

JVC®

VHS SQPB

Extra 19µm HEAD

4 HEAD MONO

STEREO TV



TV/VCR COMBO USER'S GUIDE

For Model

TV-20241



IMPORTANT NOTE TO THE CUSTOMER

In the space below, enter the serial number for your television
(located at the rear of the television cabinet).

Staple your sales receipt or invoice to the inside cover of this guide.

Keep this user's guide in a convenient place for future reference.

Keep the carton and original packaging for future use.

Serial Number

IMPORTANT SAFETY PRECAUTIONS

IMPORTANT SAFEGUARDS

CAUTION:

Please read and retain for your safety.

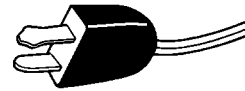
Electrical energy can perform many useful functions. This TV set has been engineered and manufactured to assure your personal safety. But *improper use can result in potential electrical shock or fire hazards*. In order not to defeat the safeguards incorporated in this TV set, observe the following basic rules for its installation, use and servicing.

And also follow all warnings and instructions marked on your TV set.

INSTALLATION

- 1 Your TV set is equipped with a polarized AC line plug (one blade of the plug is wider than the other).

(POLARIZED-TYPE)



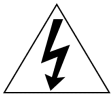
This safety feature allows the plug to fit into the power outlet only one way. Should you be unable to insert the plug fully into the outlet, try reversing the plug.

Should it still fail to fit, contact your electrician.

- 2 Operate the TV set only from a power source as indicated on the TV set or refer to the operating instructions for this information. If you are not sure of the type of power supply to your home, consult your TV set dealer or local power company. For battery operation, refer to the operating instructions.
- 3 Overloaded AC outlets and extension cords are dangerous, and so are frayed power cords and broken plugs. They may result in a shock or fire hazard. Call your service technician for replacement.
- 4 Do not allow anything to rest on or roll over the power cord, and do not place the TV set where power cord is subject to traffic or abuse. This may result in a shock or fire hazard.
- 5 Do not use this TV set near water — for example, near a bathtub, washbowl, kitchen sink, or laundry tub, in a wet basement, or near swimming pool, etc.

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

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



The lightning flash with arrowhead symbol, within an equilateral triangle 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.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING: TO PREVENT FIRE OR SHOCK HAZARDS, DO NOT EXPOSE THIS TV SET TO RAIN OR MOISTURE.

CAUTION: TO INSURE PERSONAL SAFETY, OBSERVE THE FOLLOWING RULES REGARDING THE USE OF THIS UNIT.

1. Operate only from the power source specified on the unit.
2. Avoid damaging the AC plug and power cord.
3. Avoid Improper installation and never position the unit where good ventilation is unattainable.
4. Do not allow objects or liquid into the cabinet openings.
5. In the event of trouble, unplug the unit and call a service technician. Do not attempt to repair it yourself or remove the rear cover.

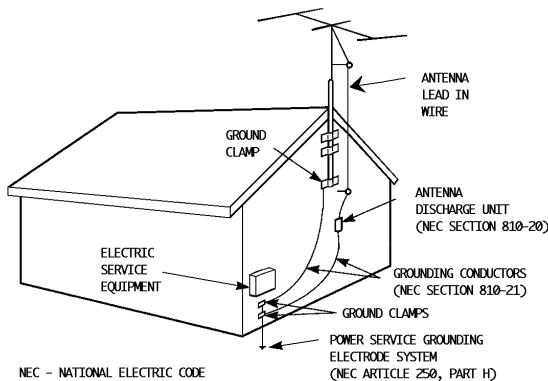
Changes or modifications not approved by JVC could void the warranty.

* When you don't use this TV set for a long period of time, be sure to disconnect both the power plug from the AC outlet and antenna for your safety.

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

- 6 If an outside antenna is connected to the TV set, be sure the antenna system is grounded so as to provide some protection against voltage surges and built-up static charges. Section 810 of the National Electrical Code provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection requirements for the grounding electrode.
- 7 An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.

EXAMPLE OF ANTENNA GROUNDING AS PER NATIONAL ELECTRICAL CODE



- 8 TV sets are provided with ventilation openings in the cabinet to allow heat generated during operation to be released. Therefore:
 - Never block the bottom ventilation slots of a portable TV set by placing it on a bed, sofa, rug, etc.
 - Never place a TV set in a “built-in” enclosure unless proper ventilation is provided.
 - Never cover the openings with a cloth or other material.
 - Never place the TV set near or over a radiator or heat register.
- 9 To avoid personal injury:
 - Do not place a TV set on a sloping shelf unless properly secured.
 - Use only a cart or stand recommended by the TV set manufacturer.
 - Do not try to roll a cart with small casters across thresholds or deep pile carpets.
 - Wall or shelf mounting should follow the manufacturer's instructions, and should use a mounting kit approved by the manufacturer.

USE

- 10 Caution children about dropping or pushing objects into the TV set through cabinet openings. Some internal parts carry hazardous voltages and contact can result in a fire or electrical shock.
- 11 Unplug the TV set from the wall outlet before cleaning. Do not use liquid or an aerosol cleaner.
- 12 Never add accessories to a TV set that has not been designed for this purpose. Such additions may result in a hazard.

- 13 For added protection of the TV set during a lightning storm or when the TV set is to be left unattended for an extended period of time, unplug it from the wall outlet and disconnect the antenna. This will prevent damage to product due to lightning storms or power line surges.
- 14 A TV set and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the TV set and cart combination to overturn.



SERVICE

- 15 Unplug this TV set from the wall outlet and refer servicing to qualified service personnel under the following conditions:
 - A. When the power cord or plug is damaged or frayed.
 - B. If liquid has been spilled into the TV set.
 - C. If the TV set has been exposed to rain or water.
 - D. If the TV set does not operate normally by following the operating instructions. Adjust only those controls that are covered in the operating instructions as improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the TV set to normal operation.
 - E. If the TV set has been dropped or damaged in any way.
 - F. When the TV set exhibits a distinct change in performance — this indicates a need for service.
- 16 Do not attempt to service this TV set yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
- 17 When replacement parts are required, have the service technician verify in writing that the replacement parts he uses have the same safety characteristics as the original parts. Use of manufacturer's specified replacement parts can prevent fire, shock, or other hazards.
- 18 Upon completion of any service or repairs to this TV set, please ask the service technician to perform the safety check described in the manufacturer's service literature.
- 19 When a TV set reaches the end of its useful life, improper disposal could result in a picture tube implosion. Ask a qualified service technician to dispose of the TV set.
- 20 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.

Precautions About Video

Precautions for Recording TV Programs

About Copyright

The recordings you make from TV programs or pre-recorded tapes cannot be used without permission from the copyright holders, except when they are used solely for personal enjoyment.

Trial Recording Before Making Important Recordings

Make a trial recording before an important program to be sure that you can record and playback audio and video properly.

Disclaimer:

JVC assumes no liability for failure to record or playback audio and video properly with this unit.

Precautions About Video Cassettes

Keep these points in mind while working with video cassettes.

Recording

- If you record on a previously recorded tape, the original content will be automatically erased.
- Video cassettes cannot be reversed or "flipped over" like audio cassettes.

Handling Cassettes Properly

- To store cassettes, place them inside their cases. The cases should then be stored vertically.
- Do not drop cassettes, or give them any other hard shock.
- Rewind cassettes before storing.
- Do not repeatedly load and unload tapes without running them in between.

Do Not Store in the Following Places

- Exposed to direct sunlight or near a heating device.
- Exposed to excessive humidity, smoke, or dust.
- Near a strong magnet (including speakers).

Prevent Accidental Erasure

Remove the small plastic tab at the rear of the cassette. Without this tab, the cassette cannot be used for recording. It is recommended that you remove the tabs from important cassettes to prevent accidental erasure. To record on a cassette whose tabs have been removed, cover the tab hole with two layers of adhesive tape.



Video Heads beginning to get dirty



Video Heads now fairly dirty



Video Heads totally clogged

Precautions About Moisture Condensation

What is Moisture Condensation?

When you put cold water into a glass, water droplets form on its surface. This phenomenon is called moisture condensation.

If Moisture Condensation Occurs

The video unit may fail to operate, or may operate erratically potentially damaging the unit and video cassettes.

When Does Condensation Occur?

- When equipment is moved from a colder to a warmer place.
- Immediately after a room heater is started.
- When the unit is exposed to a cold air flow (like from an air conditioner).
- In high humidity or when steam is present.

To Prevent Condensation

- Wait about an hour before operating the unit so that it can become accustomed to the room conditions.
- Provide proper ventilation.

If the unit fails to operate or operates poorly and you think condensation may be the cause, turn the unit's power off and wait a few hours before trying to operate the unit again.

Enjoying Clear Video

Cleaning the Video Heads

After a long, or frequent use, the video heads inside the unit may become dirty, possibly resulting in poor picture quality. To prevent this from happening, it is recommended you clean the unit frequently with a head cleaning cassette (TCL-2 or 3, sold separately).

If Video Quality is Still Poor After Cleaning

Try cleaning the unit two or three times instead of just once. If the repeated cleaning still fails to produce better picture quality, an internal malfunction may be the cause. Call your local dealer for servicing.

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

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Connections

CONNECTIONS CHECKLIST - READ ME FIRST

The Connections Checklist section of this guide is a list of ideas to keep in mind while you setup your new TV. It is designed to help us not-so-technically-minded individuals make our connections properly. If you read this section and still can't identify the plugs, connectors and components you have, please ask someone for help in making your connections.

1) Always refer to the connection instructions in the user's guide for your components first. The manufacturer will provide the most detailed information about their products.

2) Know your jacks and plugs - most are color coded:

- Yellow plugs are for Video connections
- Red plugs are for Right Audio connections
- White or Black plugs are Left Audio (or Mono) connections. If your camcorder is a stereo model, use a stereo-to-monaural conversion cable to connect to the TV/VCR combo. Conversion cables may be purchased separately.

3) Perform one connection at a time. If you have several accessories to connect, make sure each connection is correct by checking to see that it works properly before trying the next connection.

4) Unplug the power cord during each connection.

5) Follow the In and Out Concept. Remember In and Out - the Output jack from one device will go to the Input jack of the other. Read the jack panels, they are all labeled.

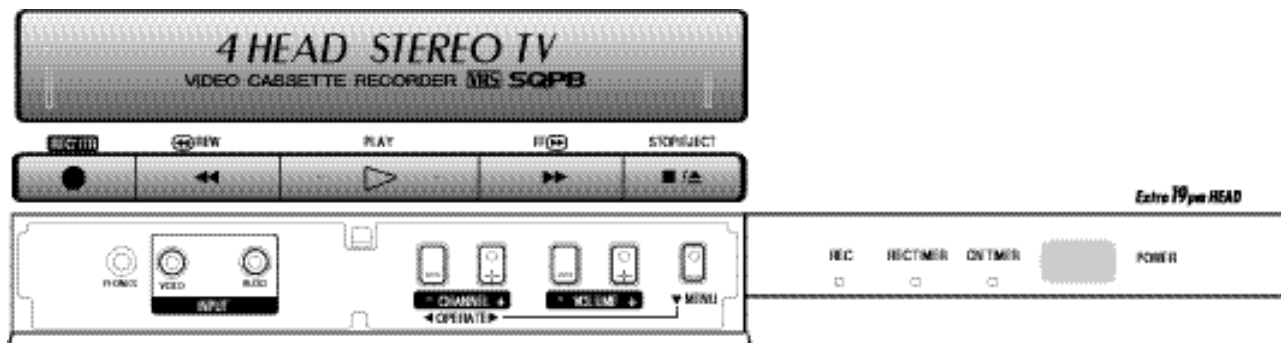


A/V Input Plug



RF Connectors

Front Panel Diagram



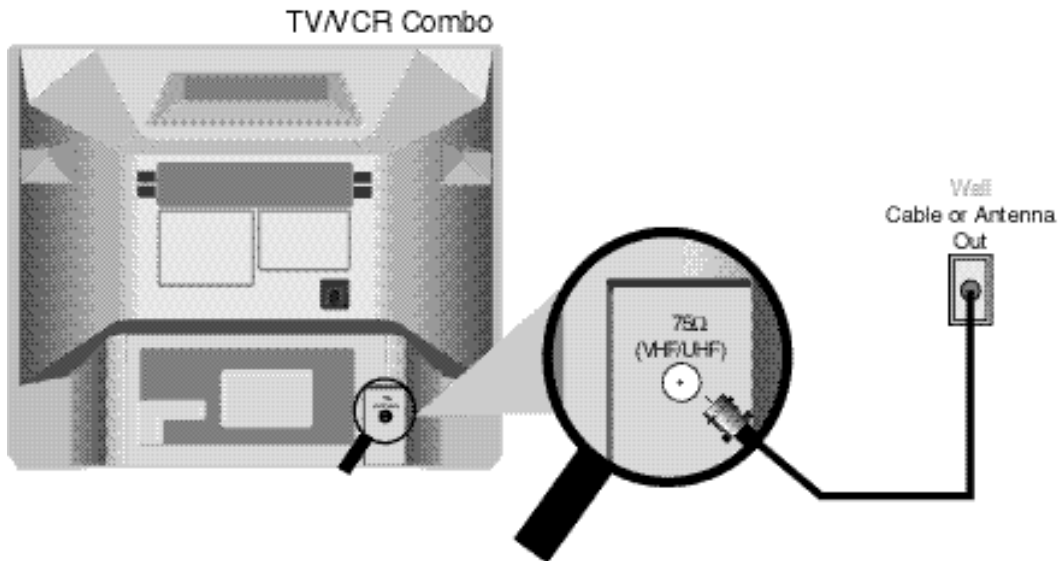
TV-20241 Front Panel (with panel door open)

