

JVC



VIDEO CASSETTE RECORDER

HR-J2010T



VHS
Hi-Fi
SQP/B
G-CODE



INSTRUCTIONS

Dear Customer,

Thank you for purchasing the JVC VHS video cassette recorder. Before use, please read the safety information and precautions contained in the following pages to ensure safe use of your new VCR.

WARNING:
TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.

CAUTION:

This video cassette recorder should be used with AC 110V~, 60Hz only.

To prevent electric shocks and fire hazards, DO NOT use any other power source.

CAUTION

- When you are not using the recorder for a long period of time, it is recommended that you disconnect the power cord from the mains outlet.
- Dangerous voltage inside. Refer internal servicing to qualified service personnel. To prevent electric shock or fire hazard, remove the power cord from the mains outlet prior to connecting or disconnecting any signal lead or aerial.

The STANDBY/ON ϕ 1 button does not completely shut off mains power from the unit, but switches operating current on and off. " ϕ " shows electrical power standby and "1" shows ON.

IMPORTANT

- Please read the various precautions on this page before installing or operating the recorder.
- It should be noted that it may be unlawful to re-record pre-recorded tapes, records, or discs without the consent of the owner of copyright in the sound or video recording, broadcast or cable programme and in any literary, dramatic, musical, or artistic work embodied therein.

Failure to heed the following precautions may result in damage to the VCR, remote control or video cassette.

1. DO NOT place the VCR ...

- ...in an environment prone to extreme temperatures or humidity.
- ...in direct sunlight.
- ...in a dusty environment.
- ...in an environment where strong magnetic fields are generated.
- ...on a surface that is unstable or subject to vibration.

2. DO NOT block the VCR's ventilation openings.**3. DO NOT place heavy objects on the VCR or remote control.****4. DO NOT place anything which might spill on top of the VCR or remote control.****5. AVOID violent shocks to the VCR during transport.******MOISTURE CONDENSATION**

Moisture in the air will condense on the VCR when you move it from a cold place to a warm place, or under extremely humid conditions—just as water droplets form on the surface of a glass filled with cold liquid. Moisture condensation on the head drum will cause damage to the tape. In conditions where condensation may occur, keep the VCR's power turned on for a few hours to let the moisture dry before inserting a tape.

****ABOUT HEAD CLEANING**

Accumulation of dirt and other particles on the video heads may cause the playback picture to become blurred or interrupted. Be sure to contact your nearest JVC dealer if such troubles occur.

G-CODE is a registered trademark of Gemstar Development Corporation.

The *G-CODE* system is manufactured under license from Gemstar Development Corporation.

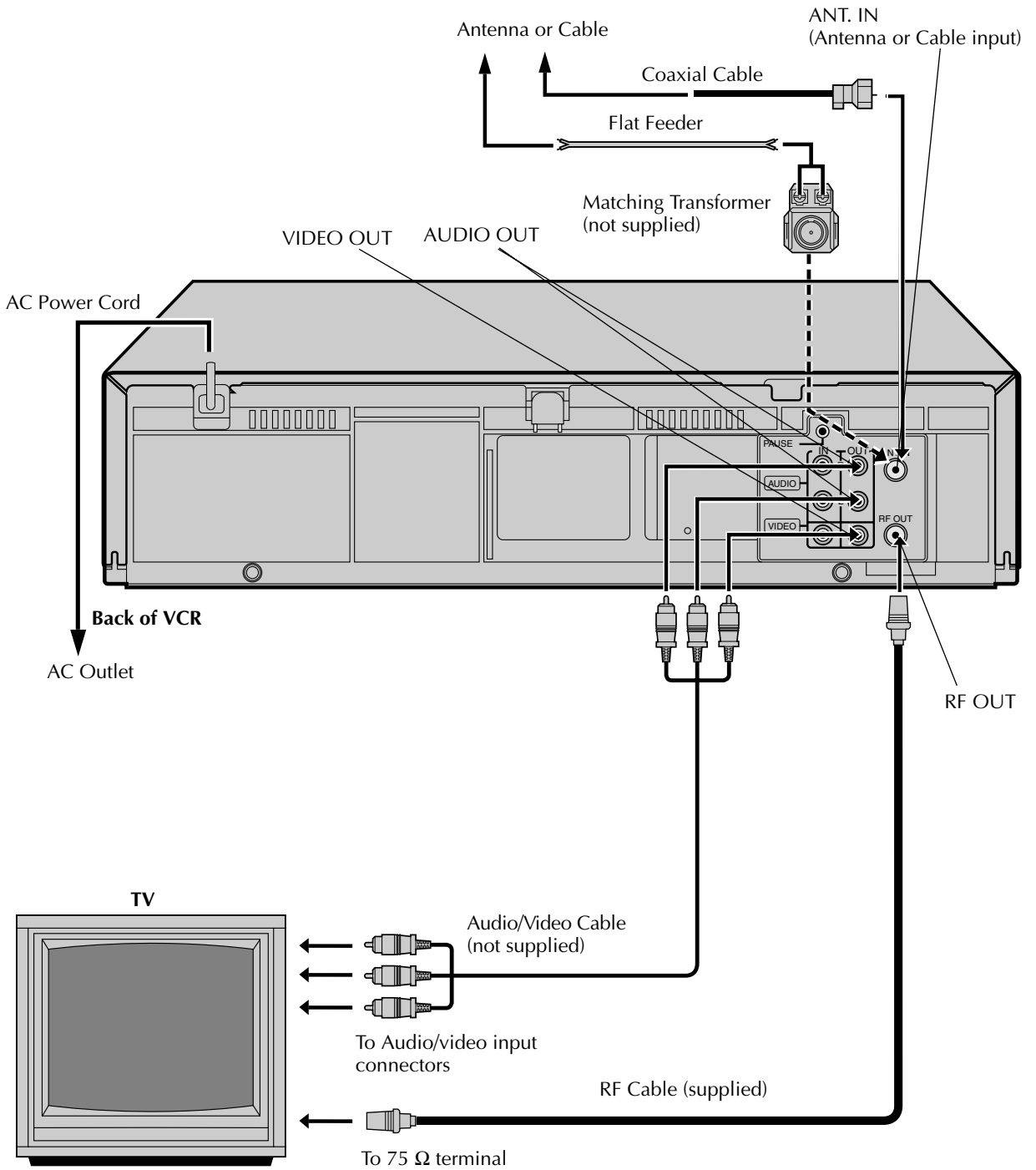
DSS™ is an official trademark of DIRECTV, Inc., a unit of GM Hughes Electronics. PRIMESTAR is a registered service mark of Primestar Partners, L.P. DISH Network™ is a trademark of EchoStar Communications Corporation.



- Cassettes marked "VHS" (or "S-VHS") can be used with this video cassette recorder. However, S-VHS recording is not possible with this model.
- This model is equipped with SQPB (S-VHS QUASI PLAYBACK) that makes it possible to play back S-VHS recordings with regular VHS resolution.
- HQ VHS is compatible with existing VHS equipment.

I	NSTALLING YOUR NEW VCR	4
	Basic Connections	4
I	NITIAL SETTINGS	6
	Plug & Play Setting	6
	Clock Setting	8
	Tuner Setting	10
	Setting channels automatically	
	— Auto Channel Set	10
	Setting channels manually	
	— Manual Channel Set	11
B	ASIC PLAYBACK AND RECORDING	12
	Basic Playback	12
	Basic Playback Features	13
	Changing display information	13
	Checking tape position	13
	Playing back tape repeatedly	
	— Repeat Play	13
	Adjusting tracking condition	
	— Tracking Adjustments	14
	Selecting monitor sound	
	— Audio Monitor	14
	Automatic operations after rewinding	
	— Next Function Memory	14
	Locating beginning of recordings	
	— Index Search	15
	Locating beginning of timer recordings	
	— Instant ReView	15
	Basic Recording	16
	Basic Recording Features	17
	Changing display information	17
	Specifying recording length	
	— Instant Timer Recording (ITR)	17
	Watching one program while recording another	17
	Showing on-screen display	18
S	PECIAL EFFECT PLAYBACK	19
	Special Effect Playback	19
	Locating particular scene rapidly	
	— Picture Search	19
	■ High-Speed Picture Search	19
	■ Variable-Speed Picture Search	19
	Viewing still picture	
	— Still Picture Playback	20
	Skipping unwanted portions	
	— Skip Search	20
	Viewing still picture frame by frame	
	— Frame-by-Frame Playback	20
	Viewing slow motion picture	
	— Slow Motion Playback	20
T	IMER RECORDING	21
	G-CODE [®] Timer Programing	21
	G-CODE [®] System Setup	23
	Express Timer Programing	25
	Checking program settings	27
	Canceling or changing program settings	27
	When programs overlap each other	28
O	THER USEFUL FUNCTIONS	29
	Useful Function Settings	29
	■ B.E.S.T.	30
	■ PICTURE CONTROL	30
	■ AUTO TIMER	30
	■ SUPERIMPOSE	30
	■ AUTO SP→EP TIMER	31
	■ VIDEO STABILIZER	31
	■ BLUE BACK	31
	■ 2ND AUDIO RECORD	32
	■ AUDIO MONITOR	32
E	EDITING	33
	Edit To Or From Another VCR	33
	Edit From Camcorder	34
M	ULTI-BRAND REMOTE CONTROL	36
	TV Brand Setting	36
	Multi-Brand Setting	37
	Changing Remote Control Code	39
T	ROUBLESHOOTING	40
	Questions and answers	42
I	NDEX	43
	List of terms	43
	Front panel	44
	Front display panel	44
	Rear panel	45
	On-screen display	45
	Remote	46
S	PECIFICATIONS	47

Basic Connections



1 Check contents

Make sure the package contains all of the accessories listed in "SPECIFICATIONS" (☞ pg. 47).

2 Situate VCR

Place the VCR on a stable, horizontal surface.

3 Connect VCR to TV

The following connections are required.

RF Connection

- 1 Disconnect the TV antenna from the TV.
- 2 Connect the TV antenna cable to the ANT. IN terminal on the rear of the VCR.
- 3 Connect the supplied RF cable between the RF OUT terminal on the rear of the VCR and the TV's antenna input terminal.

AV Connection (improves picture quality during tape playback.)

If your TV is equipped with audio/video input connectors

- 1 Connect the antenna, VCR and TV as shown in the illustration.
- 2 Connect an audio/video cable between the AUDIO/VIDEO OUT connectors on the rear of the VCR and the audio/video input connectors on the TV.

4 Connect VCR to power source

Connect the AC power plug to an AC outlet.

5 Final preparation for use

You can now perform basic playback (☞ pg. 12) or basic recording (☞ pg. 16).

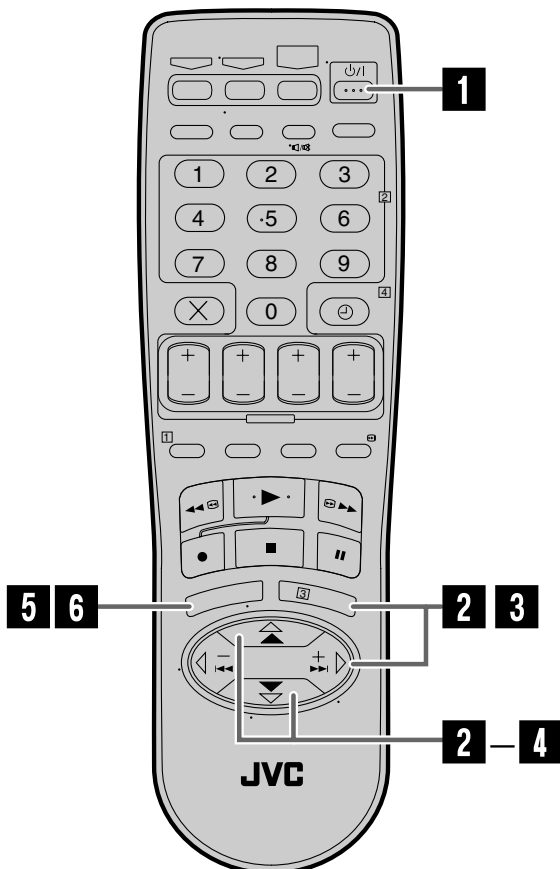
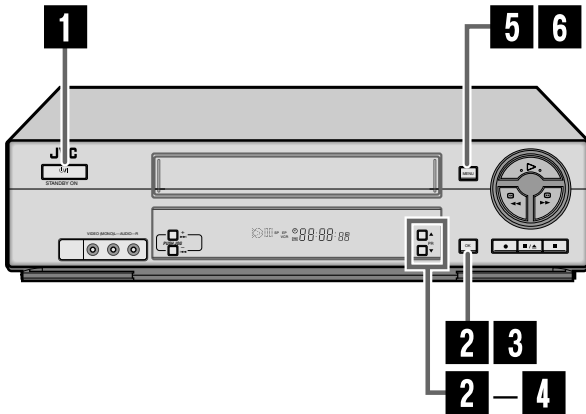
NOTES:

- The VCR channel is the channel on which you can watch the picture from the VCR on the TV when only using the RF connection.
- Even if you are using audio/video cables to connect your VCR to your TV, you must also connect it using the RF cable. This will ensure that you can record one show while watching another (☞ pg. 17).
- For full identification of the VCR's rear panel, refer to the Index (☞ pg. 45).

Plug & Play Setting

Before starting...

- Connect the TV antenna cable to the ANT. IN jack on the VCR and plug the power cord into the AC outlet.
- Turn on the TV and select the VCR channel 13 (or AV mode).



The Plug & Play function simplifies installation by guiding you through the procedures of setting the clock and tuner channels—simply follow the on-screen menus that appear when the ψ/I button is first pressed to power on the VCR after you connect the power plug to an AC outlet.

IMPORTANT

- Do not press any buttons on the VCR or Remote that are not directly related to the step you are performing while Plug & Play is in progress.
- If you perform Plug & Play successfully during installation, there's no need to separately perform the Clock Set or Channel Set procedures, but if adjustments become necessary they can be performed as follows:
 - To reset or adjust the time (☞ pg. 8)
 - To add/delete channels manually (☞ pg. 11)
 - To reset the tuner after moving to a different location (☞ pg. 10, 11)

1 Perform Plug & Play setup

Press ψ/I .

- The Clock Set screen appears.

2 Set time

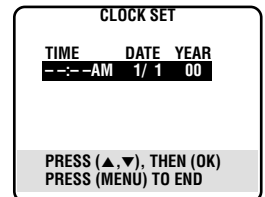
On the front panel:

Press **PR** \blacktriangle / \blacktriangledown to set the hour, then press **OK**.

On the Remote:

Press \blacktriangle / \blacktriangledown to set the hour, then press **OK** or \blacktriangleright .

- Press and hold either button to delay or advance the time by 30 minutes.



3 Set date

On the front panel:

Press **PR ▲▼** to set the date, then press **OK**.

On the Remote:

Press **△▽** to set the date, then press **OK** or **▷**.

- Press and hold either button to change the date by 15 days.

4 Set year

On the front panel:

Press **PR ▲▼** to set the year.

On the Remote:

press **△▽** to set the year.

5 Start auto channel set

Press **MENU**.

- Receivable channels in your area are automatically assigned to the **PR ▲▼** buttons, and non-receivable channels are skipped.
- If the tuner channels have been set properly "SCAN COMPLETED" will be displayed on the screen. If "NO SIGNAL" is displayed on the screen, make sure that the antenna cable is connected to the VCR properly and press **OK** on the front panel or **▷** on the Remote. The VCR will try Auto Channel Set again.

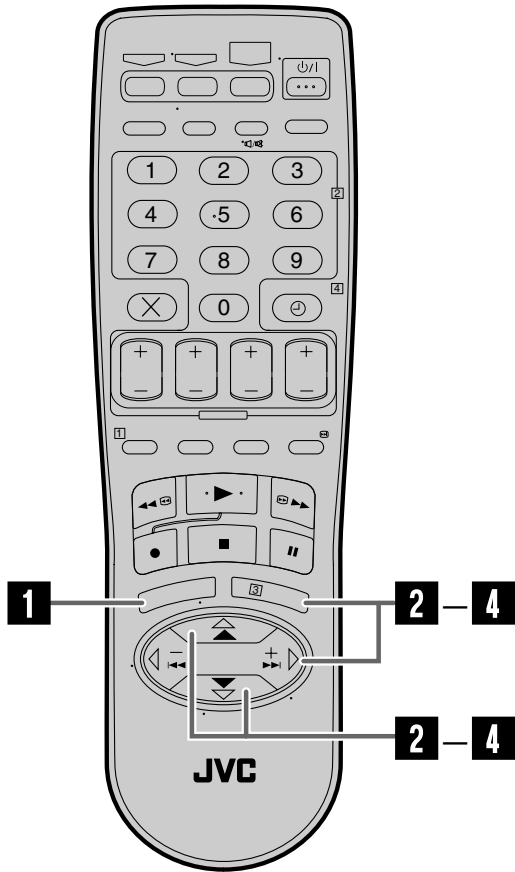
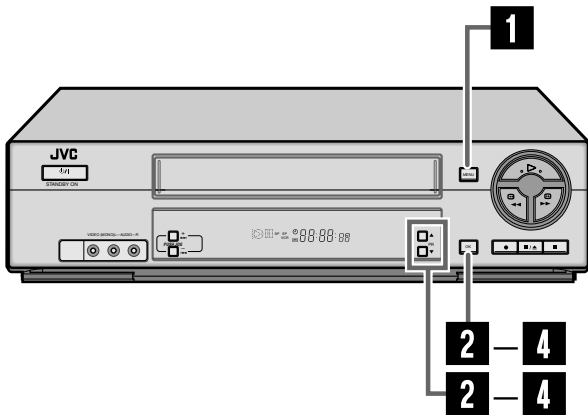


6 Return to normal screen

Press **MENU**.

