

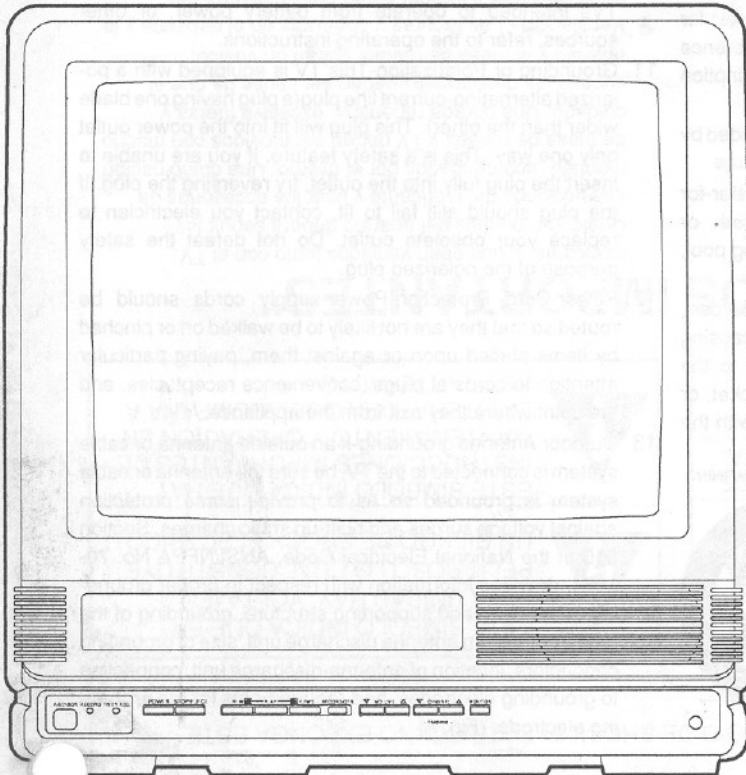
# OWNER'S MANUAL

# 13-INCH COLOR TV/VCR TVCR13B1

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# Symphonic



VHS

Please read before using this equipment

**WARNING:**

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

**CAUTION**

**RISK OF ELECTRIC SHOCK  
DO NOT OPEN**



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



THIS SYMBOL INDICATES THAT DANGEROUS VOLTAGE CONSTITUTING A RISK OF ELECTRIC SHOCK IS PRESENT WITHIN THIS UNIT.



THIS SYMBOL INDICATES THAT THERE ARE IMPORTANT OPERATING AND MAINTENANCE INSTRUCTIONS IN THE LITERATURE ACCOMPANYING THE APPLIANCE.

## "IMPORTANT SAFEGUARDS"

1. Read instructions-All the safety and operating instructions should be read before the appliance is operated.
2. Retain Instructions-The safety and operating instructions should be retained for future reference.
3. Heed Warnings-All warnings on the appliance and in the operating instructions should be adhered to.
4. Follow Instructions-All operating and use instructions should be followed.
5. Cleaning-Unplug TV from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.  
**EXCEPTION :** A product that is meant for uninterrupted service and that for some specific reason, such as the possibility of the loss of an authorization code for a CATV converter, is not intended to be unplugged by the user for cleaning or any other purpose, may exclude the reference to unplugging the appliance in the cleaning description otherwise required in item 5.
6. Attachments-Do not use attachments not recommended by the TV manufacturer as they may cause hazards.
7. Water and Moisture-Do not use this TV near water-for example, near a bath tub, wash bowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, and the like.
8. Accessories-Do not place this TV on an unstable cart, stand, tripod, bracket, or table. The TV may fall, causing serious injury to someone, and serious damage to the appliance. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the TV. Any mounting of the appliance should follow the manufacturer's instructions and should use a mounting accessory recommended by the manufacturer. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.
9. Ventilation-Slots and openings in the cabinet and the back or bottom are provided for ventilation and to ensure reliable operation of the TV and to protect it from overheating, these openings must not be blocked or covered. The openings should never be blocked by placing the TV on a bed, sofa, rug, or other similar surface. This TV should never be placed near or over a radiator or heat register. This TV should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to .
10. Power Sources-This TV should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home consult your appliance dealer or local power company. For TVs intended to operate from battery power, or other sources, refer to the operating instructions.
11. Grounding or Polarization-This TV is equipped with a polarized alternating-current line plug(a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact you electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.
12. Power-Cord Protection-Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.
13. Outdoor Antenna grounding-If an outside antenna or cable system is connected to the TV, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Section 810 of the National Electrical Code, ANSI/NFPA No. 70-1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. (Fig. A)