Cable or Antenna Connections

There are two basic types of cable or antenna connections:

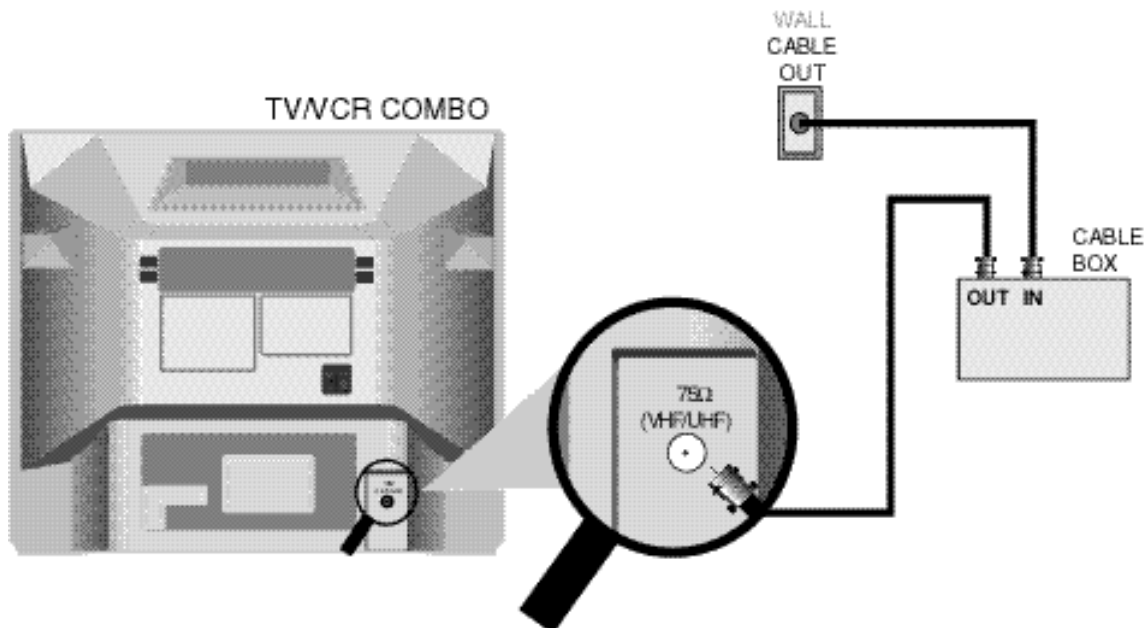
- If you have an antenna or have a cable system that does not require you use a cable box to select channels, please refer to Diagram #1.
- If you use a cable box to access any or all the channels, please refer to Diagram #2.

#1



- 1) Connect the antenna or cable TV wire from the wall outlet, in to the RF Input at the rear of your TV/VCR combo.

#2



- 1) Connect the cable TV wire from the wall outlet, in to the RF Input on your Cable Box.
- 2) Connect an RF cable from the Cable Box Output, in to the RF input at the rear of your TV/VCR combo.

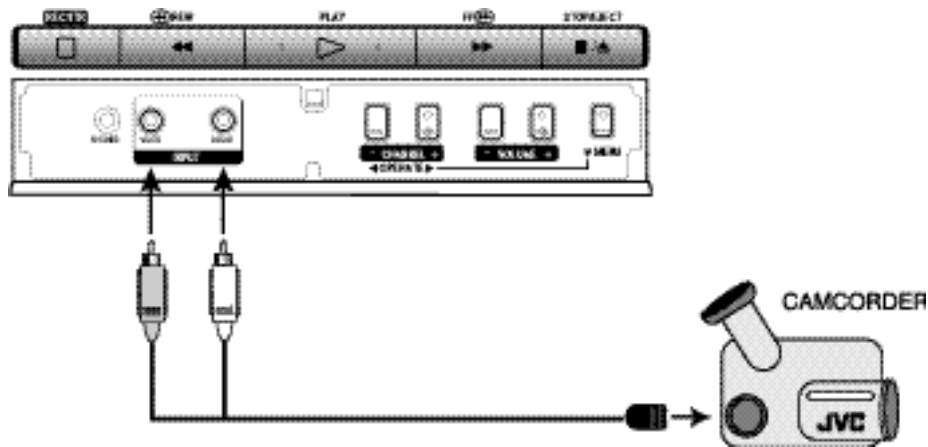
NOTE:

Refer to the Cable Box instructions for more information on its operation.

8

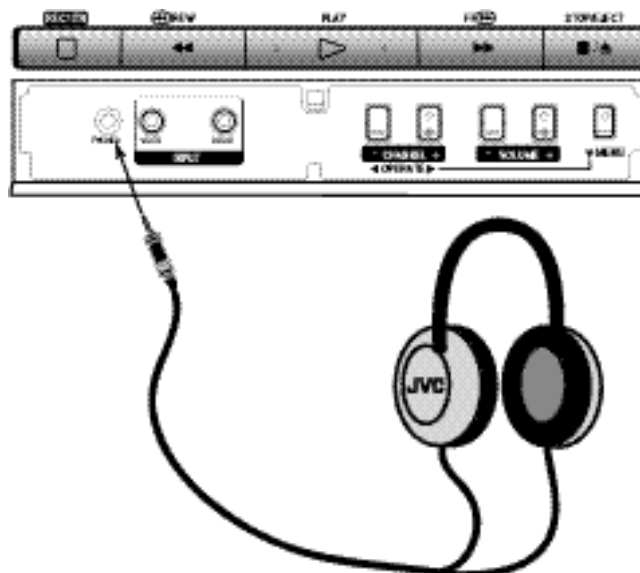
Connections

Connecting to a Camcorder



- 1) Press on the TV/VCR combo's front panel door lightly to open it.
 - 2) Connect the white audio cable from the Camcorder's Audio Output jack to the TV/VCR combo's Audio Input jack.
 - 3) Connect a yellow video cable from the Camcorder's Video Output to the TV/VCR combo's Video Input jack.
- If your camcorder is a stereo model, use a stereo-to-monaural conversion cable to connect to the TV/VCR Combo.

Connecting to Headphones



- 1) Press on the TV/VCR combo's front panel door lightly to open it.
- 2) Insert the stereo mini plug from the headphones into the headphone jack on the front panel of the TV/VCR combo.

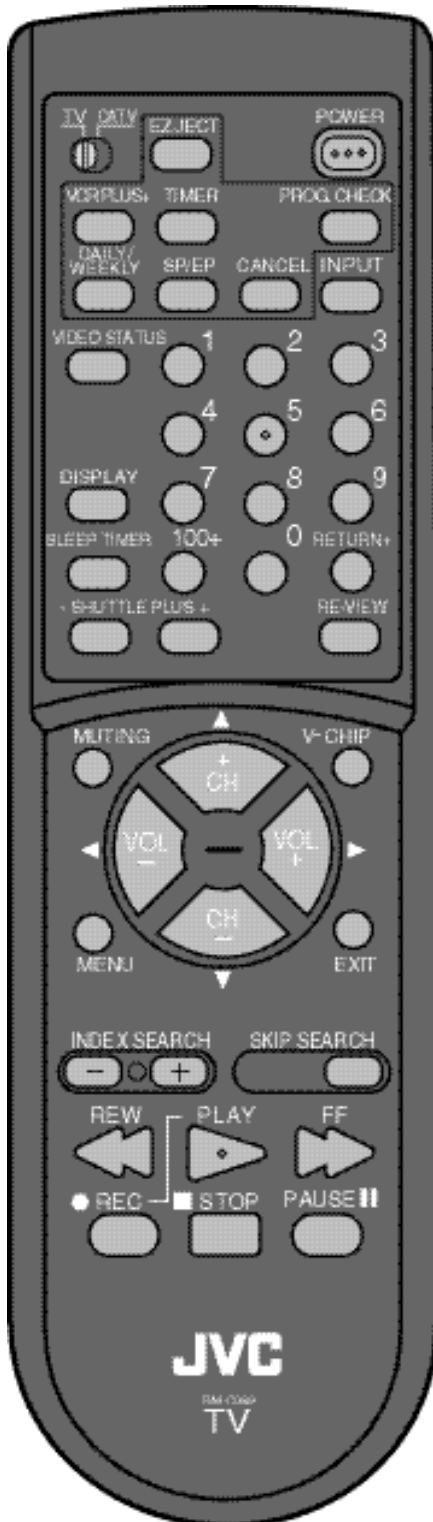
NOTE:

Refer to the Camcorder's instructions for more information on its operation.

Remote Control

RM-C389

RM-C389
TV-20241

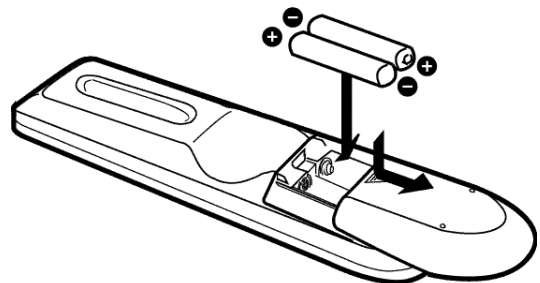


Changing the Batteries

Be sure to use only size AA batteries.

- 1 Push down on the remote's back cover and slide towards the bottom to remove it.
 - 2 Insert two AA batteries (supplied), carefully noting the "+" and "-" markings on the batteries and on the remote control. To avoid a potential short circuit, insert the "-" end first.
 - 3 When batteries are installed, snap the back cover into place.
- If the remote control acts erratically, replace the batteries. Typical battery life is six months to one year.
 - We recommend using alkaline batteries for longer battery life.

When you change the batteries, try to complete the task within three minutes. If you take longer than three minutes, the remote control codes for your Cable Box may have to be reset (page 11).



RM-C389

POWER

- Press the POWER button on the remote control or the front panel of the TV. The On Timer will glow red.
- Make sure the TV/CATV switch on the remote is set to TV. Move the switch to CATV only if you plan to operate a cable box. On the CATV setting the remote will only operate the cable box functions.
- To turn the power off, press the POWER button again. The On Timer will go out.
- The On Timer lamp will glow green when the On/Off Timer is set (page 23), even when the TV power is off.

ADJUSTING VOLUME

To control the volume level, use the VOLUME+/- buttons (◀▶) on the remote control or on the TV's front panel. Use the VOLUME - (◀) button to lower the volume. Press the VOLUME+ (▶) button to raise the volume.