Clock Setting

Turn on the VCR and the TV, and select the VCR channel 13 (or AV mode) on the TV.



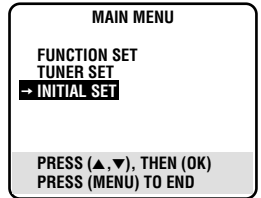
Perform clock setting only if the clock has not been set correctly by the Plug & Play setting or if you use a cable box.

1 Access Main Menu screen
Press **MENU**.

2 Access Initial Set screen

On the front panel:
Press **PR ▲▼** to move the highlight bar (arrow) to "INITIAL SET", then press **OK**.

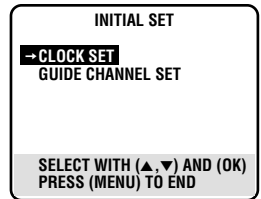
On the Remote:
Press **△▽** to move the highlight bar (arrow) to "INITIAL SET", then press **OK** or **▷**.



3 Select clock set

On the front panel:
Press **PR ▲▼** to move the highlight bar (arrow) to "CLOCK SET", then press **OK**.

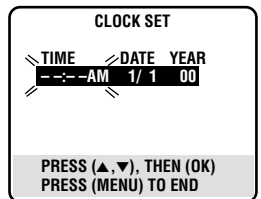
On the Remote:
Press **△▽** to move the highlight bar (arrow) to "CLOCK SET", then press **OK** or **▷**.



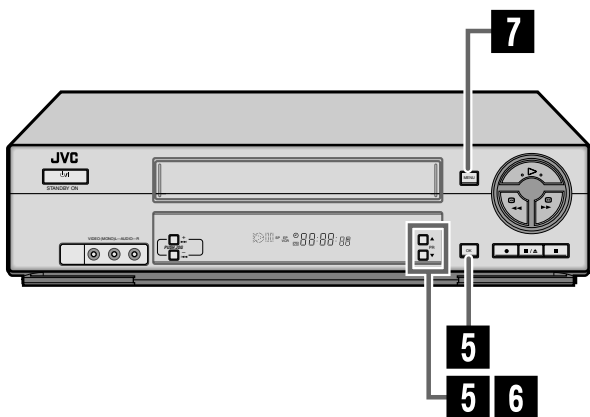
4 Set time

On the front panel:
Press **PR ▲▼** until the desired time appears, then press **OK**.

On the Remote:
Press **△▽** until the desired time appears, then press **OK** or **▷**.



- Holding **PR ▲▼** or **△▽** changes the time in 30-minute intervals.



5 Set date

On the front panel:

Press **PR ▲▼** until the desired date appears, then press **OK**.

On the Remote:

Press **△▽** until the desired date appears, then press **OK** or **▷**.

- Holding **PR ▲▼** or **△▽** to changes the date in 15-day intervals.

6 Set year

On the front panel:

Press **PR ▲▼** until the desired year appears.

On the Remote:

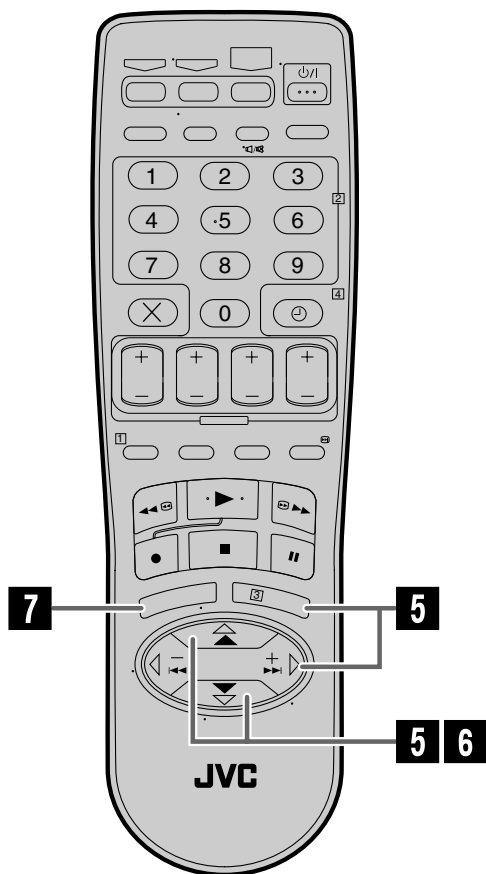
Press **△▽** until the desired year appears.

7 Start clock

Press **MENU** and normal screen appears.

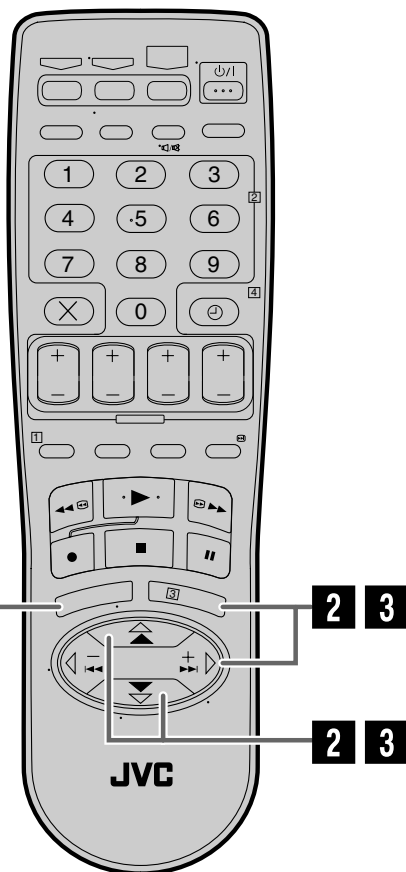
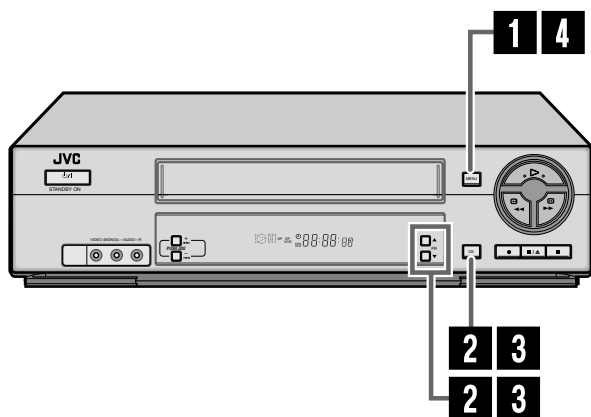
To make corrections any time during the process

Press **OK** or **▷** repeatedly until the item you want to change blinks, then press **PR ▲▼** or **△▽**.



Tuner Setting

Turn on the VCR and the TV, and select the VCR channel 13 (or AV mode) on the TV.



Setting channels automatically

— Auto Channel Set

Use Auto Channel Set only if channels have not been set correctly by the Plug & Play setting or if you use a cable box. If you want to add or delete channels, use Manual Channel Set (pg. 11).

1 Access Main Menu screen

Press MENU.

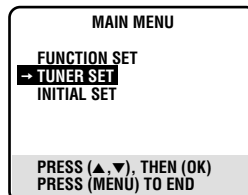
2 Access Tuner Set screen

On the front panel:

Press PR ▲▼ to move the highlight bar (arrow) to “TUNER SET”, then press OK.

On the Remote:

Press ▲▼ to move the highlight bar (arrow) to “TUNER SET”, then press OK or ▷.



3 Perform Auto Channel Set

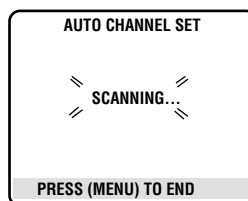
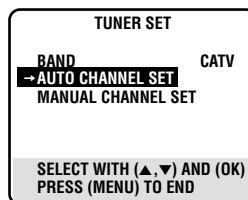
You can automatically set the receivable channels in your area in the order of their frequencies.

On the front panel:

Press PR ▲▼ to move the highlight bar (arrow) to “AUTO CHANNEL SET”, then press OK.

On the Remote:

Press ▲▼ to move the highlight bar (arrow) to “AUTO CHANNEL SET”, then press OK or ▷.



NOTES:

- When Auto Channel Set is complete, “SCAN COMPLETED” appears on screen.
- If the scan was unsuccessful, “SCAN COMPLETED—NO SIGNAL” appears on screen. Check the connections and start again.

4 Return to normal screen

Press MENU.

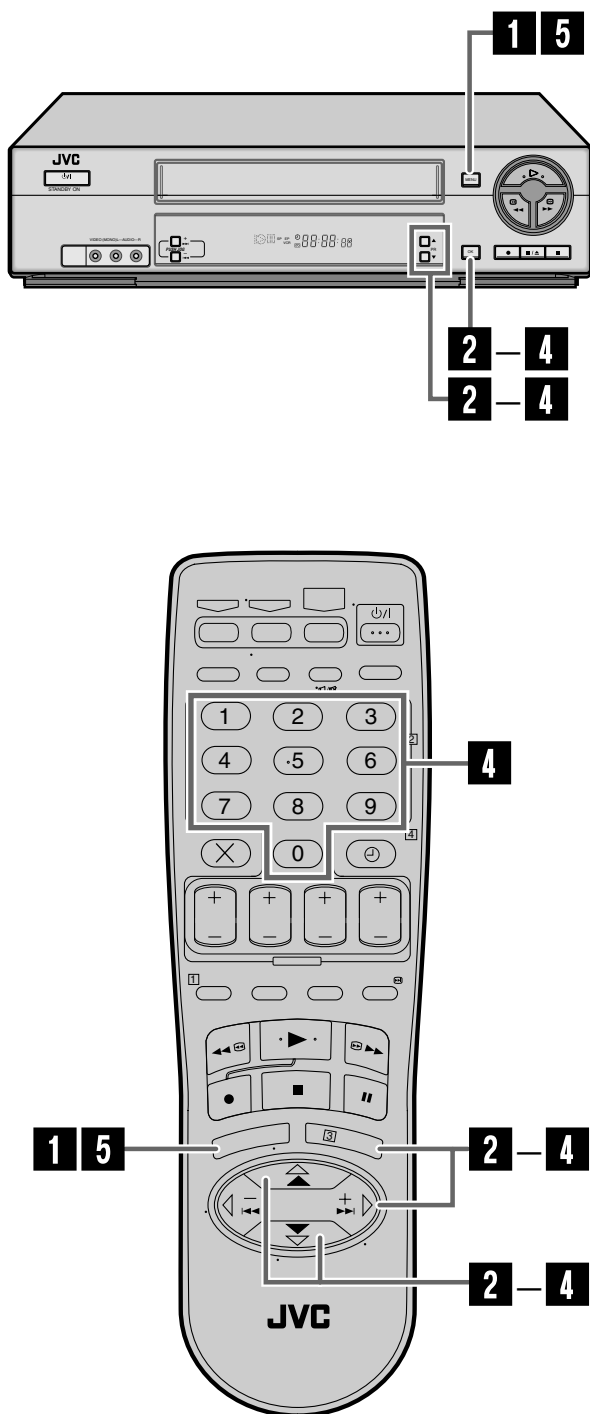
INFORMATION

The VCR selects the correct band (TV or CATV) automatically during Auto Channel Set. The selected band will be displayed on the right side of “BAND” on the Tuner Set screen.

Setting channels manually

— Manual Channel Set

You can add the channels you want or delete the channels you do not want manually.



1 Access Main Menu screen

Press **MENU**.

2 Access Tuner Set screen

On the front panel:

Press **PR ▲▼** to move the highlight bar (arrow) to “TUNER SET”, then press **OK**.

On the Remote:

Press **△▽** to move the highlight bar (arrow) to “TUNER SET”, then press **OK** or **▷**.

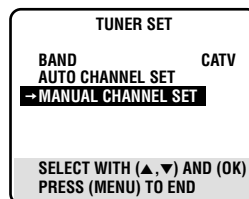
3 Access Manual Channel Set screen

On the front panel:

Press **PR ▲▼** to move the highlight bar (arrow) to “MANUAL CHANNEL SET”, then press **OK**.

On the Remote:

Press **△▽** to move the highlight bar (arrow) to “MANUAL CHANNEL SET”, then press **OK** or **▷**.

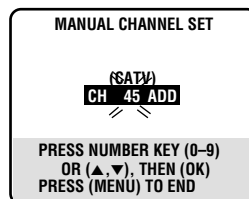


4 Add or skip desired channels

To add channels

On the Remote ONLY:

- ① Press the **Number** keys to input a channel number you want to add.
- ② Press **OK** or **▷** to set to “ADD”.
- ③ Repeat ① and ② to add other channels.



To skip channels

On the front panel:

- ① Press **PR ▲▼** to select a channel number you want to skip.
- ② Press **OK** to set to “SKIP”.
- ③ Repeat ① and ② to skip other channels.

On the Remote:

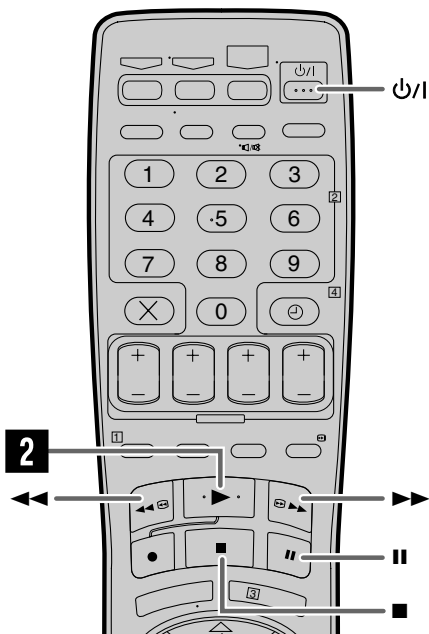
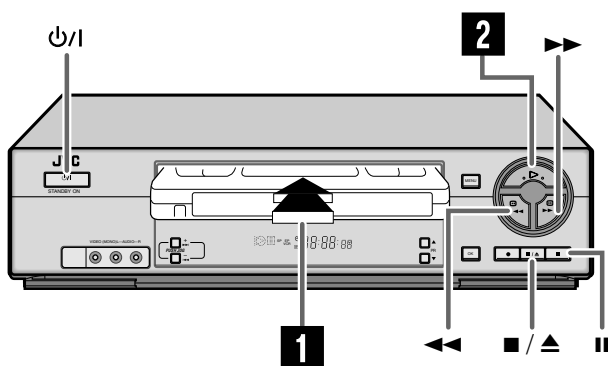
- ① Press the **Number** keys or **△▽** to input a channel number you want to skip.
- ② Press **OK** or **▷** to set to “SKIP”.
- ③ Repeat ① and ② to skip other channels.

5 Return to normal screen

Press **MENU**.

Basic Playback

Turn on the VCR and the TV, and select the VCR channel 13 (or AV mode) on the TV.



Clean the video heads using a dry cleaning cassette — TCL-2UX — when:

- Rough, poor picture appears while a tape is played back.
- The picture is unclear or no picture appears.
- "USE CLEANING CASSETTE" appears on the screen (only with "SUPERIMPOSE" set to "ON": pg. 30.)

1 Load a cassette

Make sure the window side is up, the rear label side is facing you and the arrow on the front of the cassette is pointing towards the VCR. Do not apply too much pressure when inserting.

- The VCR turns on automatically.
- The counter is automatically reset to "0:00:00".
- If the cassette's record safety tab has been removed, playback begins automatically.

2 Start playback

Press ►.

- Tape speed (SP or EP) is automatically detected.
- If "B.E.S.T." is set to "ON" (default setting: pg. 30), "B.E.S.T. PICTURE SYSTEM" appears on the screen, and this VCR checks the tape condition during automatic tracking.

To stop playback

Press ■ on the Remote or ■ / ▲ on the front panel.

To pause playback

Press II. To resume playback, press ►.

To rewind the tape

Press ◀ — when the tape is not running.

To fast-forward the tape

Press ▶ — when the tape is not running.

To eject the tape

Press ■ / ▲ on the front panel when the tape is not running.

- You can also eject the cassette with the VCR turned off.

To turn off the VCR

Press 0/I.

INFORMATION

This VCR is equipped with SQPB (S-VHS QUASI PLAYBACK) that lets you watch tapes recorded in the S-VHS format with regular VHS resolution.

- SQPB does not deliver Super VHS resolution.
- S-VHS recording is not possible with this VCR.