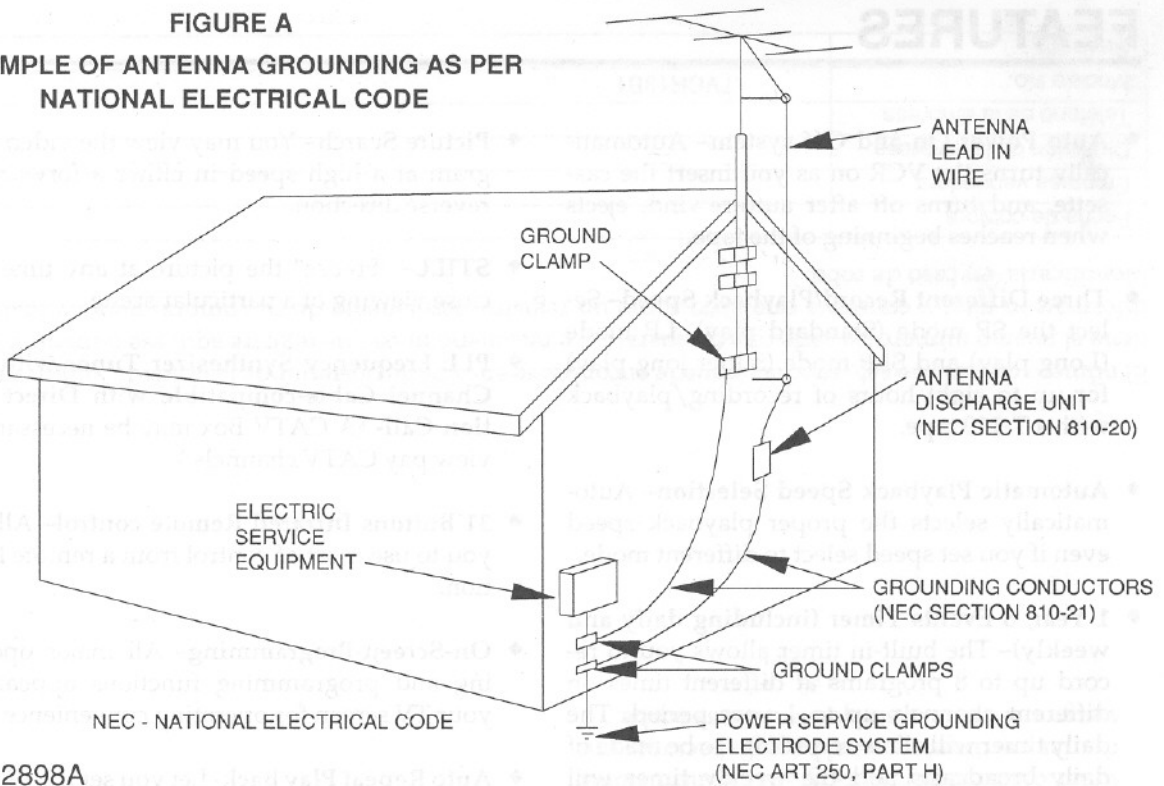
PORTABLE CART WARNING



S3125A

**FIGURE A**

**EXAMPLE OF ANTENNA GROUNDING AS PER NATIONAL ELECTRICAL CODE**



NEC - NATIONAL ELECTRICAL CODE

**S2898A**

14. **Lightning**-For added protection for this TV receiver during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the TV due to lightning and power-line surges.
15. **Power Lines**-An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.
16. **Overloading**-Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.
17. **Object and Liquid Entry**-Never push objects of any kind into this TV through opening as they may touch dangerous voltage points or shortout parts that could result in a fire or electric shock. Never spill liquid of any kind on the TV.
18. **Servicing**-Do not attempt to service this TV yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
19. **Damage Requiring Service**-Unplug this TV from the wall outlet and refer servicing to qualified service personnel under the following conditions:
  - a. When the powersupply cord or plug is damaged or trayed.
  - b. If liquid has been spilled, or objects have fallen into the TV.
  - c. If the TV has been exposed to rain or water.
  - d. If the TV does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the TV to its normal operation.
  - e. If the TV has been dropped or the cabinet has been damaged.
  - f. When the TV exhibits a distinct change in performance-this indicates a need for service.
20. **Replacement Parts**-When replacement parts are required, be sure the service technician had used replacement parts specified by the manufacturer that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, injury to persons or other hazards.
21. **Safety Check**-Upon completion of any service or repairs to this TV, ask the service technician to perform routine safety checks to determine that the TV is in proper operating condition.

