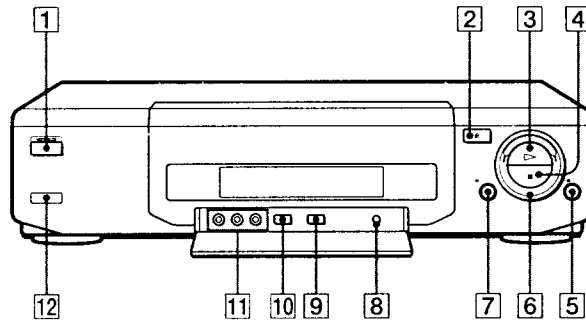
Design and specifications are subject to change  
without notice.

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## Index to parts and controls

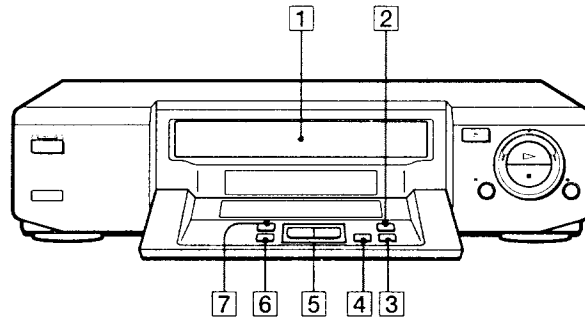
Refer to the pages indicated in parentheses ( ) for details.

### Front panel



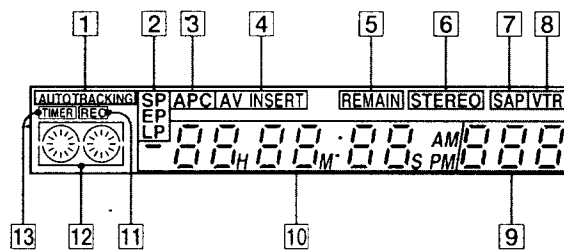
- |                                   |                                           |
|-----------------------------------|-------------------------------------------|
| 1 POWER switch/indicator          | 8 EASY SET UP button (11, 14, 17, 20, 23) |
| 2 ▲ EJECT button (49)             | 9 COMMAND MODE switch (5)                 |
| 3 ▷ PLAY button (49)              | 10 EDIT switch (69)                       |
| 4 ■ STOP button (49)              | 11 LINE-2 IN VIDEO/AUDIO L/R jacks (68)   |
| 5 ● REC button (50)               | 12 Remote sensor                          |
| 6 DUAL MODE SHUTTLE ring (49, 58) |                                           |
| 7    PAUSE button (49)            |                                           |

## Front panel, with cover opened



- |                                  |                                |
|----------------------------------|--------------------------------|
| 1 Tape compartment               | 5 CHANNEL +/- buttons (50)     |
| 2 QUICK TIMER button (60)        | 6 INPUT SELECT button (50, 69) |
| 3 TAPE SPEED (SP/EP) button (51) | 7 TV/VTR button (51)           |
| 4 COUNTER RESET button (49)      |                                |

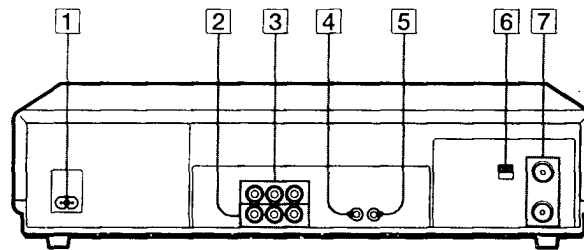
## Display window



- |                                |                                              |
|--------------------------------|----------------------------------------------|
| 1 AUTO TRACKING indicator (65) | 7 SAP indicator (62)                         |
| 2 Tape speed indicator (51)    | 8 VTR indicator (51)                         |
| 3 APC indicator (65)           | 9 Line/channel indicator (50, 69)            |
| 4 AV INSERT indicator (70)     | 10 Time counter/remaining time counter/clock |
| 5 REMAIN indicator (51)        | 11 REC indicator                             |
| 6 STEREO indicator (62)        | 12 Tape indicator                            |
|                                | 13 TIMER indicator                           |

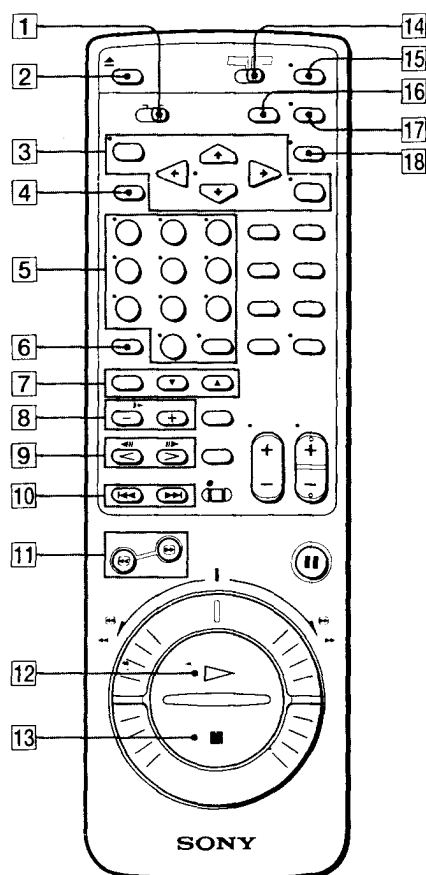
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## Rear panel



- |                                        |                                                      |
|----------------------------------------|------------------------------------------------------|
| 1 AC IN connector                      | 5 CABLE BOX CONTROL (CONTROL S OUT) jack (10, 22)    |
| 2 LINE OUT AUDIO L/R/VIDEO jacks (8)   | 6 RF UNIT switch (72)                                |
| 3 LINE-1 IN AUDIO L/R/VIDEO jacks (68) | 7 VHF/UHF IN/OUT connectors (10, 13, 16, 19, 22, 25) |
| 4 S-LINK (CONTROL S IN) jack (9, 68)   |                                                      |

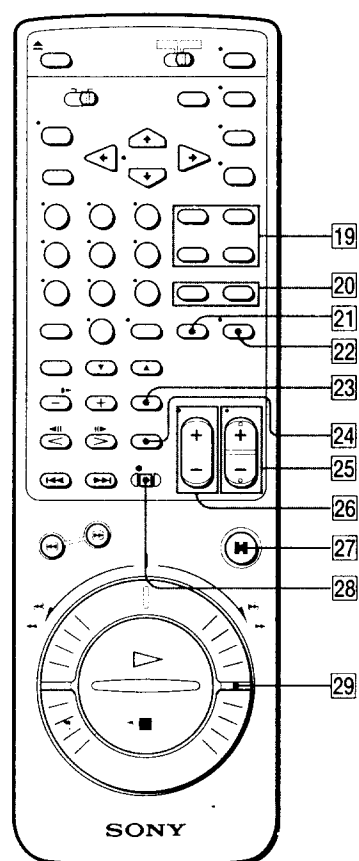
## Remote commander



- 1 COMMAND MODE switch (5)
- 2 ▲ EJECT button (49)
- 3 Menu operation buttons (29)  
MENU button  
CURSOR ↑/↓/←/→ buttons  
EXECUTE button
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## Quick reference to using the VCR

### Hookup 1

#### To play a tape

- 1 Set the TV to channel 3 or 4 (or to video input, if you made A/V connections.)
- 2 Insert a tape and press PLAY.