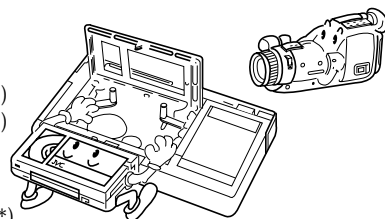
Usable cassettes

Full-Size VHS
T-30 (ST-30**)
T-60 (ST-60**)
T-90
T-120 (ST-120**)
T-160 (ST-160**)
ST-210**

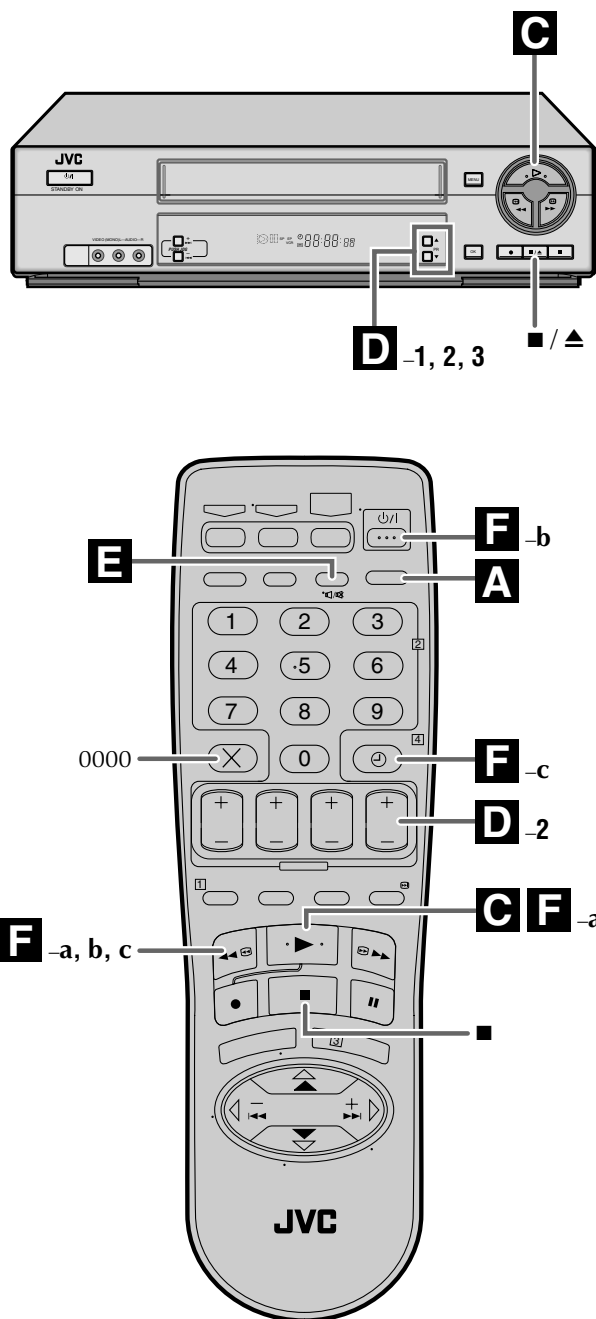
Compact VHS*
TC-20 (ST-C20**)
TC-30 (ST-C30**)
TC-40 (ST-C40**)

* Compact VHS camcorder recordings can be played on this VCR. Simply place the recorded cassette into a VHS Cassette Adapter and it can be used just like any full-sized VHS cassette.

** This VCR can record on regular VHS and Super VHS cassettes. However, it will record regular VHS signals only.



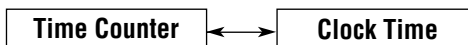
Basic Playback Features



A Changing display information

Press **--:--** during playback.

Each time you press the button, the front display panel shows the time counter and the clock time alternately.



- To display the VCR status including the time counter and the clock time on the TV screen, see "Showing on-screen display" (pg. 18).

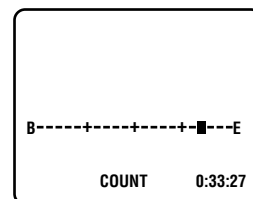
To reset the time counter, press **0000** on the Remote. The counter reading becomes "0:00:00". It is also reset when a tape is inserted.

B Checking tape position

The tape position indicator appears on screen in the following cases:

- When you change the VCR operation mode from the stop mode to fast forward or rewind mode.
- When you perform an Index Search (pg. 15) or Instant ReView (pg. 15).

The position of "■" in relation to "B" (Beginning) or "E" (End) shows you where you are on the tape.



NOTES:

- "SUPERIMPOSE" must be set to "ON", or the indicator will not appear (pg. 30).
- It may take a few seconds for the tape position indicator to be displayed.

C Playing back tape repeatedly

Repeat Play

You can play back a tape repeatedly (100 times).

While playing back a tape, press and hold ▶ for more than 5 seconds.

The play indicator (▶) on the front display panel starts flashing slowly, and a tape will be played back 100 times.

To stop playback, press ■ on the Remote or ■ / ▲ on the front panel.

D Adjusting tracking condition

— Tracking Adjustments

Automatic tracking adjustment

This VCR automatically adjusts the tracking condition. Whenever you insert a tape and start playback, automatic tracking starts working and continuously analyzes the signal to enable optimum picture quality during playback.

Manual tracking adjustment

If automatic tracking cannot eliminate noises well during playback, use the manual tracking following the procedures below.

- You can also use the manual tracking during slow motion playback (☞ pg. 20).

1 Activate manual tracking

Press **PR ▲** and **▼** on the front panel at the same time during playback.

2 Eliminate the noises on the TV screen

Press **PR ▲** and **▼** on the front panel (or **PR +** and **-** on the Remote).

- Press it briefly for a fine adjustment, or press and hold for coarse adjustment. Watch the screen and continue adjustment until optimum picture and sound quality are achieved.

3 Reactivate automatic tracking

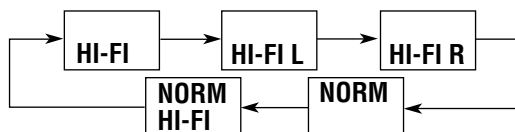
Press **PR ▲** and **▼** on the front panel at the same time. The automatic tracking becomes active again.

E Selecting monitor sound

— Audio Monitor

You can select the desired monitor sound.

While playing back a tape on which stereo sound or bilingual sound is recorded, press AUDIO on the Remote. Each time you press the button, sound changes as follows:



HI-FI: Normally select this.

Hi-Fi sound is played back.

HI-FI L: Sound on the left Hi-Fi channel is played back.

HI-FI R: Sound on the right Hi-Fi channel is played back.

NORM: Sound on the normal track is played back.

NORM

HI-FI: Both sounds on the Hi-Fi track and normal track are mixed and played back.

NOTES:

- The above indication appears when "SUPERIMPOSE" is set to "ON" (☞ pg. 30), though the monitor sound changes in sequence.
- If the tape being playback has no Hi-Fi sound track, the normal sound track will be played back regardless of this setting.
- If RF connection (☞ pg. 5) is used for viewing pictures on the TV, sound will be monaural even though you select "HI-FI".
- You can also use the menu to select your desired monitor sound. (☞ pg. 32)

F Automatic operations after rewinding — Next Function Memory

The Next Function Memory "tells" the VCR what to do after rewinding is complete.

- Ensure that the VCR is in stop mode.

a- For Automatic Playback Start

Press **◀**, then press **▶** within 2 seconds.

b- For Automatic Power Off

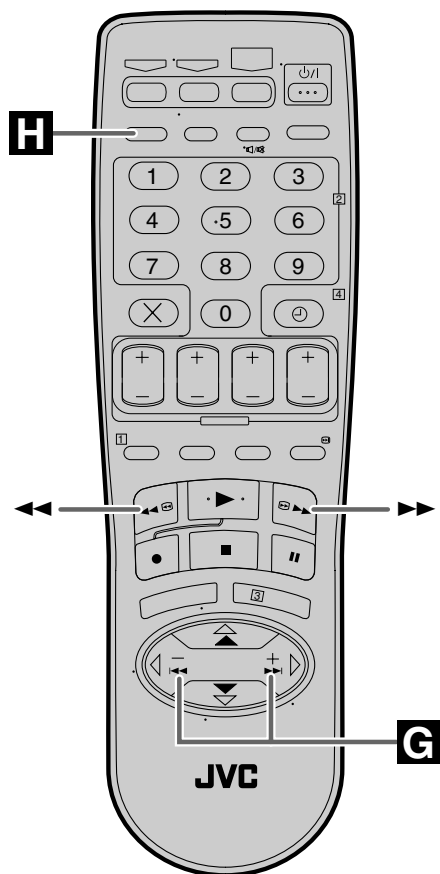
Press **◀**, then press **⏻** within 2 seconds.

c- For Automatic Timer Standby

Press **◀**, then press **⌚** within 2 seconds.

NOTE:

It is not possible to select the Automatic Timer Standby function if the cassette's record safety tab is removed.



G Locating beginning of recordings — Index Search

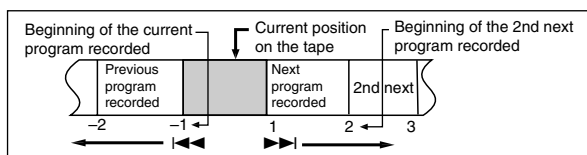
Index codes are placed on the tape at the beginning of each recording when recording on this VCR. You can find and automatically play back from the beginning of any recording using the Index Search function.

1 Start search

While the tape is not running, press ◀ or ▶ (◀◀◀ or ▶▶▶) on the Remote.

2 Access distant code

To access a recording of 2 to 9 index codes away, press ◀ or ▶ (◀◀◀ or ▶▶▶) repeatedly until the correct number is displayed on screen (only if “SUPERIMPOSE” is set to “ON”) (☞ pg. 30). Playback begins automatically when the desired recording is located.



- If you want to find the very beginning of the desired program, press ◀◀◀ or ▶▶▶ after playback starts.

NOTE:

An index code is not placed on the tape when recording is resumed from recording pause.

H Locating beginning of timer recordings — Instant ReView

At the press of a button, you can turn on the VCR, rewind the tape and begin to view the most recent timer-recorded program.

Press **RE-VIEW** on the Remote after ensuring that the VCR is in the timer recording standby mode.

- The VCR turns on, and rewinds to the index code indicating the beginning of the last timer-recorded program, then begins playback automatically.
- You can access a program of 2 to 9 index codes away from the current position on the tape. If, for example, you have 5 programs recorded and you want to watch the third one, press **RE-VIEW** three times.
- If you want to find the very beginning of the desired program, press ◀◀◀ or ▶▶▶ after playback starts.
- If the tape is already rewound when **RE-VIEW** is pressed, it will play the tape from the beginning. It will not fast-forward to an index code.
- The Instant ReView function will also operate if the VCR is turned on.

Other Useful functions for playback

You can also use the following functions for recording.

• B.E.S.T. (☞ pg. 30)

When this function is set to “ON”, this VCR checks the condition of the tape in use during playback and recording, and compensates to provide the highest-possible playback pictures.

• Picture Control (☞ pg. 30)

This function helps you to adjust the playback picture quality according to your preference.

• Video Stabilizer (☞ pg. 31)

You can automatically correct vertical vibrations in the picture when playing back unstable recordings made on another VCR.

• Blue Back (☞ pg. 31)

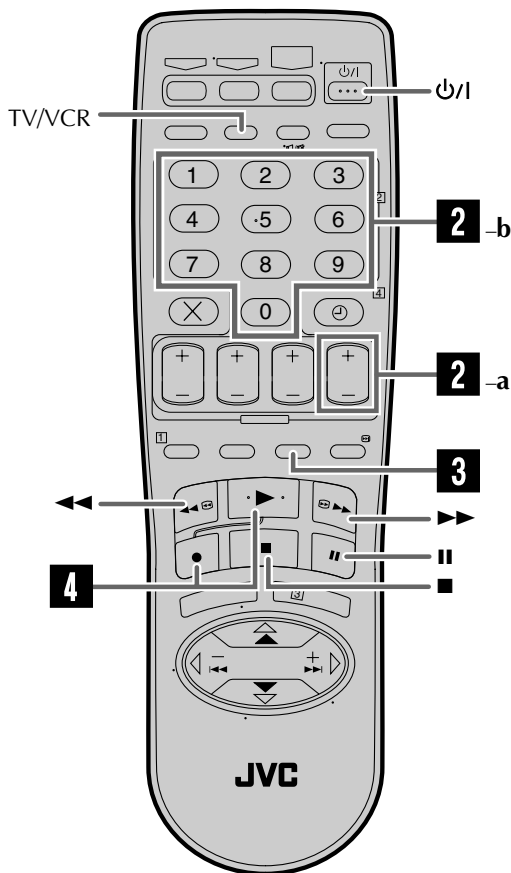
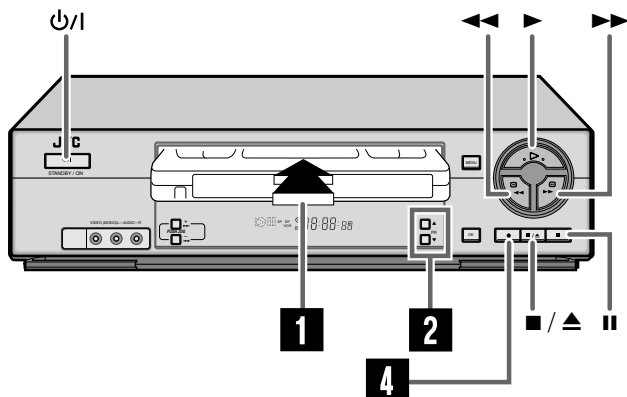
When this function is set to “ON”, the TV screen becomes all blue in the following cases:

- When receiving a channel not in use.
- When stopping playback.

* The ◀◀◀ ▶▶▶ buttons on the VCR's front panel function the same as the ◀ ▶ buttons on the Remote.

Basic Recording

Turn on the VCR and the TV, and select the VCR channel 13 (or AV mode) on the TV.



It may be unlawful to record or play back copyrighted material without the consent of the copyright owner.

1 Load a cassette

Make sure the record safety tab is intact. If not, cover the hole with adhesive tape before inserting the cassette.

2 Select recording channel

On the front panel:
Press **PR ▲▼**.

On the Remote:

a- Press **PR + or -**.

or

b- Press the **Number** keys.

- If you connect the TV and the VCR only using the RF connection, press **TV/VCR** on the Remote so that the VCR mode indicator lights on the front display panel to view the program to be recorded.

3 Set tape speed

On the Remote ONLY:

Press **/// (SP/EP)** to set the recording speed.


4 Start recording

On the front panel:

Press **●**.

On the Remote:

While holding **●**, press **▶**.

- If "B.E.S.T." is set to "ON" (default setting:  pg. 30), this VCR checks the tape condition for about seven seconds, then starts recording. (This means that the first seven seconds of the program will not be recorded.) If this is inconvenient for you, follow the steps below:
 - 1 Press **●** and **||** to start B.E.S.T.
 - 2 Then press **▶** to start recording after B.E.S.T. is complete.

To pause recording

Press **||**. To resume recording, press **▶**.

To stop recording

Press **■** on the Remote or **■ / ▲** on the front panel.

To rewind the tape

Press **◀◀** – when the tape is not running.

To fast-forward the tape

Press **▶▶** – when the tape is not running.

To eject the tape

Press **■ / ▲** on the front panel when the tape is not running.

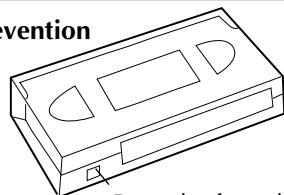
- You can also eject the cassette with the VCR turned off.

To turn off the VCR

Press **⏻**.

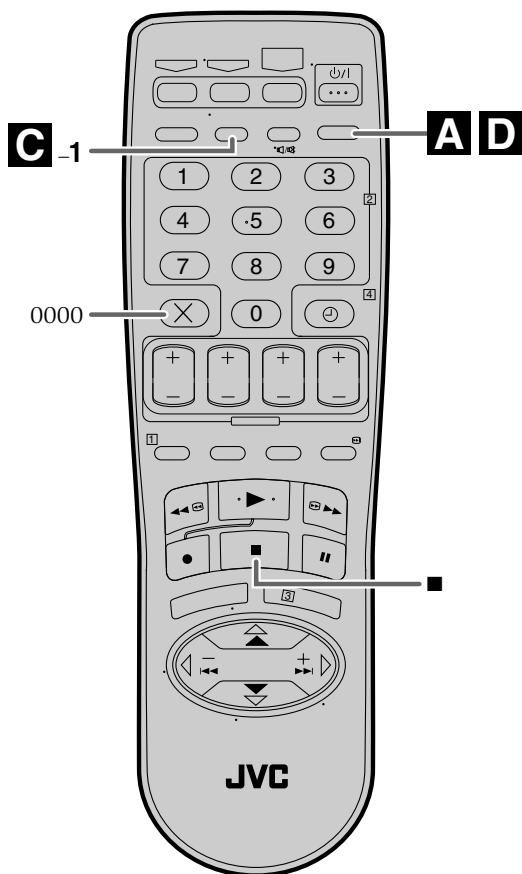
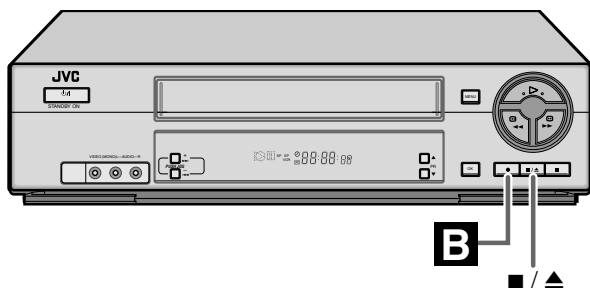
Accidental erasure prevention

To prevent accidental recording on a recorded cassette, remove its record safety tab. To record on it later, cover the hole with adhesive tape.



Record safety tab

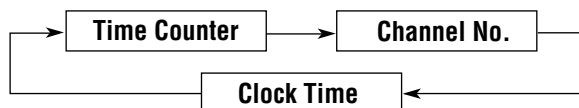
Basic Recording Features



A Changing display information

Press **■ / ▲** on the Remote during recording or recording pause.

Each time you press the button, the front display panel shows the time counter, channel number and the clock time in sequence.



- To display the VCR status including the time counter, channel number, and the clock time on the TV screen, see “Showing on-screen display” (pg. 18).


To reset the time counter, press **0000** on the Remote. The counter reading becomes “0:00:00”. It is also reset when a tape is inserted.

B Specifying recording length

— Instant Timer Recording (ITR)

You can easily specify the recording length from 30 minutes to 6 hours and the VCR shuts off after recording is finished.

During recording, press **●** on the front panel repeatedly until the recording length you want appears on the front display panel.

The  (record) indicator starts flashing.