# FEATURES

- ◆ **Auto Power On and Off system**– Automatically turns the VCR on as you insert the cassette, and turns off after auto-rewind, ejects when reaches beginning of the tape.
- ◆ **Three Different Record/Playback Speed**– Select the SP mode (Standard play), LP mode (Long play) and SLP mode (Super long play) for up to eight hours of recording/playback with a T-160 tape.
- ◆ **Automatic Playback Speed Selection**– Automatically selects the proper playback speed even if you set speed select to different mode.
- ◆ **1 Year, 8 Events Timer (including daily and weekly)**– The built-in timer allows you to record up to 8 programs at different times on different channels up to 1 year period. The daily timer will allow recordings to be made of daily broadcasts and the weekly timer will allow recording to be made once a week up to the end of the tape.
- ◆ **Picture Search**– You may view the video program at a high speed in either a forward or reverse direction.
- ◆ **STILL**– "Freeze" the picture at any time, for close viewing of a particular scene.
- ◆ **PLL Frequency Synthesizer Tuner with 181 Channel Cable-compatible with Direct station Call**– (A CATV Box may be necessary to view pay CATV channels.)
- ◆ **31 Buttons Infrared Remote control**– Allows you to use most of control from a remote location.
- ◆ **On-Screen-Programming**– All major operating and programming functions appear on your TV screen for operating convenience.
- ◆ **Auto Repeat Play back**– Let you set the VCR to automatically repeat a tape when it reaches the end.

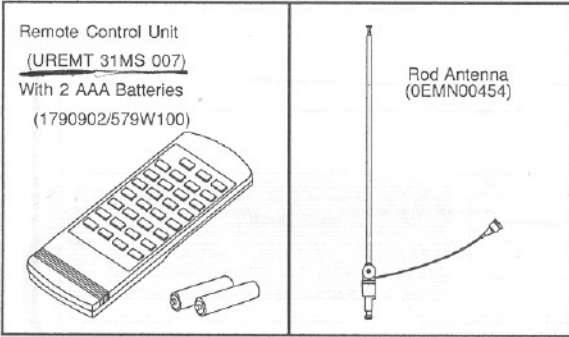
The serial number of this product may be found on the back of the unit. No others have the same serial number as yours. You should record the number and other vital information here and retain this book as a permanent record of your purchase to aid identification in case of theft.

Date of Purchase	
Dealer Purchase from	
Dealer Address	
Dealer Phone No.	
Model No.	TVCR13B1
Serial No.	



# PRECAUTIONS

## SUPPLIED ACCESSORIES



## LOCATION

For safe operation and satisfactory performance of your unit, keep the following in mind when selecting a place for its installation:

- ◆ Shield it from direct sunlight and keep it away from sources of intense heat.
- ◆ Avoid dusty or humid places.
- ◆ Avoid places with insufficient ventilation for proper heat dissipation. Do not block the ventilation holes at the top and bottom of the unit. Do not place the unit on a carpet because this will block the ventilation holes.
- ◆ Install unit in a horizontal position.
- ◆ Avoid locations subject to strong vibration.
- ◆ Do not place the unit near strong magnetic fields.
- ◆ Do not move the unit from a cold to a hot place or vice versa.

## AVOID THE HAZARDS OF ELECTRICAL SHOCK AND FIRE

- ◆ Do not handle the power cord with wet hands.
- ◆ Do not pull out the power cord when disconnecting it from an AC wall outlet. Grasp it by the plug.
- ◆ If, by accident, water is spilled on your unit, unplug the power cord immediately and take the unit to an authorized video service center for servicing.
- ◆ Do not put your fingers or objects into the VCR cassette holder.
- ◆ Do not place anything directly on top of the unit.