#### To record a program

- 1 Turn on the cable box.
- 2 Press VCR Plus+ on the remote commander.
- 3 Enter the program's PlusCode number.
- 4 Press ONCE, DAILY, or WEEKLY.
- 5 Insert a tape.
- 6 Press POWER to turn off the VCR.
- 7 Leave the cable box on.

#### To watch TV

- 1 Turn off your VCR, or press the VCR's TV/VTR button until the VTR indicator in the display window goes off.
- 2 Turn on your cable box.
- 3 Set the TV to the cable box output channel (usually 2, 3, or 4).
- 4 Set the cable box to the channel you want to watch.

### Hookup 2

#### To play a tape

- 1 If you made A/V connections, set the TV to video input.  
If you didn't use A/V hookup:
  - Turn on the cable box.
  - Set the cable box to channel 3 or 4.
  - Set the TV to the output channel of the cable box (usually 2, 3 or 4).

- 2 Insert a tape and press PLAY.

#### To record a program

- 1 Press VCR Plus+ on the remote commander.
- 2 Enter the program's PlusCode number.
- 3 Press ONCE, DAILY, or WEEKLY.
- 4 Insert a tape.
- 5 Press POWER to turn off the VCR.

#### To watch TV

- 1 Turn off your VCR, or press the VCR's TV/VTR button until the VTR indicator in the display window goes off.
- 2 Select the channel with your cable box (if you have one) or with your TV.

### Hookup 3

#### To play a tape

- 1 Set the TV to channel 3 or 4 (or to video input, if you made A/V connections.)
- 2 Insert a tape and press PLAY. If there's no picture on your TV, press the VCR's TV/VTR button until the VTR indicator comes on in the display window.

#### To record a program

- 1 Press VCR Plus+ on the remote commander.
- 2 Enter the program's PlusCode number.
- 3 Press ONCE, DAILY, or WEEKLY.
- 4 Insert a tape.
- 5 Press POWER to turn off the VCR.

#### To watch TV

- 1 Turn off the VCR, or press the VCR's TV/VTR button until the VTR indicator in the display window goes off.
- 2 Set the TV to the channel you want to watch.

### Hookup 4

#### To play a tape

- 1 Set the TV to channel 3 or 4 (or to video input, if you made A/V connections.)
- 2 Insert a tape and press ▷ PLAY.

#### To record a program

- 1 Turn on the cable box.
- 2 Set the cable box to the channel you want to record.
- 3 Press VCR Plus+ on the remote commander.
- 4 Enter the program's PlusCode number.
- 5 Press ONCE, DAILY, or WEEKLY.
- 6 Insert a tape.
- 7 Press POWER to turn off the VCR.
- 8 Leave the cable box on.

#### To watch TV

- 1 Turn off your VCR, or press the VCR's TV/VTR button until the VTR indicator in the display window goes off.
- 2 Turn on your cable box.
- 3 Set the TV to the cable box output channel (usually 2, 3, or 4).
- 4 Set the cable box to the channel you want to watch.

If you have any questions about this product, you may call: **Sony Customer Information Center** 1-800-222-SONY (7669) or write to: **Sony Customer Information Center** Sony Drive, Mail Drop #T1-11, Park Ridge, NJ 07656

Sony Corporation Printed in Malaysia

GOLD DISK

# **VideoDirector®** **Home** **Sony VCR Edition**



Getting Started

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Printed in Canada.

The following applies to the Smart Cable included with VideoDirector Home:

#### **GOLD DISK SMART CABLE**

##### **FCC ID: J8NGDLIR**

This device complies with Part 15 of the FCC Rules. Operation is subject to the following conditions: (1) This device may not cause harmful interference and (2) this device must accept interference that may cause undesired operation.

**NOTE:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guaranty that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

**WARNING:** Changes or modifications not expressly approved by Gold Disk could void the user's authority to operate the equipment.

---

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# Introduction

Welcome to VideoDirector Home! VideoDirector Home is an easy-to-use video editing system that allows you to edit raw video footage with little effort. You can select your favorite video moments, arrange them in any order and VideoDirector Home automatically records them accurately on a new tape. VideoDirector Home lets you use your personal computer as the centerpiece of your own video editing system, giving you great results without having to purchase expensive equipment. Gold Disk's *SmartCable* is included in the VideoDirector Home package and lets you control your camcorder and VCR from your computer.

## Where To Find Help

This manual is designed to be an overview that will take you through the basics of VideoDirector Home. You will learn how to install VideoDirector Home, set up your hardware, define and edit clips, and create finished videos. For detailed, step by step instructions on VideoDirector Home's features, please refer to the on-line help. The on-line help provides you with useful information while you are working in VideoDirector Home.

To display on-line help, click on the *Book o' Help* on the *Tool Shelf*, and then on the *On-line help* button in the *VideoDirector Home Help* window. Each page in the on-line help provides a list of related topics to help you in your search for information. You can also go through the tutorials to familiarize yourself with VideoDirector Home's main features before you start editing. To display the tutorials, click on the *Tutorials* button in the *VideoDirector Home Help* window.

If balloon help is enabled in the *Preferences* dialog box, speech balloons appear on the screen when you place the pointer over buttons, tabs or controls on the VideoDirector Home window. The balloons contain a brief description of each button or tool's function. To display the *Preferences* dialog box, click on the *Configuration Toolbox* on the *Tool Shelf*.

## Technical Support

We understand that you may want additional help in setting up and using VideoDirector Home. You get 90 days of free technical support from the first time you contact us.

**Fax:** 905 602-0393    **Phone:** 905 602-5293

**CompuServe:** 75300,3433 and type: GO GOLDDISK

**World Wide Web:** <http://www.golddisk.com>

**Mail:** Gold Disk  
P.O. Box 789  
Streetsville, ON  
Canada  
L5M 2C2

You can save time if you have your computer, with VideoDirector Home running, near the phone when you call. Relevant files should be loaded if possible. Information such as your computer's model number, memory size, peripherals, and output devices can speed up problem solving. Also, try to recreate the problem you are experiencing so we can help you the best we can.

# Basic Concepts

## Camcorder Tape List

The *Tape List* allows VideoDirector Home to keep track of all your video clips, so you can find any clip you have defined, quickly.

## Calibration

Calibration involves repositioning your camcorder tape to improve editing accuracy.

## Clip

A clip is a single segment of footage defined from your camcorder tape, such as a scene from a family reunion or a relative's wedding.