Each time you press the button, recording length increases in 30-minute intervals (up to 6 hours).

To cancel an ITR, press **■** on the Remote or **■ / ▲** on the front panel.

C Watching one program while recording another

1 Engage TV mode

During recording...

- **If you connect the TV and the VCR only using the RF connection** (pg. 5) to view pictures from the VCR, press **TV/VCR** on the Remote so that VCR mode indicator goes off from the front display panel. The TV broadcast being recorded disappears.
- **If you are using the AV connection** (pg. 5) to view pictures from the VCR, change the TV’s input mode from AV to TV.

2 Select channel for viewing

Select the channel, you want to watch on the TV.

D Showing on-screen display

When "SUPERIMPOSE" is set to "ON" (☞ pg. 30), you can see the current VCR status on the TV screen.

- For more detailed information about the on-screen display, see page 45.

1 Display VCR status on TV screen

During recording or recording pause, press --:-- on the Remote.

All indications corresponding to the current VCR status are displayed for 5 seconds. The time counter remains on the screen indicating the elapsed time.

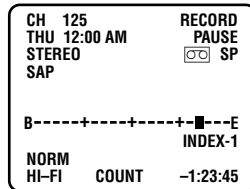
- The indications are not recorded.

2 Erase on-screen display

Press --:-- on the Remote again.

NOTES:

- If the VCR is in recording pause mode, "RECORD/PAUSE" is always displayed.
- The VCR status can be also displayed during playback.



Other useful function for recording

You can also use the following function for recording.

• Recording Resume Function

If there is a power outage during recording (or Instant Timer Recording, or timer recording), the recording will resume automatically when the power is restored to the VCR. (No setting is required for this function.)

• B.E.S.T. (☞ pg. 30)

When this function is set to "ON", this VCR checks the condition of the tape in use during playback and recording, and compensates to provide the highest-possible pictures.

• Second Audio Recording (☞ pg. 32)

This VCR's built-in MTS decoder enables reception of Multichannel TV Sound broadcast.

To record a SAP program received, set "2ND AUDIO RECORD" to "ON" using the menu screen.

NOTES:

When the channel is changed on the VCR;

- The "STEREO" indication appears on the screen for about 5 seconds if the program is a stereo broadcast.
- The "SAP" indication appears on the screen for about 5 seconds if the program is a SAP broadcast.
- Both indication appear when a stereo program is accompanied by SAP sound.

Special Effect Playback

A Locating particular scene rapidly — Picture Search

■ High-Speed Picture Search:

Possible during normal playback or still picture playback. You can rapidly locate a particular scene on the tape.

To do forward picture search, press .

To do reverse picture search, press .


- If you press and hold the button for more than 2 seconds, simply releasing it cancels the picture search, and normal playback resumes.


To resume normal playback, press .

■ Variable-Speed Picture Search:

You can change the speed of picture search.


How to use the PUSH JOG buttons:


To do forward picture search, press  repeatedly. Each time you press the button, the search speed increases.

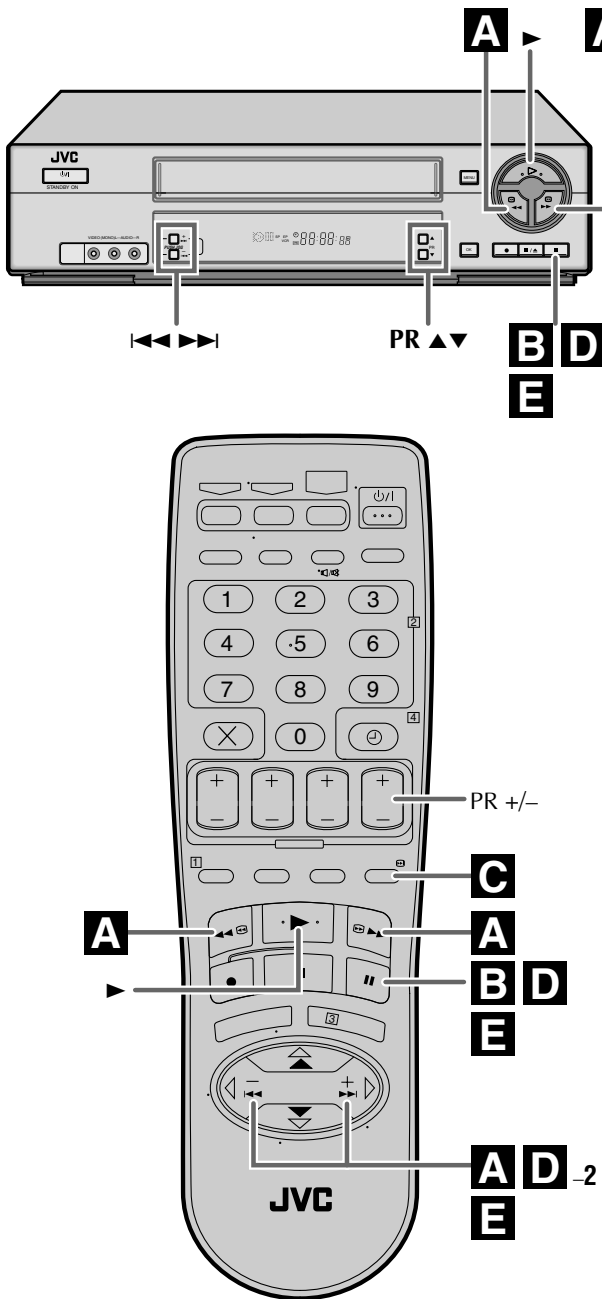
- To decrease the speed while forward picture search (toward normal playback, then reverse picture search), press  repeatedly.



To do reverse picture search, press  repeatedly.

Each time you press the button, the search speed increase while reverse picture search.

- To decrease the speed while reverse picture search (toward normal playback, then forward picture search), press  repeatedly.

To resume normal playback, press .



(The  buttons on the VCR's front panel function the same as the  buttons on the Remote.)

B Viewing still picture**— Still Picture Playback**

Press **II** during normal playback.

Playback is frozen and a still picture appears.

To resume normal playback, press **▶**.

NOTE:

To obtain a noiseless still picture, it may be necessary to adjust tracking in slow motion playback before starting still picture playback.

C Skipping unwanted portions**—Skip Search**

You can skip over (view at high speed) unwanted portions of the tape.

Press **30 SEC** **▶** on the Remote once to 4 times during playback.

Each press initiates a 30-second period of high speed playback (up to 2 minutes). When the specified portion of the tape is skipped, normal playback resumes automatically.

To return to normal playback during Skip Search, press **▶**.

D Viewing still picture frame by frame**— Frame-by-Frame Playback****1 Pause during playback**

Press **II**.

Playback is frozen and a still picture appears.

2 Advance or reverse still picture

To advance a still picture, press **▷** on the Remote (or **II**) repeatedly.

To reverse a still picture, press **◁** on the Remote repeatedly.

To resume normal playback, press **▶**.

E Viewing slow motion picture**— Slow Motion Playback**

During normal playback:

- Press **◁** to decrease the playback speed. Each time you press the button, the speed decreases (toward reverse slow motion playback, then reverse picture search).
- Holding **II** for more than 2 seconds also starts forward slow motion playback.

To resume normal playback, press **▶**.

During still picture playback:

- Press and hold **▷** to start forward (or **◁** to start reverse) slow motion playback. When you release the button, slow motion playback stops and a still picture appears.
- Holding **II** for more than 2 seconds also starts forward slow motion playback.

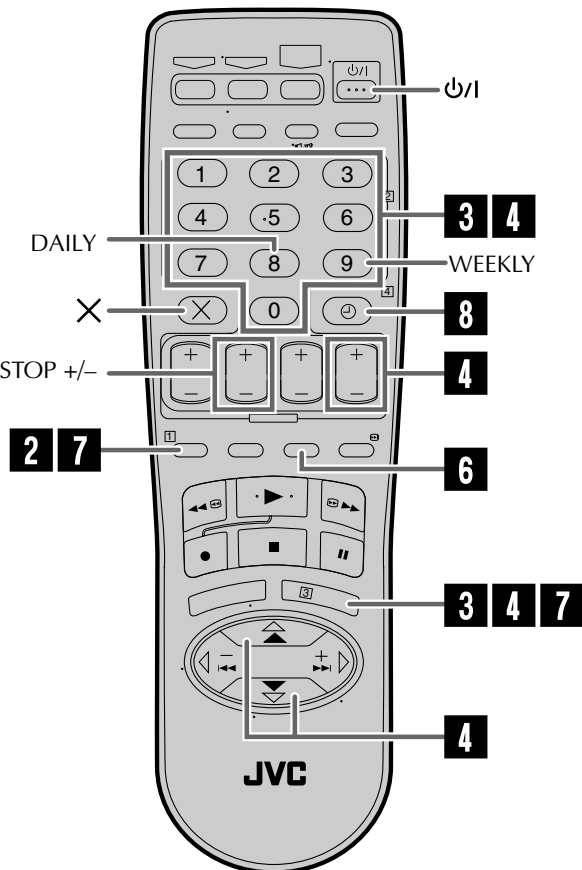
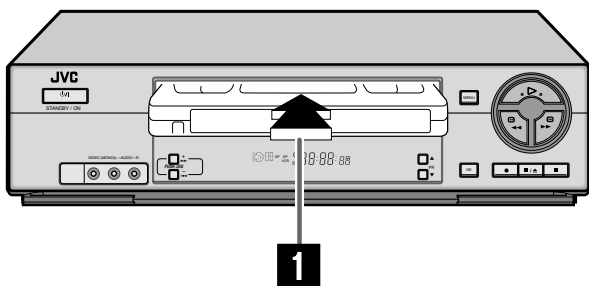
To resume normal playback, press **▶**.

NOTE:

Manual tracking is possible during slow motion playback. During slow motion playback, simply press **PR ▲** and **▼** on the front panel or **PR +** or **-** on the Remote to adjust tracking.

G-CODE® Timer Programming

Turn on the VCR and the TV, and select the VCR channel 13 (or AV mode) on the TV.



Timer recording allows you to program the VCR to automatically record a broadcast at some future time. Up to 8 timer recording programs can be made using G-CODE timer programming or Express timer programming method (see pg. 25) as far as a year in advance. The G-CODE timer programming system eliminates the need to input channel, date, start and stop time data when programming timer recording settings. Simply key in the G-CODE number for the TV broadcast you wish to record and the VCR's timer will be automatically programmed. (The G-CODE programming numbers are the numbers next to the program in most TV listing.)

1 Load a cassette

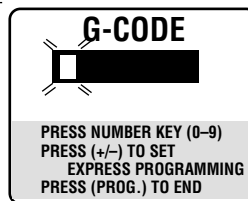
Make sure the record safety tab is intact. If not, cover the hole with adhesive tape, then load it into the VCR.

- The VCR turns on, and the counter is reset, automatically.

2 Access G-CODE program screen

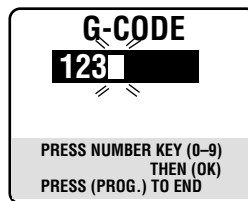
Press **PROG** on the Remote.

- The clock must be set to access the G-CODE program screen. If you have not set the clock, the Main Menu screen appears after an error message is displayed. Refer to page 6 for the Plug & Play setting or page 8 for the clock setting procedure.



3 Enter G-CODE number

Press the appropriate **Number** keys to input the G-CODE number printed in the TV listings for the TV broadcast you wish to record, then press **OK**.



Then;

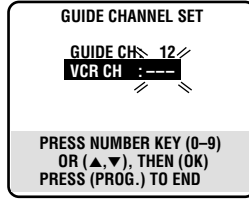
If the Guide Channel Set screen appears — go to step **4**.

If the G-CODE Program screen appears — go to step **5**.

- To make corrections, press **X** and input the correct G-CODE number.

4 Input receiving channel number

The guide channel number, which is assigned to the TV or cable station for the G-CODE number that you entered in step 3, will appear automatically on the Guide Channel Set screen.



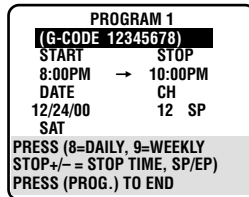
Press the **Number** keys (or **PR +/-** or **Δ▽**) to input the number of the channel on which the broadcast for the G-CODE number is received on, then press **OK** the VCR or cable box.

- The Guide Channel Set screen appears only when you input the G-CODE number of a station for which the guide channel number has not been set previously.

5 Check program data

The G-CODE number you entered and the corresponding timer recording program is displayed on the Program screen. Check to make sure it is accurate.

- To change the stop time, press **STOP +/-**.
- To timer-record daily (Monday–Friday) or weekly serials, press **DAILY** (number “8”) or **WEEKLY** (number “9”). “DAILY” or “WEEKLY” appears on the Program screen. Pressing the button again makes each corresponding display disappear.
- If you made a mistake, press **X** to access the G-CODE program screen again and input the correct G-CODE number.
- If an incorrect G-CODE number or the one for a broadcast already finished has been inputted, “ERROR” is displayed for about 5 seconds, then the G-CODE program screen reappears.



6 Set tape speed

Press **///** (SP/EP).

7 Return to normal screen

Press **PROG** or **OK**.

“PROGRAM COMPLETED” appears on the screen for about 5 seconds, then normal screen appears.

- If “PROGRAM NOT COMPLETED PROGRAM OVERLAP” appears, you have another program overlapping the program you have just made. The Program Check screen appears and conflicting programs will start blinking. You can now correct the conflicting programs. See “When programs overlap each other” on page 28.

8 Engage timer recording standby mode

Press **⊖**.

The VCR turns off automatically and “⊖” is displayed on the front display panel.

To use the VCR while it is in timer recording standby mode

Press **⊖** to cancel the timer recording standby mode, then press **⏻/⏮** to turn on the VCR.

DO NOT forget to put the VCR into timer recording standby mode again by pressing **⊖** after you use the VCR; otherwise, you cannot record the broadcasts you want.

- When “AUTO TIMER” (ⓘ pg. 30) is set to “ON”, the timer recording standby mode is automatically engaged when the VCR is turned off. It is temporarily canceled when the VCR is turned on. You do not have to press **⊖** to engage or disengage the timer recording standby mode.

IMPORTANT

If you have moved to a different area or if a broadcasting station’s channel number has been changed, the wrong VCR CH or CABLE CH number will be displayed on the Program screen in step 5. When this happens, set the correct guide channel number for that station. (ⓘ pg. 23, “G-CODE System Setup”)

NOTES:

- Even if a power failure occurs, the VCR keeps your timer programs. In case of a power failure after programing, the VCR’s memory backup keeps your selections for approx. 3 minutes.
- To timer-record cable channels received through a cable box, be sure to keep the cable box turned on.

G-CODE[®] System Setup

Turn on the VCR and the TV, and select the VCR channel 13 (or AV mode) on the TV.

IMPORTANT

If you have moved to a different area or if a broadcasting station's channel number has been changed, the wrong VCR CH or CABLE CH number will be displayed on the G-CODE Program screen (→ step 5 on page 22). When this happens, perform the following steps to set the correct guide channel number for that station.

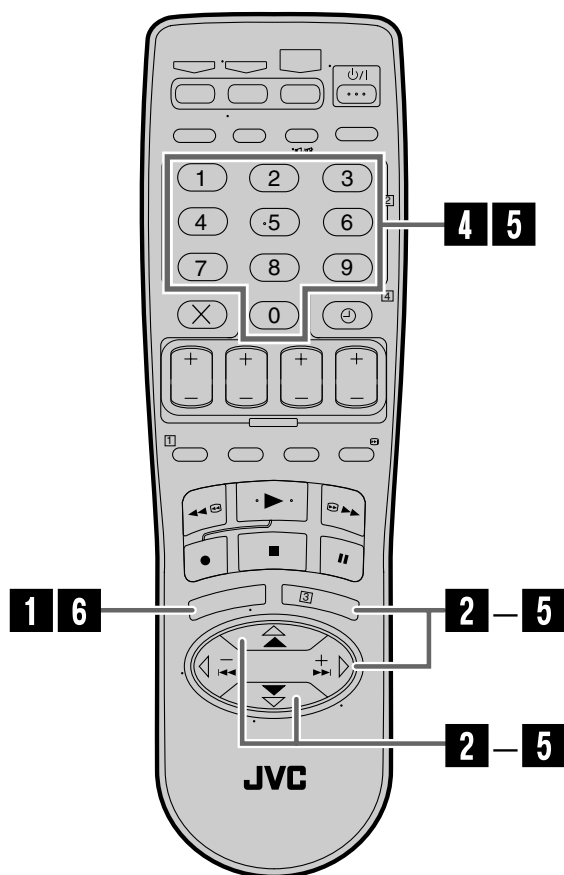
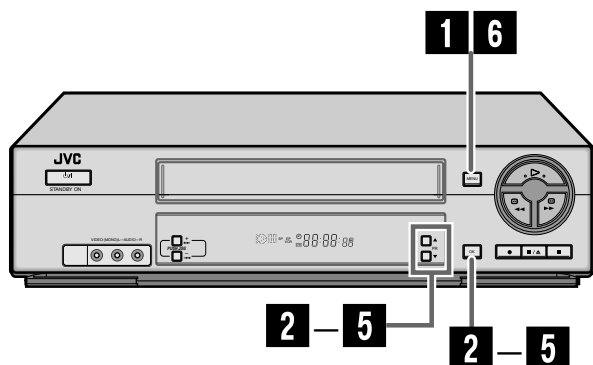
To ensure that G-CODE timer recording operates correctly, it is necessary to set the G-CODE "Guide Channel Set" for each station. Read the following information carefully.