## WARNING

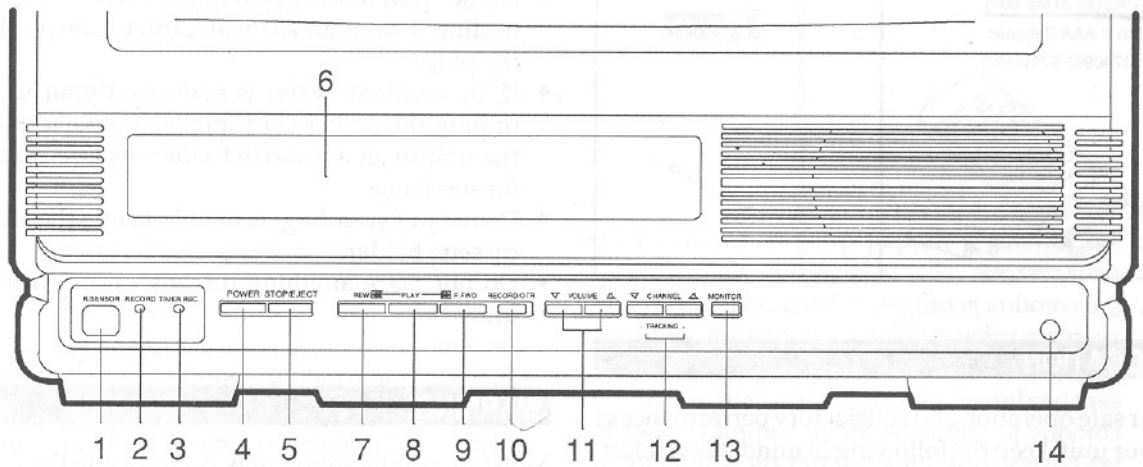
Moisture condensation may occur inside the unit when it is moved from a cold place to a warm place, or after heating a cold room or under conditions of high humidity. If playing a tape with a VCR which has moisture, it will damage the tape and VCR. Therefore when the condensation occurs inside the unit turn the POWER button on and allow at least 2 hours for the unit to dry out.

## IMPORTANT COPYRIGHT INFORMATION

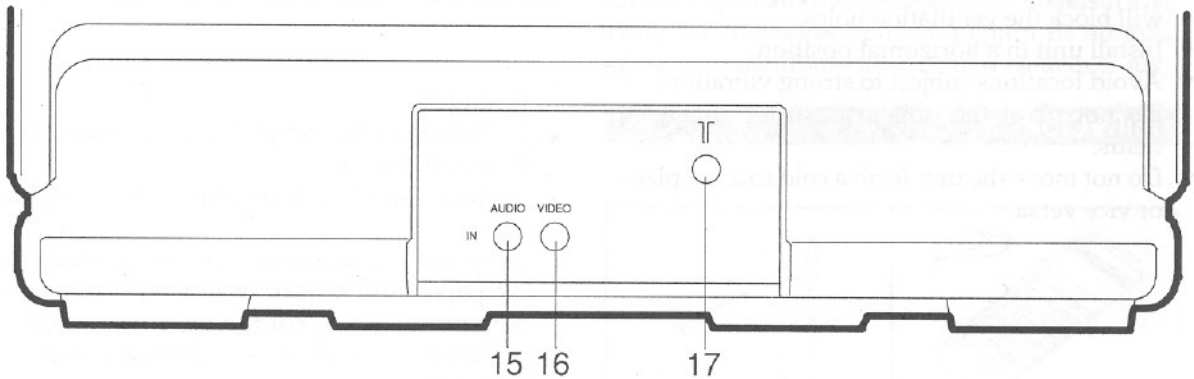
Unauthorized recording or use of broadcast television programming, video tape, film, or other copyrighted material may violate applicable copyright laws. We assume no responsibility for the unauthorized duplication, use or other acts which infringe upon the rights of copyright owners.

# OPERATING CONTROLS AND FUNCTIONS

## — FRONT VIEW —



## — REAR VIEW —



- 1 **R/SENSOR(Remote Sensor)**– Receives the infrared control signals from the handheld remote control unit.
- 2 **RECORD indicator**– Lights when in the Recording mode.
- 3 **TIMER REC. indicator**– Lights when in the Timer Recording mode.
- 4 **POWER button**– To turn VCR on and off. Press to activate the automatic recording timer.
- 5 **STOP/EJECT button**– Press to stop tape motion. Press to remove tape from VCR.
- 6 **CASSETTE COMPARTMENT**
- 7 **REWIND button**– Press to rewind tape, or to view video in reverse during play mode at a faster than normal speed. Press PLAY button to return VCR to normal playback speed.
- 8 **PLAY button**– Press to begin playback of a tape.
- 9 **F.FWD button**– Press to advance tape, or to view video in forward direction during play mode at a faster than normal speed. Press PLAY button to return VCR to normal playback speed.
- 10 **RECORD/OTR button**– Press to begin manual recording. Press to activate One Touch Recording mode.
- 11 **VOLUME buttons**– To adjust the volume level.
- 12 **CHANNEL buttons**– Press to select the channel for viewing or recording.  
**TRACKING buttons**– Adjust to minimize video 'noise' (lines or dots on screen) during playback.
- 13 **MONITOR button**– Press to turn the TV screen on and off when in the recording mode.
- 14 **EARPHONE jack**– To connect earphones (not supplied) for personal listening.
- 15 **AUDIO IN jack**– Connect to audio output jack of your audio equipment or another VCR.
- 16 **VIDEO IN jack**– Connect to video output jack of your video camera or another VCR.
- 17 **ANT. IN terminal**– Connect an antenna.