## COM Port

A serial port located at the back of your computer where you can plug in the *SmartCable*.

## LANC

A communication protocol designed by Sony that receives and transmits information. VideoDirector Home's *SmartCable* can communicate with camcorders by sending and receiving LANC messages. LANC is also referred to as Control-L or Remote on some video devices.



The LANC symbol

## Control-S

Control-S is a communication protocol designed by Sony to receive and transmit information. VideoDirector Home can send information to Control-S controllable VCRs.

## Scripts

A *Script* is a list of clips in a particular order that will be recorded onto your final tape. VideoDirector Home allows you to customize your own scripts by adding, deleting and reordering clips in any way you choose.

## SmartCable

The cable included with VideoDirector Home to operate a LANC compatible camcorder and a Control-S controllable VCR.

## Transport Controls

Buttons in the *Camcorder* or *VCR display* that control the transport mechanism of your camcorder or VCR from VideoDirector Home. These include *Rewind/Review*, *Stop*, *Pause*, *Play* and *Fast Forward/Cue*, as well as the *Backward/Forward jog* controls.

## Installation

Before installing VideoDirector Home, make sure you read the license agreement at the back of this manual.

1. **Launch Windows.**
2. **Insert the VideoDirector Home install disk into your floppy drive.**
3. **Choose Run...** from either the *File* menu in the *Windows 3.1 Program Manager* or from the *Start* menu in *Windows '95*.
4. **Type a:\setup and click on the OK button.**  
Or, if you put the VideoDirector Home disk in drive b, type b:\setup.
5. **Specify where to install VideoDirector Home in.**
6. **Click on the OK button.**

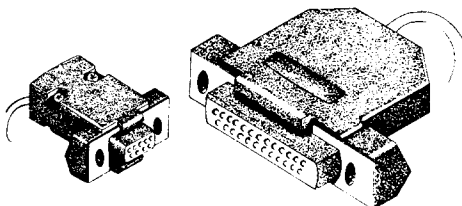
## Setting Up the Cables

In addition to your computer, you need a camcorder, VCR, a television or video monitor and Gold Disk's *SmartCable*. Before you start editing with VideoDirector Home, you need to connect this hardware to your computer.

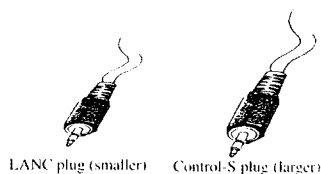
### To connect the SmartCable

1. Turn your computer, camcorder and VCR off.
2. Plug either the 9 pin or 25 pin connector into a COM port on the back of your computer.

Do not plug both in.



3. Insert the LANC plug into the LANC jack on your camcorder.



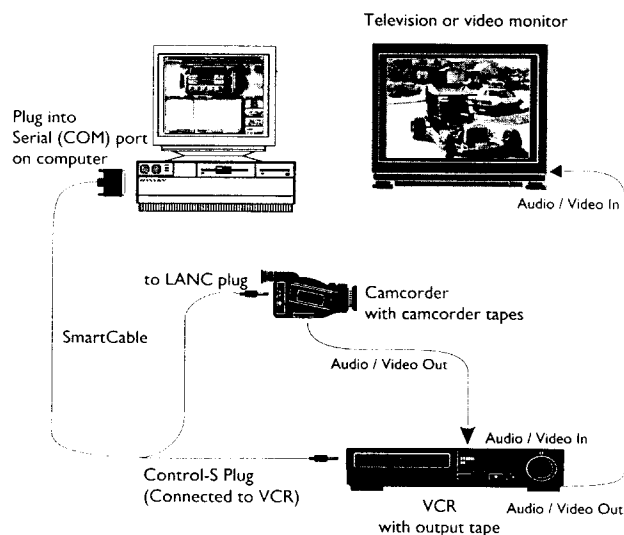
The LANC jack on the camcorder is designated by the LANC symbol.

It is **very important** to make sure that the socket you plug the *SmartCable* into on your camcorder is in fact a LANC socket. For example, the Synchro Edit sockets available on some camcorders and VCRs are not compatible with either LANC or VideoDirector Home.

**NOTE: Plugging the *SmartCable* into any type of socket other than LANC may damage your hardware.**

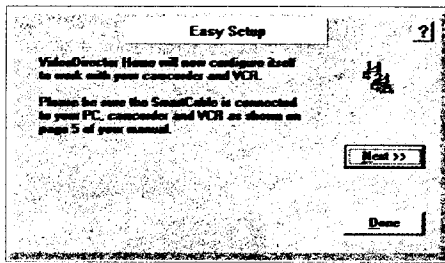
4. Insert the Control-S plug into the appropriate jack on your VCR.

Your setup should look like this:



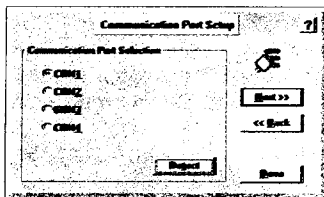
# Setting Up Your Camcorder and VCR

To simplify the setup process for you, the *Easy Setup* dialog box appears the first time you start VideoDirector Home.



1. Click on the *Next* button.

The *Communication Port Setup* dialog box appears, and performs a test to locate which COM ports are available on your computer for the *SmartCable* to be plugged into.



2. Click the *Detect* button.

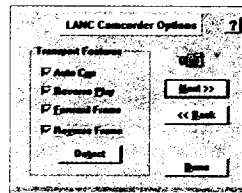
VideoDirector Home checks your COM ports to see where the *SmartCable* is.

3. When the detection is finished, click on the *Next* button.

The *LANC Driver Options* dialog box appears.

4. Click the *Detect* button

VideoDirector Home performs a test to determine which transport features your camcorder supports.



**Auto Cue:** Selecting this option tells VideoDirector Home that your camcorder needs a single command to be placed in *Cue* or *Review* mode. Some camcorders do not have a *Cue* or *Review* mode, and require these commands to be sent repeatedly in order to cue or review the tape.

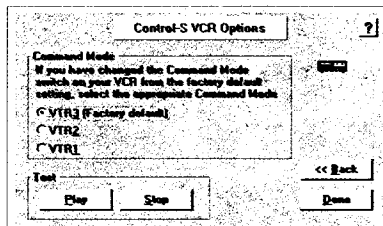
**Reverse Play:** Selecting this option tells VideoDirector Home that your camcorder has a reverse play function.

**Forward Frame:** Selecting this option tells VideoDirector Home that your camcorder can advance your video one frame at a time.

**Reverse Frame:** Selecting this option tells VideoDirector Home that your camcorder can rewind your video one frame at a time.

5. Click on the *Next* button.

- The *Control-S VCR Options* dialog box appears.



6. Specify the Command Mode your VCR is using.

You can click on the *Play* and *Stop* buttons to check that you have selected the correct setting. The VCR should respond properly when you click on the *Play* and *Stop* buttons.