G-CODE guide channel matching

The G-CODE programming system assigns a G-CODE guide channel to the TV channels and the cable channels. These guide channel numbers are also called the G-CODE channel codes. Most TV listings have a section, usually a chart, indicating the guide channel numbers assigned to each station. For accurate G-CODE programming, the G-CODE guide channel number for each station should match the channel number on which it is received in your area.

NOTES:

- In many instances, the G-CODE guide channel numbers for cable and broadcast TV stations DO NOT match the channel number on which it is received by your VCR or cable box. Check your TV listing, or contact your cable supplier for details.
- Many TV stations can be viewed on cable. Check your TV listing, or contact your cable supplier for details.



1 Access Main Menu screen

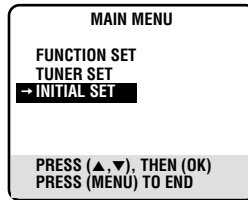
Press **MENU**.

2 Access Initial Set screen**On the front panel:**

Press **PR ▲▼** to move the highlight bar (arrow) to "INITIAL SET", then press **OK**.

On the Remote:

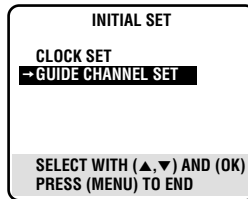
Press **△▽** to move the highlight bar (arrow) to "INITIAL SET", then press **OK** or **▷**.

**3 Access Guide Channel Set screen****On the front panel:**

Press **PR ▲▼** to move the highlight bar (arrow) to "GUIDE CHANNEL SET", then press **OK**.

On the Remote:

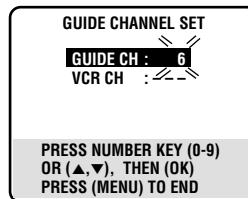
Press **△▽** to move the highlight bar (arrow) to "GUIDE CHANNEL SET", then press **OK** or **▷**.

**4 Input guide channel number****On the front panel:**

Press **PR ▲▼** to select the G-CODE guide channel number as shown in the TV listing, then press **OK**.

On the Remote:

Press the **Number** keys or **△▽** to input the G-CODE guide channel number as shown in the TV listing, then press **OK** or **▷**.



(EX.) When inputting the guide channel number 6 for WNJU (Ind.)

5 Input receiving channel number**On the front panel:**

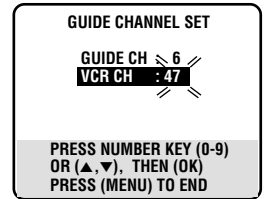
Press **PR ▲▼** to select the number of the channel on which the guide channel's broadcast are received, then press **OK**.

On the Remote:

Press the **Number** keys or **△▽** to input the number of the channel on which the guide channel's broadcasts are received, then press **OK** or **▷**.

- Repeat steps **4** and **5** for each instance.

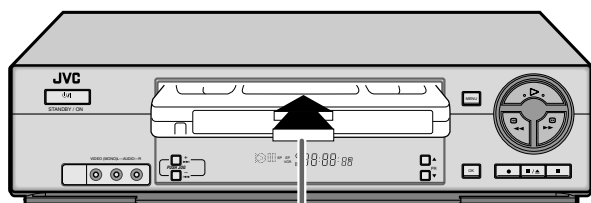
(EX.) If WNJU (Ind.) is received on channel 47

**6 Return to normal screen**

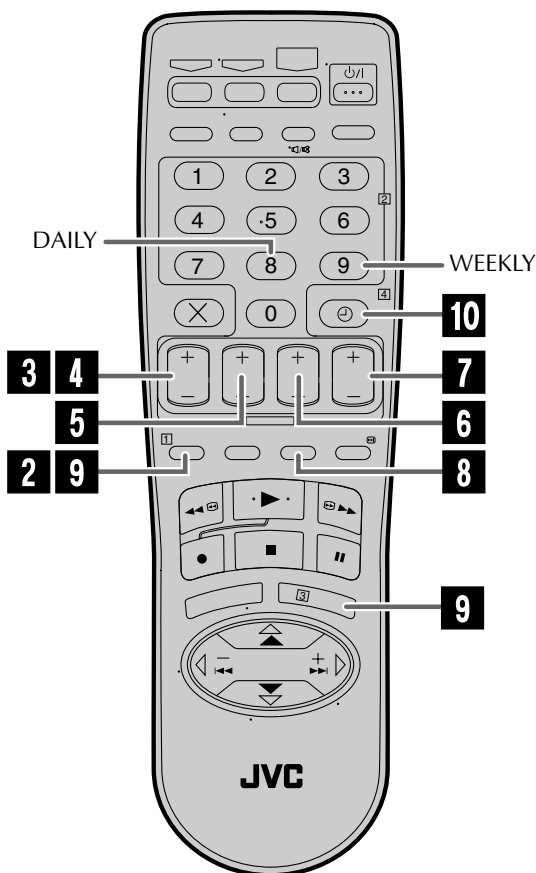
Press **MENU**.

Express Timer Programming

Turn on the VCR and the TV, and select the VCR channel 13 (or AV mode) on the TV.



1



You can directly program the VCR's timer to record up to 8 broadcasts, as far as a year in advance. Remember, the clock must be set before you program the timer (see pg. 6 or 8).

1 Load a cassette

Make sure the record safety tab is intact. If not, cover the hole with adhesive tape, then load the it into the VCR.

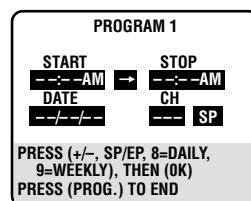
- The VCR turns on, and the counter is reset, automatically.

2 Access G-CODE program screen

Press **PROG.**

3 Access Program screen

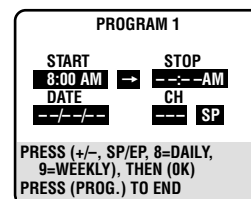
Press **START +/-**. (If no program is stored, "PROGRAM 1" appears.)



4 Set program start time

Press **START +/-** repeatedly to enter the time you want recording to start.

- Press and hold **START +/-** to increase the time in 30-minute intervals.



5 Set program stop time

Press **STOP +/-** repeatedly to enter the time you want recording to stop.

- Press and hold **STOP +/-** to increase the time in 30-minute intervals.

6 Set program date

Press **DATE +/-**. (The current date is displayed on the screen. The date you enter appears in its place.)

7 Set channel number

Press **PR +/-**.

- Holding down **PR +/-** rapidly changes the channel numbers.
- If you receive your programs through a cable box, select the cable box output channel — the channel on which you view the cable box programs on the TV.

8 Set tape speed

Press **///** (SP/EP) to set the tape speed.

9 Return to normal screen

Press **PROG** or **OK**.

“PROGRAM COMPLETED” appears on the screen for about 5 seconds, then normal screen appears.

- If “PROGRAM NOT COMPLETED PROGRAM OVERLAP” appears, you have another program overlapping the program you have just made. The Program Check screen appears and conflicting programs will start blinking. You can now correct the conflicting programs. See “When programs overlap each other” on page 28.

10 Engage timer recording standby mode

Press **⏻**.

The VCR turns off automatically and “⏻” is displayed on the front panel display.

To timer-record daily (Monday–Friday) or weekly serials

Press **DAILY** (number “8”) or **WEEKLY** (number “9”) anytime during steps **3** through **8**.

“DAILY” or “WEEKLY” appears on the Program screen.

- Pressing the button again makes the corresponding indication disappear.

To use the VCR while it is in timer recording standby mode

Press **⏻** to cancel the timer recording standby mode, then press **⏻/I** to turn on the VCR.

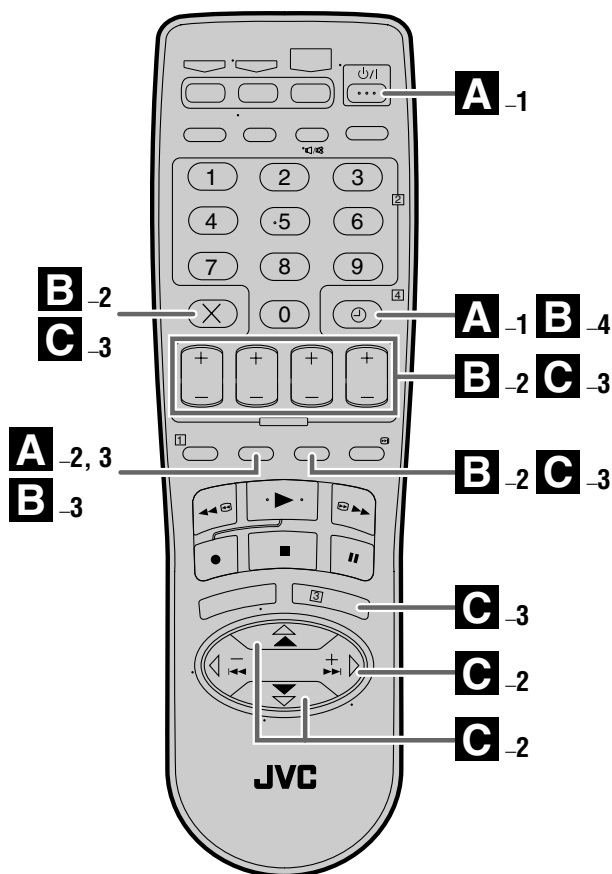
DO NOT forget to put the VCR into timer recording standby mode again by pressing **⏻** after you use the VCR; otherwise, you cannot record the broadcast you want.

- When “AUTO TIMER” (⏻ pg. 30) is set to “ON”, the timer recording standby mode is automatically engaged when the VCR is turned off. It is temporarily canceled when the VCR is turned on. You do not have to press **⏻** to engage or disengage the timer recording standby mode.

NOTES:

- Even if a power failure occurs, the VCR keeps your timer programs. In case of a power failure after programing, the VCR's memory backup keeps your selections for approx. 3 minutes.
- Programs that start after midnight must have the next day's date.
- After timer recording is completed, the VCR turns off automatically.
- You can program the timer recording while a regular recording is in progress; the menu screens will not be recorded.
- If the tape reaches its end during timer recording, the cassette is automatically ejected.
- To timer-record cable channels, be sure to keep the cable box turned on with the correct channel selected.

Turn on the VCR and the TV, and select the VCR channel 13 (or AV mode) on the TV.



Other useful functions for timer recording

You can also use the following functions for timer recording.

• Auto Timer (pg. 30)

When "AUTO TIMER" is set to "ON", the timer recording standby mode is automatically engaged when the VCR is turned off. It is temporarily canceled when the VCR is turned on. You do not have to press **A** to engage or disengage the timer recording standby mode.

• Auto SP → EP Timer (pg. 31)

If there is not enough tape to record the entire broadcast for recording in SP mode, the VCR automatically switches to EP mode to allow complete recording. This feature is especially handy when recording a broadcast of more than 2 hours in length.

A Checking program settings

1 Disengage timer

Press **A**, then press **A**.

- When "AUTO TIMER" (pg. 30) is set to "ON", you do not have to press **A**.

2 Access Program Check screen

Press **A** ?.

PR	START	STOP	CH	DATE
1	8:00P	10:00	12	12/24
2	10:00A	10:45	40	12/25
3	11:30P	1:00	125	12/25
4				
5				
6				
7				
8				

PRESS (CHECK) TO NEXT

3 Access Program screen

Press **A** ? again to check more detailed information. Each time you press **A** ?, the next program's Program screen appears. When all Program screens are shown, normal screen resumes.

B Canceling or changing program settings

1 Access Program screen

Repeat steps 1 to 3 in **A** above.

2 Cancel or change program setting

To cancel a program, press **B** when the Program screen you do not want is shown.

To change a program, press the appropriate button: **START** +/-, **STOP** +/-, **DATE** +/-, **PR** +/-, and/or **///** (SP/EP) when the Program screen on which you want to make changes is shown.

3 Return to normal screen

Press **A** ? as many times as necessary until no Program screen is shown.

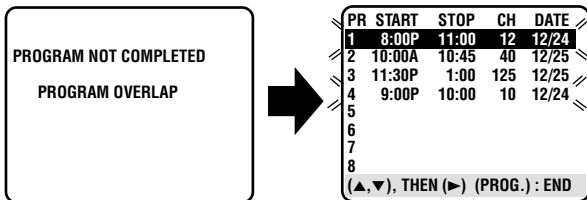
4 Reengage timer recording standby mode

Press **A**.

- When "AUTO TIMER" (pg. 30) is set to "ON", the timer recording standby mode automatically resumes when you turn off the VCR.

C When programs overlap each other

If "PROGRAM NOT COMPLETED PROGRAM OVERLAP" appears, you have another program overlapping the program you have just made. The Program Check screen appears and conflicting programs will start blinking.



EX. Program 1 (you have just made) and Program 4 overlap each other

1 Confirm overlapping programs

Overlapping programs blink on the screen.

2 Select program to modify

Press ▲▼, then press ▶.

- You can only select one of the overlapping programs.

NOTE:

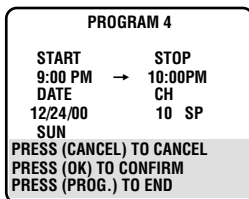
If you do not mind this overlap, press **PROG** to finish the timer program setting. See "ATTENTION" to the right. Without doing anything for about 1 minutes, the VCR will finish the timer programming.

3 Cancel or change program setting

To cancel a program,

press X when the Program screen you do not want is shown.

"PROGRAM COMPLETED" appears on the screen for about 5 seconds, then normal screen appears.



To change a program, press the appropriate button:

START +/-, **STOP** +/-, **DATE** +/-, **PR** +/-, and/or **///** (SP/EP) when the Program screen on which you want to make changes is shown, then press **OK**. "PROGRAM COMPLETED" appears on the screen for about 5 seconds, then normal screen appears.

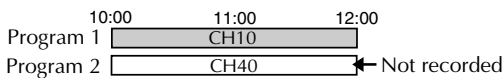
NOTE:

If the overlap is not yet solved or another overlap occurs with the timer program setting made last after making correction on a program, the conflicting programs will be shown on the Program Check screen again. Repeat the above steps again until the overlap is solved.

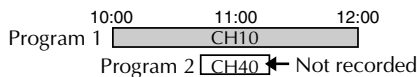
ATTENTION

If there is a conflict in the timer schedule and one program overlaps with another, only the parts shown below in gray will be recorded.

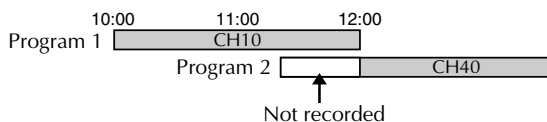
Pattern 1: The program with the lower program number will be recorded.



Pattern 2: The program starting earlier will be recorded.

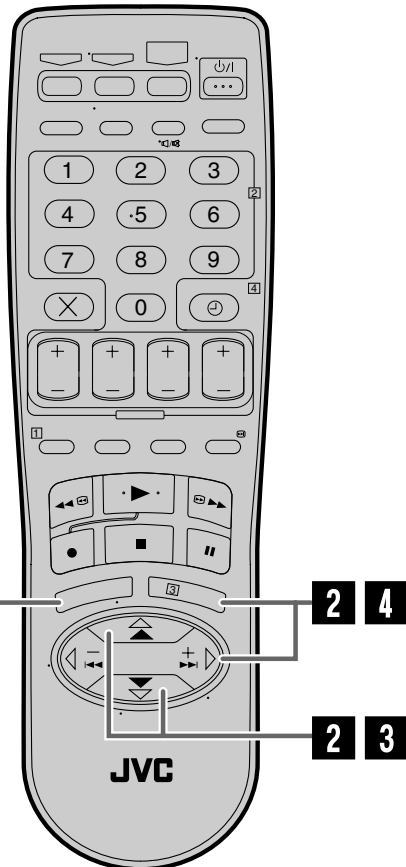
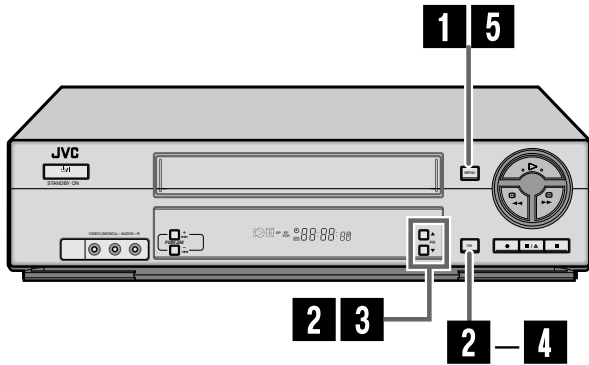


Pattern 3: The program starting earlier will be recorded, followed by the remaining portion of the other program.



Useful Function Settings

Turn on the VCR and the TV, and select the VCR channel 13 (or AV mode) on the TV.



You can use the other useful function settings on the Function Set screen by following the procedure described below.

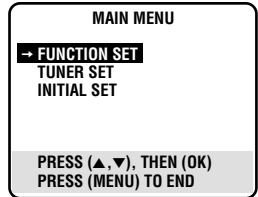
- For the functions you can set on the Function Set screen, see pages 30 to 32.

1 Access Main Menu screen

Press **MENU**.

2 Access Function Set screen

On the front panel:
Press **PR** \blacktriangle \blacktriangledown to move the highlight bar (arrow) to "FUNCTION SET", then press **OK**.

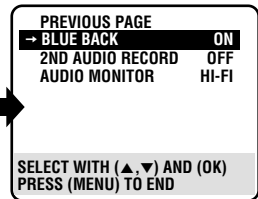
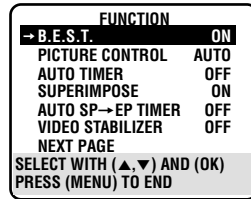


On the Remote:
Press \blacktriangle \blacktriangledown to move the highlight bar (arrow) to "FUNCTION SET", then press **OK** or \blacktriangleright .