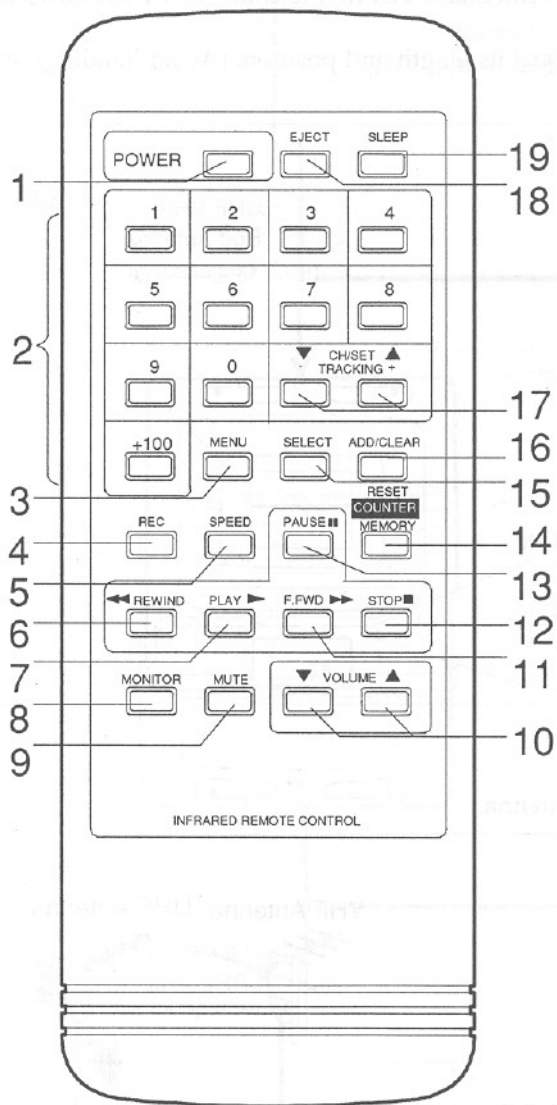
# REMOTE CONTROL OPERATION

You can operate most of functions from the Remote Control (included). The buttons on the Remote Control have the same functions as the corresponding buttons on the unit.

## HOW TO USE REMOTE CONTROL

- 1 **POWER button**— To activate the automatic timer recording and turn VCR on and off.
- 2 **NUMBER buttons**— To select desired channels. To select channels 1 to 9, first press the 0 button and then press desired channel button 1 to 9.
  - +100 button— To select channels which are equal or greater than number 100.
- 3 **MENU button**— Press to display main menu on the TV screen. (This function is operative only when the main menu is displayed on TV screen in the stop mode.)
- 4 **REC button**— Press to begin manual recording.
- 5 **SPEED button**— To set desired recording speed. (SP/LP/SLP)
- 6 **REWIND button**— To rewind the tape. To view the picture rapidly in reverse, during the playback mode. (Rewind Search)
- 7 **PLAY button**— To playback the tape.
- 8 **MONITOR button**— Press to turn the TV screen on and off when in the recording mode.
- 9 **MUTE button**— To mute sound. Press again to resume sound.
- 10 **VOLUME buttons**— To adjust desired volume level by pressing either "▲" or "▼" button.
- 11 **F.FWD button**— To move the tape forward rapidly. To view the picture rapidly in forward during the playback mode. (Forward Search)
- 12 **STOP button**— To stop tape motion.
- 13 **PAUSE button**— To stop the tape temporarily during playback or recording.
- 14 **COUNTER MEMORY button**— To set counter memory on and off. (See page 21.)
- 15 **SELECT button**— Press to select setting modes (clock, counter, tape speed, program, CH preset) in the main menu. (This function is operative only when the main menu is displayed on TV screen in the stop mode.)
  - Press to display the counter or the current channel number and current time on the TV screen. (Status function)
- 16 **ADD/CLEAR button**— Press to cancel memorized channel or Timer Program, and to add desired channel. (This function is operative only when the main menu is displayed on TV screen in the stop mode.) (See page 17, 18 and 24.)
  - RESET button**— To reset counter to 0000.
- 17 **CHANNEL buttons**— To select desired channel by pressing either "▲" or "▼" button. They cannot be used during Timer Recording. They may also be used to adjust the picture control. (See page 17.)
  - SET button**— Adjust time with "+" or "-" button. (This function is operative only when the main menu is displayed on TV screen in the stop mode.)
  - TRACKING buttons**— Adjust to minimize video 'noise' (lines or dots on screen) during playback. (See page 30.)
- 18 **EJECT button**— Press to remove tape from VCR.
- 19 **SLEEP button**— To activate the sleep function. (See page 28.)