Press the MUTING button to instantly turn the volume to zero. Press the MUTING button again to return to the previous volume level.

CHANGING CHANNELS

1 10 key direct access

To move directly to a specific channel, press that channel's numbers on the remote's 10 key pad. For single-digit channel numbers, press "0" then the channel number. For channels above 100, press the 100+ button, then the remaining two digits on the 10 key pad.

2 CHANNEL +/- BUTTON

To scan through the channels, press either the CHANNEL + (▲) or CHANNEL - (▼) button on the remote or TV/VCR's front panel and release. You will move through the channels in numerical order.

- After you operate the Auto Tuner Setup (page 13), all of the empty channels will be removed from scanning. When you scan you will only receive clear, active channels.

Hyperscan

With JVC's Hyperscan feature you can zip through the channels at a rate of five per second. To use Hyperscan, press and hold either the CHANNEL+ or CHANNEL- buttons. After the first few channels scan at normal speed, the rest will move by at five per second. To scan at normal speed, press and release the CHANNEL+/- button.

3 Regular Return

Press and release the RETURN+ button to return to the previous channel viewed. For example select a channel. Then select another channel using the 10 key pad buttons. You can now flip back and forth between these two channels by pressing RETURN+.

4 RETURN+

With RETURN+ you can program your TV to always return to a specific channel. Press and hold down the RETURN+ button for three seconds. The message, "RETURN CHANNEL PROGRAMMED!" will appear on-screen. Now when you scan through the channels, pressing RETURN+ will bring you back to your programmed channel.

To cancel the RETURN+ channel, press and hold the RETURN+ button for three seconds. The message "RETURN CHANNEL CANCELLED!" will appear on-screen.

- Pressing any number key or turning off the TV will also cancel the RETURN+ channel.

Setting the CATV & Satellite Codes

You can program your remote to operate your cable box or satellite receiver by using the instructions and codes listed below. If the equipment does not respond to any of the codes listed below or to the code search function, use the remote control supplied by the manufacturer.

Cable Box or Satellite setup

The remote control is programmed with CATV and/or Satellite codes for power on, power off, channel up, channel down, and 10 key operation.

- 1) Find the CATV/Satellite brand from the list of codes shown below.
 - 2) Slide the 2-way selector switch to "CATV".
 - 3) Press and hold down the DISPLAY button.
 - 4) With the DISPLAY button held down, enter the first code number listed using the 10 key pad.
 - 5) Release the DISPLAY button.
 - 6) Confirm the operation of the Cable Box/Satellite receiver.
- If your cable box or Satellite receiver does not respond to the first code, try the others listed. If it does not respond to any code, try the Search Codes Function at the bottom of the page.

CABLE BOXES	CODES	CABLE BOXES	CODES	DIGITAL SATELLITE SYSTEMS	CODES
ABC	024	Puser	032	Echostar	100
Archer	032, 025	RCA	061, 070	G.E.	106
Cableview	051, 032	Realistic	032	Gradiente	112
Citizen	022, 051	Regal	058, 064, 040, 041, 042, 045, 068	Hitachi	104, 111
Curtis	058, 059	Regency	034	HNS(Hughes)	104
Diamond	024, 032, 025	Rembrandt	037, 032, 051, 038	Panasonic	105
Eagle	029	Samsung	051	Philips	102, 103
Eastern	034	Scientific Atlanta	057, 058, 059	Primestar	108
GCBBrand	032, 051	SLMark	051, 047	RCA	106, 109, 110
Gemini	022, 043	Sprucer	051, 056	Sony	107
General Instrument	065, 024, 025, 026, 027, 020, 021, 022, 057, 023	Stargate	032, 051	Toshiba	101
Hamlin	040, 041, 042, 045	Telecaption	067	Uniden	102, 103
Hitachi	049, 024	Televue	047, 051		
Jerrold	065, 024, 025, 026, 027, 020, 021, 022, 057, 023	Texscan	044		
Macom	049, 050, 051, 054	Tocom	035, 036, 066		
Magnavox	033	Toshiba	050		
Memorex	030	Unika	032, 025		
Movietime	032, 051	Universal	022, 032		
Oak	039, 037, 048	Videoway	052		
Panasonic	055, 056, 060	Viewstar	029, 030		
Paragon	063	Zenith	063, 046		
Philips	028, 029, 030, 052, 053, 031, 069	Zenith/Drake	046		
Pioneer	047, 062	Satellite			
Pulsar	051, 032				

Search Codes Function:

- 1) Slide the 2-Way Mode Selector switch to CATV.
- 2) Press the TV POWER and RETURN+ buttons. Hold for at least three seconds and release.
- 3) Press TV POWER, see if the CATV or Satellite box responds.
- 4) If there was a response, press RETURN+. The operating codes are now set. If there was no response, repeat Step 3. If you repeat Step 3 64 times without a response, use the remote control which came with the equipment.

Using this Guide

Certain symbols are used throughout this guide to help you learn about the features of your new television. The ones you will see most frequently are:

- ▲▼ Up and Down arrows mean press the CHANNEL UP or CHANNEL DOWN buttons. Pressing the UP or DOWN buttons let you:
 - Move vertically in a main menu screen
 - Move through a submenu screen
 - Move to the next letter, number, or other choice in a submenu
 - Back up to correct an error
 - Scan through TV channels (when not in a menu screen)
- ◀▶ Left and right arrows mean press the VOLUME LEFT or VOLUME RIGHT buttons to:
 - Select a highlighted menu item
 - Select an item in a submenu
 - Select numbers in certain menu options
 - Turn the volume up or down (when not in a menu screen)



The "Press Button" icon means you should press the button named on your remote control. Remote control buttons may have the same name as some menu functions so button names appear in this book in SMALL CAPITAL LETTERS.



The 'Helping Hand' points to the highlighted, or selected, item in a menu.

The Onscreen Menus:

To use the Menu, press the MENU button, then use the ▲▼ and ▶◀ buttons to move through the menus as described above.

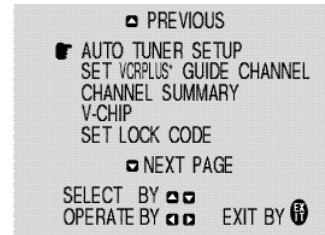
Note: The menu screens shown in this book are representations of the menu screens on your set, not exact replications.

Plug In Menu

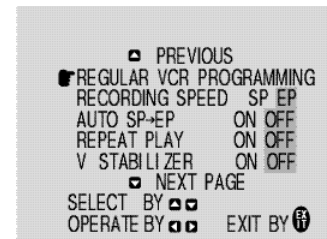


The Plug In Menu only appears the first time the TV is plugged in.

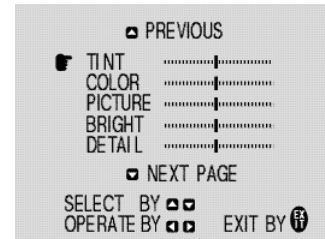
1 Initial Setup Items



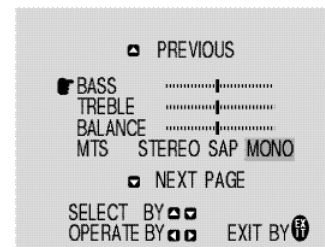
2 VCR Setup



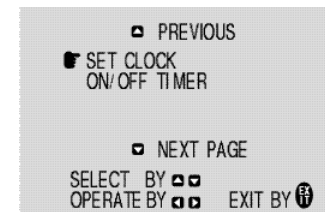
3 Picture Settings



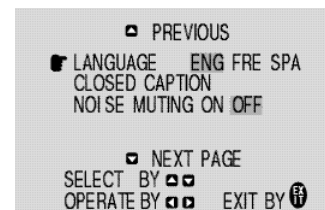
4 Sound Settings



5 General Items 1



6 General Items 2



Introduction

The Plug In Menu comes up automatically when you first turn on the TV/VCR Combo after plugging it in. The Plug In Menu helps you to get your Combo ready to use by letting you set your preferences for:

- The Language in which you want the onscreen menus to appear,
- The Auto Tuner Setup of which channels you wish to receive,
- VCR Plus+ Guide Setup to get your Combo unit ready for easy recording of your favorite programs,
- Setting the TV's clock to the correct time so your timer functions will work properly.

Descriptions of each of the Plug In Menu features appear on the next three pages. We recommend you complete the Plug In Menu setup first so your TV/VCR Combo is set up just the way you want, right away.

Language

You can choose to view your onscreen menus in one of three languages: English, Spanish, or French.



Press the MENU button



To LANGUAGE



To choose a language



Exit when finished

Auto Tuner Setup

In Auto Tuner Setup, the TV automatically scans through all available channels, memorizing the active ones and skipping over blank ones or channels with weak signals. This means when you scan (using the CHANNEL +/- buttons) you will receive only clear, active channels.



Press the MENU button



To AUTO TUNER SETUP



To operate



To choose CABLE or AIR



To move to START



To start Auto Tuner Setup



Programming will take approximately 1 to 2 minutes.



- Noise Muting will not work during Auto Tuner Setup.

VCR Plus+ Guide Setup

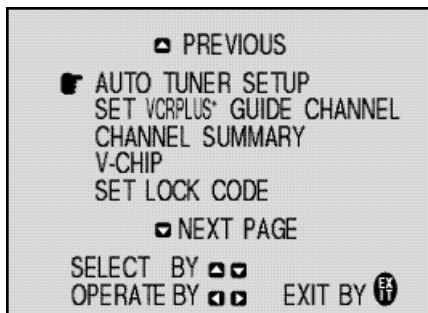
Using VCR Plus+ codes to program your VCR, recording your favorite TV programs is now simple. Whenever you want to record a program, all you need to do is find its VCR PLUS+ code. After entering the VCR PLUS+ code, the TV/VCR Combo will automatically record the program at the correct date, time, and channel.

- VCR PLUS+ codes for individual television programs can be found in most local newspaper television listings and in TV magazines.

Before using VCR PLUS+ for the first time, you need to enter guide numbers for your local TV channels. These guide numbers may be found in your local TV magazine or newspaper's TV listings.



Press the MENU button



- ▲▼ To SET VCR PLUS+ GUIDE CHANNEL
- ◀▶ To display the SET VCR PLUS+ GUIDE CHANNEL menu

VCR PLUS+ Guide Setup (continued)

Below is the VCR PLUS+ Guide Setup Menu

GUIDE CH	TV CH	GUIDE CH	TV CH
01	01	06	06
02	02	07	07
03	03	08	08
04	04	09	09
05	05	10	10

SELECT BY
 OPERATE BY EXIT BY

To set the guide numbers on the menu, select a guide channel (GUIDE CH) you wish to program. Find the television channel which matches that guide channel and program it in the TV Channel column (TV CH).

- ▲▼ To move to a TV CH position that matches a particular GUIDE CH number
- ◀▶ To select the TV CH number
- ▲▼ When finished to move to the next GUIDE CH number

Repeat the steps described above until all receivable channels have been set



EXIT to save the settings and exit






Your TV/VCR Combo is now ready to accept VCR Plus+ codes for programming.

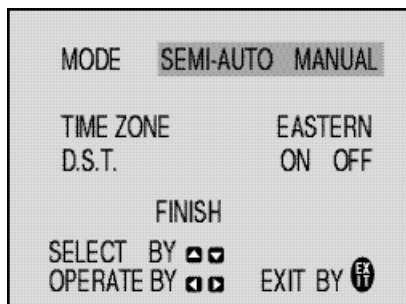
NOTE:



VCR PLUS+ codes for individual television programs can be found in most local newspaper television listings and in TV magazines.