3 Select Function

On the front panel:
Press **PR** \blacktriangle \blacktriangledown to move the highlight bar (arrow) to the function you want to set.

On the Remote:
Press \blacktriangle \blacktriangledown to move the highlight bar (arrow) to the function you want to set.



4 Change setting




On the front panel:
Press **OK**.

On the Remote:
Press **OK** or \blacktriangleright .

5 Return to normal screen

Press **MENU**.

*The default setting is **bold** in the table below.

<p>■ B.E.S.T. (Biconditional Equalized Signal Tracking) ON OFF</p>	<p>When this function is set to "ON", this VCR checks the condition of the tape in use during playback and recording, and compensates to provide the highest-possible playback pictures. This takes place whenever you play back a tape or start recording after inserting a tape.</p> <p>NOTES:</p> <ul style="list-style-type: none"> • During playback, this function is always working even though "B.E.S.T. PICTURE SYSTEM" appears just at the beginning of automatic tracking. • During recording, this function works only for the first EP recording and the first SP recording on an inserted tape. For timer recording, this function checks the tape condition both for the SP recording and the EP recording before the first timer recording starts. • When you play back rental tapes or tapes recorded on other VCRs, set this function either "ON" or "OFF" whichever gives you the best picture.
<p>■ PICTURE CONTROL AUTO (NORM): Normally select this. Picture quality is adjusted automatically. When "B.E.S.T." is "OFF", "NORM" will appear instead of "AUTO". EDIT: Minimizes picture degradation during editing (recording and playback). SOFT: Reduces image coarseness when viewing overplayed tapes containing much noise. SHARP: Clearer, sharper-edged picture when viewing images with much flat, same-colored surfaces such as cartoons.</p>	<p>This function helps you to adjust the playback picture quality according to your preference.</p> <p>NOTES:</p> <ul style="list-style-type: none"> • When you select "EDIT", "SOFT" or "SHARP", the selected mode will not change until you select again. • Select "EDIT" when you are dubbing tapes (see pg. 33). After you finish dubbing the tapes, select "AUTO" ("NORM" when "B.E.S.T." is "OFF").
<p>■ AUTO TIMER ON OFF</p>	<ul style="list-style-type: none"> • When this function is set to "ON": The timer recording standby mode is automatically engaged when the VCR is turned off. It is temporarily canceled when the VCR is turned on. You do not have to press  to engage or disengage the timer recording standby mode. • When this function is set to "OFF": For safety, all buttons except  are disabled while the VCR is in the timer recording standby mode. To use the VCR as usual, press .
<p>■ SUPERIMPOSE ON OFF</p>	<p>When this function is set to "ON", various VCR status information (on-screen display) appears on the screen.</p> <p>NOTES:</p> <ul style="list-style-type: none"> • When you use this VCR as the playback VCR for editing a tape, be sure to set this function to "OFF"; otherwise, the VCR status information (on-screen display) will be recorded on the edited tape. • If you select a channel on which no signal is received, the channel number is displayed regardless of this function setting.

*The default setting is **bold** in the table below.

<p>■ AUTO SP → EP TIMER ON OFF</p>	<p>When this function is set to “ON”, the VCR automatically switches to EP mode to allow complete recording if there is not enough tape to record the entire program while timer-recording in SP mode.</p> <p>For Example . . . Recording a program of 140 minutes in length onto a 120-minute tape</p> <table border="1" data-bbox="581 372 1171 432"> <tr> <td style="text-align: center;">Approximately 110 minutes</td> <td style="text-align: center;">Approximately 30 minutes</td> </tr> <tr> <td style="text-align: center;">SP mode</td> <td style="text-align: center;">EP mode</td> </tr> </table> <p>Make sure you set this function to “ON” before the timer-recording starts.</p> <p>NOTES:</p> <ul style="list-style-type: none"> ● If you have programed the VCR to timer-record 2 or more programs, the second program and those thereafter may not fit on the tape with this function set to “ON”. In this case, do not use this function, but change the tape speed manually during timer programing. ● In order to ensure that the recording fits on the tape, this function may leave a slight non-recorded portion at the end of the tape. ● There may be some noise and sound disturbance where the tape speed switches from SP to EP mode on the tape. ● This function is not available during ITR (Instant Timer Recording), and will not work properly on the following tapes: T(ST)-30, T(ST)-60, T(ST)-90, and T(ST)-120. 	Approximately 110 minutes	Approximately 30 minutes	SP mode	EP mode
Approximately 110 minutes	Approximately 30 minutes				
SP mode	EP mode				
<p>■ VIDEO STABILIZER ON OFF</p>	<p>When this function is set to “ON”, you can automatically correct vertical vibrations in the picture when playing back unstable recordings made on another VCR.</p> <p>NOTES:</p> <ul style="list-style-type: none"> ● When you finish viewing a tape, be sure to set this function to “OFF”. ● Regardless of the setting, this function has no effect during recording and during special effects playback. ● The on-screen display may jitter vertically when this function is set to “ON”. ● To watch recordings with close-caption, set this function to “OFF”. 				
<p>■ BLUE BACK ON OFF</p>	<p>When this function is set to “ON”, the TV screen becomes all blue in the following cases:</p> <ul style="list-style-type: none"> ● When receiving a channel not in use. ● When stopping playback. <p>NOTE: When you want to receive an unstable channel with poor signals, set this function to “OFF”.</p>				

*The default setting is **bold** in the table below.

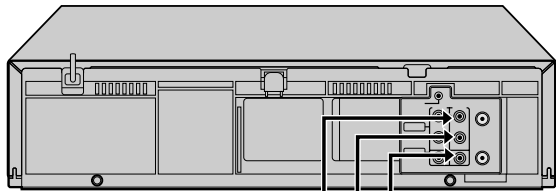
<p>■ 2ND AUDIO RECORD ON OFF</p>	<p>When this function is set to "ON":</p> <ul style="list-style-type: none"> ● If a SAP program is received, the SAP audio is recorded on both the normal and Hi-Fi tracks. The main audio is not recorded. ● If a non-SAP program is received, the main audio is recorded on both the Hi-Fi and normal tracks. <p>When this function is set to "OFF", the SAP audio cannot be recorded.</p>
<p>■ AUDIO MONITOR</p> <p>HI-FI: Normally select this. Hi-Fi sound is played back.</p> <p>HI-FI L: Sound on the left Hi-Fi channel is played back.</p> <p>HI-FI R: Sound on the right Hi-Fi channel is played back.</p> <p>NORM: Sound on the normal track is played back.</p> <p>MIX: Both sounds on the Hi-Fi track and normal track are mixed and played back.</p>	<p>This VCR can record two sound tracks simultaneously (normal and Hi-Fi) on a Hi-Fi stereo tape. You can select the sound track(s) to listen to while playing back a Hi-Fi stereo tape. In addition, when playing back a prerecorded tape containing two separate audio programs on the Hi-Fi tracks, you can choose either one by selecting either "HI-FI L" or "HI-FI R".</p> <p>NOTES:</p> <ul style="list-style-type: none"> ● While playing back a monaural tape, sounds on the normal track will be heard regardless of this setting. ● If RF connection (☞ pg. 5) is used for viewing pictures on the TV, sound will be monaural even though you select "HI-FI". ● You can also use AUDIO button on the Remote to select the desired monitor sound. (☞ pg. 14)

Edit To Or From Another VCR

Connection

Ex. When using this VCR as the playback VCR

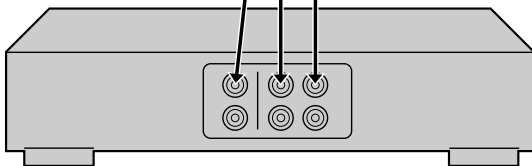
This VCR (for playback)



To AUDIO/
VIDEO OUT

Audio/video cable
(not supplied)

Another VCR
(for recording)



To Audio/
video Input

You can use your VCR as the playback or recording VCR.

- Refer also to the other VCR's instruction manual for connection and its operations.

1 Make connections

Connect an audio/video cable between the playback VCR's audio/video output connectors and the recording VCR's audio/video input connectors.

- If the playback VCR is monaural, connect the audio output connector on the playback VCR to the left audio input connector on this VCR.
- When using this VCR as the recording VCR, connect this VCR's audio/video input connectors to the audio/video output connectors on the other VCR.

2 Load cassettes

Insert the playback cassette into the playback VCR and the cassette to be recorded on into the recording VCR.

3 Select input mode on recording VCR

Select the correct external input on the other VCR.

- On this VCR (when using this VCR as the recording VCR);
Select "L-1" — when connecting the other VCR to the audio/video input connectors on the rear panel.
Select "F-1" — when connecting the other VCR to the audio/video input connectors on the front panel.

On the front panel:

Press **PR ▲▼**.

On the Remote:

Press the **Number** key "**0 (AUX)**" or **PR +/-**.

4 Select EDIT function

Set the EDIT function to "ON" for the VCRs if such a mode is equipped.

- On this VCR, set "PICTURE CONTROL" to "EDIT" by following the procedure described on page 30.

5 Start playback

Press **▶** on the playback VCR.

NOTE:

If the playback VCR is equipped with a superimpose disable feature then set it to "OFF" before starting playback (☞ pg. 30).

6 Start recording

Press **●** on the recording VCR.

NOTE:

Be sure to select "AUTO" for "PICTURE CONTROL" (or "NORM" when "B.E.S.T." is set to "OFF") after you finish dubbing the tapes (☞ pg. 30).

Edit From Camcorder

Connection

This VCR (for recording)



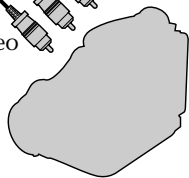
To AUDIO/VIDEO Input To rear panel PAUSE terminal

Audio/video cable (not supplied)

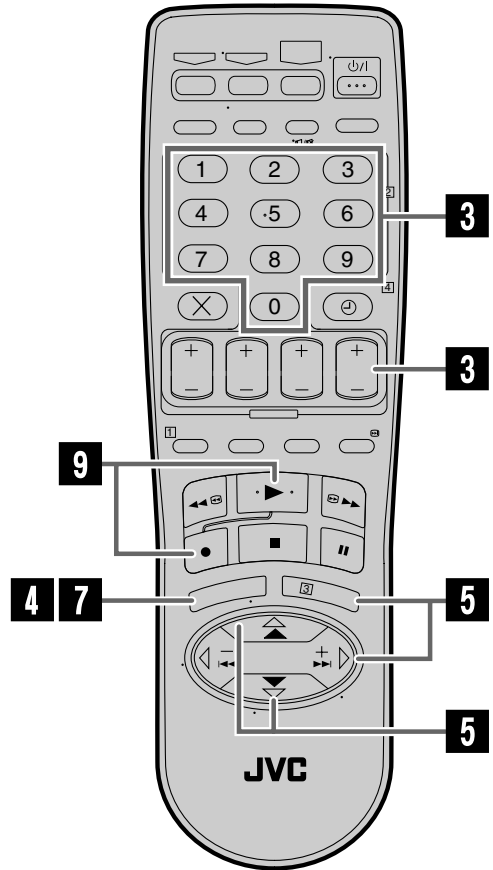
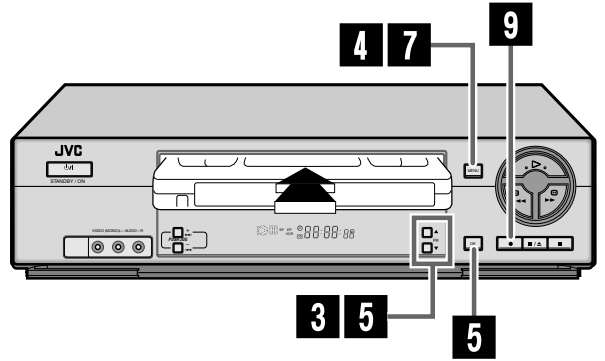
Mini-plug cable (not supplied) (JVC camcorder only)

To EDIT

To audio/video output



Camcorder (for playback)



You can use a camcorder as the playback VCR and your VCR as the recording VCR.

1 Make connections

Connect an audio/video cable between the camcorder's audio/video output connectors and your VCR's video audio/video input connectors.

- When the JVC camcorder is equipped with the Master Edit Control, you can control the VCR from the camcorder. Connect the mini-plug cable (not supplied with this VCR) as illustrated to the left.
- When using a camcorder with a monaural output, connect the audio output connector on the camcorder to the left audio input connector on this VCR.

2 Load a cassette

Insert the cassette to be recorded on into this VCR (for recording).

3 Select input mode on this VCR

Select "L-1" — when connecting the camcorder to the audio/video input connectors on the rear panel.
Select "F-1" — when connecting the camcorder to the audio/video input connectors on the front panel.

On the front panel:

Press **PR ▲▼**.

On the Remote:

Press the **Number** key "0 (AUX)" or **PR +/-**.

4 Access Main Menu screen on this VCR

Press **MENU**.

5 Access Function Set screen

On the front panel:

Press **PR ▲▼** to move the highlight bar (arrow) to "FUNCTION SET", then press **OK**.

On the Remote:

Press **△▽** to move the highlight bar (arrow) to "FUNCTION SET", then press **OK** or **▷**.

6 Select "EDIT" for Picture Control

Follow the procedure described on pages 29 and 30.

7 Return to normal screen

Press **MENU**.

8 Start playback

Press **▶** on the camcorder.

NOTE:

If the camcorder is equipped with a superimpose/OSD disable feature then set it to "OFF" before starting playback.

9 Start recording

On the front panel:

Press **●**.

On the Remote:

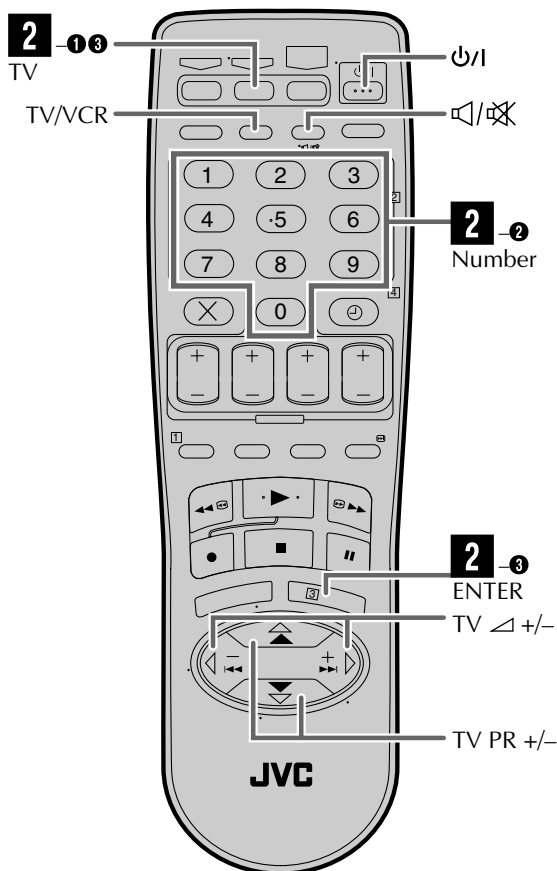
Press **●** and **▶** at the same time.

- If you are using a Master Edit Control-equipped JVC camcorder, recording starts automatically on this VCR. (Refer to camcorder's instruction manual.)

NOTE:

Be sure to select "AUTO" for "PICTURE CONTROL" (or "NORM" when "B.E.S.T." is set to "OFF") after you finish dubbing the tapes (☞ pg. 30).

TV Brand Setting



This Remote can control some functions of remote controllable TVs listed below. This Remote is factory preset to control JVC TVs.

1 Turn on the TV

Turn on the TV using the Power button on the TV or its Remote.

2 Set TV brand code

Follow the example shown below.

- 1 Press and hold **TV**.
- 2 Press the **Number** keys to enter your TV's brand code by referring to the table below.
- 3 Press **OK**, and release **TV**.
The TV should turn off. If it does, try other operations below (☞ step 3).

- Once you have set the Remote to operate the TV, you do not have to set it again until you replace the batteries from the Remote.
- Some brands have several codes. If the TV does not function with one code, try entering the others.

3 Operate TV

First, press **TV** to set the Remote to TV mode, then press one of the following buttons: **Power**, **TV/VCR**, **TV PR +/-**, **TV Muting**, **TV Volume +/-**, and **Number** keys.

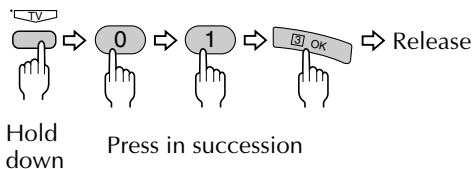
- For some brands, you must press **ENTER** after having pressed the **Number** keys to enter a channel number.

NOTES:

- Depending on the type of TV, some or all of the functions cannot be operated using this Remote.
- This remote cannot operate a TV not equipped with a remote sensor.

