

Operating Instructions

Panasonic VHS
Professional/Industrial Video

**PRO
LINE**

AG-**2550**



Video Cassette Recorder

Before attempting to connect, operate or adjust this product, please read these instructions completely.

VQT6643

Dear Customer

May we take this opportunity to thank you for purchasing this Panasonic Video Cassette Recorder.

We would particularly advise that you carefully study the Operating Instructions before attempting to operate the unit and that you note the listed precautions.

FCC NOTE: This device complies with Part 15 of the FCC Rules. To assure continued compliance follow the attached installation instructions and do not make any unauthorized modifications.

FCC's limits are designed to provide reasonable protection against harmful interference when operated in a residential environment.

If this device does cause interference to radio or television reception, which can be determined by turning the device off and on, use this device in another location and/or utilize an electrical outlet different from that used by the receiver. If necessary, consult the dealer or an experienced radio/TV technician for help.

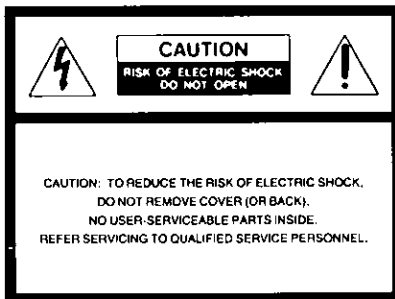
Contents

WARNING:

TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

CAUTION:

■ TO REDUCE THE RISK OF FIRE, SHOCK OR INTERFERENCE, USE THE RECOMMENDED ACCESSORIES ONLY.



This symbol warns the user that uninsulated voltages within the unit may have sufficient magnitude to cause electric shock. Therefore, it is dangerous to make any kind of contact with any inside part of this unit.



This symbol alerts the user that important literature concerning the operation and maintenance of this unit has been included.



Therefore, it should be read carefully in order to avoid any problems.

Note to CATV system installer:

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

ACCESSORIES

- 1 pc. Infrared Remote Controller
- 1 pc. Coaxial Cable
- 1 pc. AC Power Cord
- 2 pcs. "AA" size Batteries

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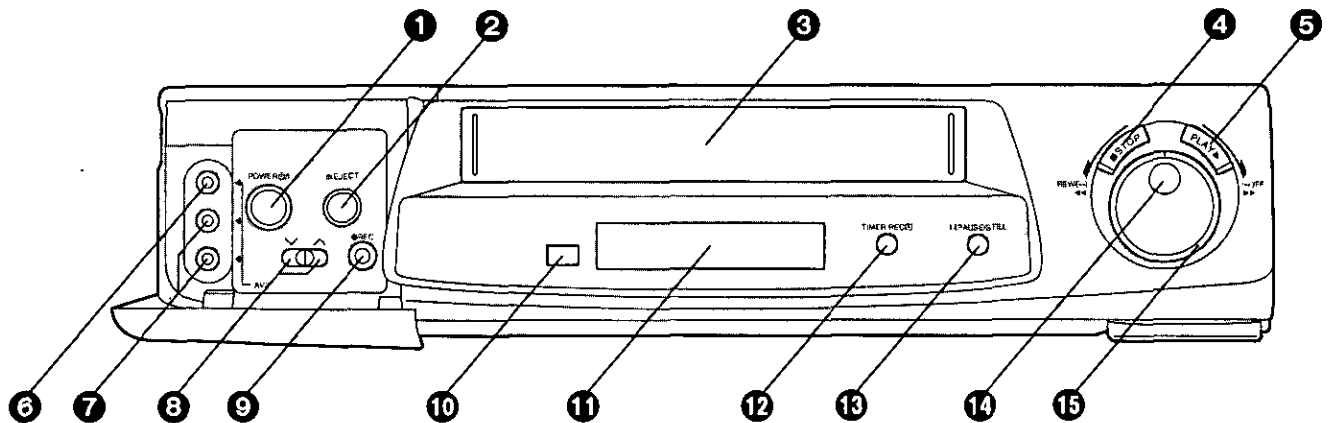
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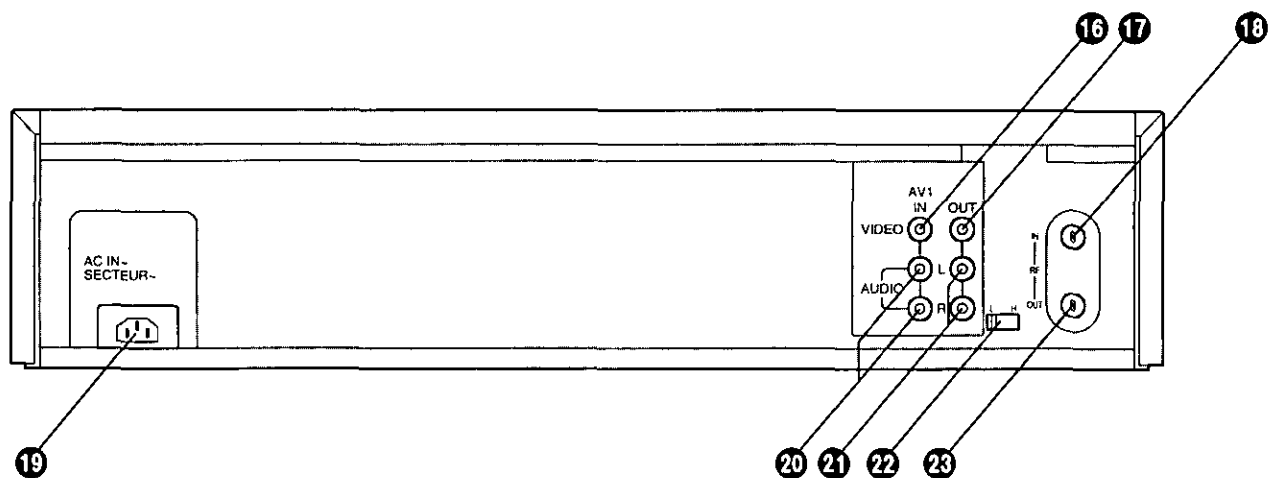
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Controls and Connections

This gives a detailed explanation of the function of each button, switch and connection socket.

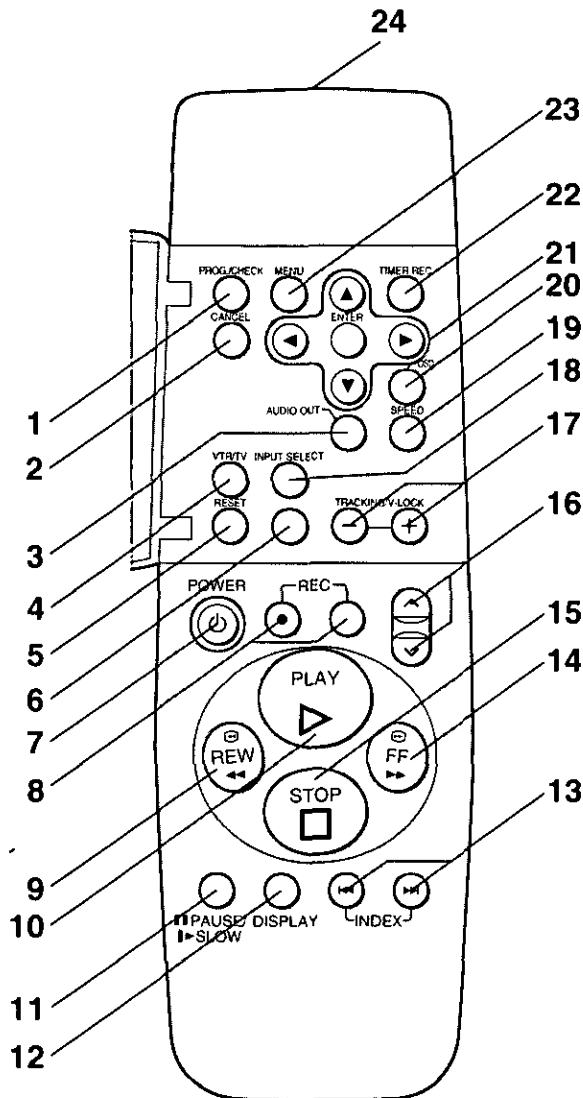


- 1 POWER** Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still connected to the main AC power.
- 2 EJECT**
To eject a video cassette.
- 3 Cassette Compartment**
Insert a video cassette here.
- 4 STOP**
To stop any playback or recording.
- 5 PLAY**
To start playback. "▷" is lit.
For the repeat playback function.
- 6 VIDEO IN (AV2)**
To connect a video cable to a video camera or another video recorder.
- 7 AUDIO IN (AV2)**
To connect audio cables to a video camera or another video recorder.
- 8** To select Channel numbers (TV station).
- 9 REC**
To make a recording.
- 10 Infra-red Remote Control Receiver Window**
- 11 Display**
- 12 TIMER REC**
To turn the timer recording function on and off.
 is lit when **TIMER REC** is on.
When using timer recording function, the normal VTR operation is not possible unless this button is set to off.
- 13 PAUSE/STILL**
In the stop mode: Still picture (Jog/Shuttle mode).
During playback: Still picture (Jog/Shuttle mode).
During recording: To interrupt recording.
- 14 Jog Dial**
To locate any desired frame with precision.
- 15 Shuttle Ring**
In the stop mode: To rewind or fast forward the tape.
In the playback mode:
To search picture backward or forward.
In the still playback mode:
To adjust playback speed backward or forward.
In the rewind or fast forward mode:
To obtain high speed picture.



- 16 VIDEO IN (AV1)**
To connect a cable from a video camera or another video recorder.
- 17 VIDEO OUT**
To connect a video cable to a TV video input or another video.
- 18 RF IN**
To connect an external antenna.
- 19 AC IN~**
To connect the AC line cord.
- 20 AUDIO IN (AV1)**
To connect an audio cable to a video camera or another video recorder.
- 21 AUDIO OUT**
To connect an audio cable to a TV or another video recorder.
- 22 L/H**
Used to select the RF Converter to either Channel US3 or US4.
- 23 RF OUT**
To connect to the antenna terminal on a TV set.

Infra-red Remote Controller



1 PROG./CHECK

To set and check timer programs.

2 CANCEL

To cancel the settings made for timer recording.

3 AUDIO OUT

To select the desired sound mode.

At the every push of this button, the audio output mode changes as follows.

→Stereo→L→R→Normal audio track→

While the broadcast signals are being received:

→Stereo→L→R→

The L and R Indicators show which sound mode is selected in the following way.

Stereo: Both the L and R Indicators are lit.

L: The L Indicator is lit.

R: The R Indicator is lit.

Normal: Both the L and R Indicators are not lit.