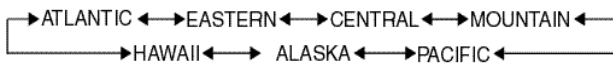
Set Clock





Before you use any of your TV's timer functions, you must first set the clock. You may precisely set your clock using the XDS time signal broadcast by most Public Broadcasting stations. To set the clock using the XDS signal:

-  Enter the channel number of your local PBS station.
-  Press MENU
-  To SET CLOCK
-  To operate
-  To Semi-Auto



-  To select your time zone
-  To set the time zone



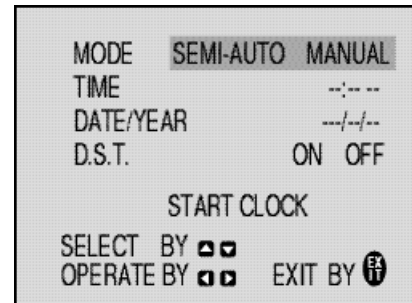
-  To move to Daylight Savings Time (D.S.T.)
-  To turn D.S.T. ON or OFF
-  To Finish
-  To Exit and save settings




- If you do not have a PBS station in your local area, you will have to set the clock manually. See 'Set Clock - Manual' at the top of the next column for instructions.

- The Daylight Savings Time feature automatically adjusts your TV's clock for Daylight Savings. The clock will move forward one hour at 2:00 am on the first Sunday in April. The clock will move back one hour at 2:00 am on the last Sunday in October.

Set Clock - Manual

To set your clock manually (without using the XDS signal), choose MANUAL from the Set Clock menu and follow the steps below.





-  To move to the hour
-  To set the hour
-  To move to minutes
-  To set the minutes
-  To move to MONTH
-  To set the MONTH
-  To move to DATE
-  To set the DATE
-  To move to YEAR
-  To set the YEAR
-  To move to Daylight Savings Time (D.S.T.)
-  To turn D.S.T. ON or OFF
-  To move to START CLOCK
-  To start clock and exit



Finish

Once you have the items in the Plug In Menu set to your personal preferences, move to the Finish option to save your settings.

-  To FINISH
-  To save settings and exit

- You can change the preferences you set in the Plug In Menu at any time using the regular JVC on screen menu system.

NOTES:

- You will have to reset the clock after a power interruption of 90 seconds or longer.
- You must set the clock before operating any timer functions.

Canadian Viewers: Please see note regarding the Set Clock (Semi-Auto) feature on page 39.

Channel Summary

Channel Summary allows you to customize the line-up of channels received by your TV. You can add or delete channels from the line-up or prevent any unauthorized viewers from watching any or all 181 channels.



Press the MENU button



To CHANNEL SUMMARY



To operate

The Channel Summary screen (below) will now be displayed with the channels set to scan marked with an "✓". You can delete channels from the scan by removing the "✓". If any channels were missed during Auto Tuner Setup and you wish to add them, you may by placing an "✓" next to the channel number.

CHNO	SCAN		:	CHNO	SCAN	
01			:	06	✓	
02	✓		:	07		
03	✓		:	08		
04	✓		:	09	✓	
05	✓		:	10		



To the SCAN column



To include or delete from scan



Exit when finished

Channel Summary - Lock



Press the MENU button



to CHANNEL SUMMARY



To operate



To the Lock Column



Zero to lock or unlock that channel

CH	SCAN		:	CH	SCAN	
01		-	:	06	✓	-
02	✓	-	:	07		
03	✓	-	:	08		
04	✓	-	:	09	✓	-
05	✓	-	:	10	✓	-



EXIT when finished

Channel Guard Message

When a viewer attempts to watch a guarded channel, the following message appears:

**THIS CHANNEL IS LOCKED BY
CHANNEL GUARD.
PLEASE ENTER LOCK CODE BY
10 KEY PAD TO UNLOCK IT.**

NO. - - - -

To watch a channel that you have locked, enter the Lock Code using the 10 key pad (see "Set Lock Code" - page 22).

If the wrong code is entered, this message will flash on the screen:

INVALID LOCK CODE !

The channel cannot be accessed until the correct code is entered.

- Once a channel has been unlocked, it will remain unlocked until the television is turned off.

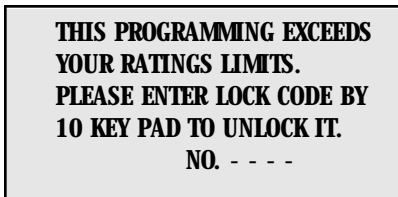
NOTE:

Some cable systems experience interference from radio frequencies on cable Channel 95. You may delete this channel from your scan by removing the "✓" next to it on the Channel Summary screen.

V-Chip

Your TV is equipped with V-Chip technology which enables TV Parental Guideline and Movie (MPAA) Guideline controls. V-Chip technology allows you to program your TV to receive, or not to receive, programs based on content according to the guidelines. Programs which exceed the ratings limits you set will be blocked.

When a viewer attempts to watch a blocked channel, this message appears:



To watch a blocked channel, enter the lock code (page 20) using the 10 key pad.

To set up the TV Parental Guideline Ratings:



Press the MENU button



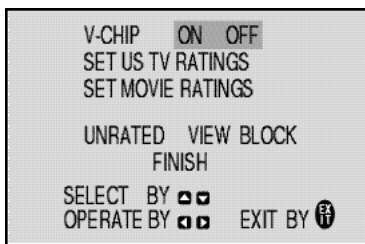
To V-CHIP



To operate (Lock icon will appear)



Press ZERO to access the V-Chip menu



To turn V-Chip ON or OFF



To move to SET US TV RATINGS



To operate

	TV MA	TV 14	TV PG	TV G	TV Y7	TV Y
V/FV	—	—	—	—	—	—
S	—	—	—			
L	—	—	—			
D		—	—			

Viewing Guidelines

- V/FV is for VIOLENCE/FANTASY VIOLENCE
- S stands for SEXUAL CONTENT
- L stands for strong LANGUAGE
- D stands for suggestive DIALOG

U.S. PARENTAL RATING SYSTEMS

Programs with the following Ratings are appropriate for Children.

TV Y is Appropriate for All Children.

Programs are created for very young viewers and should be suitable for all ages, including children ages 2 - 6.

TV Y7 is for Older Children.

Most parents would find such programs suitable for children 7 and above. They may contain some mild fantasy violence or comedic violence, which children should be able to discern from reality.

Programs with the following Ratings are designed for the entire audience.

TV G stands for General Audience.

Most parents would find these programs suitable for all age groups. They contain little or no violence, no strong language, and little or no sexual dialog or situations.

TV PG Parental Guidance Suggested.

May contain some, but not much, strong language, limited violence, and some suggestive sexual dialog or situations. It is recommended that parents watch these programs first, or with their children.


TV 14 Parents Strongly Cautioned.

Programs contain some material that may be unsuitable for children under the age of 14 including possible intense violence, sexual situations, strong coarse language, or intensely suggestive dialog. Parents are cautioned against unattended viewing by children under 14.

TV MA Mature Audiences Only.

These programs are specifically for adults and may be unsuitable for anyone under 17 years of age. TV MA programs may have extensive V, S, L, or D.





Directions to Block Viewing:

Line up the cursor in the column (TV PG, TV G, etc.) with the content row (V/FV, S, etc.) and press the ▲ or ▼ to move the cursor to the correct location. Press ◀ or ▶ to turn the locking feature on or off. An item is locked if the  icon appears instead of a "—".

For example. To block viewing of all TV 14 shows:

Move the cursor to the top row of that column and add a lock icon. Once you've put a lock on the top row, everything in that column is automatically locked.

- ▲▼ To the TV 14 Column
- ◀▶ To turn on the lock

	TV MA	TV 14	TV PG	TV G	TV Y7	TV Y
V/FV	—		—	—	—	—
S	—		—	—	—	—
L	—		—	—	—	—
D	—		—	—	—	—



Press EXIT when done

- If you want to change the setup, move the cursor to the top column and change the lock icon to "—". You may then select individual categories to block.

Special Note about Ratings

Some programs are not broadcast with a ratings signal. Therefore, even if you setup V-Chip ratings limits, these programs will not be blocked. Parents are cautioned to preview the contents of these programs or movies.

Directions to set up Movie Ratings:

Press the MENU button



To V-CHIP



To operate (Lock icon  appears)



Press ZERO to access V-Chip setup options



To SET MOVIE RATINGS



To enter movies menu

X	N _C -17	R	P _G -13	PG	G	NR
—	—	—	—	—	—	—



Select the column



To turn the lock ON or OFF



Exit when done

NR - Not Rated.

This is a film which has no rating. In many cases these films were imported from countries which do not use the MPAA ratings system. Other NR films may be from amateur producers who didn't intend to have their film widely released.

NR (Not Rated) Programming may contain all types of programming including children's programming, foreign programs, or adult material.

G – General Audience.

In the opinion of the review board, these films contain nothing in the way of sexual content, violence, or language that would be unsuitable for audiences of any age.

PG – Parental Guidance.

Parental Guidance means the movie may contain some contents such as mild violence, some brief nudity, and strong language. The contents are not deemed intense.

PG-13 – Parents Strongly Cautioned.

Parents with children under 13 are cautioned that the content of movies with this rating may include more explicit sexual, language, and violence content than movies rated PG.

NOTE (For Canadian Viewers):

V-Chip function is based on specifications for the United States and therefore may not work properly in Canada.

R Restricted.

These films contain material that is explicit in nature and is not recommended for unsupervised children under the age of 17.


NC-17 No One Under 17.

These movies contain content which most parents would feel is too adult for their children to view. Content can consist of strong language, nudity, violence, and suggestive or explicit subject matter.

X No One under 18.

Inappropriate material for anyone under 18.

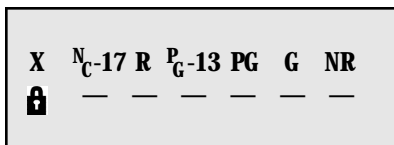
Directions to Block Movie Viewing:

To block viewers from any or all of these ratings categories, press the ▲ or ▼ to move the cursor to the correct location. Press the ◀ or ▶ buttons to turn the locking feature on or off. An item is blocked if the  icon appears instead of a "—".

For example, to block viewing of X and NC-17 rated from shows:

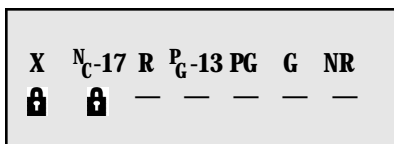
▲▼ To the X Column

◀▶ To turn on the lock



▲▼ To the NC-17 Column

◀▶ To turn on the lock



Press EXIT when done

Notes About Unrated Programs:

Unrated programming refers to any programming which does not contain a rating signal. Programming on television stations which do not broadcast rating signals will be placed in the "Unrated Programming" category.

Examples of Unrated programs:

- Emergency Bulletins
- Locally Originated Programming
- News
- Political Programs
- Public Service Announcements
- Religious Programs
- Sports
- Weather
- Some Commercials

• TV programs or movies that do not have rating signals will be blocked if the Unrated Category is set to LOCK.

Directions to Block Unrated Programs:

You can block programs that are not rated.



Press the MENU button



To V-CHIP



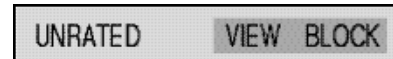
To operate



Press ZERO to access V-Chip setup options



To UNRATED



To View or Block



Press EXIT when done

NOTES:

- In order for V-Chip settings to take effect, **V-Chip settings must be turned ON in the V-Chip menu (page 17).***
- You can automatically unblock all of your restrictions by turning V-Chip settings OFF in the V-Chip menu (page 17).*
- You can always unblock a restriction by re-entering the V-Chip menu and removing the lock icon.*
- V-Chip ratings block may not work when playing a video cassette while using the V Stabilizer feature (page 26).*

Accessing V-Chip Information:

To access Rating information about a certain program, press the V-CHIP button while viewing that program. A display like this will appear:



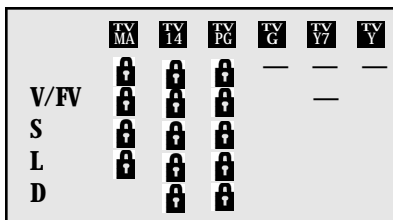
If you decide you want to block this category of viewing, press "0" while the above screen is visible, and all programs from that category will be blocked.