7. Click on the *Done* button to finish the *Easy Setup* process.

### *Additional Setup Options*

You can change your setup options at any time by clicking on the *Configuration Toolbox* button on the *Tool Shelf*. From the resulting *VideoDirector Home Setup* dialog box you can go through the *Easy Setup* process again, change your *SmartCable* connection, change your *SmartCable* connection, change your camcorder or VCR setup, or display the *Preferences* dialog box to change sound options, display balloon help or tape calibration reminders.

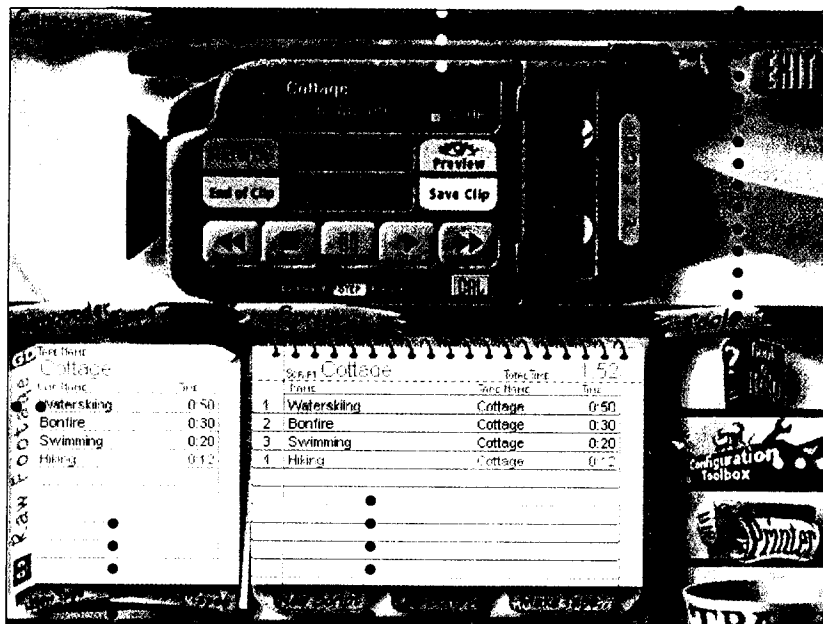
# Overview

Define the video clips you want to include in your final tape here.

Click here for on-line help.

Choose or create a tape list to work with here.

Click here to set up your camcorder and VCR.



You can edit your clips here.

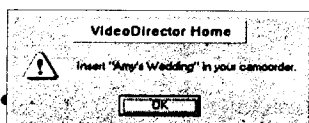
Organize your clips here in the order you want them to appear on the final tape.

Click here to start making your final video.

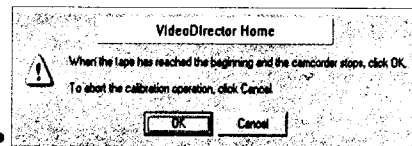
# Loading Your Tape

Before you can define any clips, you need to select, name and calibrate a camcorder tape to work with.

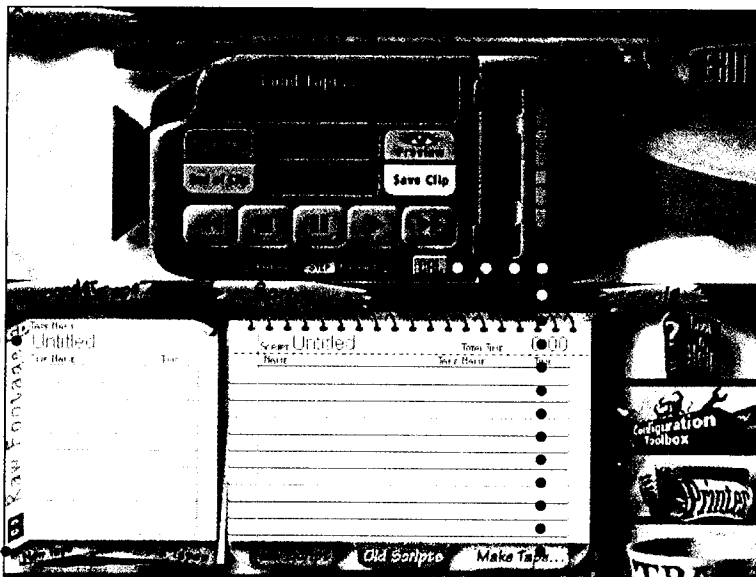
- 3 A message box appears. Insert your tape into your camcorder and click here.



- Another message box appears, asking you to calibrate your camcorder tape.



- 2 Type a name for the tape here, and then press [Enter].



- 4 To calibrate your camcorder tape, click here and then follow the instructions in the resulting message box.

Calibrating your camcorder tapes is highly recommended. This feature allows you to edit your clips and record your final tape more accurately. It ensures that VideoDirector Home knows exactly where to find your clips on your tape. This is especially important when you create your final tape. You should calibrate every time you load a new tape.

- 1 Click here to create a new tape list.

You can open an existing tape list by clicking here, and then dragging the tape name you want to load onto the *Camcorder display*. The tape is loaded into the *Camcorder display* and the tape name is displayed. A message box prompts you to insert the tape into your camcorder.

You can also calibrate your tape at any time by clicking here to display the *Calibrate Camcorder Tape* dialog box. For more information, refer to the on-line help.

# Defining Your Video Clips

The first step in editing your raw footage is to identify and define sections of interest — video clips. Every clip has a name, a start point, an end point, and information about which tape the clip is on. You can define as many clips as you want for each tape.

- 2 When you see the start of the clip you want to define, click here.

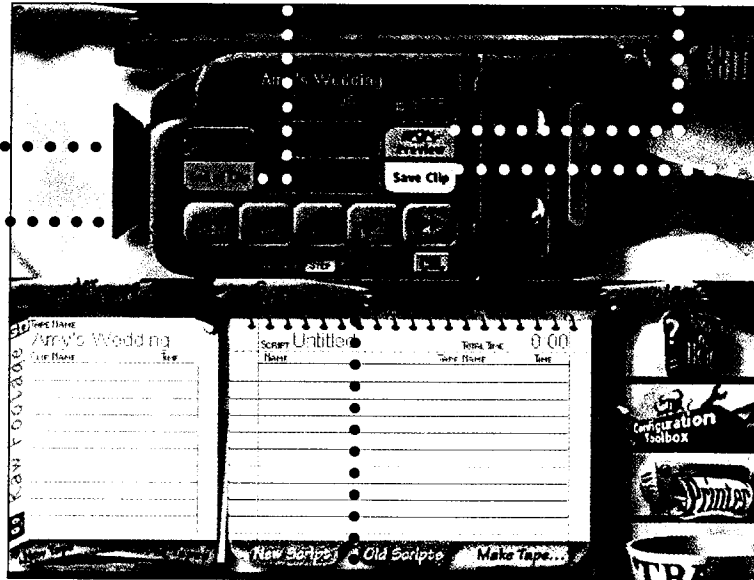
- 3 When you see the end of the clip you want to define, click here.