4 VTR/TV

To select the VTR mode or TV mode.

5 RESET

To reset the tape counter (elapsed time) to "0:00.00".

- The tape counter is automatically reset to "0:00.00" when a video cassette is inserted.

6 No function

7 POWER

To switch the VTR from on to standby mode or vice versa. In standby mode, the VTR is still connected to the main AC power.

8 REC

To make a recording.

- Press both buttons simultaneously.

9 REW (REWIND)

In the stop mode: To rewind the tape.

In the playback mode: To search backward.

In the rewind mode: To obtain high speed picture.

"<<" is lit.

10 PLAY

To start playback. ">" is lit.

For the repeat playback function.

11 PAUSE/SLOW

During playback:

- By pressing; Still picture. "||" is lit.

- By pressing for more than 2 seconds; Slow playback. "▸" is lit.

During recording: To interrupt recording temporarily.

12 DISPLAY

To change the indication on the VTR Display.

→Clock→Counter→Remaining Tape Time→

13 INDEX

For index search function.

14 FF (FAST FORWARD)

In the stop mode: To fast forward the tape.
 In the playback mode: To search forward.
 In the fast forward mode: To obtain high speed picture.

"▷▷" is lit.

15 STOP

To stop playback or recording.

16 ∨ ^

To select the channel number (TV station) of the VTR.

17 TRACKING/V-LOCK**For manual tracking adjustment**

The + and – buttons are used to adjust the tracking when, for example, noise bars on the picture are more effectively removed manually than by the automatic digital tracking control. After making a manual adjustment, press both buttons together to return to automatic digital tracking control.

For slow tracking adjustment

When noise bars appear **during Still or Slow playback**, switch over to **slow playback** and adjust with the + or – Button to reduce noise bars.

For vertical locking adjustment

Use the + and – buttons to minimize any vertical jitter **during still-picture playback**.

18 INPUT SELECT

To select the "A1" or "A2" external recording source.

19 SPEED

To select the tape speed desired for recording.
 SP gives the best picture quality.
 EP gives the longest recording time.

20 OSD

To turn On Screen Display Function on or off.

21 ▲ ▼ ◀ ▶ /ENTER

To make selections from On Screen Display.

22 TIMER REC

To turn the timer recording function on and off.
 [] is lit when **TIMER REC** is on.
 When using timer recording function, normal VTR operation is not possible unless this button is set to off.

23 MENU

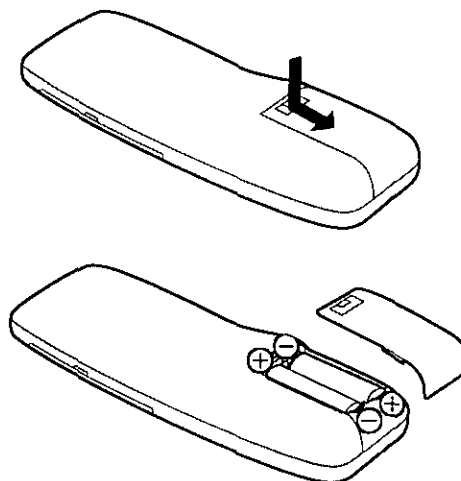
To make MENU On Screen Display appear on the TV screen.

24 Infra-red Transmitter**Power Source for the Remote Controller**

The remote controller is powered by 2 "AA", "UM3" or "R6" size batteries. The life of the batteries is about one year, although this depends on the frequency of use.

Precautions for Battery Replacement

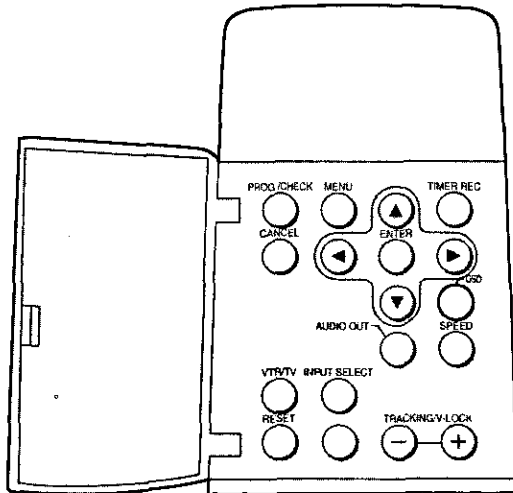
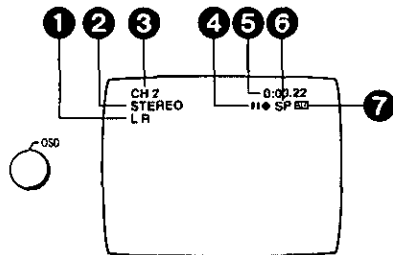
- Load the new batteries with their polarity (⊕ and ⊖) aligned correctly.
- Do not apply heat to the batteries, or an internal short-circuit may occur.
- If you do not intend to use the remote controller for a long period of time, remove the batteries and store them in a cool and dry place.
- Remove spent batteries immediately and dispose of them.
- Do not use an old and a new battery together, and never use an alkaline battery with a manganese battery.

Installing the Batteries

On Screen Display

Press **OSD** to make the On Screen Display appear on the TV screen.

• To make this display disappear, press **OSD** again.



1 L and R Indicators

2 Indicator for Stereo and SAP Reception

When receiving a TV program, automatically indicates when a TV program is broadcast with the stereo and/or AUDIO II (SAP) sound system.

3 Program Position (Channel)

4 Tape Running Display

Stop, Eject	
Rewind, Review	◀◀
Fast Forward, Cue	▶▶
Playback	▶
Still Playback	
Recording	●
Recording Pause	●
Slow Playback	▶▶
Repeat Playback	R

5 Present Time/Tape Counter

Information	Display
Present Time	17:24
Tape Counter	-2:35.47
Remaining Tape Time	REMAIN 2:34
Index Search	S 01

6 Tape Speed Indicator

7 Cassette-in Indicator

Notes:

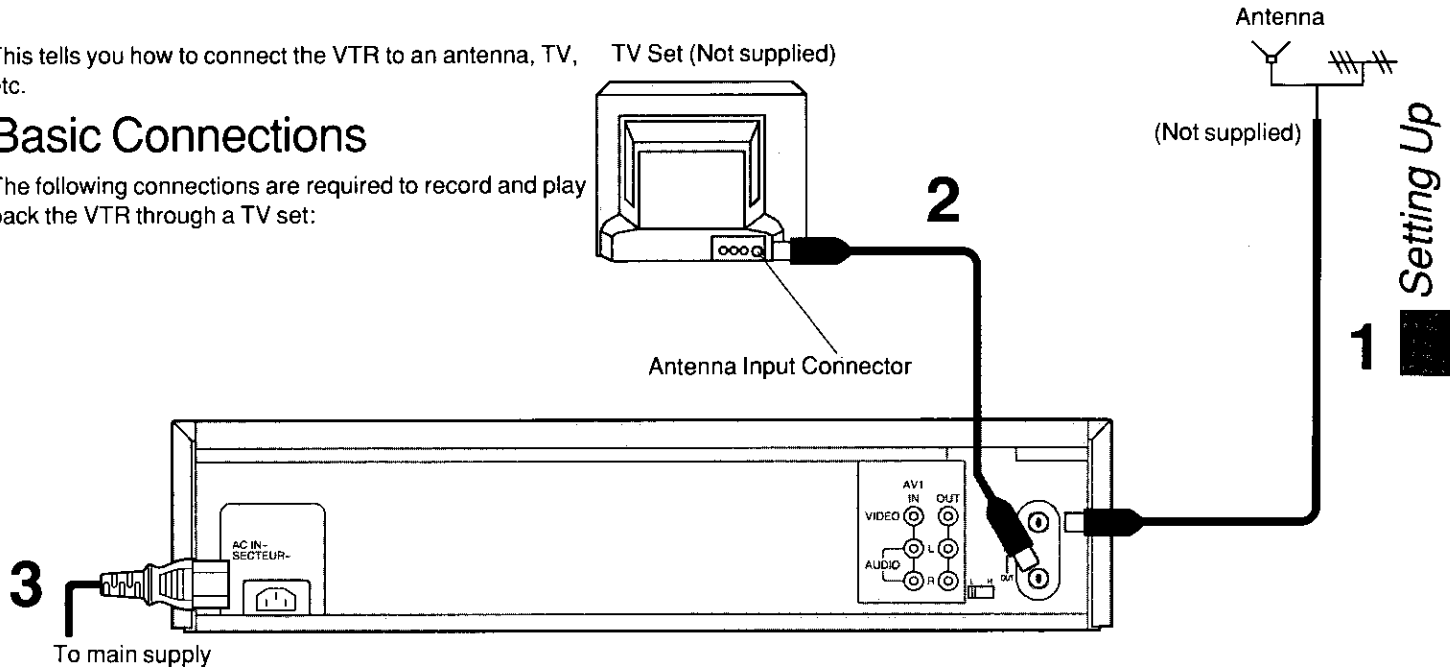
- On Screen Display may be disturbed or disappear during special playback.
- On Screen Display may be disturbed depending on the played back tape or the input signal.