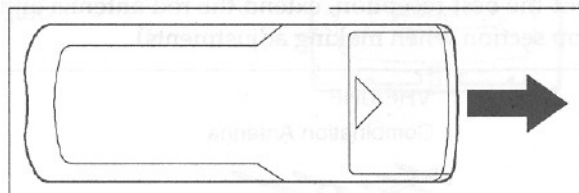




## INSTALLING THE BATTERIES

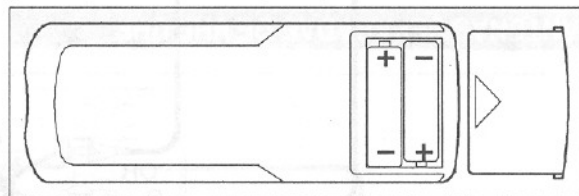
**1**

Slide the battery compartment cover by pressing the cover on the remote unit in the direction of the arrow.



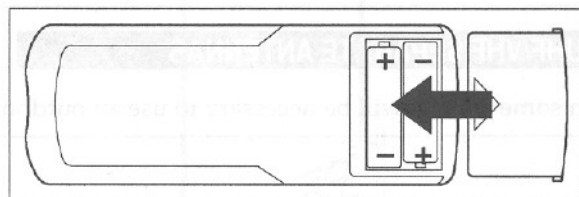
**2**

Insert 2 "AAA" penlight batteries into the battery compartment in the direction as indicated by the polarity (+/-) markings.



**3**

Replace the cover.



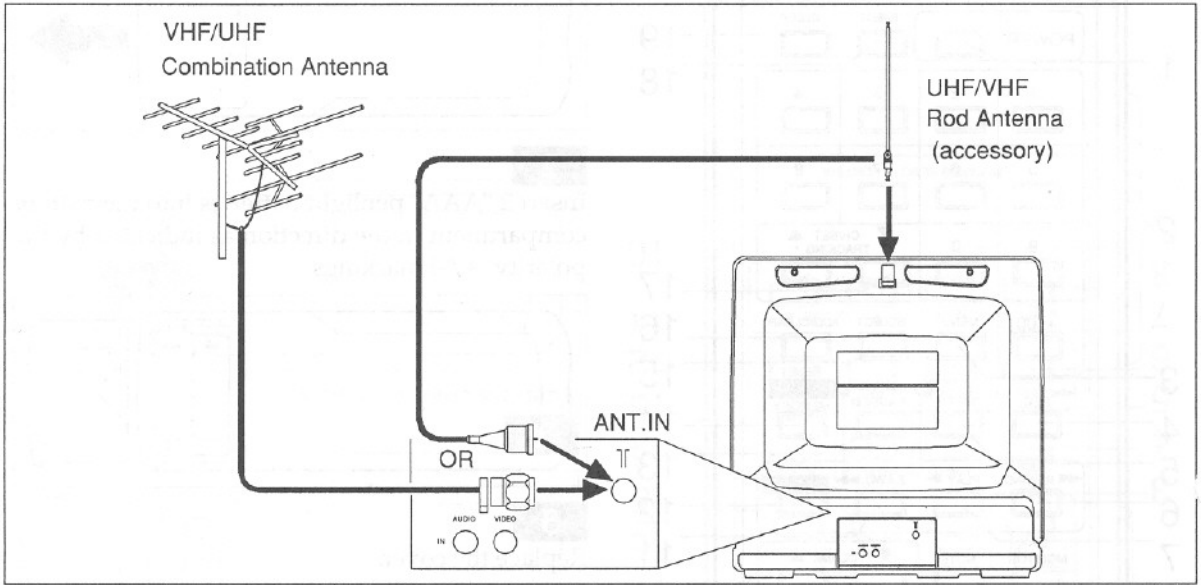
# ANTENNA CONNECTIONS

## VHF/UHF COMBINED ANTENNA

The UHF/VHF Rod Antenna (supplied) is detachable. Push the stem of the antenna into the hole which is located on the upper back cabinet of the unit.