You can view the clip you've just defined by clicking here.

- 4 Click here to save the clip into the *Tape List*.

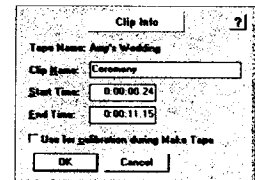
You can use the other buttons to rewind, fast-forward, stop and pause while you search through your tape.

You can also use the *Backward/Forward Jog Controls* below these controls to move your tape forward or backward one frame at a time (if your camcorder supports this function).



- 1 Click here to start playing the camcorder tape so you can view its contents.

The *Clip Info* dialog box appears.



- 5 Type a name for the clip here and click on the *OK* button.

From the *Clip Info* dialog box you can edit your clip's start and end times. You can also use the clip as a calibration clip during the *Make Tape* process by enabling the *Use for calibration during Make Tape* option. This ensures that your final tape is recorded accurately. During the final recording, VideoDirector Home pauses at this clip in the *Script*, and prompts you to reposition the camcorder tape to the beginning of the clip. This corrects for any tape drift.

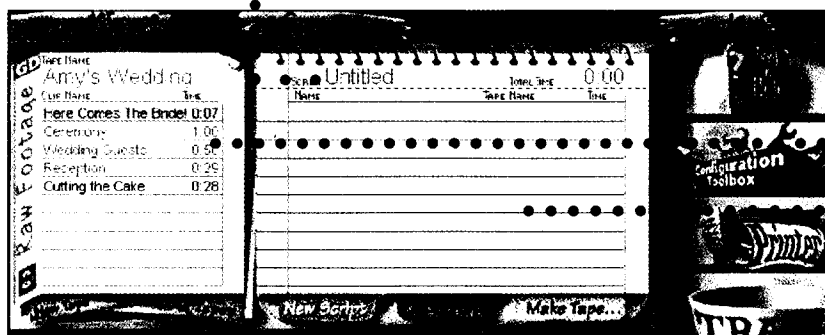
# Creating a Script

Now that you have defined your clips, you need to create a script. The *Script* will contain all of your clips for your final tape, in the order they will appear.

- 2 Type a name for the script here and then press [Enter].

- 3 To add your clip(s) to the *Script*, drag the clip(s) from the *Tape List* to the *Script* and release the mouse button when the position marker is at the desired location.

You can also add clips to the *Script* from different camcorder tapes.



- 1 Click here to create a new, blank script.

You can open an existing script by clicking here. From the resulting *Old Scripts* list, double click on the script you want to open.

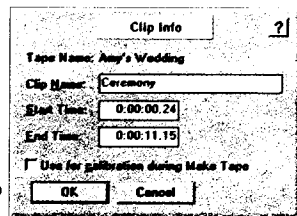
You can select a range of clips by clicking on the first clip in the range, and then holding down the [Shift] key while you click on the last clip in the range. To select multiple clips individually, hold down the [Ctrl] key as you click on each clip.

# Editing Your Tape List or Script

If you are not happy with one or more of the clips in the *Tape List* or *Script*, you can make some alterations. You can redefine the start and end times, rename the clip, or create a new clip.

- 2 Edit the clip's name here.

The *Clip Info* dialog box appears.



Clip Info

Tape Name: Amy's Wedding

Clip Name: Ceremony

Start Time: 0:00:00.24

End Time: 0:00:11.15

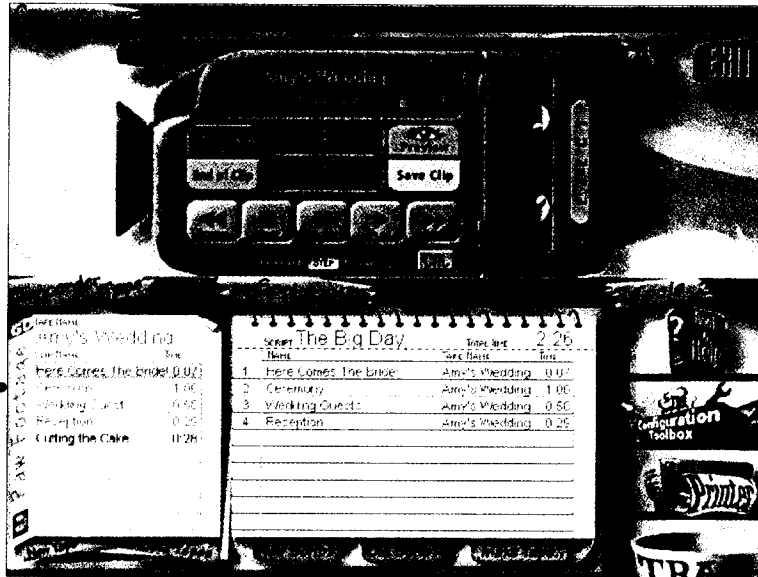
☐ Use for calibration during Make Tape

OK Cancel

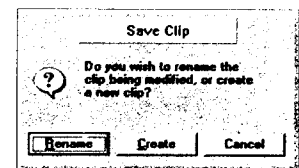
You can edit the clip's start and end times here.

- 3 If you want to make the clip a calibration clip, enable this option and then click on the *OK* button.

- 1 Double click on the clip you want to edit in the *Tape List* or *Script*.



A message box appears.



Save Clip

Do you wish to rename the clip being modified, or create a new clip?

Rename Create Cancel

- 4 Click here to rename the existing clip or...

click here to create a new clip.

# Additional Editing Options for the Scripts Notebook

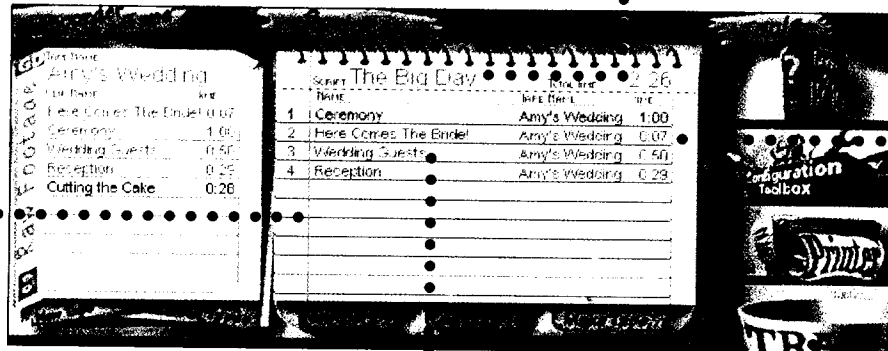
Once you have moved your clips to the *Scripts Notebook*, you can rearrange them in any order you want for your final tape. You can also add clips to a script, delete clips or entire scripts from the *Scripts Notebook*.

A filmstrip icon follows the pointer as you drag, and the position marker (thick black line) moves through the script indicating the current position of the clip you are dragging.

To change the name of the script, click here and type a new name.