Connections

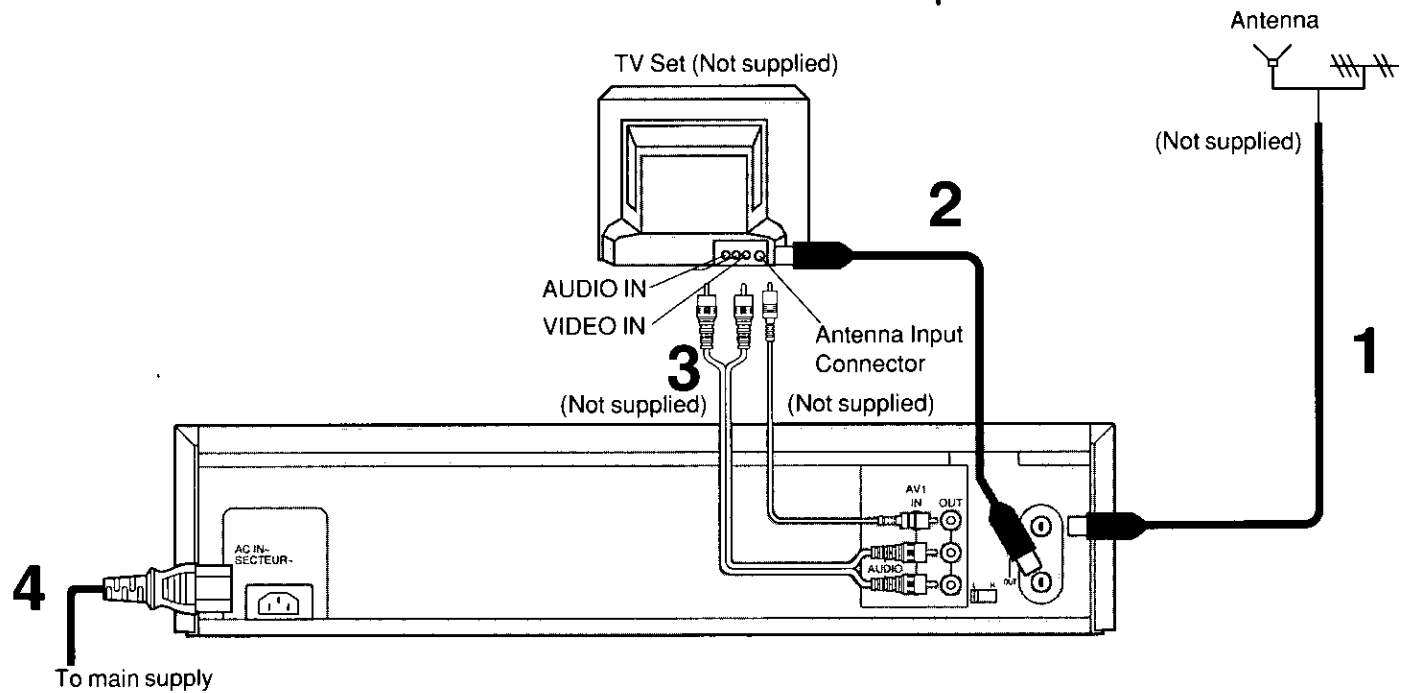
This tells you how to connect the VTR to an antenna, TV, etc.

Basic Connections

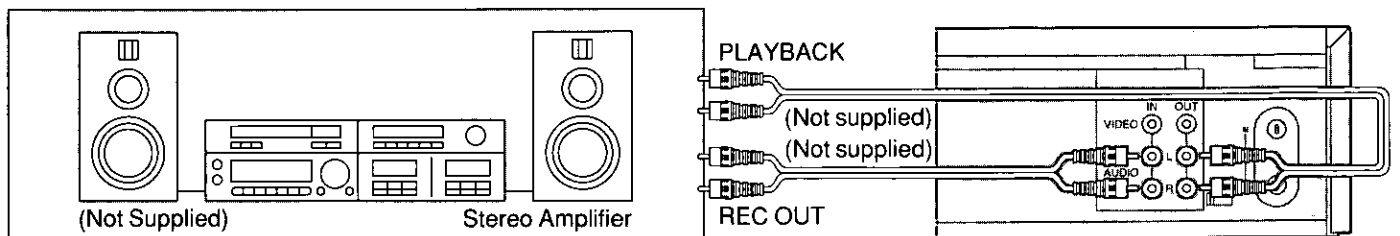
The following connections are required to record and play back the VTR through a TV set:



Connection to a TV Set with the Audio/Video Input Connectors



• Connection to a Stereo Amplifier



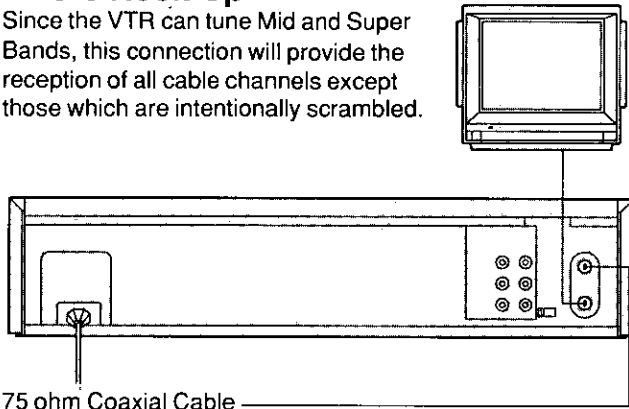
Cable Connection

Cable-VTR-TV (For CATV/PAY Channels Recording/Playback)

The VTR has an extended range, and can tune the Low-Band, Mid-Band, Super-Band, Hyper-Band, Ultra-Band and Special cable channels (Channels A-5-A-1, A-W, AA-FFF, GGG-WWW, WWW+1-WWW+12, 100-125, 5A). Also, the VTR can tune to any of the 56 UHF channels (14-69). Refer to **Storing TV Broadcasts into your VTR** on page 14.

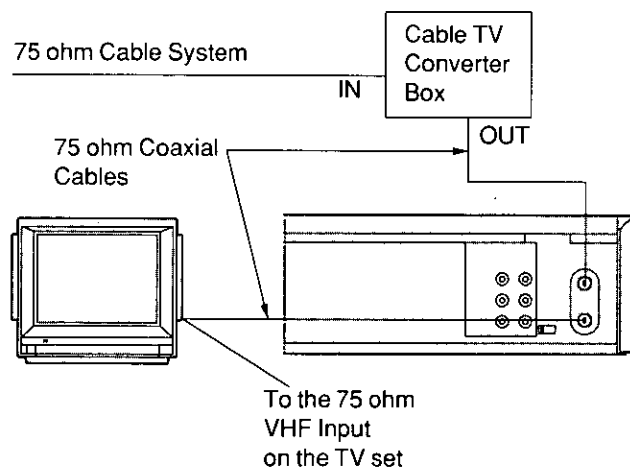
BASIC Hook-Up

Since the VTR can tune Mid and Super Bands, this connection will provide the reception of all cable channels except those which are intentionally scrambled.

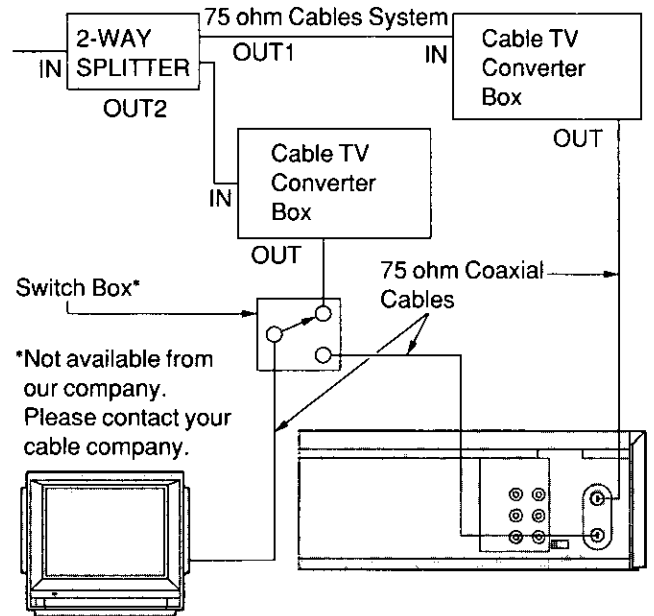


However, if you subscribe to a special channel which is scrambled—you will probably have a descrambler box for proper reception. The VTR by itself cannot properly receive a scrambled program since it does not contain a descrambler. In order for the VTR to properly receive a scrambled program, your existing descrambler must be used. There are two commonly used methods of connection in this case.

Typical Cable System Hook Ups with Cable Converter/Descrambler Boxes



The above cable hook-up allows VTR-TV functions except for viewing one channel while recording another.

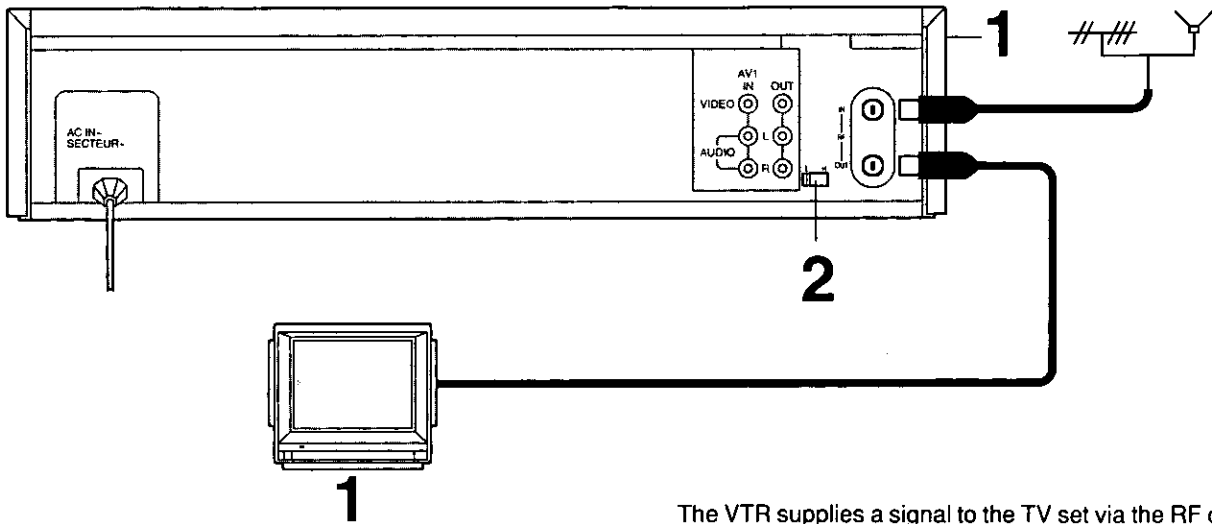


To the 75 ohm VHF input on the TV set

The above cable hook-up allows VTR functions, including viewing one channel while recording another, but it requires two cable TV Converter/Descrambler Boxes, one Switch Box and one 2-Way Splitter.

Since the VTR has an extended range of tuning, tuning-programing of non-scrambled Mid-Band and Super-Band TV programs is possible. When a cable converter or descrambler box is connected to the VTR, all timer-controlled recording functions will continue to operate with the exception of changing channels automatically. CATV Channel selection will have to be performed with the cable converter. Timer-controlled recording from CATV Channels is therefore limited to one channel at any given time.

Tuning the TV to your VTR




The VTR supplies a signal to the TV set via the RF coaxial cable on channel US3 or US4.

It is possible to view the video picture on your TV in the same way that you watch TV broadcasts.

If you have connected the VTR to the TV through the video and audio input sockets then you do not need to follow the procedure mentioned below.