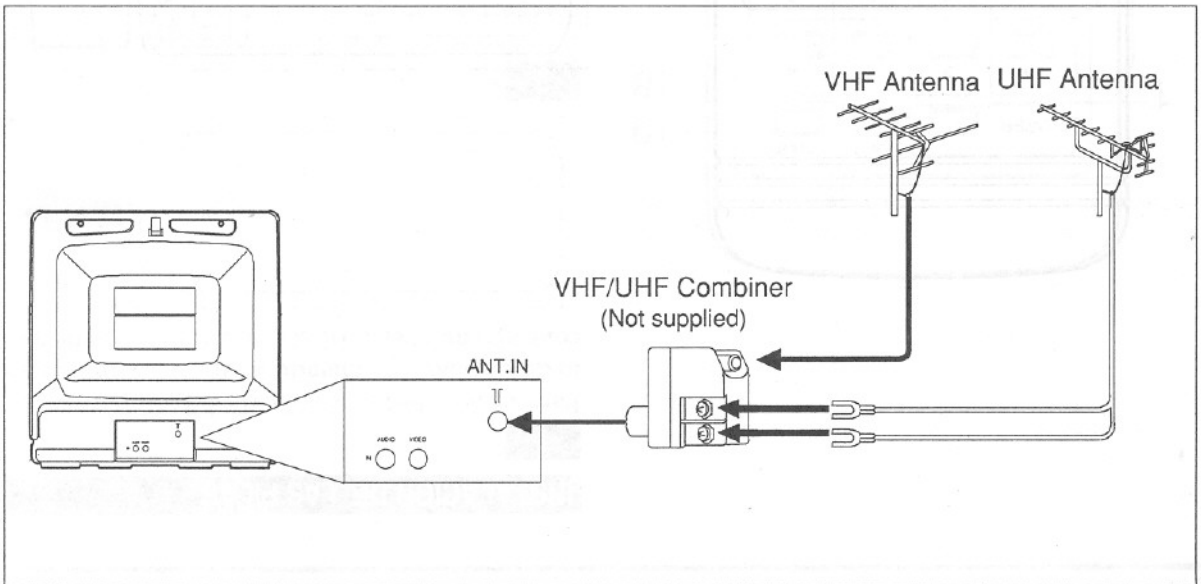
Connect the Rod antenna or VHF/UHF Combination Antenna to ANT.IN terminal of TV as shown in drawing.

For the best reception, extend the rod antenna and adjust its length and position. (Avoid handling the top section when making adjustments).



## UHF/VHF SEPARATE ANTENNAS

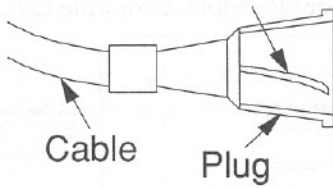
In some areas it will be necessary to use an outdoor antenna.



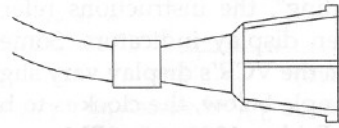
**Note :**

Before plugging the Rod antenna into antenna terminal, check that the pin is not bent. If it is bent, straighten the pin as illustrated, then plug the pin into antenna terminal.