To copy clips within the script, select the clip, and while holding down the [Ctrl] key, drag the clip to where you want to copy it.

To move a clip within the script, drag the clip to where you want to insert it into the *Script*.



To preview a selected clip, press [Shift] [Return]. The clip is played back from the *Camcorder display*.

You can select a range of clips to move, copy or delete by clicking on the first clip in the range, and then holding down the [Shift] key while you click on the last clip in the range. You can select multiple clips individually by holding down the [Ctrl] key as you click on each clip.

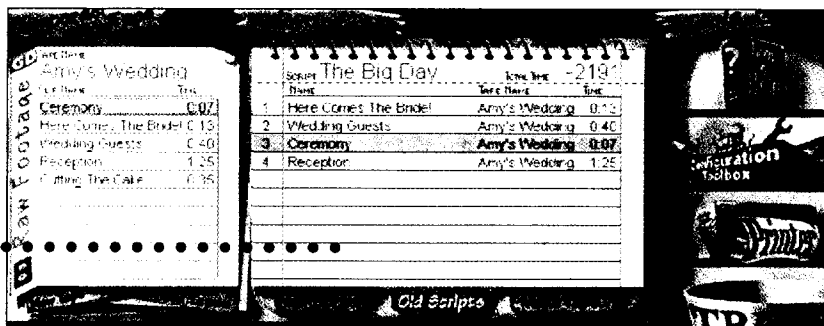
To delete a clip or an entire script from the *Scripts Notebook*, drag the clip or the script name and drop it here. Click on the *OK* button in the resulting message box to confirm the deletion.

You can also delete an entire tape list by dragging the tape name here.

# Making Your Final Tape

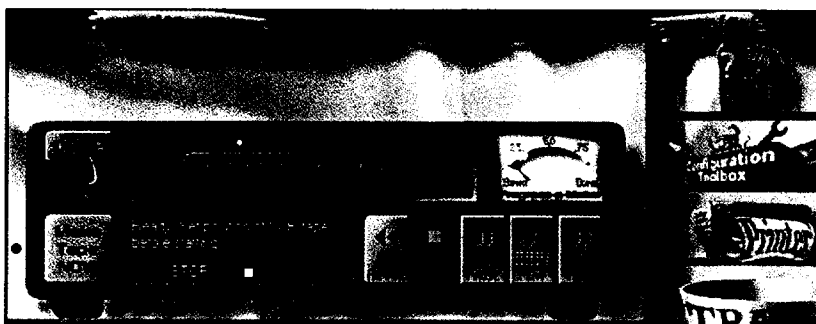
Making the final tape is the last stage of editing in VideoDirector Home. For the most part, this process is carried out automatically. There will be times when you need to get involved in the process: to change camcorder tapes, or to calibrate tapes for better editing accuracy.

1. Make sure the script includes the clips you want, and that they are arranged in the proper order.



2. Click here to display the VCR display.

3. Click here to start the Make Tape process.



If your tape is not loaded or your clips are on more than one camcorder tape, the *Mount New Tape* dialog box appears asking you to load the first tape.

The Make Tape process continues.

If you are using multiple camcorder tapes, VideoDirector Home will prompt you to change tapes when necessary.

If you have used calibration clips in your video, the *Calibration Event* dialog box will appear when the Make Tape process reaches that clip, asking you to reposition the tape at the beginning of the clip.

## Calibration Clips

You can improve the accuracy of your video editing by using calibration clips in your script. Calibration realigns your camcorder tape's actual position and the camcorder tape position registered by VideoDirector Home.

You should always calibrate between clips that are far apart, because clips requiring the camcorder to rewind or fast-forward for a long period may cause the tape counter to become inaccurate. You should also calibrate if you have short clips that are only a few seconds long.

### Defining a Calibration Clip

1. Use the *Transport Controls* in the *Camcorder window* to position your camcorder tape at the calibration frame.
2. Click on the *Start of Clip* and *End of Clip* buttons to define the clip.

--The ideal calibration clip should be easy to locate later. The first frame of a new sequence usually works well.

3. Click on the *Save Clip* button.

The *Clip Info* dialog box appears.

4. Type a name for the clip in the *Clip Name* field.

If you are using your camcorder's date or time display to define a calibration clip, you can name the clip after the actual date or time displayed, for example 12:42 PM (Cal.). This can help you pick out the calibration clip later on.

5. If you want, you can adjust the clip's start and end times in the corresponding fields.

6. Enable the *Use for calibration during Make Tape* option.

7. Click on the *OK* button.

The single frame clip is placed in the *Tape List* as a calibration clip.

# Tips for Maximum Accuracy

## Logging Clips

To avoid problems when logging clips, make use of the *Calibrate* function. When you edit clip information, you can click on the *Calibrate* button in the *Camcorder* display. This allows you to position the camcorder tape to the correct point, reducing the tape drift that can occur over long editing sessions, and the errors caused by long seeking for widely-spaced clips on a tape.

1. **Calibrate to the start of the tape before beginning to log clips.**
2. **Click on the *Play* button.**
3. **While the tape plays, log all the clips you want using the *Start of Clip* and *End of Clip* buttons.**

Avoid the Pause, Cue, Review or any Transport Controls as much as possible.

## Making a Tape

The following steps will ensure that your final tape is recorded accurately.

1. **Calibrate to the start of the tape before beginning to record to a final tape.**
2. **Click on the *Configuration Toolbox*.**  
The *VideoDirector Home Setup* dialog box appears.
3. **Click on the *Camcorder* button.**  
The *Camcorder Setup* dialog box appears.
4. **Make sure the *High-Speed Seek* option is not enabled.**

If the script is very long, or if you are using clips that are far apart, use calibration clips.

If the clips in your script are from multiple tapes, make sure you calibrate the camcorder tape every time the tape is changed.

## Transport Controls

Although VideoDirector Home gives you access to all of the standard Transport Controls on your camcorder (Stop, Rewind, Play, Fast-Forward, Pause, Cue, Review), we recommend that you use the Pause command instead of the Stop command when possible. We also recommend that you use Cue and Review modes instead of the Fast-Forward and Rewind modes. This will result in greater accuracy during the Make Tape process later on.

## The Make Tape Process

For best results, place a calibration clip in your script every 10 clips or so when using an infrared camcorder.

# Commonly Asked Questions

The following problems, suggestions and tips will help you get the best results from VideoDirector Home. Please refer to this guide before calling Technical Support.

## **My camcorder and/or VCR won't respond to VideoDirector Home.**

Make sure you have selected the correct drivers and driver options.

## **My camcorder freezes on certain frames.**

All recorded video is accompanied by a control track of some kind. Unless your camcorder uses Time Code, VideoDirector Home receives its frame count information from the control track on the camcorder tape. The control track pulses tell your camcorder or VCR exactly where each frame of video information is recorded, ensuring video frames are played back at a constant rate. If your camcorder tape has blank sections, these sections will not have a control track or any control track information. Make sure the tape has continuous recorded video.