Operations

1  Turn on the TV and VTR.

2  Select the video playback channel which is not occupied with any TV station.
L: Channel US3
H: Channel US4

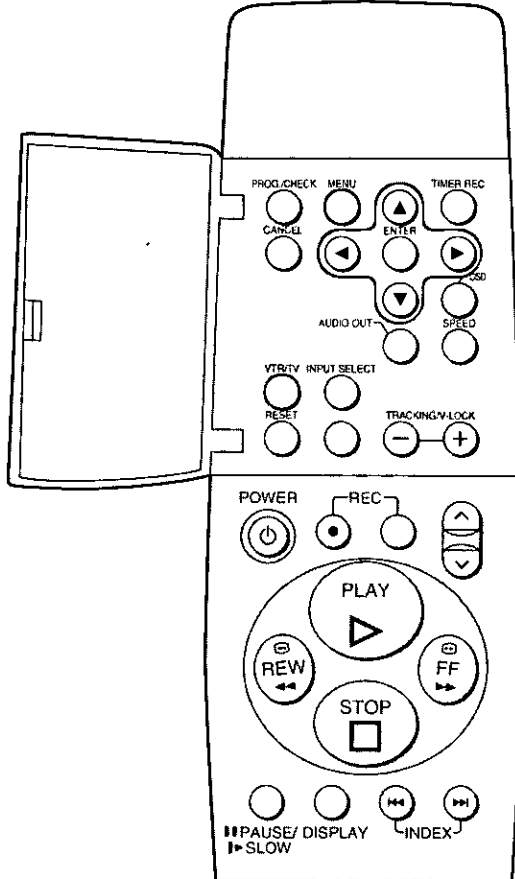
Channel Reception Check

- 1 Set channel 3 or 4 on your TV (selected in step 2) in order to check a proper broadcast reception.
- 2 Press **VTR/TV** (on the remote controller) to select the VTR mode.
 - The "VTR" indicator appears on the VTR Display.
- 3 Select channels on the VTR that you would normally receive clearly in your area to check proper reception.

Language Setting of On Screen Display

Preparation

- Confirm that the TV is on and the VTR viewing channel is selected.
- Turn on the VTR.
- Press **VTR/TV** to select the VTR mode.

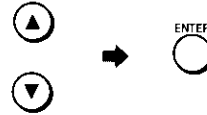


To View a Demonstration

1 Press **MENU**.



2 Select **DEMONSTRATION**.



- During Demonstration mode, all the On Screen Displays are displayed one after the other at about five second intervals.

3 Press **MENU** to stop the Demonstration.



Note:

The Menu Screen has a blue background. However, if there is no signal during external input, the Menu Screen may change to black and white if **MENU** is pressed. This does not indicate a malfunction. If this happens, either input a signal during external input or switch to Tuner input.

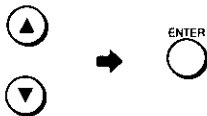
To select the Desired Language

Select one of the four languages displayed: English, Spanish, Portuguese and French.

1 Press **MENU**.



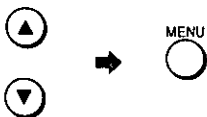
2 Select **LANGUAGE**.



On Screen Display



3 Select the desired language.



Setting the Clock of the VTR

The built-in clock is used to activate the timer for automatic recording and must be set to the correct time.

The built-in digital clock employs the 24-hour system.

For Example:

Date; 16th, October, 1999

Time; 20:15

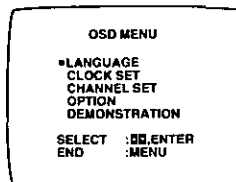
Preparation

- Confirm that the TV is on and the VTR viewing channel is selected.
- Turn on the VTR.
- Press **VTR/TV** to select the VTR mode.

Operations

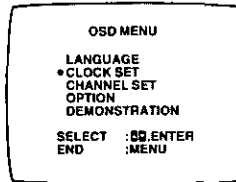
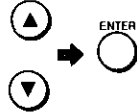
On Screen Display

1



Press **MENU**.

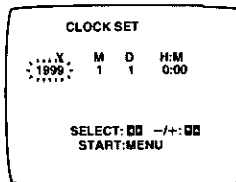
2



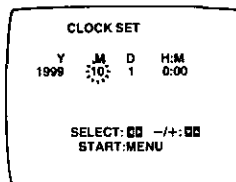
Select **CLOCK SET**.

3

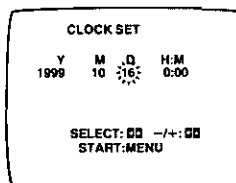
Set each item by pressing **▲** or **▼** and **▶**. Press **◀** to return to the previous item.



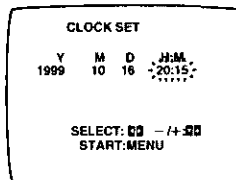
Set Year "1999".



Set Month "10".



Set Date "16".



Set Time "20:15".

- When it is kept pressed, the indication changes in 30-minute steps.
- There is no need to press **▶**.

4

Display Symbol

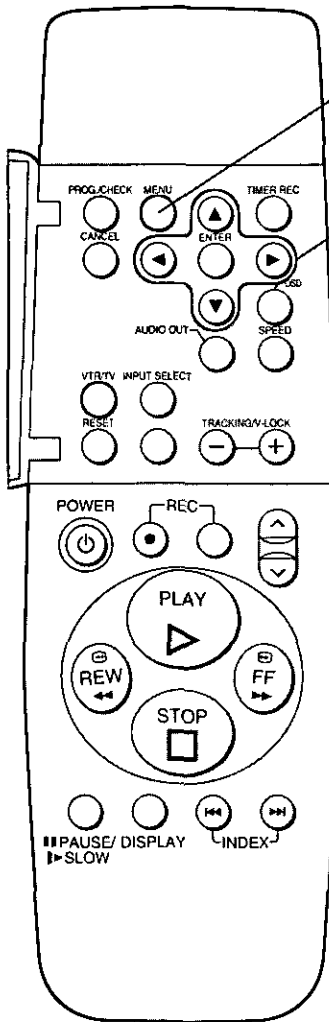


Press **MENU**.

- The clock will start.

Note:

The clock operates for at least 1 year by its backup system in the event of power failure.



Time Reset Function

If the clock is less than two minutes slow or fast, it can easily be reset to the proper time.

For example:

Resetting the clock to 12:00.00.

- 1 Select **CLOCK SET** on **MENU** On Screen Display and press **ENTER**.
- 2 When the current clock display on the VTR is between 11:58 to 12:01, press **MENU** as soon as you hear the 12:00.00 time signal. This resets the time to 12:00.00.

Storing TV Broadcasts into your VTR

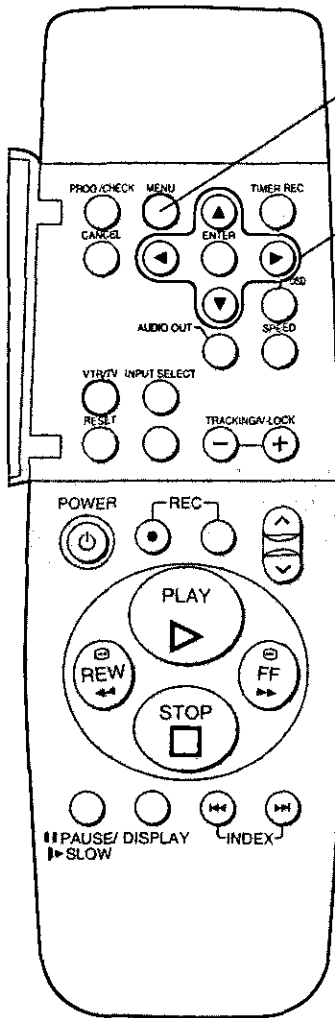
Introduction

The VTR has its own tuner (just like a normal TV set) and can receive up to 181 TV broadcast stations.

Preparation


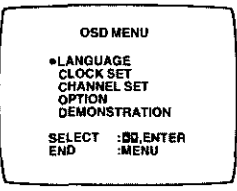
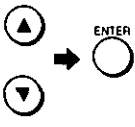
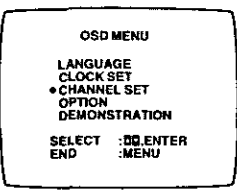
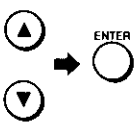
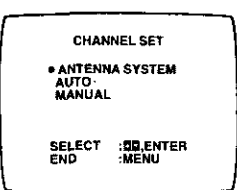
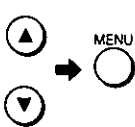
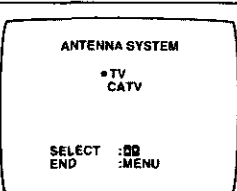

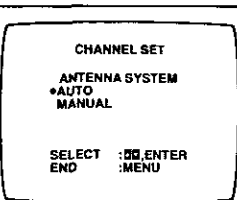
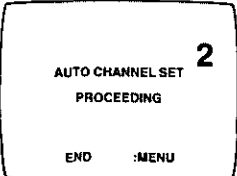
- Confirm that the TV is on and the VTR viewing channel is selected.
- Turn on the VTR and select any channel except A1 or A2.
- Press **VTR/TV** to select the VTR mode.

Auto Tuning procedure



Operations

On Screen Display

1 		Press MENU .
2 		Select CHANNEL SET .
3 		Select ANTENNA SYSTEM .
4 		Select the desired system.
5 	 	Select AUTO and press ENTER . • When Auto Tuning is finished, the On Screen Display disappears and the lowest channel position at which a broadcast can be tuned in is received.

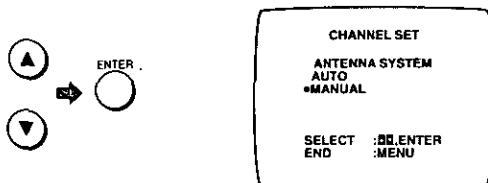
Notes:

- Auto Tuning searches for TV stations from VHF minimum to UHF maximum and memorizes which channel numbers actually receive a station. Channel numbers with no reception are skipped.
- Auto Tuning takes seven or more minutes to complete the search.
- If VTR is not correctly tuned by Auto Tuning, follow the procedure on next page.

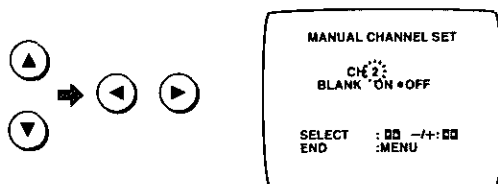
Manual System Setting Procedure

Follow steps 1 to 4 of the above procedure.

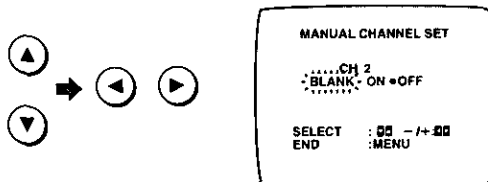
- 5 Select **MANUAL** by pressing ▲ or ▼ and then press **ENTER**.



- 6 Select **CH** by pressing ▲ or ▼ and then select the program position by pressing ◀ or ▶.