Example 1:

If you want to set your V-Chip settings to block *all* programming above TV PG:



Press ZERO when TV-PG is displayed



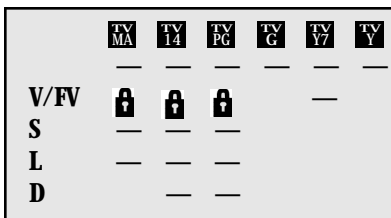
All Programming above TV PG will be blocked.

Example 2:

If you want to set your V-Chip settings to block all programming above a current setting such as TV PG-V (with violence):



Press ZERO when TV-PG - V is displayed



All Programming above TV PG with Violence will be blocked.

- For Children's programming you can block TV-Y and Y programs by Pressing "0" when Y is displayed during a program. Programming for audiences other than children's audiences will not be affected.

Set Lock Code

Channel Guard and V-Chip settings are protected by a four-digit Lock Code. Your TV comes pre-set with a Lock Code of "0000". You may change the code to any four-digit number you wish. To change the Lock Code, follow the steps below.



Press the MENU button



To SET LOCK CODE



To operate



The padlock icon appears



Press ZERO to access the Lock Code



The first digit will be highlighted



To select the number



To move to the next digit

Continue to follow these directions for all four numbers



To Finish



To save your settings and return to the Initial Setup menu



EXIT when finished

NOTES:

- After a power interruption you must reset the Lock Code.
- Write your Lock Code number down and keep it hidden from potential viewers.
- If you forget the Lock Code, a new code may be set using the steps listed above.

Tint

Tint allows you to adjust the levels of red and green in your TV picture.

- ▲▼ To TINT
- ▶ to increase the levels of green
- ◀ To increase the levels of red
- ▲▼ To move to the next setting

Color

The color function lets you make all the colors in the TV picture appear either more vivid or subtle.

- ▲▼ To COLOR
- ▶ To make the colors more vivid
- ◀ To make the colors more subdued
- ▲▼ To move to the next setting

Picture

Picture allows you to adjust the levels of black and white on the TV screen, giving you a darker or brighter picture overall.

- ▲▼ To PICTURE
- ▶ To increase the level of contrast
- ◀ To decrease the level of contrast
- ▲▼ To move to the next setting

Bright

You can adjust the overall brightness of the TV picture with the Bright control.

- ▲▼ To BRIGHT
- ▶ To lighten the picture
- ◀ To darken the picture
- ▲▼ To move to the next setting

Detail

The Detail feature adjusts the level of fine detail displayed in the picture.

- ▲▼ To DETAIL
- ▶ To make the picture sharper (more details)
- ◀ To make the picture smoother (less detail)
- ▲▼ To move to the next setting

NOTES:

The setting screen will disappear if you do not make any adjustments or move to the next setting in approximately three seconds. Any changes you have made to picture settings up to that point will be stored. You can exit the Picture Settings menu at any time by pressing the EXIT button on the remote control.

Bass

You can increase or decrease the level of low-frequency sound in the TV's audio with the Bass adjustment.



Press the MENU button



To BASS



To increase the bass



To decrease the bass



To move to the next setting

Treble

Use Treble to adjust the level of high-frequency sound in your TV's audio.



Press the MENU button



To TREBLE



To increase the treble



To decrease the treble



To move to the next setting

Balance

Adjust the level of sound between the TV's two speakers with the Balance setting.



Press the MENU button



To BALANCE



To shift the balance towards the right speaker



To shift the balance towards the left speaker



To move to the next setting

MTS (Multi-Channel Television Sound)

MTS technology allows several audio signals to be broadcast at once, giving you a choice in what you wish to hear with a TV program. In addition to mono or stereo sound, an MTS broadcast may also include a Second Audio Program (SAP).



Press the MENU button



To MTS



Select the mode

(The ON AIR arrow tells you if a broadcast is in Stereo and/or contains an SAP).

- Keep the TV in STEREO mode to get the best sound quality. The sound will work in STEREO mode even if a certain broadcast is in MONO sound only.
- Choose the MONO setting to reduce excessive noise on a certain channel or broadcast.
- Selecting SAP will allow you to hear an alternative soundtrack, if one is available.

Some Sound Advice

You can tell if a program is broadcast in stereo by the position of the ON AIR arrow in the MTS menu screen. Unfortunately, while many programs are originally broadcast in stereo, some cable companies may "squash" the transmission to mono sound because they have only mono equipment. If you are connected to a cable system, the sound quality is determined by the cable company. If they broadcast only in mono, you will receive only mono sound, even if the program was aired in stereo.

Fortunately, most stereo programs are broadcast by the major television networks. If you connect an antenna to your TV instead of cable and set the tuner mode in Auto Tuner Setup to "Air" instead of "Cable" you will be able to pick up stereo broadcasts in their original stereo format.

NOTE:

You can leave the Sound Settings menu at any time by pressing the EXIT button on the remote control.

On/Off Timer

The On/Off timer lets you program your television to turn itself on or off. You can use it as an alarm to wake up, to help you remember important programs, or as a decoy when you're not home.



Press the MENU button



To ON/OFF TIMER



To operate (begins with ON TIME)

ON TIME	7:00 PM
OFF TIME	10:00 PM
CHANNEL	02
MODE	ONCE EVERYDAY
ON/OFF TIMER	YES NO
FINISH	



To set the hour (AM/PM) you want the TV to turn on



To move to minutes



To set the minutes



To accept ON TIME and move to OFF TIME (the time the TV will turn off). Set the OFF TIME the same way as ON TIME



To accept OFF TIME and move to CHANNEL



To select channel



To move to MODE



Choose ONCE or EVERYDAY



To ON/OFF TIMER



Choose YES to accept the timer setting, choose NO if you don't wish to accept



To FINISH



To save settings



EXIT when done

Closed Caption

Use this function to display the Closed Captioning text onscreen (when included in a broadcast).



Press the MENU button



To CLOSED CAPTION



To operate

MODE	: CAPTION
CAPTION	: CC1 CC2 CC3 CC4
TEXT	: T1 T2 T3 T4
FINISH	



To MODE



To select CAPTION, TEXT, or OFF



To CAPTION or TEXT (the option selected in MODE)



To select a CAPTION or TEXT channel



To FINISH



To save settings and exit



EXIT when done

Noise Muting

This feature inserts a blank blue screen over channels which are not broadcasting or are too weak to be received clearly.



Press the MENU button



To NOISE MUTING



To turn Noise Muting ON or OFF

• Noise Muting will not work during Auto Tuner Setup or when you operate Channel Summary.

NOTES:

Closed Captions subtitles are usually found on caption channel CC1. Some programs may include additional text information which is usually found on text channel T1. The other channels are available for future use. Closed captioning may not work correctly if the signal being received is weak or if you are playing a video tape. Closed Captioning may not function from a video cassette if **V Stabilizer** is turned on (page 26). Most broadcasts containing Closed Captioning will display a notice at the start of the program.

On/Off Timer cannot be set to locked or guarded channels. In order for the On/Off Timer to work, the clock must be set. After a power interruption Timer settings must be reset.

VCR Basics

This section of the guide will explain the many functions of the VCR portion of your new TV/VCR combo. We will begin with a basic explanation of how to load, watch and eject a video cassette

Load a Videocassette

Make sure the "window" of the video cassette is facing up and the rear label is facing you. Insert the cassette into the slot below the television screen by pressing on the rear of the cassette. Do not shove or force the cassette into the VCR. If the tab at the rear of the cassette has been removed, playback will begin automatically.

CAUTION!

To avoid injury, do not place your hand inside the video cassette slot of the VCR or your hand might be caught by the unit's internal mechanism. Take special care to prevent children from inserting their hands into the VCR.

Find the Start of the Program

If the tape is not set to the start of the program you want to view, you can rewind it using the REW button on the remote or the TV/VCR combo front panel. Press REW to rewind the tape to the desired point. To move the tape forward, press the FF (Fast Forward) button.

Start Playback

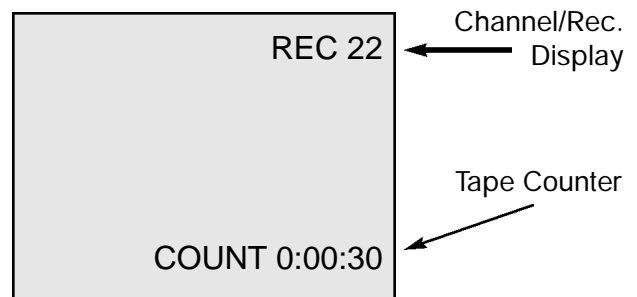
To begin viewing a video cassette, press the PLAY button on the remote or the TV/VCR combo front panel.

Stop Playback

To end the playback of a video cassette, press the STOP button on the remote or the STOP/EJECT button on the TV/VCR combo front panel. The video playback will stop and the onscreen display will automatically switch to the television signal (or to the LINE input signal if LINE INPUT is selected).

Simple Recording

To record a television program, first select the channel airing the program you wish to record using either the 10 key pad or the CHANNEL +/- buttons on the remote control. Next, select the recording speed with the SP/EP button (for more on recording speeds, see page 26). To begin recording, press and hold the REC (Record) button, then with REC held, press PLAY. Release both buttons. The following display will appear onscreen over the television picture for a few seconds.



When the program is over, press STOP to finish recording.

Tape Counter

The Tape Counter appears onscreen when you fast forward or rewind as a guide to show you how much tape is left on a cassette. It also appears when you first begin recording or playback. To see the tape counter display at other times, press DISPLAY. For more information on Display, see page 29. To reset the counter, press CANCEL.

Ejecting the Cassette

To remove a cassette from the unit, press the STOP/EJECT button on the TV/VCR combo front panel.

NOTES:

- The TV/VCR combo can record and playback video cassettes in **monaural** sound only.
- This TV/VCR combo is equipped with SQPB (S-VHS Quasi-Playback) which lets you watch tapes recorded in the S-VHS format. SQPB **does not** deliver S-VHS resolution.
- S-VHS recording is **not** possible with this video recorder.

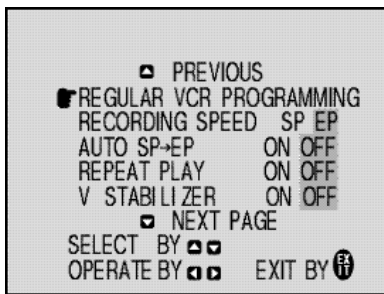
VCR Menu

The VCR Menu screen gives you a number of options for operating your VCR. For an explanation of how to use onscreen menus, see page 12. Access the VCR menus by pressing Menu.

Regular VCR Programming

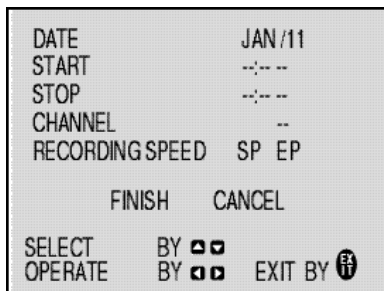
This function lets you manually input the time, date and channel information for a program you wish to record. (To program your VCR using the VCR Plus+ codes, see page 27).

- ▲▼ To REGULAR VCR PROGRAMMING



- ◀▶ To operate

The following menu will appear



- ◀▶ To select DATE
- ▲▼ To START
- ◀▶ To set the time you wish the VCR recording to begin.
 - When you press the left or right arrow, the current time is first displayed in the setting field.

- ▲▼ To STOP (Recording Stop time)
- ◀▶ To set the time you wish the recording to end
- ▲▼ To CHANNEL
- ◀▶ To select the channel of the program you wish to record
- ▲▼ To RECORDING SPEED
- ◀▶ To select the recording speed
 - **SP** - to record at standard speed
 - **EP** - to record at 1/3 normal speed
- ▲▼ To move to FINISH
- ◀▶ To exit programming and save your settings

Press the Timer button on the remote control. The timer is now in standby mode.

The REC TIMER lamp will glow green on the front panel of the unit indicating the timer has been programmed. When the programmed start time arrives, the Rec lamp will glow red and recording will begin. When the programmed stop time arrives, the lamp will go out and the recording will automatically stop.