## **My tape counter freezes.**

When VideoDirector Home encounters a section of unrecorded tape without a control track, the tape counter freezes. This causes errors in defining clips as well as problems during tape assembly. If you notice gaps in your existing footage, record a new blank signal over the gap. This provides continuous control track data.

## **My clips aren't recorded accurately.**

Use calibration clips for maximum accuracy. Use the Cue and Review speeds instead of Fast-Forward and Rewind, and Pause instead of Stop when controlling your camcorder from VideoDirector Home.

## **When pausing between recorded clips, my record deck goes into stop mode.**

Your record deck may go into stop mode if your camcorder searches for a clip for more than four or five minutes or if you take too long to switch camcorder tapes during tape assembly. You can use VideoDirector Home's *High-Speed Seek* option to quickly seek between distant clips, however this will cause some accuracy loss.

## **Sometimes my first clip of video footage is cut off on my recorded tape.**

Wherever possible, try to leave some footage of a clip before your start time and after your end time. Don't define clips within the first twenty seconds of a camcorder tape. VideoDirector Home has to position the tape a few seconds before a clip during the Make Tape Process. If the clip is too close to the start of the tape, this will be impossible.

**Sometimes I get brief "blips" of unwanted footage.**

Don't start or end a clip right on a scene change, unless it is a calibration clip. This will prevent brief sections of unwanted footage from winding up on your final tape if your camcorder tape is not calibrated perfectly.

**When I select the LANC driver for my camcorder, I get the message: "There is a problem with the LANC driver: Check all connections and ensure that the camcorder is turned on and in VTR mode."**

Make sure the deck you are controlling is LANC compatible.

Make sure the *SmartCable* is connected to the camcorder's LANC jack.

Make sure the *SmartCable* is connected to proper COM port.

Make sure there is a tape in the camcorder.

The camcorder should be turned on and in Play or VTR mode.

**My mouse pointer is jumpy.**

Make sure no other applications are running, including "Terminate and Stay Resident" (TSR) programs.

**The counter is at a negative value, and the program freezes when the camcorder seeks to a clip near the start of the tape, during the Make Tape process.**

The first clip on your camcorder tape must be a minimum of twenty seconds from the start of the tape.

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VideoDirector Home 19

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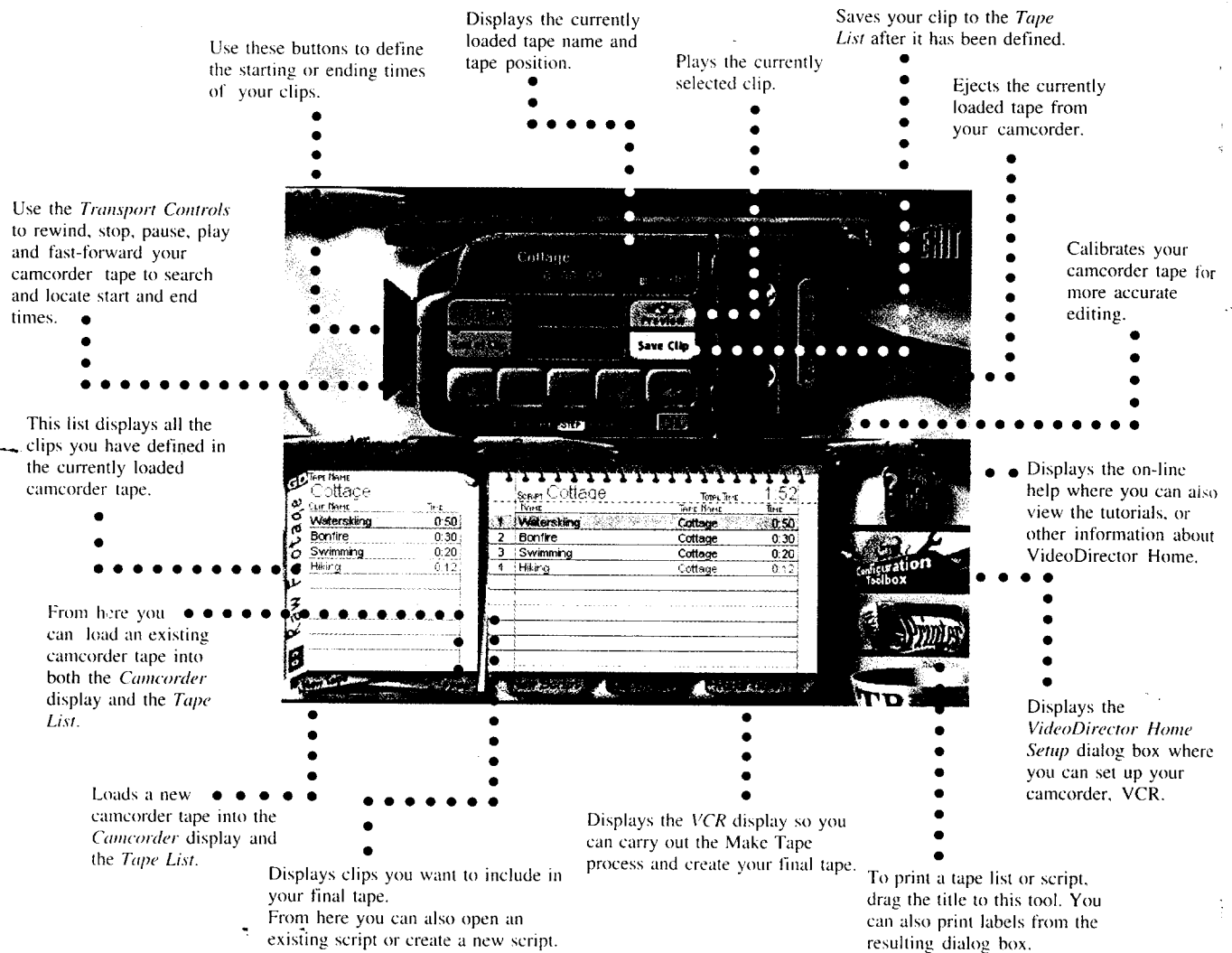
| Scripts Notebook                                 |                                    |
|--------------------------------------------------|------------------------------------|
| Select a Range of Scripts                        | Shift + Click                      |
| Select Multiple Scripts Individually             | Ctrl + Click                       |
| Delete Selected Scripts                          | Delete/Drag to Trash               |
| Display Clips for Selected Script                | Enter/Double Click                 |
| Print Selected Scripts                           | Drag to Printer                    |
| Script Name                                      |                                    |
| Change Name                                      | Click to Select and then Type      |
| Print                                            | Drag to Printer                    |
| Delete                                           | Drag to Trash                      |
| Clip List                                        |                                    |
| Select a Range of Clips                          | Shift + Click                      |
| Select Multiple Clips Individually               | Ctrl + Click                       |
| Delete Selected Clips                            | Delete/Drag to Trash               |
| Display Old Script List                          | Escape                             |
| Display All Clips for Selected Clip in Tape List | Spacebar                           |
| Edit Selected Clip                               | Enter/Double Click                 |
| Preview Selected Clip                            | Shift + Enter/Shift + Double click |
| Display Clip Times in Camcorder Display          | Drag to Camcorder Display          |
| Move Selected Clips within Current Script        | Drag to New Location               |
| Copy Selected Clips within Current Script        | Ctrl + Drag to New Location        |