- 7 Select **BLANK** by pressing ▲ or ▼ and then select **OFF** by pressing ◀ or ▶.



- To select the blanking of a program position, select **ON**. When blanking is on for any program position, that channel number will be skipped when changing channels using the ▼ or ▲ key's.
- Repeat steps 6 and 7 for another unoccupied program positions to skip during the selection of the program positions.

- 8 Press **MENU** three times.



Channel Plan

TV mode

CHANNEL DESIGNATIONS	CHANNEL RECEIVED OFF THE AIR	CHANNEL SELECTION & INDICATION ON VTR
VHF	2-13	2-13
UHF	14-69	14-69

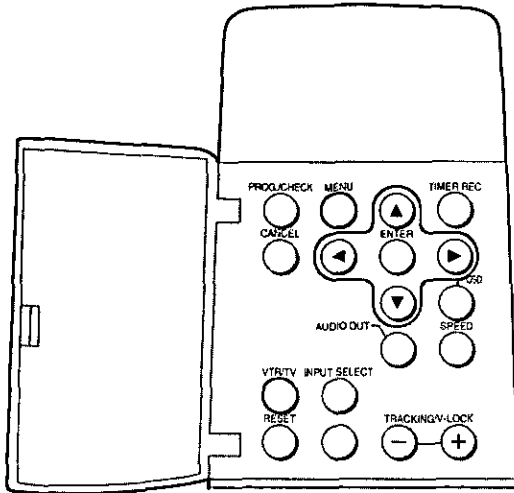
CATV mode

CHANNEL DESIGNATIONS	CATV CHANNEL RECEIVED FROM CABLE	CHANNEL SELECTION & INDICATION ON VTR
BROADCAST VHF	2-13	2-13
CATV LOW BAND	A-5-A-1	95-99
CATV MID/SUPER BANDS	A-W	14-36
CATV HYPER BAND	AA-FFF	37-65
ULTRA BAND	GGG-WWW WWW+1- WWW+12	66-94
	100-125	100-125
SPECIAL CATV CHANNEL	5A	1

Settings Using On Screen Display

Preparation

- Confirm that the TV is on and the VTR viewing channel is selected.
- Turn on the VTR.
- Press **VTR/TV** to select the VTR mode.

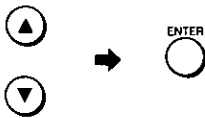


To select Cassette Tape Length for displaying the Approximate Remaining Tape Time

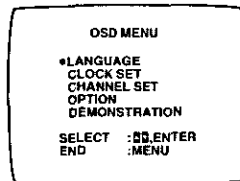
- 1 Press **MENU**.



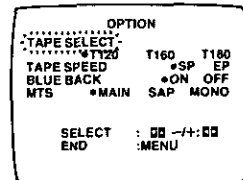
- 2 Select **OPTION**.



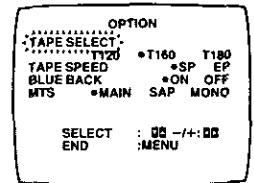
On Screen Display



- 3 Select **TAPE SELECT**.



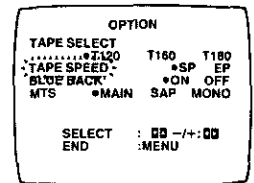
- 4 Select the corresponding cassette tape length.



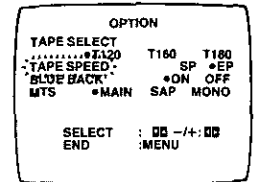
- T120: For T30, -60, -90 and -120 tapes.
- T160: For T140 and -160 tapes.
- T180: For T180 tape.

To select the Desired Tape Speed for Manual Recording

- 1 Select **TAPE SPEED** on **OPTION** On Screen Display.



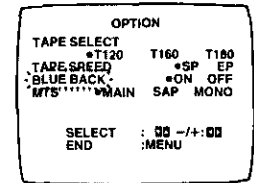
- 2 Select the desired tape speed.



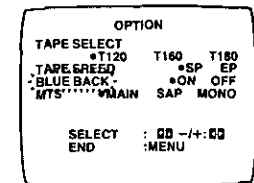
For Blue Background Function

When **BLUE BACK** is **ON**, the screen will always have a blue background when no signal is received or the received signal is very weak during Tuner input.

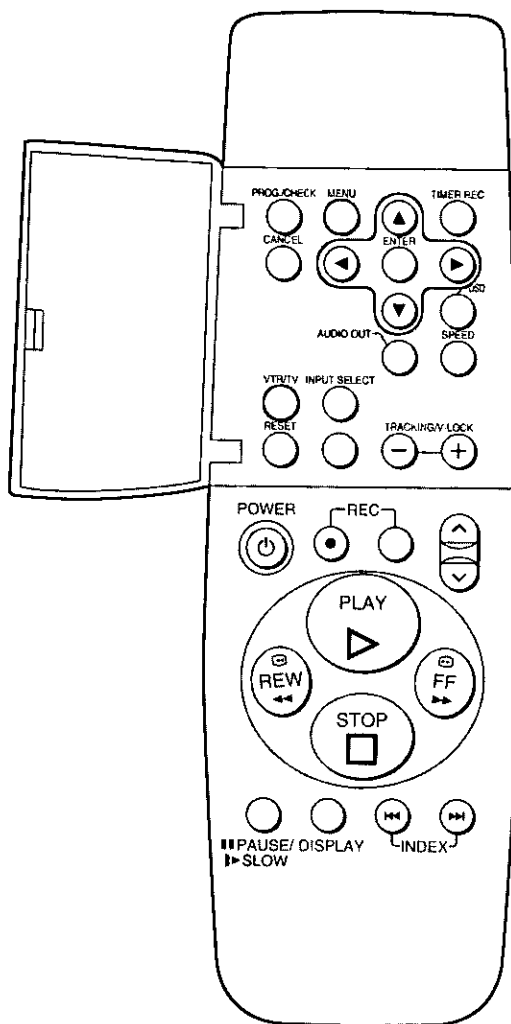
- 1 Select **BLUE BACK** on **OPTION** On Screen Display.



- 2 Select **ON**.



- When **BLUE BACK** is **OFF**, the blue background function does not work.
- It is not possible to record the blue picture of the blue background function.



The table below shows the TV broadcast type, **MTS** settings, and audio recording patterns.

Be sure that MTS is set to MAIN or SAP and follow the operation procedure described on page 20 to record on the Hi-Fi audio tracks.

TV Broadcast	MTS	Audio Track		
		Normal (Mono)	Hi-Fi	
			Left	Right
Mono	MAIN or SAP	Mono	Mono	Mono
Stereo	MAIN or SAP	L+R (Mixed)	Left	Right
Mono and Audio II (SAP)	MAIN	Mono	Mono	Mono
	SAP	Mono	Mono	Audio II
Stereo and Audio II (SAP)	MAIN	L+R (Mixed)	Left	Right
	SAP	L+R (Mixed)	L+R (Mixed)	Audio II

MONO Position

If the sound of a stereo or Audio II (SAP) broadcast is impaired by noise due to weak reception, set **MTS** to MONO. The TV broadcast is recorded monaurally for easier listening.

To resume stereophonic recording, set **MTS** to MAIN or SAP.

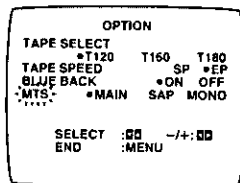
After All Settings are selected

Press **MENU** twice to make On Screen Display disappear.

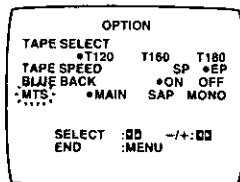
Audio Channel Selection

When a stereo and/or Audio II (SAP) broadcast is received, "STEREO" and/or "SAP" are lit to inform you of the type of broadcast.

1 Select **MTS**.



2 Select the desired mode.

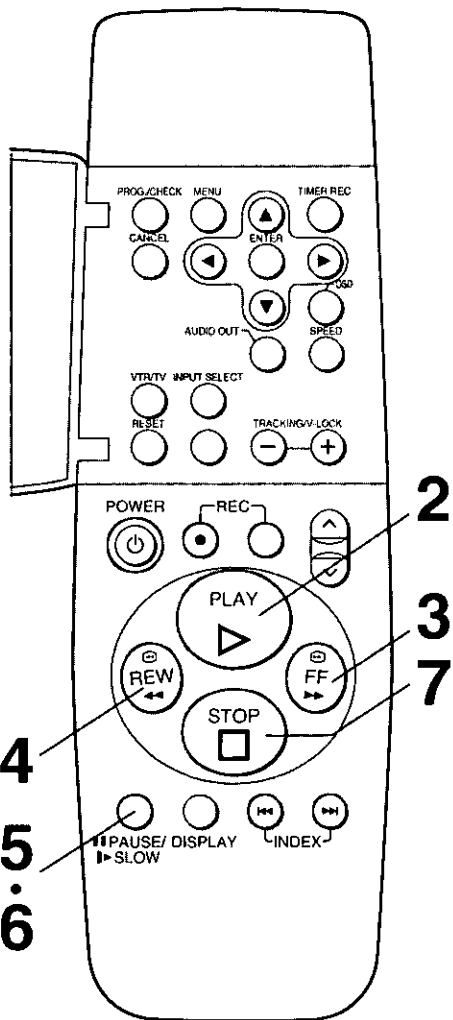
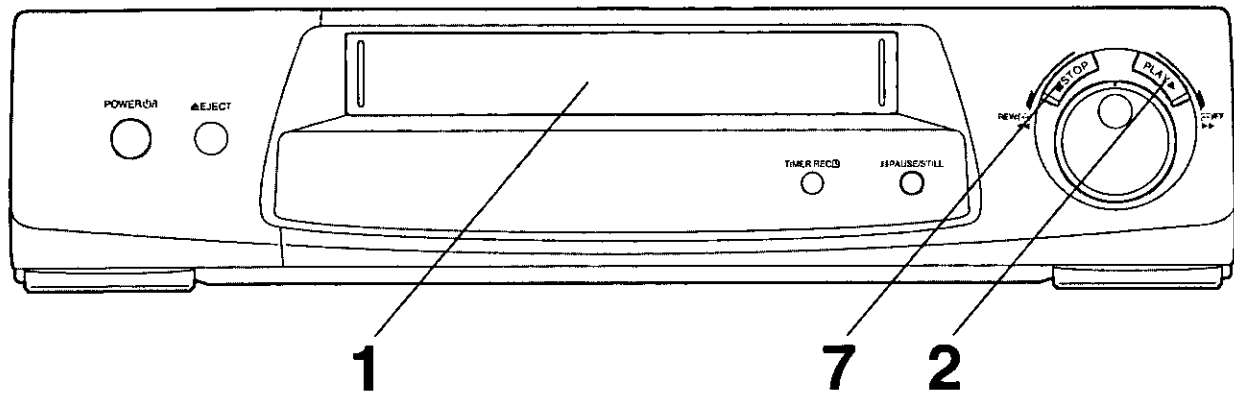


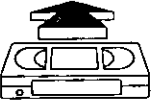


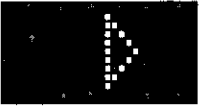









Auto Bilingual Choice Function

When a stereo broadcast or Audio II (SAP) broadcast is recorded and played back on this unit, stereo sound will be automatically selected in the case of a stereo broadcast and Audio II (SAP) sound will be automatically selected in the case of a dual-sound broadcast (Mono and Audio II or Stereo and Audio II).