- After recording, if you have other programs in the timer, the REC TIMER lamp will glow green.

Overlapping Programs

If the timer is set to record two different programs with overlapping times, the second recording will not start until the first is finished. For example, if one timed recording is set to run from 5:00 to 6:00, and a second is set from 5:30 to 7:00, the second recording will not start until 6:00 when the first one finishes. If one program entirely overlaps another - Program 1 runs from 5:00 to 6:00, and Program 2 runs from 5:30 to 6:00, the second program will not record.

NOTES:

Recording Speeds: This VCR lets you record and playback at two different speeds.

SP - Standard Play: This setting gives you the best recording and playback qualities. It is the time length indicated on blank video cassettes.

EP - Extended Play: This setting records and plays back at 1/3 of the SP speed. For example a 120 minute cassette can hold 6 hours of material at EP speed. However, video and audio quality are not as sharp at EP speeds as they are at SP.

Other Notes - To check your programmed settings, press PROG. CHECK on the remote. See page 33 for more details.

For Troubleshooting tips on Timer Recording, see page 28.

Recording Speed

Lets you choose between the two recording speeds, SP - Standard Play, or EP - Extended Play



Press MENU



To RECORDING SPEED



To set to SP or EP



Press EXIT to finish

Auto SP→EP

This function is used with timer-recording (page 25) and with the SP tape speed. When AUTO SP→EP is on, the unit automatically calculates the amount of time left in the recording and the amount of time left on the cassette. If there is not enough tape left to finish recording, the unit automatically switches to EP speed to finish recording on the tape available.



Press MENU



To AUTO SP→EP



To set to ON or OFF

ON: The unit will automatically switch from SP to EP speed if it detects there is not enough tape left to finish the recording.

OFF: The tape speed will not change. The tape may run out before the recording is finished.



Press EXIT to finish

Repeat Play

Once playback of a video cassette has finished, this function automatically rewinds the tape and begins playback again. Playback may be repeated up to 50 times.



Press MENU



To REPEAT PLAY



To turn Repeat Play ON or OFF

ON: Once a tape has finished it will automatically rewind and replay

OFF: The tape will stop when playback is finished



Press EXIT to finish

- If a non-recorded period of three seconds or more is encountered on a tape, playback will stop and the tape will automatically rewind.
- If you timer-record two programs back-to-back, a non-recorded period will automatically be inserted between programs.

V Stabilizer

This function eliminates any vertical shaking of the video image during playback in EP mode.



Press MENU



To V STABILIZER



To turn ON or OFF



Press EXIT to Finish

- Closed Captioning may not display properly when V. Stabilizer is set to "ON".
- After a power interruption or once a tape is ejected, V. Stabilizer will return to "OFF".

NOTE:

If V Stabilizer is turned on, V-Chip and Closed Captioning information contained on a video cassette may not be received properly. V-Chip ratings block and Closed Caption functions may not work with V Stabilizer.

VCR Plus+

Your TV/VCR combo comes equipped with VCR Plus+ technology. This function lets you program your VCR by simply entering the VCR Plus+ code number associated with the program you wish to record.

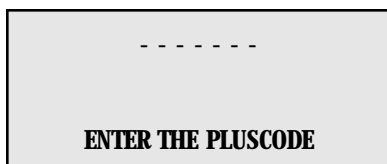
- Before VCR Plus+ can be used, the VCR Plus+ guide channels must be programmed. See VCR Plus+ Guide Setup in "Initial Setup" page 15 if you have not yet programmed these guide channels.

Timer Recording with VCR Plus+

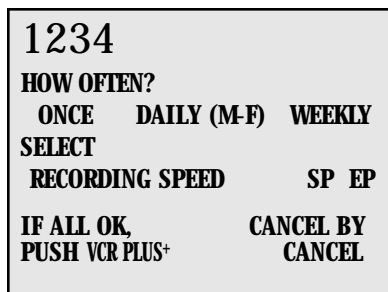


Press VCR PLUS+ on the remote control

The VCR Plus+ code screen appears.



Enter the VCR Plus+ code (a three-to-eight digit number) of the program you wish to record using the 10 key pad on the remote control. The following screen will appear:



- If you enter the VCR Plus+ code incorrectly, press CANCEL on the remote. The "Enter the PlusCode" screen will reappear.



Press the DAILY/WEEKLY button to select how often a program should be recorded, ONCE, DAILY, or WEEKLY

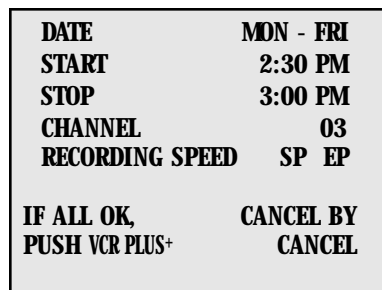


Press the SP/EP button to select SP or EP recording speed. (See page 26 for more on tape recording speeds)



Press the VCR PLUS+ button

The following screen will appear displaying a summary of the information you just entered.



If the settings are correct, press the VCR PLUS+ button again to accept. The following message will appear:



If you wish to make a correction, use the (▲▼) buttons to move to the item and the (◀▶) buttons to correct. Once corrected, press VCR PLUS+ to accept the settings.



Press the TIMER button on the remote control. The timer is now in standby mode.

The REC TIMER lamp will glow green on the front panel of the unit indicating that the timer has been programmed. When the programmed start time arrives, the REC lamp will glow red and recording will begin. When the programmed stop time arrives, the lamp will go out and the recording will automatically stop. If there are other pre-set recordings, the REC TIMER lamp will glow green.

NOTES:

VCR Plus+ Codes can usually be found in most local newspaper television listings or in TV magazines. VCR Plus+ codes are three-to-eight digit numbers usually printed after the program title or description in the TV listings. VCR Plus+ and PlusCode are registered trademarks of Gemstar Development Corporation. The VCR Plus+ system is manufactured under license from Gemstar Development Corporation.

Timer Recording Troubleshooting

The following are some common problems that may arise when using Timer Recording and some possible solutions.

REC lamp starts flashing when you press TIMER on the remote control.

No cassette is loaded into the VCR.

Insert a cassette into the VCR and continue.

- or -

Cassette loaded has its recording tab removed.

Insert a recordable cassette (one with its recording tab intact), or cover the missing tab hole with two layers of tape.

The following message appears when attempting to eject tape or operate the VCR:

**VCR TIMER IS ON. PUSH
TIMER BUTTON TO RELEASE**

Press the **TIMER** button and set Timer Mode to Off. Try operating VCR again.

To stop taping once automatic recording has begun.

Press the **TIMER** button then press **STOP**.

Instant Timer Recording (ITR)

Instant Timer Recording lets you set the VCR timer after the videotaping of a program has begun. The ITR timer can be programmed to stop recording up to four hours after it has begun.

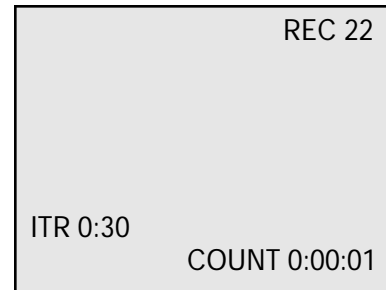
To use the ITR timer, the VCR must already be recording. Press the **REC/ITR** button on the front panel of the TV/VCR.

- This function cannot be accessed from the remote control.



REC/ITR

The following display will appear on the screen



The Timer is set to stop recording in 30 minutes.

Press the **ITR** button again to increase the amount of time on the ITR timer. Each press increases the amount by 30 minutes. The ITR timer can be set from a minimum of 30 minutes (ITR 0:30) to a maximum of four hours (ITR 4:00). When the time allotted to the ITR expires the recording automatically shuts off.

- To cancel the ITR timer. press the **REC/ITR** button until the onscreen display disappears.
- To stop recording before the allotted time expires, press the **STOP** button.

Display

The Display screen shows the current status of timers and inputs.

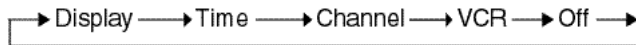


Press the DISPLAY button

07	
NOW	12:20 PM
	SEPT/01/00
SPEED	EP
REMAIN	--:--
SLEEP TIMER	OFF
ON/OFF TIMER	OFF

- The channel or AV input (Channel 07)
- The current time (12:20 pm)
- The current date (Sept 1, 2000)
- Recording Speed (EP)
- Amount of tape left on cassette (--:--)
- Sleep Timer status (The Sleep Timer is off)
- On/Off Timer status (OFF)

Each Press of the DISPLAY button changes the display mode:



Display - Full screen shown above

Time - Shows the current time only

Channel - Shows the current channel

VCR - Shows the VCR's current function (like "PLAY") and tape counter

Off - Turns Display off

- You may also turn off the Display at any step by pressing EXIT
- The VCR display will only appear if there is a tape in the unit.

Video Status

The VIDEO STATUS button gives you a choice of three TV picture display settings, including "Standard", "Cinema", and "Game".

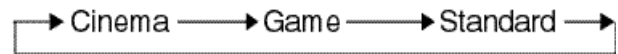
Standard - Resets the picture display to the factory settings.

Cinema - Settings designed to give a "film-like" look to television and video tape programs.

Game - Enhanced settings designed especially for use with video games.



Press the VIDEO STATUS button

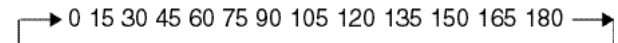


Sleep Timer

The Sleep Timer can turn the TV off for you after you fall asleep. Program it to work in intervals of 15 minutes, for a total time of up to 180 minutes.



Press the SLEEP TIMER button



Sleep Timer Message

20 seconds before the automatic shutoff, this message will appear:

GOOD NIGHT!!
PUSH SLEEP TIMER BUTTON
TO EXTEND.

You then have 20 seconds to press the Sleep Timer button to delay the shutoff for another 15 minutes.

NOTES:

Please note that if the Clock, Sleep Timer or On/Off Timer are not set, the Display screen will show: "Clock Not Set", "Sleep Timer OFF", and "On/Off Timer Off" respectively. "Remain" automatically calculates how much time is left on a video cassette. If the display reads "--:--", try advancing the tape a bit and press DISPLAY again. If there is no tape in the unit, Remain will read "--:--".

Number Buttons - 10 Key Pad

To move directly to a specific channel, enter the channel number with the number buttons on the remote. For example, to move to Channel 7:



0 (zero)



7 (seven)

100+ Button

Use the 100+ button to directly access channels above Channel 99. For example to move to channel 124:



100+



2 (two)



4 (four)

Muting

The MUTE button instantly turns the volume down completely when you press it.



MUTE

The volume level will instantly go to zero.

- To restore the volume to its previous level, press MUTE again.

Menu

The MENU button allows you to access JVC's onscreen menu system. Press MENU to activate the onscreen menu system.

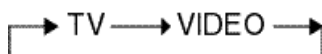
- See individual topics (like "Sound Settings") for specific information on using menus.

INPUT

Selects the input source: TV (cable or antenna input) or Line (VCR or other video device).



INPUT



Return+

The RETURN+ button has two functions:

Return - Returns to the channel viewed just before the channel currently onscreen.

Return+ - Lets you program a specific channel to return to while scanning through the channels.



RETURN+ and hold for three seconds

**RETURN CHANNEL
PROGRAMMED !**

Scan using the CHANNEL+/- buttons



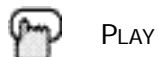
RETURN+

You will return to your programmed channel.

- To cancel your Return+ channel, press and hold the RETURN+ button for three seconds. The message "RETURN CHANNEL CANCELLED" will appear.
- Return+ works only with CHANNEL+/- . Pressing any number key will cancel Return+.
- For more information on Return and Return+, turn to page 10.

VCR Functions - Basic

The following remote control buttons control the basic functions of the VCR.



PLAY

- Begins playback of a video cassette.



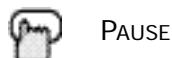
REW

- Rewinds tape. If pressed while tape is stopped, the tape counter will display onscreen. Can also be used while VCR is playing to scan backward through the tape.