| Camcorder Window       | Enable Num Lock and press: |
|------------------------|----------------------------|
| Rewind/Review          | 7 on numeric keypad        |
| Stop                   | 0 on numeric keypad        |
| Pause                  | 5 on numeric keypad        |
| Play                   | 6 on numeric keypad        |
| Reverse Play           | 4 on numeric keypad        |
| Fast Forward/Cue       | 9 on numeric keypad        |
| Step Forward 1 Frame   | 3 on numeric keypad        |
| Step Backward 1 Frame  | 1 on numeric keypad        |
| Define Clip Start Time | 8 on numeric keypad        |
| Define Clip End Time   | 2 on numeric keypad        |
| Save Clip              | + on numeric keypad        |
| Preview Clip           | - on numeric keypad        |

| Old Tape List                                 |                                                  |
|-----------------------------------------------|--------------------------------------------------|
| Select a Range of Tapes                       | Shift + Click                                    |
| Select Multiple Tapes Individually            | Ctrl + Click                                     |
| Load Tape and Display Clip List               | Insert /Shift + Return/Drag to Camcorder Display |
| Display Clip List for Selected Tape           | Spacebar/Enter/Double Click                      |
| Delete Selected Tapes                         | Delete/Drag to Trash                             |
| Print Selected Tapes                          | Drag to Printer                                  |
| Insert all Clips of Selected Tape into Script | Drag to Script                                   |
| Tape Name                                     |                                                  |
| Change Name                                   | Click to Select and then Type                    |
| Load                                          | Drag to Camcorder Display                        |
| Delete                                        | Drag to Trash                                    |
| Print                                         | Drag to Printer                                  |
| Insert all Clips of Tape into Script          | Drag to Script                                   |
| Clip List                                     |                                                  |
| Select a Range of Clips                       | Shift + Click                                    |
| Select Multiple Clips Individually            | Ctrl + Click                                     |
| Display Old Tape List                         | Escape                                           |
| Display Clip Times in Camcorder Display       | Spacebar/Drag to Camcorder Display               |
| Delete Selected Clips                         | Delete/Drag to Trash                             |
| Insert Selected Clips into Current Script     | Insert/Drag to Script                            |
| Edit Selected Clip                            | Enter/Double Click                               |
| Preview Selected Clip                         | Shift + Enter/Shift + Double Click               |

| Miscellaneous                               |     |
|---------------------------------------------|-----|
| Move Between Tape List and Scripts Notebook | Tab |
| On-Line Help                                | F1  |

# VideoDirector Home at a Glance



0203-01-10H-S

● You own a Macintosh computer

but...

● You own a camcorder that does not have a mini jack LANC connector  
or...

● You want to add titles, sounds, animations and more

## Look at these Special Offers from Gold Disk!

### Is your home computer a Macintosh?

VideoDirector 2.0 for Macintosh has familiar VCR style controls that look and work just like the controls on your camcorder and VCR so you'll be up and running in no time.

VideoDirector 2.0 for Macintosh supports all 8mm and Hi8 camcorders, and all camcorders with a wireless remote, and is just \$49.95 through this special offer!

Note: You will not be able to use the built-in Control-S interface to control your Sony VCR when you use VideoDirector 2.0 for Macintosh. However, by controlling your VCR with the cable's built-in infrared emitter, you can still create perfect edits that take advantage of your VCR's flying erase head.

### Do You Own a Camcorder without a LANC jack?

Gold Disk offers an infrared editing cable. It's a patent-pending Gold Disk first that allows VideoDirector Home to control your Sony VCR and

virtually any camcorder equipped with an infrared remote control as a source device with a single infrared transmitter. Gold Disk is offering the IR cable to Sony customers at a very special price of \$24.95.

Note: You will not be able to use the built-in Control-S interface to control your Sony VCR when you use the Infrared cable for Windows.

However, by controlling your VCR with the cable's built-in infrared emitter, you can still create perfect edits that take advantage of your VCR's flying erase head.

### Does Your Camcorder have a 5-pin LANC socket?

Some earlier camcorders have a 5-pin LANC socket, rather than the standard miniature earphone-style jack. A special 5-pin adapter that allows you to connect the LANC plug of the SmartCable to the 5-pin LANC socket of your camcorder is available from Gold Disk. This adapter is free, except for a \$9.95 shipping and handling charge.

### Want to Add Titles, Animation, and Clip Art to your videos?

VideoDirector Suite 2.5 for Windows gives you all the tools and a huge library of clip media to create titles, voice-overs, sound effects and animation to highlight your videotapes. And for the serious video editor, VideoDirector Suite includes a host of sophisticated editing and cataloging tools, label printing, and support for visual storyboarding and viewing footage on your PC monitor. These sophisticated tools give you greater video editing power. VideoDirector Suite is only \$49.95 through this special offer to Sony customers.

Additional hardware may be needed for some advanced features:

**Add Voice-Overs, Sound Effects, MIDI Music**--Windows-compatible sound board

**View Video On PC Monitor, Capture Picons**--MCI-compatible video-in-a-window card

**Add Full Screen Titles, Graphics, and Animations**--VGA-to-video encoder or scan converter

**Superimpose Titles or Genlock Graphics and Animation**--Genlock card or MCI-compatible video overlay card plus a VGA-to-video encoder

### Want to Add cool VIDEO CLIP ART?

Begin your wedding with silver bells... or start your vacation with a jumbo jet taking off! using COOLCLIPS!

CoolClips offers you a unique collection of over 50 professionally created scenes, titles, and animations, accompanied by sounds, and music, all on one tape! Using VideoDirector Home, VideoDirector Suite, or VideoDirector for Macintosh, you can easily edit CoolClips scenes and titles into your own videotapes. The ideal way to begin scenes and make transitions to new footage.

CoolClips, a \$49.95 value, is yours for just \$29.95! CoolClips is available in 8mm, VHS, or VHS-C format. Be sure to choose the same tape format as your camcorder/source device.

For Fastest Service, call toll-free: 1-800-982-9888, or fax to 1-800-986-0628, or mail to Gold Disk, 2475 Augustine Drive, Santa Clara, CA 95052.

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|                                                                                                    |         |    |
|----------------------------------------------------------------------------------------------------|---------|----|
| VideoDirector 2.0 for Macintosh                                                                    | \$49.95 | \$ |
| VideoDirector 2.5 Suite                                                                            | \$49.95 | \$ |
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| IR Cable                                                                                           | \$24.95 | \$ |
| 5-Pin Adapter                                                                                      | FREE    | \$ |
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