- The wrong choice may be made if the program is played back from an interim point. (In a case like this, press the **AUDIO OUT** button and select the right sound.)
- This function works only for cassettes which have been recorded by a video recorder equipped with Panasonic's Auto Bilingual Choice function.
- The function will not work with a cassette which has been recorded using the external input facility.

Playback



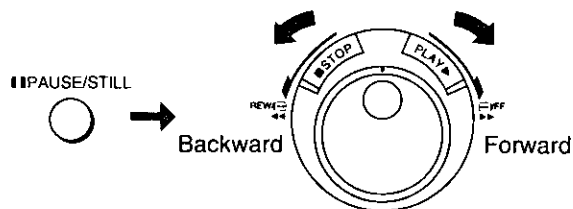
Operations	Display Symbols	
1 		Insert a recorded cassette tape.
2 		Start viewing the picture.
3 		Search forward by pressing FF . • To change back to normal playback, press PLAY . Keep FF pressed to search and release it to return to normal playback.
4 		Search backward by pressing REW . • To change back to normal playback, press PLAY . Keep REW pressed to search and release it to return to normal playback.
5 		View a still picture. • Press PAUSE/SLOW . • To continue the normal playback, press PLAY or PAUSE/SLOW .
6 		View the slow motion picture. • Keep PAUSE/SLOW pressed for more than 2 seconds. • To resume the normal playback, press PLAY .
7 		Stop viewing the picture.

Other Playback Functions

To change the playback speed

Using Shuttle Ring:

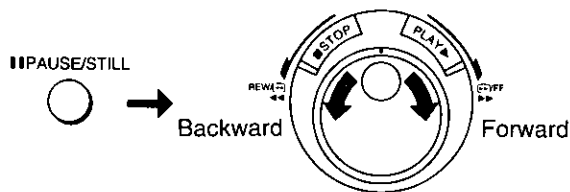
- 1 Press **PAUSE/STILL**.
- 2 Rotate Shuttle Ring.



To locate the desired picture exactly

Using Jog Dial:

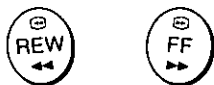
- 1 Press **PAUSE/STILL**.
- 2 Turn Jog Dial.



To obtain High Speed Picture during Fast Forward or Rewind

Keep **FF** pressed during fast forward.

Keep **REW** pressed during rewind.

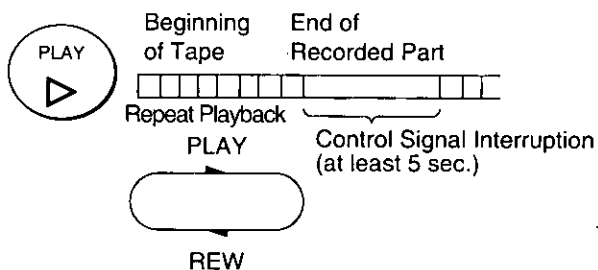


- The same operation can also be performed by turning the Shuttle Ring.

To playback the Recorded Part Repeatedly

Keep **PLAY** pressed for more than 5 seconds.

This causes the tape to repeatedly play from the beginning up to the end of the recorded position.



- "R ▶" appears on the On Screen Display.
- Press **POWER** to release from Repeat Playback mode.
- Repeat playback is not possible for tapes with an unrecorded part lasting 1 or more seconds at the beginning of the tape.

To find the Beginning of Each Recording

For example:

Searching for the 2nd recorded segment in the forward direction.

Press **INDEX ▶▶** twice.



- After finding the specific recorded segment, playback starts automatically.
- For the reverse direction, press **INDEX ◀◀**.
- Up to 20 index signals can be searched for in both directions.
- When the opposite **INDEX** button is pressed, the number will be decreased till 1.
- The figure on the display is decremented by 1 each time an index signal is located.

Recording Index Signals

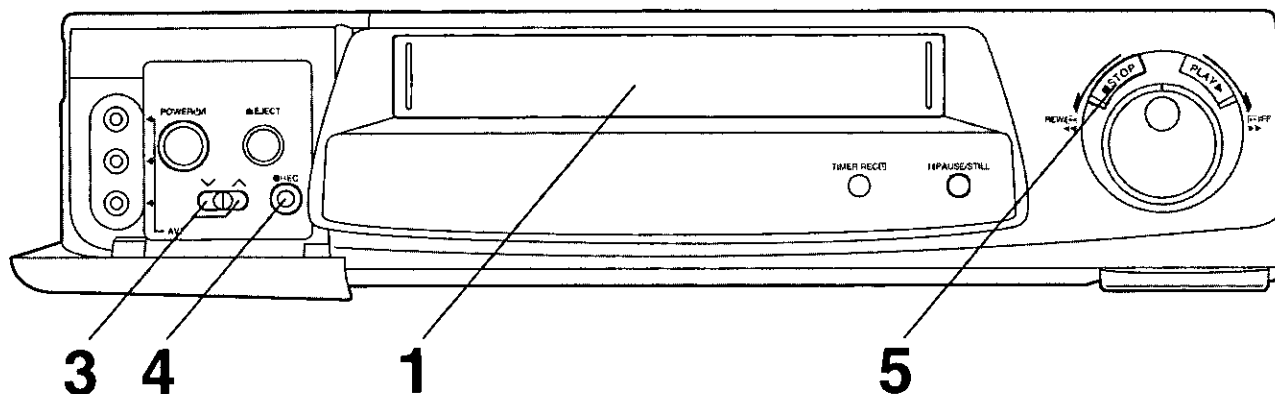
Index signals are recorded in following cases.

- When a recording is started by pressing **REC**.
- When **REC** is pressed during recording.
- When timer recording is activated.










Notes:

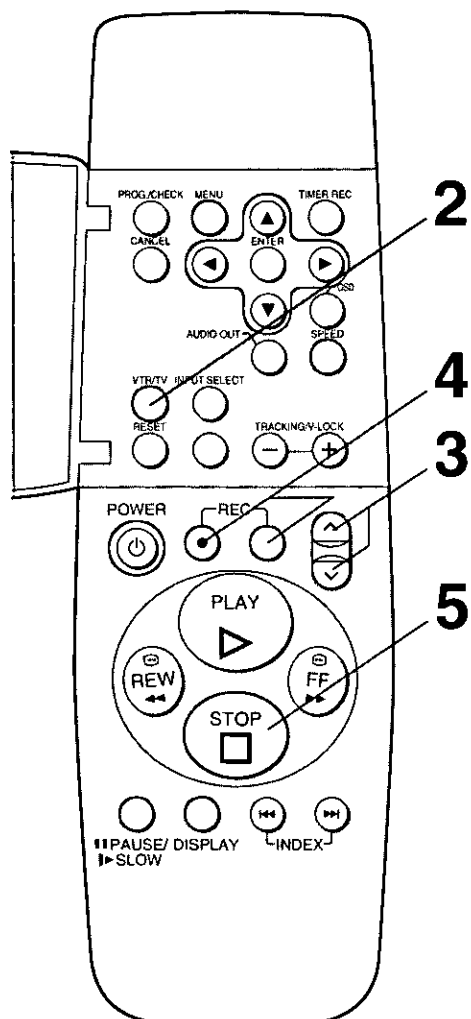
- Audio reproduction of linear (conventionally recorded) tapes will be monaural when played back on the FM Hi-Fi video recorders.
- Cue, review or slow playback will be automatically released after 10 minutes, and still playback after 5 minutes.
- The **INDEX** search function can only work correctly, if the index signals are spaced at least 3 minutes apart in the SP mode and 5 minutes apart in the EP mode.
- In EP mode only:
When playing back a tape which was recorded on another VTR, it may be necessary to adjust the Tracking Control. In some cases the picture quality may still be inferior. This is due to limitation of format.

Manual Recording



Operations Display Symbols

- | | | |
|--|--|--|
| 1  |  | Insert a cassette tape.
• If it has already been inserted, press POWER to turn the VTR on. |
| 2  |  | Select the VTR mode. |
| 3  |  | Select TV station. |
| 4  |  | Start recording. |
| 5  | | Stop recording. |



To select the Desired Tape Speed

Press **SPEED** before recording.



To interrupt Recording

Press **PAUSE/SLOW** during recording.
Press again to continue recording.

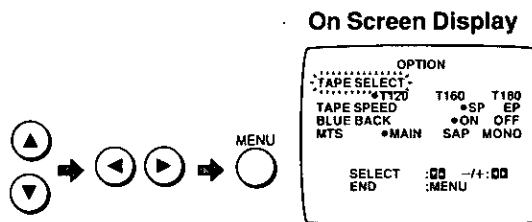


To record One TV Program while viewing Another Program

- 1 Refer to the manual recording operations steps 1 to 4.
- 2 Press **VTR/TV** to select the TV mode.
- 3 Select the TV program on your TV set you wish to view at the present time.

To display the Approximate Remaining Tape Time

- 1 Select **TAPE SELECT** on **OPTION** On Screen Display and select the corresponding cassette tape length. See page 16.



- T120: For T30, -60, -90 and -120 tapes.
- T160: For T140 and -160 tapes.
- T180: For T180 tape.

- 2 Press **DISPLAY**.



- The remaining tape time may not be displayed correctly depending on the tape used.

Notes:

- When a video cassette with a broken off tab is inserted, the "RECORD" indication will flash to indicate that recording is not possible.
- The recording pause mode will be automatically released after 5 minutes, and return to stop mode.