FF

- Fast Forward. If pressed while tape is stopped, the tape counter will display onscreen. Can also be used while VCR is playing to scan forward through the tape at an accelerated rate.



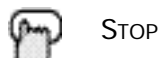
PAUSE

- Freezes a single frame of video onscreen during playback. Press PLAY to resume normal playback.
- While tape is paused you can advance forward frame-by-frame. Each press of the PAUSE button will move the tape ahead one frame.
- While tape is playing, you can slow the playback speed to 1/6 of normal by pressing and holding PAUSE for two seconds.
- Press PLAY to resume normal playback.



REC

- Immediately begins recording of program currently on television. To start recording, hold down the REC button and press PLAY.



STOP

- Halts VCR function. Will stop tape during play, record, fast forward or rewind functions. If pressed while FF or REW are being used with PLAY, the tape will return to normal playback.
- With the tape stopped, press the STOP/EJECT button on the front panel to eject the video cassette.

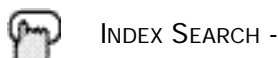
Index Search

Most JVC-brand VCR's automatically insert an index mark at the start of a recording. The INDEX SEARCH +/- buttons can be used to scan a video cassette for these marks. To quickly find the beginning of a taped program, press INDEX SEARCH.



INDEX SEARCH +

Scans tape forward for index marks. If there are numerous programs recorded on one tape, you can press the Index Search button a number of times to search for that number of marks. (For example four presses will move ahead four index marks.) A recording up to nine index marks ahead may be accessed.



INDEX SEARCH -

Scans tape backward for index marks. You can press the Index Search button a number of times to search for that number of marks. (For example four presses will move back four index marks.) A recording up to nine index marks back may be accessed.

Tracking Adjustment

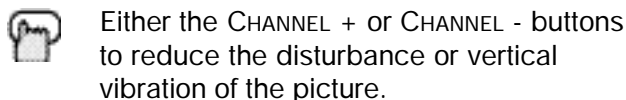
During playback, if tracking (the alignment of the video heads on the video cassette tape) deviates, an unclear picture is displayed. This TV/VCR combo is equipped with an automatic tracking function. But, there are cases when manual tracking adjustment may be needed. They include:

- When the Auto Tracking does not work properly and the picture remains unclear.
- If the picture moves vertically during playback. To manually adjust tracking, open the cover of the TV/VCR combo front panel.



CHANNEL + and CHANNEL - on the front panel simultaneously during playback.

- No special tracking indication will appear onscreen.



Either the CHANNEL + or CHANNEL - buttons to reduce the disturbance or vertical vibration of the picture.

- Once the video cassette is removed, manual tracking will automatically be turned off.

NOTES:

- Index marks are a function of JVC-brand video decks. Therefore Index Search cannot be used on commercially produced tapes or tapes recorded on non-JVC brand VCR's since these tapes will not have the JVC index marks recorded on them.
- If you try to begin an Index Search at a point on the tape between two programs, index search may not work correctly. Either fast-forward or rewind the tape a bit and try index search again.

Skip Search

Each time you press the SKIP SEARCH button while a tape is playing, the unit will fast-forward ahead 30 seconds on the tape. You may press the button up to four times in a row to move 120 seconds (two minutes) ahead.



SKIP SEARCH

Re-View

Once a timer recording has finished, press the RE-VIEW button to automatically rewind the tape to the start of the newly recorded program.



RE-VIEW

EZ Ject

Pressing EZ Ject automatically rewinds and ejects the video cassette in the unit.



EZ JECT

Display

You can check how much time remains on a video cassette or tape speed setting by pressing DISPLAY while a video cassette is playing. See page 29 for more information on display.



DISPLAY

Cancel

Press CANCEL to delete a pre-set timed program from memory or if you incorrectly input a VCR Plus+ code on the VCR Plus+ screen.



CANCEL

SP/EP

Selects a recording speed (SP or EP) for simple recording. See "Regular VCR Programming" on page 25 for more information.



SP/EP

VCR Plus+

A one-touch way to access the TV/VCR combo's VCR Plus+ functions. For more information on timer recording with VCR Plus+, see page 27.



VCR PLUS+

Shuttle Plus +/-

Lets you gradually increase or decrease the playback speed of a video cassette. With a videotape playing, choose either the SHUTTLE PLUS + or SHUTTLE PLUS - button.



SHUTTLE PLUS +

Each time this button is pressed, playback speed will increase. The forward speed may be increased by up to four steps.



SHUTTLE PLUS -

Each time this button is pressed, playback speed will decrease. After six presses the tape will begin to play in reverse slow motion. Continue to press SHUTTLE PLUS - to make the tape play backwards at an accelerated rate. SHUTTLE PLUS - may be pressed up to 14 times.

To resume playback at normal speed, press the PLAY button.

Timer

Lets you turn the Timer Mode ON or OFF.



TIMER

Daily/Weekly

Selects how often a program will be recorded: Once, Daily (at the same time everyday), or Weekly (at the same time once each week). Pressing DAILY/WEEKLY will access this option in the Timer Recording menu.



DAILY/WEEKLY

NEXT Function

You can automatically perform some VCR functions using two-button combinations. You can automatically start playback, go into Timer Stand-by, or turn the power off after rewinding a tape by using the button combinations shown below.

To automatically start playback after rewind:



REW, then PLAY within 2 seconds

To automatically start Timer Stand-by after rewind:



REW, then TIMER within 2 seconds

To automatically shut power off after rewind:



REW, then POWER within 2 seconds

Program Check

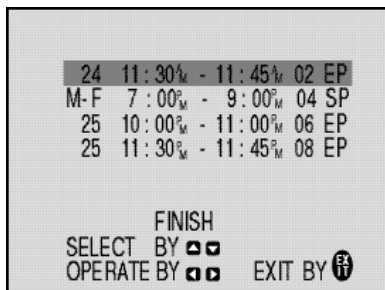
The Program Check button allows you to confirm the settings programmed into your TV/VCR. You can make changes if you find any errors.

Confirm Timer Settings

Press the Program Check button to display the timer information.



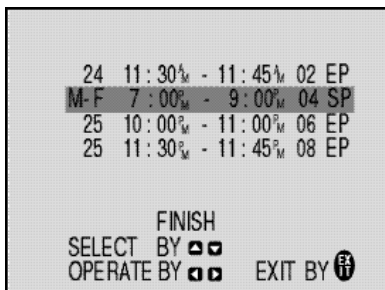
PROG. CHECK



- Press PROG. CHECK again to leave screen.

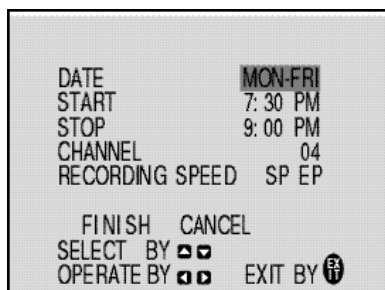
Changing Timer Settings

If you find an error, you may correct it from the Program Check screen.



- ▲▼ To the program you wish to change

- ◀▶ To display the "REGULAR VCR PROGRAMMING" menu



Program Check - continued

Use the Menu buttons to select which items you wish to change. (For more information on Regular VCR Programming, see page 20.)

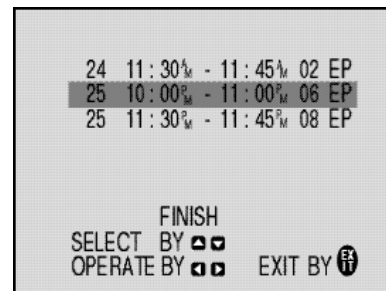
Cancelling Timer Programs

Press the Program Check button to display the timer information



PROG. CHECK

Select the program you wish to cancel.



CANCEL

The program is now cancelled. Press PROG. CHECK again to exit the menu.

REC/ITR

(On the TV/VCR Combo front panel)



REC/ITR

Pressing the REC/ITR button once will begin recording of the program onscreen. Pressing the button a second time will activate the ITR (Instant Timer Recording) timer. See "Instant Timer Recording" on page 28 for more information.

Stop/Eject

(On the TV/VCR Combo front panel)



STOP/EJECT

Pressing the STOP/EJECT button when the VCR is operating to halt any active VCR function such as playback or recording. Press STOP/EJECT while the VCR is stopped to eject the video cassette currently in the unit.

PROBLEMS	CHECK
There is no power	<ul style="list-style-type: none"> • See if the power cord became unplugged. • Check for a blown fuse or circuit breaker or a power outage.
There is no picture or sound	<ul style="list-style-type: none"> • The antenna could be disconnected. • The input mode (TV/ Line) could be set improperly. See page 30. • The tuner (Auto Tuner Setup) could be set improperly. See page 13. • The TV station may be having difficulties. Check to see if other stations are working.
Remote control is not operating properly or at all	<ul style="list-style-type: none"> • Check to see that the batteries are still working and properly installed. • Make sure the remote has a clear sight path to the TV. • Check that the TV/CATV switch is in the proper position.
You cannot select a certain channel	<ul style="list-style-type: none"> • You may be too far from the TV. You must be within 23 feet (7 meters). • Make sure the channels have been programmed. See "Channel Summary", page 16. • Check to see if the channel is locked. See "Channel Summary - Lock" page 16.
The power turns off by itself	<ul style="list-style-type: none"> • Make sure the set did not become unplugged. • Perhaps the On/Off Timer is set. See page 23. • Check to see if the Sleep Timer was set. See page 29.
The clock is wrong	<ul style="list-style-type: none"> • The power was interrupted and the clock was not reset. See page 15.
The On Timer is blinking	<ul style="list-style-type: none"> • There is a problem with the TV. Unplug the set and call for service.
The color quality is poor	<ul style="list-style-type: none"> • Tint and Color may be improperly adjusted. See page 21. • The Video Status mode may be turned to the wrong setting. See page 29.
There are lines across the picture	<ul style="list-style-type: none"> • There could be interference from another electrical appliance, such as a computer, another TV or VCR. Move any such appliances further away from the TV.
The picture is spotted	<ul style="list-style-type: none"> • There could be interference from a high-wattage appliance, like a hairdryer or vacuum, operating nearby. Move the antenna away from the appliance or change to a coaxial cable connection which is less prone to interference.
There are double pictures (ghosts)	<ul style="list-style-type: none"> • A building or passing airplane can reflect the original signal and produce a second, slightly delayed one. Adjust your antenna position.
Picture is snowy (image noise)	<ul style="list-style-type: none"> • Your antenna may be damaged, disconnected or turned. Check the antenna connection diagram on page 7. If the antenna is damaged, replace it.
Screen is 80% black	<ul style="list-style-type: none"> • The Closed Caption Text mode is on. Turn it off in the Closed Caption Menu, page 23.
Stereo or bilingual programs can't be heard	<ul style="list-style-type: none"> • Make sure the MTS settings are correct. See "MTS" on page 22.
Static electricity	<ul style="list-style-type: none"> • It is normal to feel static electricity if you brush or touch the screen.
You hear occasional crackling sounds	<ul style="list-style-type: none"> • It is normal for the TV to make crackling sounds when first turned on or off. Unless the sound or picture become abnormal, this is fine.