TV BRAND NAME	CODE
JVC	01, 23, 24, 25
AIWA	36
BEIJING	22
CCE	02
CHANGHONG	34
DAEWOO	17, 37
FERGUSON	27
FINLUX	30
FUNAI	32
GRADIENTE	15
GRUNDIG	19
HITACHI	10
ITT	28
JINXING	38
KONKA	40
LG/GOLDSTAR	18
MITSUBISHI	03
MIVER	29
NEC	20
NOBLEX	22
NOKIA	31
PANASONIC	04, 11
PEONY	34, 38, 39
PHILICO	10, 17, 21
PHILIPS	02, 42
SAMSUNG	12, 33, 34, 35
SANYO	13, 16
SHARP	06
SONY	07
TCL	41
THOMSON	26
TOSHIBA	08, 14

(Ex.) To set Remote to JVC 01:

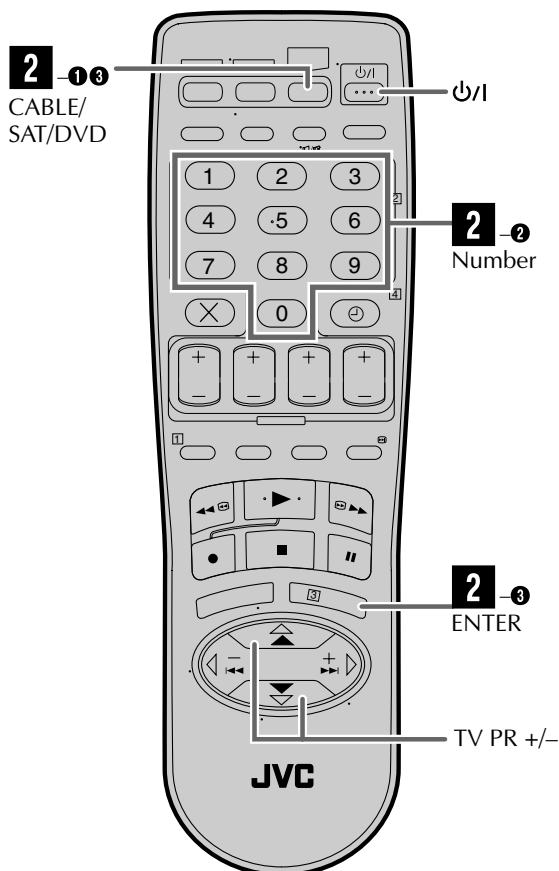


ATTENTION

The Remote can operate not only this VCR but also some of your TV, cable box, satellite receiver and DVD.

- To operate your VCR, first press the **VCR** button to set the Remote to the Video mode.
- To operate your TV, first press the **TV** button to set the Remote to the TV mode (☞ above).
- To operate your cable box, satellite receiver or DVD, first press the **CABLE/SAT/DVD** button to set the Remote to the cable box, satellite receiver or DVD mode.

Multi-Brand Setting



This Remote can control some functions of the cable boxes, satellite receiver or DVD listed on the next page. Some brands have more than one code. If your unit does not function with a specified code, try other codes.

1 Turn on the unit

Turn on the unit using the Power button on the unit or its Remote.

2 Enter unit brand code

Follow the example shown below.

- 1 Press and hold **CABLE/SAT/DVD**.
- 2 Press the **Number** keys to enter your unit's brand code by referring to the table on the next page.
- 3 Press **OK**, and release **CABLE/SAT/DVD**.
The unit should turn off. If it does, try other operations below (see step 3).

- Once you have set the Remote to operate the unit, you do not have to set it again until you replace the batteries from the Remote.

3 Operate unit

First, press **CABLE/SAT/DVD** to set the Remote to unit mode, then press corresponding button:

For cable box and satellite receiver;
ψ/I, TV PR +/-, and Number keys.

For DVD;

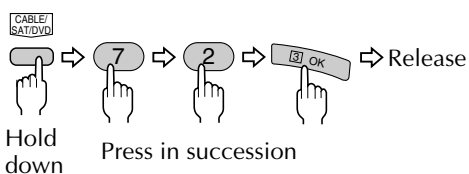
ψ/I, ▶, ■, II, ►►, ◀◀, and ◀▷ (◀◀▶▶) keys.

- For some brands, you must press **ENTER** after having pressed the **Number** keys to enter a channel number.
- To change the cable box's or satellite receiver's channels, press **TV PR +/-** or the **Number** keys.

NOTES:

- Depending on the type of unit, some or all of the functions cannot be operated using this Remote.
- This Remote cannot operate a unit not equipped with a remote sensor.
- It is not possible to set two units at the same time. You can only set the Remote to operate one of these units at a time.
- You have to subscribe to a cable or satellite receiver service to receive cable or satellite receiver channels.

(Ex.) To set the Remote to JVC 72:



ATTENTION

The Remote can operate not only this VCR but also some of your TVs, cable box, satellite receiver and DVD.

- To operate your VCR, first press the **VCR** button to set the Remote to the Video mode.
- To operate your TV, first press the **TV** button to set the Remote to the TV mode.
- To operate your cable box, satellite receiver or DVD, first press the **CABLE/SAT/DVD** button to set the Remote to the cable box, satellite receiver or DVD mode.

Cable Box or Satellite Receiver Multi-brand Code

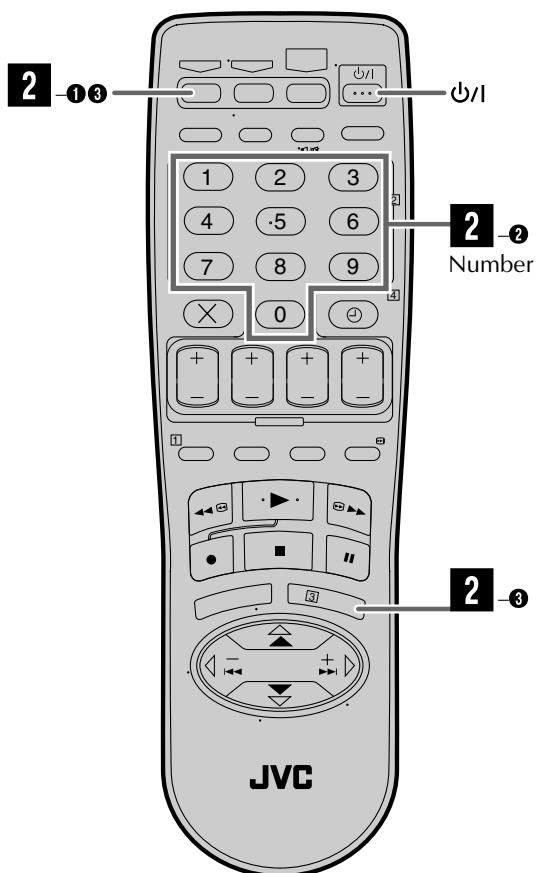
CABLE BOX BRAND NAME	CODE
JVC	72, 73
AMSTRAD	60, 61, 62, 63, 92
BT	72
CALAXIS	69, 88
CANAL+	81
CANAL SATELLITE	81
D-box	85
ECHOSTAR	51, 78, 79, 80, 82
FINLUX	68
GRUNDIG	64, 65
HIRSCHMANN	64
ITT	68
JERROLD	01, 04, 06, 11, 12, 15, 28, 75
KATHREIN	70, 71
LUXOR	68
MASPRO	70
NOKIA	68, 87
PACE	67, 86, 92
PANASONIC	13, 14, 74
PFT	69
PHILIPS	66, 84
PHONOTREND	69
SALORA	68
SKYMASTER	69
TPS	83
VIDEOWAY	03, 09, 22, 76, 77
WISI	64

DVD Multi-brand Code

DVD BRAND NAME	CODE
JVC	55
MATSUSHITA	58
PHILIPS	56
TOSHIBA	57

Changing Remote Control Code

This Remote is capable of transmitting two control codes; one set to respond to A code control signals and another set to respond to B code control signals. This Remote control is preset to send A code signals because your VCR is initially set to respond to A code signals. You can easily modify your VCR and the Remote to respond to B code signals. When using two JVC VCRs, you can set the two VCRs and their Remotes to different codes, so that you can operate these VCRs separately.



1 Unplug VCR

Unplug the AC power cord from the AC outlet.

2 Set remote control code for Remote

- 1 Press and hold **VCR**.
- 2 Press the **Number** key "2".
- 3 Press **OK**, and release **VCR**.

- The Remote now can transmit B code control signals.

3 Plug in VCR

Plug the AC power cord back into an AC outlet.

4 Turn on VCR

Press **⏻/I** on the Remote.

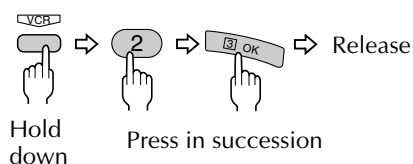
- The VCR now responds to B code control signals.
- To set the Remote and the VCR back to A code control signals, repeat the same procedure as shown above but press the **Number** key "1" in step 2.

To control two VCRs with the same Remote

You can control two JVC VCRs by switching the remote control code for the Remote between A and B (step 2), keeping two VCRs to different control codes.

- Press the **Number** key "1" for A code control signals and the **Number** key "2" for B code control signals. (To change only the remote control code for the Remote, DO NOT perform steps 1, 3, and 4.)

(Ex.) To set Remote to B code:



Before requesting service, use this chart and see if you can repair the trouble yourself. Small problems are often easily corrected, and this can save you the trouble of sending your VCR off for repair.

POWER		
SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
1. The power will not come on.	<ul style="list-style-type: none"> The AC power cord is disconnected. 	Connect the AC power cord.
2. The clock works, but the VCR's power will not come on.	<ul style="list-style-type: none"> The VCR is in the timer recording standby mode with "AUTO TIMER" set to "OFF" (☞ pg. 30). 	Press ⏻ to disengage.
3. The Remote will not function.	<ul style="list-style-type: none"> The batteries are discharged. 	Replace the dead batteries with new ones.
TAPE TRANSPORT		
SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
1. The cassette gets stuck partway during loading, and is ejected.	<ul style="list-style-type: none"> The cassette was inserted incorrectly. 	Make sure the cassette's window is facing up, the rear label side is facing you and the arrow on the front of the cassette is pointing towards the VCR. Then insert the cassette.
PLAYBACK		
SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
1. The tape is running but the picture will not appear.	<ul style="list-style-type: none"> If the RF connection (☞ pg. 5) is used to view the picture, the channel on the TV is set incorrectly. If the AV connection (☞ pg. 5) is used to view the picture, the TV receiver is set to the wrong mode. 	Select channel 13 on the TV. Select the AV mode on the TV.
2. Breaks are noticeable in Hi-Fi sound track.	<ul style="list-style-type: none"> Automatic tracking is engaged. 	Disengage auto tracking and adjust the tracking manually (☞ pg. 14).
3. The playback picture is blurred or interrupted, even though TV broadcasts are clear.	<ul style="list-style-type: none"> The video heads may be dirty. 	The heads must be cleaned. Use a dry cleaning cassette TCL-2UX or consult your JVC dealer.
4. The Hi-Fi sound cannot be heard.	<ul style="list-style-type: none"> Audio Monitor setting is incorrect. 	Set Audio Monitor to "HI-FI" (☞ pg. 14, 32).
RECORDING		
SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
1. Recording will not start.	<ul style="list-style-type: none"> There is no cassette loaded. The loaded cassette has had its record safety tab removed. 	Insert a cassette. Remove the cassette and cover the hole with adhesive tape, or load a cassette on which the record safety tab is intact.
2. TV broadcasts will not be recorded properly.	<ul style="list-style-type: none"> The VCR has been set to "L-1" or "F-1" input mode by mistake. 	Select the appropriate channel on the VCR.
3. Tape-to-tape editing will not work.	<ul style="list-style-type: none"> The VCRs or the camcorder and the VCR have been incorrectly connected. The power to one or more of the units has not been turned on. The recording VCR's input mode has been set incorrectly. 	Refer to the directions and the illustration under "Editing To Or From Another VCR" (☞ pg. 33) or "Editing From Camcorder" (☞ pg. 34) and properly connect the units. Make sure the power to all units is on. Select the appropriate input mode on the recording VCR.

TIMER RECORDING

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
1. Timer recording will not work.	<ul style="list-style-type: none"> • The clock and/or the timer have been set incorrectly. • The timer is not engaged. • The VCR has not been set up properly. 	<p>Set the clock and/or timer correctly.</p> <p>Press ⏸ and check to make sure that ⏸ appears on the front display panel. Re-perform the set-up procedures.</p> <p>Make sure you have compensated for cable box channel number mismatches (☞ pg. 37).</p>
2. Timer programing will not work.	<ul style="list-style-type: none"> • Timer recording is in progress. 	<p>Timer programing cannot be performed when timer recording is in progress. Wait until it finishes.</p>
3. ⏸ and ⏸ flash on the front display panel.	<ul style="list-style-type: none"> • The timer is engaged but there is no cassette loaded. 	<p>Load a cassette with the record safety tab intact, or with the hole covered with adhesive tape.</p>
4. The cassette is automatically ejected, and ⏸ and ⏸ flash on the front display panel.	<ul style="list-style-type: none"> • The loaded cassette has had its record safety tab removed. 	<p>Remove the cassette and cover its hole with adhesive tape, or replace it with a cassette on which the safety tab is intact.</p>
5. ⏸ flashes for 10 seconds and the timer mode is disengaged.	<ul style="list-style-type: none"> • ⏸ has been pressed when there are no programs in memory, or the timer recording program has not been set correctly. 	<p>Check the programed data and set again if necessary, then press ⏸ again.</p>
6. The cassette is automatically ejected, the power shuts off, and ⏸ and ⏸ flash on the front display panel.	<ul style="list-style-type: none"> • The tape reaches its end during timer recording. 	<p>The program may not have been recorded in its entirety. Next time be sure you have enough time on the tape to record the entire broadcast.</p>
7. You moved, and now G-CODE system does not work properly.	<ul style="list-style-type: none"> • The receivable stations in the new area are received on different channels than those in previous area. 	<p>Re-perform the G-CODE system setup procedure (☞ pg. 23).</p>
8. "PROGRAM FULL" is displayed on the screen.	<ul style="list-style-type: none"> • All 8 programs of the VCR's timer memory are used. 	<p>Wait until a space in memory clears, or cancel unnecessary program information (☞ pg. 28).</p>

OTHER PROBLEMS

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
1. When scanning channels, some of them are skipped over.	<ul style="list-style-type: none"> • Those channels have been preset to be skipped. 	<p>If you need the skipped channels, restore them (☞ pg. 11).</p>
2. The channel cannot be changed.	<ul style="list-style-type: none"> • Recording is in progress. 	<p>Press ⏸ to pause the recording, change channels, then press ▶ to resume recording.</p>
3. The Remote will not operate your TV, cable box, satellite receiver or DVD.	<ul style="list-style-type: none"> • The brand codes are set incorrectly. 	<p>Reset the correct brand codes (☞ pg. 36, 37 or 38).</p>

Questions and answers

PLAYBACK

- Q. What happens if the tape reaches its end during playback or search?**
 A. The VCR automatically rewinds it to the beginning.
- Q. Can the VCR indefinitely remain in still mode?**
 A. No. It stops automatically after 5 minutes to protect the heads.
- Q. During picture search, still picture playback and frame-by-frame playback, the picture is intermittent. What's the cause?**
 A. Picture loss occurs when these types of playback are attempted with a tape recorded in EP mode. Pressing ► to return to normal playback will restore the picture.
- Q. When returning from variable-speed picture search to normal playback, the picture is disturbed. Should I be concerned about this?**
 A. No, it is normal.
- Q. When playing back programs that have been timer-recorded consecutively (such one program from 8:00 to 9:00 and another one from 9:00 to 10:00), the picture and sound become momentarily distorted where the first program ends and the second program begins. Is this a malfunction?**
 A. No. This is normal.
- Q. Other than preventing further recording, what effect does removing the safety tab have?**
 A. It disables marking of index codes.
- Q. Sometimes, during index search, the VCR cannot find the program I want to see. Why not?**
 A. There may be index codes too close together.
- Q. During playback, the on-screen display sometimes jitters. Why does this happen?**
 A. If the condition of the tape being played back is not good, jittering of the video (including on-screen display) may occur.

RECORDING

- Q. When I pause and then resume a recording, the end of the recording before the pause is overlapped by the new recording. Why does this happen?**
 A. This is normal. It reduces distortion at the pause and resume points.
- Q. Can the VCR indefinitely remain in the recording pause mode?**
 A. No. The VCR automatically stops after 5 minutes to protect the heads. When paused during Instant Timer Recording (ITR), the VCR shuts off automatically after 5 minutes.
- Q. What happens if the tape reaches its end during recording?**
 A. The VCR automatically rewinds it to the beginning.

TIMER RECORDING

- Q. REC and ⊖ remain lit on the front display panel. Is there a problem?**
 A. No. This is a normal condition for a timer recording in progress.
- Q. Can I program the timer while I'm watching a tape or a TV broadcast?**
 A. Yes, but while you are setting the timer you will not see the tape's or broadcast program's picture as it is replaced by the on-screen menu. (The sound from the tape or broadcast program will be heard during the timer setting.)

ATTENTION

This VCR contains microcomputers. External electronic noise or interference can cause microcomputer to malfunction. If the VCR does not operate correctly switch its power off and unplug the AC power cord from the AC supply. Wait for a while and then plug the power back in. Eject and check the condition of the cassette. If everything appears normal, you can operate the VCR as usual.

List of terms

This guide serves as a quick way to locate frequently used terms and on-screen display names.