Timer Recording

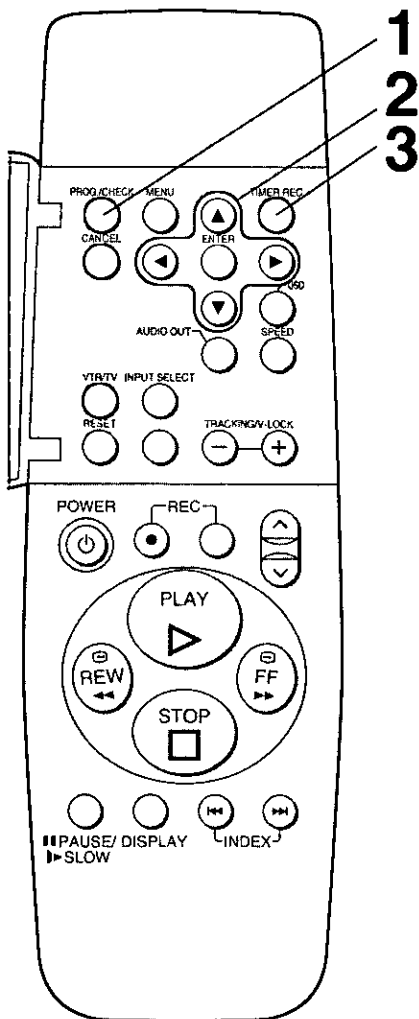
Up to 8 timer programs can be recorded up to one month in advance by setting the timer, including daily and weekly programs.

Preparation

- Confirm that the TV is on and the VTR viewing channel is selected.
- Insert a cassette tape with an intact erasure prevention tab.
- Press **VTR/TV** to select the VTR mode.

For Example:

Timer program number; 1
 Program position (channel); 2
 Date; 27th, October
 Starting time; 20:02
 Ending time; 21:30
 (Present date; 16th, October)



Operations On Screen Display

- 1** Select **Timer Program number "1"** by pressing **PROG./CHECK**, and then press **▶**.

CH	DATE	ON	OFF	SP
2	---	---	---	---
---	---	---	---	---
---	---	---	---	---
---	---	---	---	---
- 2** Set each item by pressing **▲** or **▼** and **▶**. Press **◀** to return to the previous item.

Set Program position (channel) "2".

CH	DATE	ON	OFF	SP
2	---	---	---	---
---	---	---	---	---
---	---	---	---	---
---	---	---	---	---

Set Date "27".
 • For daily and weekly recording, see page 23.

CH	DATE	ON	OFF	SP
2	27WE	---	---	---
---	---	---	---	---
---	---	---	---	---
---	---	---	---	---

Set Starting time (hour) "20".

CH	DATE	ON	OFF	SP
2	27WE	20:15	---	---
---	---	---	---	---
---	---	---	---	---
---	---	---	---	---

Set Starting time (minute) "02".

CH	DATE	ON	OFF	SP
2	27WE	20:02	---	---
---	---	---	---	---
---	---	---	---	---
---	---	---	---	---

Set Ending time (hour) "21".

CH	DATE	ON	OFF	SP
2	27WE	20:02	21:02	---
---	---	---	---	---
---	---	---	---	---
---	---	---	---	---

Set Ending time (minute) "30".

CH	DATE	ON	OFF	SP
2	27WE	20:02	21:30	---
---	---	---	---	---
---	---	---	---	---
---	---	---	---	---

Select Tape speed.
 • There is no need to press **▶**.

CH	DATE	ON	OFF	SP
2	27WE	20:02	21:30	SP
---	---	---	---	---
---	---	---	---	---
---	---	---	---	---
- 3** To activate timer recording, press **TIMER REC.**

Setting for Weekly and Daily Timer Recording

In the Date setting step, press ▼ repeatedly until the desired day(days) is displayed.

(SU=Sunday, MO=Monday, TU=Tuesday, WE=Wednesday, TH=Thursday, FR=Friday, SA=Saturday)

Weekly recording

For example, Sunday

CH	DATE	ON	OFF	SP
2	SU	---	---	SP
---	---	---	---	---
---	---	---	---	---
---	---	---	---	---

Daily recording

For this timer function, several groups of days can be selected.

- (A) Daily recording from Monday to Friday
- (B) Daily recording from Monday to Saturday
- (C) Daily recording from Sunday to Saturday

For example, (C)

CH	DATE	ON	OFF	SP
2	SU-SA	---	---	SP
---	---	---	---	---
---	---	---	---	---
---	---	---	---	---

Timer Recording from External Signal Source

If Timer Recording is performed by a unit connected to the Audio/Video input sockets, select the A1 or A2 indicator for the program position.

A1: Through the AV1 (AUDIO IN/VIDEO IN) socket.

A2: Through the AV2 (AUDIO IN/VIDEO IN) sockets on front panel.

CH	DATE	ON	OFF	SP
A1	---	---	---	SP
---	---	---	---	---
---	---	---	---	---
---	---	---	---	---

Setting other Programs in Succession

Repeat steps 1 and 2.

Checking a Timer Program

- The VTR must be turned on, or the timer recording indicator "□" must be lit.
- Confirm that the TV is on and the VTR viewing channel is selected.

1 Press **PROG./CHECK**.

CH	DATE	ON	OFF	SP
2	27WE	20:02	21:30	SP
A1	SU-SA	10:30	11:00	EP
14	SU	15:00	16:00	SP
5	19TU	22:15	23:30	EP
2	28TH	20:02	21:30	SP
4	30SA	19:10	19:55	SP
---	---	---	---	---

2 Press **VTR/TV** to select the VTR mode.



Cancelling a Timer Program

- The VTR must be turned on, or the timer recording indicator "□" must be lit.
- Confirm that the TV is on and the VTR viewing channel is selected.

1 Press **PROG./CHECK**.

CH	DATE	ON	OFF	SP
2	27WE	20:02	21:30	SP
A1	SU-SA	10:30	11:00	EP
14	SU	15:00	16:00	SP
5	19TU	22:15	23:30	EP
2	28TH	20:02	21:30	SP
4	30SA	19:10	19:55	SP
---	---	---	---	---

2 Press **VTR/TV** to select the VTR mode.



3 Press **PROG./CHECK** repeatedly until the desired timer program number is flashing on and off.

CH	DATE	ON	OFF	SP
2	27WE	20:02	21:30	SP
A1	SU-SA	10:30	11:00	EP
14	SU	15:00	16:00	SP
5	19TU	22:15	23:30	EP
2	28TH	20:02	21:30	SP
4	30SA	19:10	19:55	SP
---	---	---	---	---

4 Press **CANCEL**.

CH	DATE	ON	OFF	SP
2	27WE	20:02	21:30	SP
A1	SU-SA	10:30	11:00	EP
14	SU	15:00	16:00	SP
2	28TH	20:02	21:30	SP
4	30SA	19:10	19:55	SP
---	---	---	---	---

Note:

If a timer recording is not performed to the end (due to insufficient tape or cancellation by the user), the programmed timer recording data will be cancelled from the memory by 4 a.m. two days later.

However, if the Timer Record Function is activated at that time, the programmed timer recording data will be cancelled at 4 a.m. the next day.

Editing

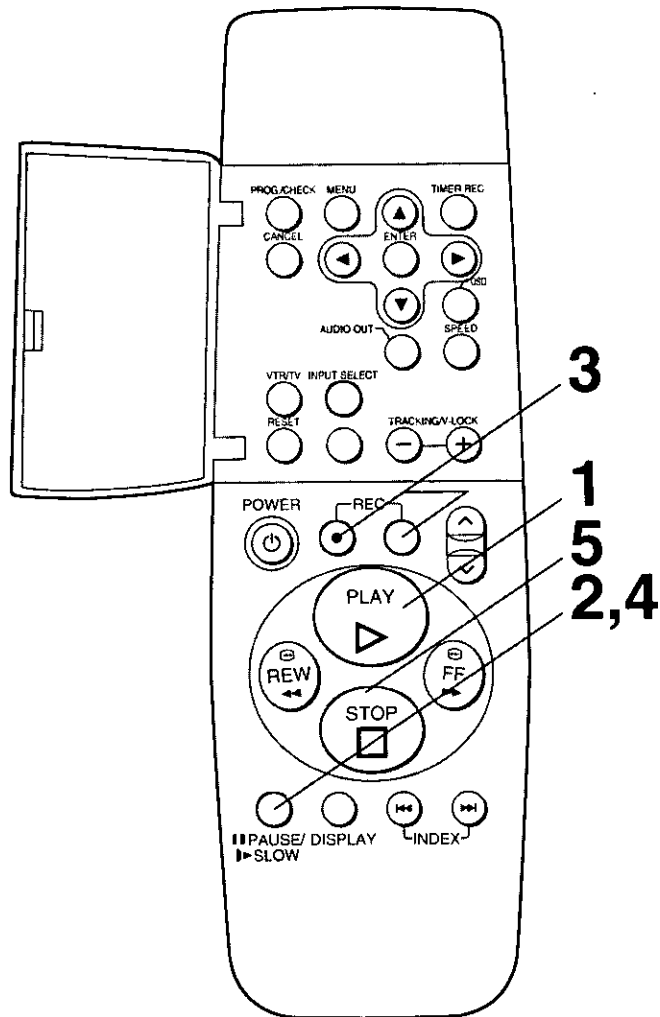
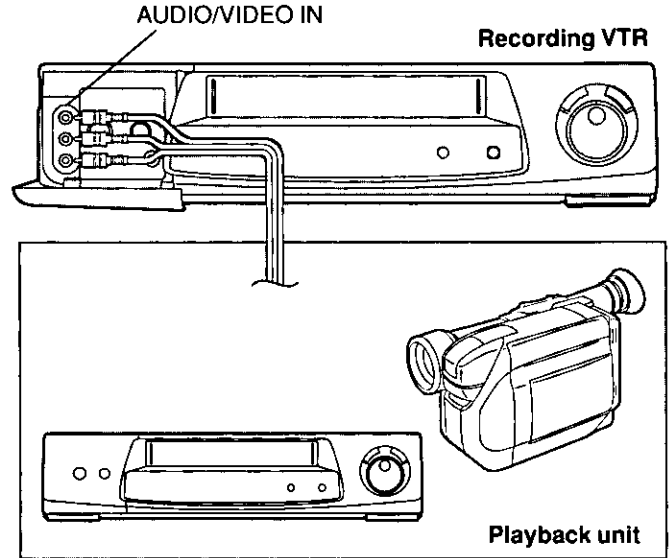
Assembly Editing

This function can be used to make up an edited tape from other recordings or video sources.

A new scene can be added to the end of a previous one.

Preparation

- Connect a video camera or another VTR to this VTR as shown.
- Insert a recorded cassette tape with an intact erasure prevention tab.
- Select the video source required by pressing **INPUT SELECT** to set A2.



Operations

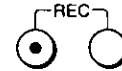
- 1 Search for the end of the previous recording.



- 2 Press **PAUSE/SLOW**.