PROBLEMS	CHECK
The video cassette will not enter the VCR	<ul style="list-style-type: none"> • Make sure you are attempting to insert the tape properly. The clear window on the cassette should be facing up and the label on the narrow part of the cassette should face away from the machine. • Are you attempting to use a cassette that is not a VHS or S-VHS type? Only these types of cassettes may be used in this machine.
The cassette will not eject	<ul style="list-style-type: none"> • Is the VCR set for timer-recording? A cassette cannot be removed while the timer is running. To eject the tape while the timer is operating, press the Timer button on the remote control to shut it off. You may then press eject on the front panel of the unit to remove the tape.
Dual or Stereo sound cannot be heard	<ul style="list-style-type: none"> • This VCR allows for recording and playback in monaural (mono) sound only.
Two sounds are heard at the same time during playback	<ul style="list-style-type: none"> • When a tape recorded with stereo Hi-Fi as its normal track is played back, two separate soundtracks may be heard at once. Make sure when purchasing or renting tapes that they are recorded in mono sound only.
Unit makes mechanical-type sounds when no operation is being performed	<ul style="list-style-type: none"> • Is the VCR set to begin timer-recording? When a timer-recording starts, it is normal to hear the cassette tape being engaged inside the machine. This is not a malfunction. • Have you just finished watching a tape? Two or three minutes after you finish watching a tape, the VCR heads automatically disengage to protect the tape. Sound may be heard at this time. This also is not a malfunction.
Cassette gets stuck halfway during loading or unloading	<ul style="list-style-type: none"> • Try unplugging the unit from the power outlet, then plugging it back in. If this does not work, call your local dealer for service.
VCR started rewinding the tape automatically	<ul style="list-style-type: none"> • During recording, playback, or fast-forwarding when the unit reaches the end of the tape it starts rewinding automatically. • Is the VCR set to Repeat Play? See "Repeat Play", page 26.
Recording won't start	<ul style="list-style-type: none"> • Has the safety tab at the rear of the cassette been removed? A cassette cannot be used for recording without this tab. If the tab is missing and you still want to record on that tape, cover the hole with two layers of adhesive tape.
"Noise" (static) appears on the screen during playback	<ul style="list-style-type: none"> • The VCR heads may be dirty. Use a commercially available cleaning cassette to clean the heads.
Still (paused) picture vibrates up and down	<ul style="list-style-type: none"> • Manually adjust the VCR's tracking. See "Tracking Adjustment", page 31.
VCR cannot be set for timer-recording	<ul style="list-style-type: none"> • Are you trying to timer-record more than six programs? The maximum number of programs that can be stored by the timer is six. • Do timer-recordings overlap? You can check timer settings by pressing Prog. Check on the remote control. For Prog. Check, see page 33. For timer recordings, see page 25.
The VCR cannot be operated	<ul style="list-style-type: none"> • Is there a video cassette inserted in the unit? If there is no cassette inserted, the VCR cannot be operated.
Timer-recording is set but VCR cannot record	<ul style="list-style-type: none"> • Do timer-recordings overlap? See the "Notes on overlapping programs", page 25.

For Canadian model televisions, see separate sheets for Warranty/Garantie and JVC Authorized Service Centers in Canada.

JVC COMPANY OF AMERICA warrants this product and all parts thereof, except as set forth below ONLY TO THE ORIGINAL PURCHASER AT RETAIL to be FREE FROM DEFECTIVE MATERIALS AND WORKMANSHIP from the date of original retail purchase for the period shown below (the "Warranty Period") (PICTURE TUBE is covered for Two (2) years.)

Parts	Labor
1 YEAR	90 DAYS

THIS LIMITED WARRANTY IS VALID ONLY IN THE FIFTY (50) UNITED STATES, THE DISTRICT OF COLUMBIA AND COMMONWEALTH OF PUERTO RICO.

WHAT WE WILL DO:

If this product is found to be defective within the warranty period, JVC will repair or replace defective parts at no charge to the original owner. Such repair and replacement services shall be rendered by JVC during regular business hours at JVC authorized service centers. Parts used for replacement are warranted only for the remainder of this Warranty Period. All products and parts thereof may be brought to a JVC authorized service center on a carry-in basis. Televisions with a screen size of 25 inches and larger may be covered on an in-home basis where such service is available.

WHAT YOU MUST DO FOR WARRANTY SERVICE:

To determine if in-home service is available in your area, either contact the selling dealer (retailer) or call 1-800-537-5722 to locate the nearest JVC authorized service center. Service locations can also be obtained from our website <http://www.jvcservice.com>. In-home service, if available, will require clear access to the Television by the service representatives. If in-home service is not available, carry in service will be provided.

If service is not locally available, box the product carefully, preferably in its original carton, and ship, insured, with a copy of your bill of sale plus a letter of explanation of the problem to the nearest JVC Factory Service Center, the name and location which will be given to you by the toll free number.

If you have any questions concerning your JVC Product, please contact our Customer Relations Department.

WHAT IS NOT COVERED:

This limited warranty provided by JVC does not cover:

- 1) Products which have been subject to abuse, accident, alteration, modification, tampering, negligence, misuse, faulty installation, lack of reasonable care, or if repaired or serviced by anyone other than a service facility authorized by JVC to render such service, or if affixed to any attachment not provided with the products, or if the model or serial number has been altered, tampered with, defaced or removed;
- 2) Initial installation, installation and removal from "built-in" entertainment centers and other mounting systems;
- 3) Operational adjustments covered in the Owner's Manual, normal maintenance, video and audio head cleaning;
- 4) Damage that occurs in shipment, due to an act of God, and cosmetic damage;
- 5) Signal reception problems and failures due to line power surge;
- 6) Video Pick-up Tubes/CCD Image Sensor, Cartridge, Stylus (Needle) are covered for 90 days from the date of purchase;
- 7) Accessories;
- 8) Batteries (except that Rechargeable Batteries are covered for 90 days from date of purchase.)

There are no express warranties except as listed above.

THE DURATION OF ANY IMPLIED WARRANTIES, INCLUDING THE IMPLIED WARRANTY OF MERCHANTABILITY, IS LIMITED TO THE DURATION OF THE EXPRESS WARRANTY HEREIN.

JVC SHALL NOT BE LIABLE FOR THE LOSS OF USE OF THE PRODUCT, INCONVENIENCE, OR ANY OTHER DAMAGES, WHETHER DIRECT, INCIDENTAL OR CONSEQUENTIAL (INCLUDING, WITHOUT LIMITATION, DAMAGE TO TAPES, RECORDS OR DISCS) RESULTING FROM THE USE OF THIS PRODUCT, OR ARISING OUT OF ANY BREACH OF THIS WARRANTY, ALL EXPRESS AND IMPLIED WARRANTIES, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE, ARE LIMITED TO THE WARRANTY PERIOD SET FORTH ABOVE.

Some states do not allow the exclusion of incidental or consequential damages or limitations on how long the warranty lasts, so these exclusions or limitations may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary state to state.

JVC COMPANY OF AMERICA
DIVISION OF JVC AMERICAS CORP.

1700 Valley Road
Wayne, New Jersey 07470

<http://www.jvcservice.com>

REFURBISHED PRODUCTS CARRY A SEPARATE WARRANTY. THIS WARRANTY DOES NOT APPLY FOR DETAILS OF REFURBISHED PRODUCT WARRANTY. PLEASE REFER TO THE REFURBISHED PRODUCT WARRANTY INFORMATION PACKAGED WITH EACH REFURBISHED PRODUCT.

For customer use:

Enter below the Model No. and Serial No. which is located either on the rear, bottom or side of the cabinet.
Retain this information for future reference.

Model No.: _____ Serial No.: _____
Purchase Date: _____ Name Of Dealer: _____

Authorized Service Centers

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QUALITY **JVC** SERVICE

HOW TO LOCATE YOUR JVC SERVICE CENTER

TOLL FREE: 1 (800) 537-5722

<http://www.jvcservice.com>

Dear Customer;

In order to receive the most satisfaction from your purchase, read the instruction booklet before operating the unit. In the event that repair is necessary, or for the address nearest your location, please refer to the factory service center list below or within the Continental United States, call 1-800-537-5722 for your authorized servicer. Remember to retain your Bill of Sale for Warranty Service.

— JVC

JVC SERVICE & ENGINEERING COMPANY OF AMERICA

DIVISION OF JVC AMERICAS CORP.

FACTORY SERVICE CENTER LOCATIONS

Dear customer;

In order to receive the most satisfaction from your purchase, read this guide before operating the unit, and before calling for service make sure you check the Troubleshooting pages at the end of this book. In the event that repair is necessary, or for the address nearest you, please refer to the factory service center list below, or within the continental United States, call the toll free number above for an authorized service center. Remember to retain your bill of sale for warranty service.

10 New Maple Avenue
Pine Brook, NJ 07058-9641
(973) 396-1000

1500 Lakes Parkway
Lawrenceville, GA 30243-5857
(770) 339-2582

705 Enterprise Street
Aurora, IL 60504-8149
(630) 851-7855

5665 Corporate Avenue
Cypress, CA 90630-0024
(714) 229-8011

2969 Mapunapuna Place
Honolulu, HI 96819-2040
(808) 833-5828

10700 Hammerly Suite 110
Houston, TX 77043
(713) 935-9331

13 Cummings Park
Woburn, MA 01801
(781) 376-9100

8192 State Road 84
Davie, FL 33324
(954) 472-1960

890 Dubuque Avenue
South San Francisco, CA 94080-1804
(650) 871-2666

Sophisticated electronic products may require occasional service. Just as quality is a keyword in the engineering and production of the wide array of JVC products, service is key to maintaining the high level of performance for which JVC is world famous. The JVC service and engineering organization stands behind our products.

NATIONAL HEADQUARTERS
JVC SERVICE & ENGINEERING COMPANY OF AMERICA
DIVISION OF JVC AMERICAS CORP.
1700 Valley Road
Wayne, New Jersey 07470

IF YOU SHIP THE PRODUCT

Pack your JVC unit in the original carton or one of equivalent size and strength. Enclose, with the unit, a letter stating the problem or symptom that exists and also a copy of the receipt or bill of sale you received when you purchased your JVC unit. Print your home return address on the outside and inside of the carton. Send to the appropriate JVC Factory Service Center as listed above.

Don't service it yourself

CAUTION

To prevent electrical shock, do not open the cabinet. No user serviceable parts inside. Refer to qualified service personnel.

ACCESSORIES

To purchase accessories for your JVC product, you may contact your local JVC Dealer. Or from the 48 Continental United States call toll free : 1 (800) 882-2345

MODEL	TV-20241
Reception Format	NTSC, BTSC System (Multi-Channel Sound)
Reception Range	VHF 2 to 13, UHF 14 to 69 Sub Mid, Super, Hyper and Ultra bands (181 channel frequency synthesizer system)
Power Source	AC 120V, 60Hz
Power Consumption	100W / 1.5A
Screen Size	20 inch / 50.8 cm measured diagonally full square
Audio Output	1.2W + 1.2W
Speakers	1 4/5" x 4" / 4.5 x 10 cm oval x 2
Antenna Terminal	75 ohms (VHF/UHF) (F-type connector)
External Input Jacks	Video: 1 Vp-p, 75 ohms Audio: 500mVrms (-4dBs) high impedance
Headphone Jack	3.5 mm stereo mini-jack
Recording/Playback	VHS System (SQPB) 4 Head helical scan system
Video Signal	NTSC system
Recording System	VHS monaural system Monaural-linear track system
Tape Speed	EP / SP
Program capacity	1- month programmable timer / 6 events
Memory backup time	Approximately 90 seconds
Clock Reference	AC
Dimensions (In) WxHxD (cm)	22 5/8" x 19 7/8" x 19 1/8" (57.2 x 50.3 x 48.3)
Weight (lbs / kg)	52.4 (lbs) / 23.8 (kg.)
Accessories	Remote control unit / AA batteries x 2

Specifications subject to change without notice.

Set Clock

Notes for Canadian customers regarding the clock feature of the TV-20241

The XDS and EDS signals are carried only by certain broadcast television stations (for example, the signal is carried by most Public Broadcasting Service stations). You must be able to receive a station carrying the XDS or EDS signal to use the Semi-Auto feature to set your TV/VCR's internal clock. If you live in an area that does not broadcast XDS or EDS signals, you must set the clock manually. Please see page 15 for instructions on how to manually set your TV/VCR's clock.

Special note for residents of Newfoundland.

The Set Clock (Semi-Auto) feature cannot be used to set the TV/VCR's internal clock to Newfoundland time. The time zone command does not include a setting for the Newfoundland time zone. Trying to use the Semi-Auto feature in the Newfoundland time zone could result in an incorrect time setting or no setting at all. Please set your TV/VCR's clock using the "Set Clock - Manual" option.

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Wayne, New Jersey, 07470



JVC CANADA, INC.
21 Finchdene Square
Scarborough, Ontario
Canada, M1X 1A7



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