A

Accidental erasure prevention 16
Audio Monitor 14, 32
Auto Channel Set 10
Auto SP→EP Timer 31
Auto Timer 30
Automatic tracking 14
AV connection 5

B

B.E.S.T. 30
Blue Back 31

C

Channel No. indication 17
Clock setting 8
Clock time 13, 17
Connection to TV 5
Contents 3
Counter reset 13, 17

E

Editing
 From another VCR 33
 From camcorder 34
 To another VCR 33
Express Timer Programing 25

F

Frame-by-Frame Playback 20
Function Set screen 29

G

G-CODE® System Setup 23
G-CODE® Timer Programing 21

H

High-Speed Picture Search 19

I

Index Search 15
Instant ReView 15
Instant Timer Recording (ITR) 17

M

Manual tracking 14
Multi-Brand Remote
 Controlling two JVC VCRs 39
 Setting Cable Box brand 37
 Setting Satellite receiver brand 37
 Setting DVD brand 37
 Setting TV brand 36

N

Next Function Memory 14

O

On-screen display 18, 30

P

Picture Control 30
Picture Search 19
Playback 12
Plug & Play 6

R

Recording 16
Recording Resume function 18
Repeat play 13
RF connection 5

S

Second Audio Record 18, 32
Slow Motion Playback 20
Special effect playback
 Frame-by-Frame Playback 20
 High-Speed Picture Search 19
 How to use the
 PUSH JOG buttons 19
 Picture Search 19
 Skip Search 20
 Slow Motion Playback 20
 Still Picture Playback 20
 Variable-Speed Picture Search 19
Specifications 47
Still Picture Playback 20
Superimpose 30

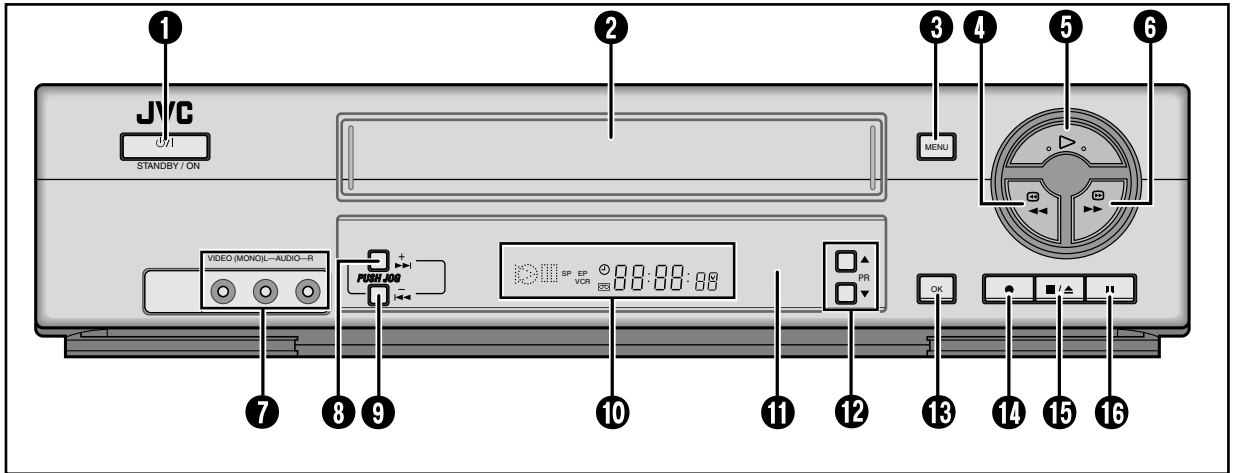
T

Tape position indicator 13
Tape speed 16
Time counter 13, 17
Timer recording
 Canceling 27
 Changing 27
 Checking 27
 Express 25
 G-CODE® 21
 G-CODE® System Setup 23
 Overlap 28
Tracking 14
Troubleshooting 40
Tuner setting 10
 Adding channels 11
 Auto Channel Set 10
 Manual Channel Set 11
 Skipping channels 11

V

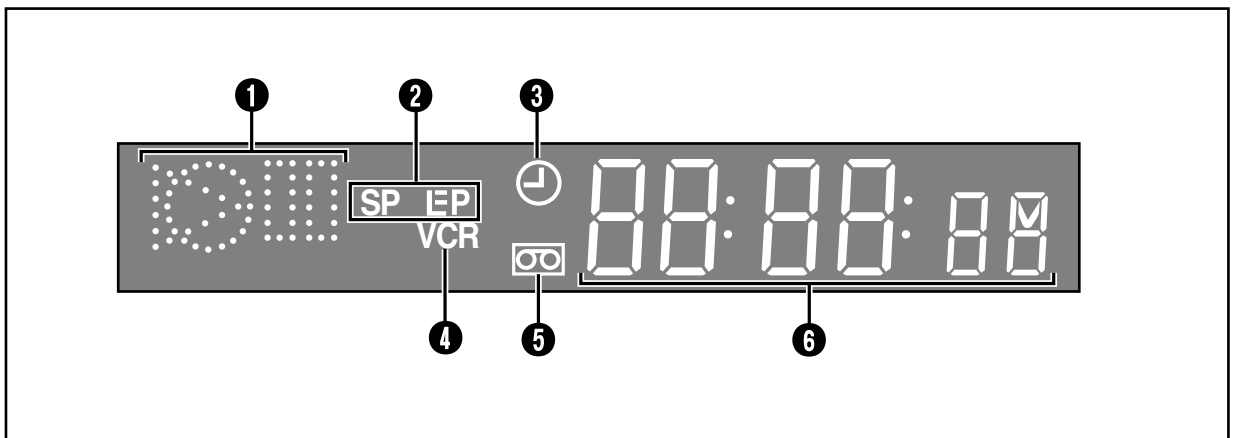
Variable-Speed Picture Search 19
Video Stabilizer 31

Front panel



- ❶ ⏻/I STANDBY/ON button : ☞ pg. 12, 16
- ❷ Cassette loading slot
- ❸ MENU button
- ❹ ⏮⏮ button : ☞ pg. 12, 16
- ❺ ▷ button : ☞ pg. 12, 16
- ❻ ⏭⏭ button : ☞ pg. 12, 16
- ❼ AUDIO/VIDEO input connectors : ☞ pg. 34
- ❽ PUSH JOG +/▶▶▶ button
* This button functions the same as the ▷ button on the Remote.
- ❾ PUSH JOG -/◀◀◀ button
* This button functions the same as the ◀ button on the Remote.
- ❿ Front display panel : ☞ below
- ⓫ Remote sensor
- ⓬ PR ▲▼ buttons : ☞ pg. 6
- ⓭ OK button
- ⓮ ● button : ☞ pg. 16, 17
- ⓯ ■ / ▲ button : ☞ pg. 12, 16
- ⓰ || button : ☞ pg. 16, 20

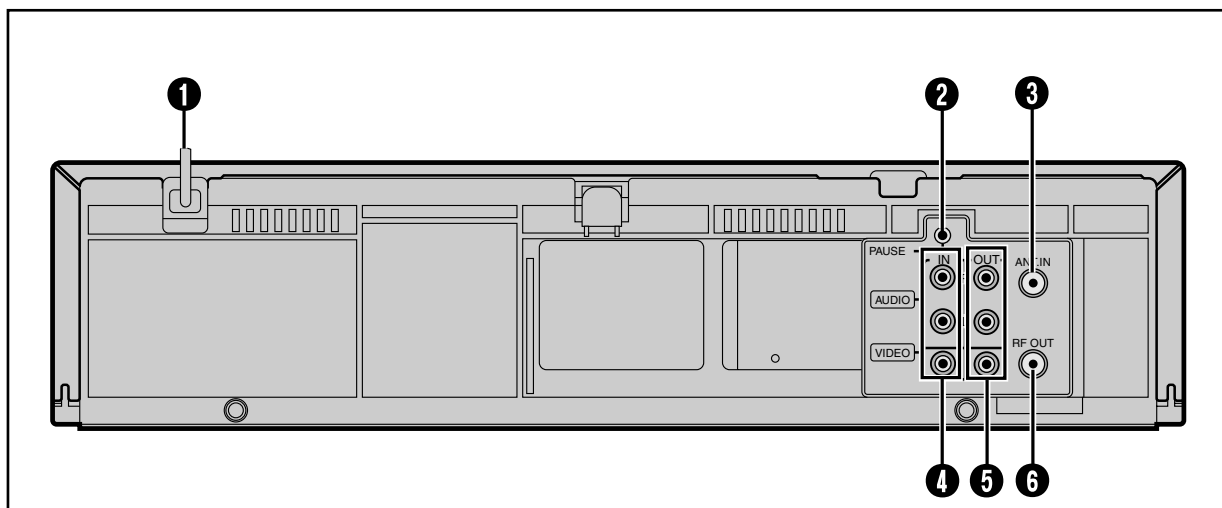
Front display panel



- ❶ Symbolic Mode Indicators
- ❷ Tape speed indicators
- ❸ Timer mode indicator : ☞ pg. 22, 26
- ❹ VCR mode indicator : ☞ pg. 16, 17
- ❺ Cassette mark
- ❻ Channel and auxiliary input ("L-1" and "F-1")
Counter reading : ☞ pg. 13, 17
Clock time : ☞ pg. 13, 17

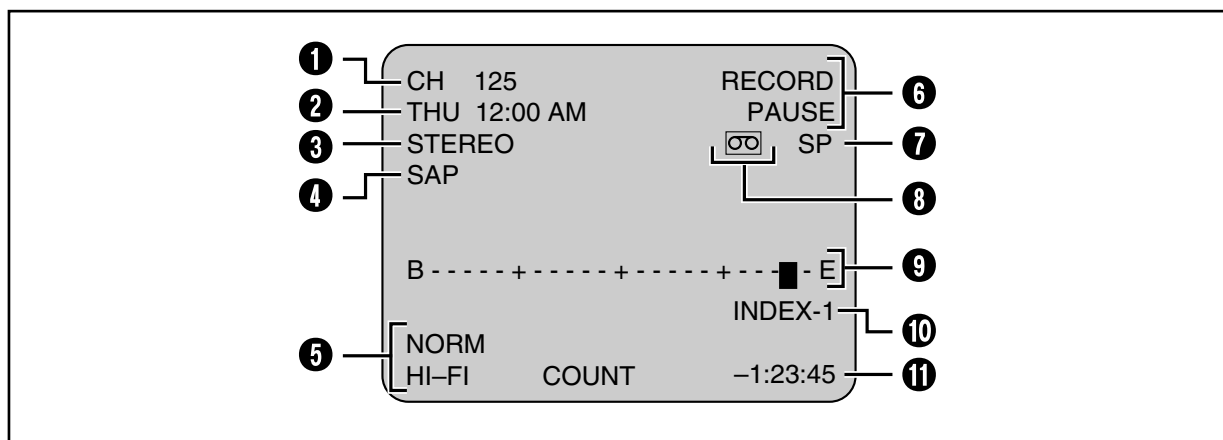
PLAY: FF/REW VARIABLE SEARCH:	▶	STILL: SLOW:	▶▶▶
		RECORD:	⊙
		RECORD PAUSE:	⊙⊙

Rear panel



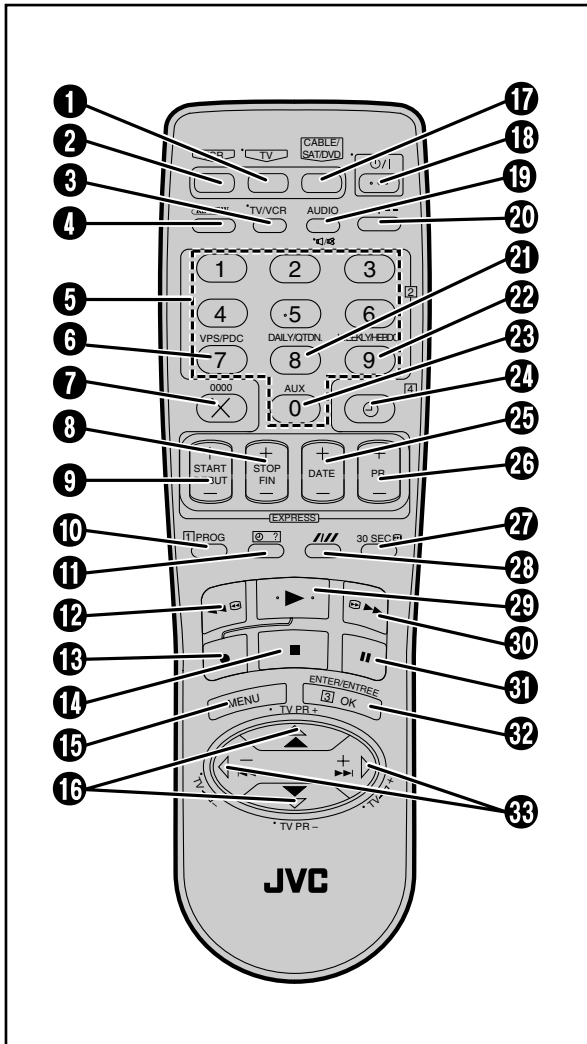
- ❶ AC power cord : ☞ pg. 4, 5
- ❷ PAUSE terminal : ☞ pg. 34
- ❸ ANT. (Antenna) IN terminal : ☞ pg. 4, 5
- ❹ AUDIO/VIDEO IN connectors : ☞ pg. 33
- ❺ AUDIO/VIDEO OUT connectors : ☞ pg. 4, 5, 33
- ❻ RF OUT terminal : ☞ pg. 4, 5

On-screen display



- ❶ Channel and auxiliary input ("L-1 and F-1")
- ❷ Date and clock time : ☞ pg. 13, 17
- ❸ STEREO program indication
- ❹ SAP (Second Audio Program) indication : ☞ pg. 18, 32
- ❺ Audio monitor indication : ☞ pg. 14, 32
- ❻ VCR operation mode indication
- ❼ Tape speed indication
- ❽ Cassette indication
- ❾ Tape position indication : ☞ pg. 13
- ❿ Index no. indication : ☞ pg. 15
- ⓫ Time counter : ☞ pg. 13, 17

Remote

**You can to operate your TV**

Buttons (3, 5, 16, 18, 19, 33) with a small dot on the left side of the name can also be used to operate your TV. Before use, set the TV brand code of your TV. (pg. 36)

*If you use JVC's TV, this setting is not necessary.

How to use the Remote

Before use, insert two AA size batteries into the Remote with the polarity (+ and -) matched correctly as indicated on the battery compartment or on the lid.

The Remote can operate most of your VCR's functions, as well as basic functions of TV sets, cable boxes, Satellite receivers and DVDs.

- Point the Remote toward the remote sensor on the target component.
- The maximum operating distance of the remote control is about 8 m.

NOTE:

If the Remote does not work properly, remove its batteries, wait for a few seconds, replace the batteries and then try again.

- 1 TV Button : pg. 36
- 2 VCR Button : pg. 39
- 3 TV/VCR Button : pg. 16, 17, 36
- 4 RE-VIEW Button : pg. 15
- 5 NUMBER Keys : pg. 11, 16, 22, 24, 36, 37, 39
- 6 VPS/PDC Button : (No Function)
- 7 X Button : pg. 21, 22, 27, 28
- 8 STOP +/- Button : pg. 22, 25
- 9 START +/- Button : pg. 25
- 10 PROG (Program) Button : pg. 21, 25
- 11 ? Button : pg. 27
- 12 Left Arrow Button : pg. 12, 14, 15, 16
- 13 Dot Button : pg. 16, 35
- 14 Square Button : pg. 12, 13, 16, 17
- 15 MENU Button : pg. 7
- 16 Delta/Diamond Button : pg. 6, 35
- TV PR +/- Button: pg. 36, 37
- 17 CABLE/SAT/DVD Button : pg. 37
- 18 U/I Button : pg. 6
- 19 AUDIO Button : pg. 14, 32
- 20 Muting Button : pg. 36
- 21 DAILY Button : pg. 22, 26
- 22 WEEKLY Button : pg. 22, 26
- 23 AUX Button : pg. 33
- 24 Clock Button : pg. 22, 26, 27
- 25 DATE +/- Button : pg. 25
- 26 PR +/- Button : pg. 14, 16, 22, 25, 35
- 27 30 SEC Button : pg. 20
- 28 (SP/EP) Button : pg. 16, 22, 25, 27
- 29 Play Button : pg. 12
- 30 Fast Forward Button : pg. 12, 15, 16, 19
- 31 Pause Button : pg. 12, 16, 20
- 32 OK Button : pg. 6
- ENTER Button : pg. 36, 37, 39
- 33 Left/Right Arrow Button : pg. 15, 19
- TV +/- Button : pg. 36

GENERAL

Power requirement	: AC 110 V~, 60 Hz
Power consumption	
Power on	: 19 W
Power off	: 2.5 W
Temperature	
Operating	: 5°C to 40°C (41°F to 104°F)
Storage	: -20°C to 60°C (-4°F to 140°F)
Operating position	: Horizontal only
Dimensions (W x H x D)	: 400 mm x 94 mm x 278 mm
Weight	: 3.3 kg (7.3 lbs)
Format	: VHS NTSC standard
Maximum recording time	
SP	: 210 min. with ST-210 video cassette
EP	: 630 min. with ST-210 video cassette

VIDEO/AUDIO

Signal system	: NTSC-type color signal and EIA monochrome signal, 525 lines/60 fields
Recording/ Playback system	: DA-4 (Double Azimuth) head helical scan system
Signal-to-noise ratio	: 45 dB
Horizontal resolution	: 240 lines
Frequency range	
Normal audio	: 70 Hz to 10,000 Hz
Hi-Fi audio	: 20 Hz to 20,000 Hz
Input/Output	: RCA connectors (IN x 2, OUT x 1)

TUNER

Tuning system	: Frequency-synthesized tuner
Channel coverage	
VHF	: Channels 2 – 13
UHF	: Channels 14 – 69
CATV	: 113 Channels
RF output	: Channel 13 75 Ω, unbalanced

TIMER

Clock reference	: Quartz
Program capacity	: 1-year programmable timer/ 8 programs
Memory backup time	: Approx. 3 min.

ACCESSORIES

Supplied accessories	: RF cable (F-type) Infrared remote control unit "AA" battery x 2
----------------------	---

Specifications shown are for SP mode unless otherwise specified. E. & O.E. Design and specifications subject to change without notice.

JVC

VICTOR COMPANY OF JAPAN, LIMITED