- 3 Press **REC** to switch the VTR from the pause mode to the recording standby mode.



- 4 Start the new recording by pressing **PAUSE/SLOW** again.



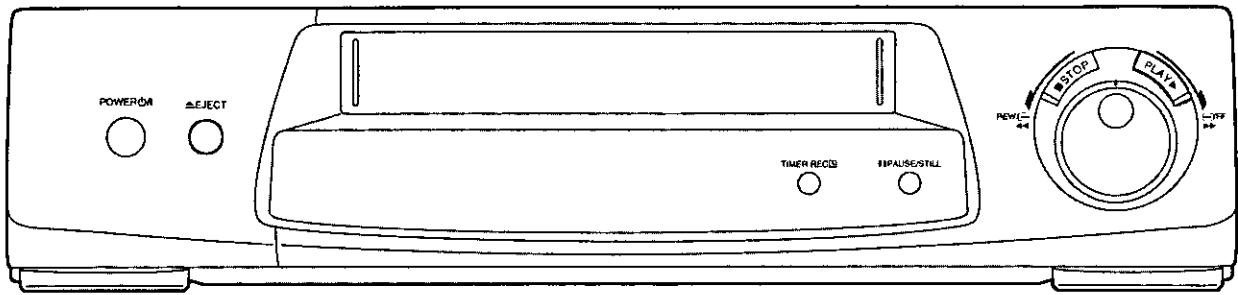
- 5 Press **STOP** to stop recording.



Note:

The new sound will be recorded on both the normal and Hi-Fi sound tracks, only monaural sound recording is possible on the normal sound tracks.

Other Functions



S-VHS Quasi Playback

It is also possible to playback tapes recorded in the S-VHS system.

- Some picture noise may occur depending on the type of tape used.
- It is not possible to fully obtain the high resolution that S-VHS is capable of.
- It is not possible to record in the S-VHS system with this VTR.

Other Automatic Functions

Automatic Playback

When a cassette without an erasure prevention tab is inserted, the VTR starts playback automatically.

VTR-off Playback

When the VTR is off, an inserted cassette can be played back by pressing **PLAY**.

Automatic Rewinding

When the tape reaches its end during recording (except for timer recording) or playback, it will automatically be rewound to the beginning.

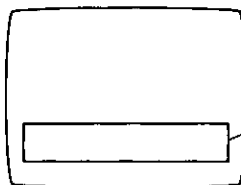
Automatic Switching Off and Ejection

When the VTR is switched off, an inserted cassette can be ejected simply by pressing **EJECT**. The VTR will eject the cassette and automatically turn itself off again.

Before Requesting Service

Before requesting service, check the following points once again.

Message of On Screen Display



Message of On Screen Display is displayed.

MESSAGE	CAUSE	REMEDY	CHECKED
PLEASE PUT IN A VIDEO CASSETTE.	REC is pressed without cassette.	Put in a video cassette.	
PLEASE STOP THE TAPE.	CHANNEL SET is selected during playback.	Stop the tape.	
PLEASE SET THE CLOCK.	PROG./CHECK is pressed when the clock is not set.	Set the clock.	
PLEASE USE A CASSETTE WITH TAB.	REC is pressed without tab of Cassette.	Use a cassette with tab.	
NO TIMER RECORDING HAS BEEN SET.	TIMER REC is pressed with no timer programs.	Set timer recording.	
VTR IS IN THE TIMER STANDBY MODE.	POWER is pressed during timer standby mode.	Press TIMER REC to release from timer standby mode.	

Self Test Indication

This VTR has a self-diagnosis and display function. If the VTR detects trouble during installation or during use, the following indications automatically appear in the VTR display. Indications are displayed in the form of a single English letter plus two numbers such as [H01].

INDICATION	CAUSE	REMEDY	CHECKED
H □ □	Some trouble has occurred. (Numbers following H and F differ according to the status of the VTR.)	Consult your dealer for further advice.	
F □ □			

VTR will not operate correctly

SYMPTOM	CAUSE	REMEDY	CHECKED
VTR display is not illuminated.	Main AC power is not connected.	Reconnect AC line cord to VTR.	
VTR display is illuminated but VTR will not operate.	VTR is in timer mode.	Press TIMER REC to operate VTR manually.	
Power is turned on but unit doesn't operate.	Safety devices are operating.	Disconnect AC line cord and wait for a short time. Reconnect AC line cord and check functions.	
A language which you do not understand appears on the TV screen.	The Language Setting is set to a language which you do not understand.	Press MENU and then ENTER , and use ▲ or ▼ to select a language you understand. Then press MENU twice. See page 12.	

Playback will not operate correctly

SYMPTOM	CAUSE	REMEDY	CHECKED
Picture is noisy or not in color. Horizontal bars or lines run down the screen.	Tracking is not correct.	Adjust the tracking. See page 7.	
	TV set is not tuned to VTR.	Check TV tuning. See page 11.	
	Video heads are clogged or worn.	Consult your dealer for further advice.	

Recording will not operate correctly			
SYMPTOM	CAUSE	REMEDY	CHECKED
"E" indication flashes whenever recording is attempted.	Erasure prevention tab on cassette is broken off.	Use tape with intact erasure prevention tab, or cover tab hole with adhesive tape, if original recording is no longer required.	
Picture is recorded with noise or blank screen.	Antenna or antenna cable is defective.	Check antenna connection to VTR. See page 9. Check your normal TV picture. If there is no picture, check your antenna.	
	VTR is not correctly tuned.	Re-tune VTR. See page 14.	
Timer recording cannot be performed.	Clock or calendar is incorrectly set.	Check clock and calendar. Set to present time. (Note this is a 24 hour clock.) See page 13.	
	Recording start or end time setting is incorrect.	Set recording start and end time correctly.	
	VTR is not set for timer recording.	Press TIMER REC after programming for timer recording.	
AV external recordings cannot be made.	"A1" or "A2" is not selected.	Select "A1" or "A2".	
	External AV connections are incorrect.	Check that connections for external video and audio source are correct. See page 24.	

Remote controller will not work correctly			
SYMPTOM	CAUSE	REMEDY	CHECKED
Remote controller does not operate correctly.	Remote controller transmitter beam is not reaching VTR.	Ensure that remote controller is being pointed at VTR and that transmitter beam is not obstructed.	
	Distance is too far.	Use remote controller within 7 m of VTR. If this range is not possible, replace batteries.	
	Batteries are exhausted.	Replace batteries. Note precaution for replacement on page 7.	
	Batteries are incorrectly fitted with (+/-) reversed.	Fit batteries correctly as shown on page 7.	

Precautions

Please read these cautions before you operate this VTR.

Avoid Sudden Changes in Temperature

If the VTR is suddenly moved from a cold place to a warm place, condensation may form on the tape and inside the VTR.

Humidity and Dust

Avoid places where there is high humidity or much dust, which may cause damage to internal parts.

Do Not Obstruct the Ventilation Holes

The ventilation holes prevent abnormal increase in temperature. Do not block or cover these holes. Especially avoid covering the holes with soft materials such as cloth or paper.

Keep away from High Temperature

Keep the VTR away from extreme direct heat such as direct sunlight, heating radiators, or closed automobiles.

Keep Magnets away

Never bring a magnet or magnetized object near the VTR because it will adversely affect the performance of the VTR.

No Fingers or Other Objects Inside

Touching internal parts of this VTR is dangerous, and may cause serious damage to the VTR. Do not attempt to disassemble the VTR. There are no user serviceable parts inside.

Keep Water away

Keep the VTR away from flower vases, tubs, sinks, etc. CAUTION: If liquids are spilled into the VTR, serious damage could occur. If you spill any liquid into the VTR, consult qualified service personnel.

Lightning

To avoid damage by lightning, disconnect the antenna plug from the VTR and the AC power cord.

Cleaning the VTR

Wipe the VTR with a clean, dry cloth. Never use cleaning fluid, or other chemicals. And do not use compressed air to remove dust.

Stacking

Place the VTR in a horizontal position, and do not place anything heavy on it.

Video Head Clogging

The video heads place picture signals on the tape during recording and read picture signals from the tape during playback and they are, therefore, of critical importance for the picture quality. If the VTR is used over extremely long periods of time, these heads may become dirty and clogged. In such a case, the signals can no longer be recorded correctly, and the playback picture will be distorted accordingly. If this is the case, for example, during the playback of a tape, the sound is reproduced normally, but no picture is seen, or the picture is greatly distorted. When such a symptom case occurs, have the recorder checked by qualified service personnel.

Condensation may form in the VTR if:

- The VTR is in a room when the heater has just been turned on.
- The VTR is in a room with steam or high humidity.
- The VTR is brought from cold surroundings into a well-heated room.
- The VTR is suddenly brought from cool surroundings, such as an air-conditioned room or car, to a place which is hot and humid.

Note:

Do not operate the VTR for at least 1 hour if any of the above conditions occur.

This VTR does not incorporate a dew sensor.

Specifications

AG-2550P

Power Source:	120 V AC 50/60 Hz
Power Consumption:	22 watts

Video Recording System:	2 rotary heads, helical scanning system
Video Heads:	4 heads
Tape Speed:	SP; 33.3 mm/sec. EP; 11.1 mm/sec.
Tape Format:	VHS tape
Record/Playback Time:	120 min. with NV-T120 (SP)

VIDEO

Television System:	EIA; Standard (525 lines, 60 fields) NTSC color signal	
Modulation System:	Luminance; FM azimuth recording Color signal; converted subcarrier phase shift recording	
Input Level:	VIDEO IN (PHONO);	1.0 Vp-p, 75 ohm, terminated
Output Level:	VIDEO OUT (PHONO);	1.0 Vp-p, 75 ohm, terminated
	RF Modulated;	VHF channel US3 or 4, 75 ohm

AUDIO

Input Level:	AUDIO IN (PHONO);	316 mV, 47 kohm
Output Level:	AUDIO OUT (PHONO);	400 mV, 1 kohm
Audio Track:	1 track (Normal-mono only), 2 channels (Hi-Fi audio track)	

Signal-to-Noise Ratio:	Video; more than 43 dB (SP)
Dynamic Range:	Audio; more than 90 dB (Hi-Fi audio track)
Audio Frequency Response:	20 Hz–20 kHz
Wow and Flutter:	0.005% Wrms/Hi-Fi
Operating Temperature:	5°C–40°C
Operating Humidity:	35%–80%
Weight:	9¼ lbs. (4.2 kg)
Dimensions:	16 ¹⁵ / ₁₆ " (W) × 3 ¹⁵ / ₁₆ " (H) × 11 ³ / ₄ " (D) [430 (W) × 99.9 (H) × 298 (D) mm]

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

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