**Bent pin**

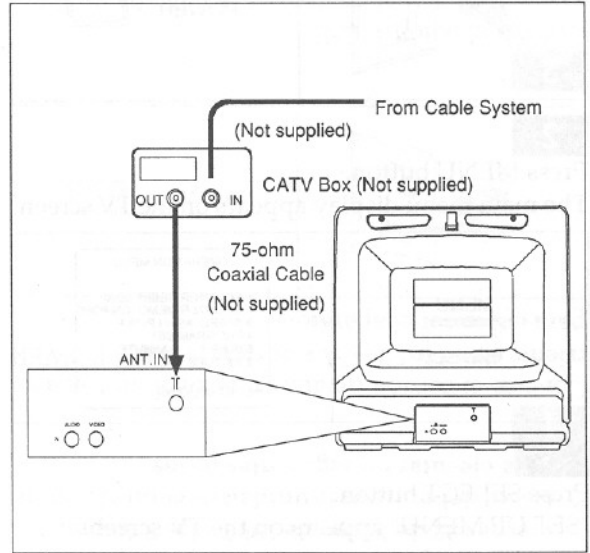
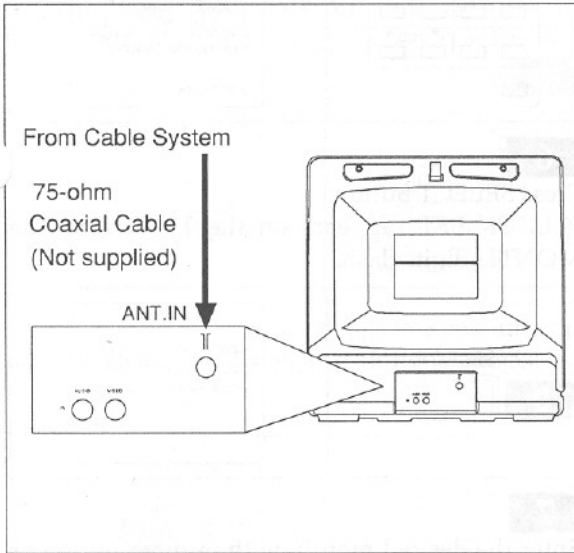


**(Needs to be straightened)**



**(Straight pin)**

**CABLE WITH PAY TV**



**EXTERNAL INPUT MODE**

When using an external input signal, connect the audio/video cable to the AUDIO IN, VIDEO IN JACKS.  
**Note:** Disconnect all cables from the AUDIO IN and VIDEO IN jacks to record TV programs.

**Note to CATV system installer**

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

# PREPARATION FOR USE

## SETTING THE CLOCK FOR CORRECT TIME

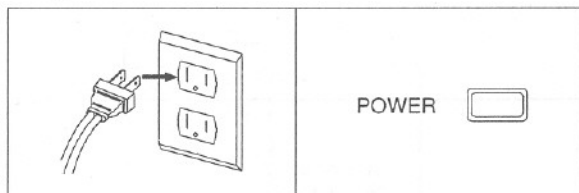
Set the clock accurately for proper automatic timer recording.

Note: For "Setting the Clock" and "Automatic Timer Recording", the instructions refer to the TV's on-screen display indicators. Some of the indications on the VCR's display vary slightly.

- ◆ In the example below, the clock is to be set to **May 22nd Friday, 1992 at 5:40PM.**
- ◆ You must use the remote control unit for the following steps.

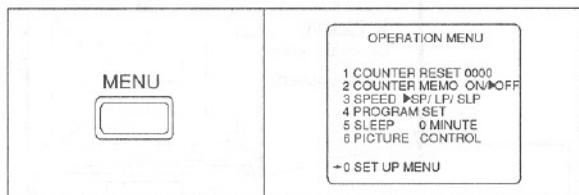
**1**

Connect the power cord to a standard AC outlet and press POWER button to turn on the unit.



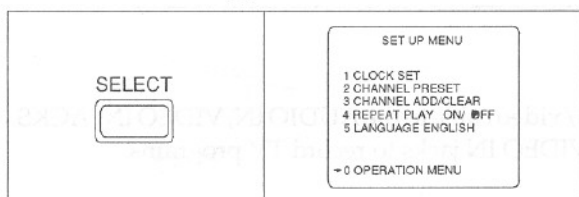
**2**

Press MENU button. The main menu display appears on the TV screen.



**3**

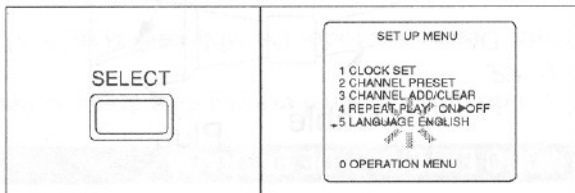
Press SELECT button. "SET UP MENU" appears on the TV screen.



**4**

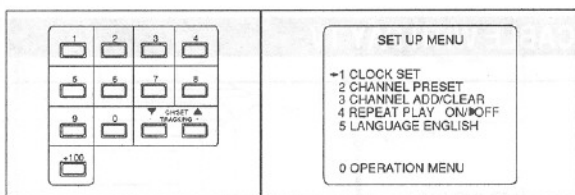
Select item 5 (LANGUAGE ENGLISH) with number button or the CH " $\blacktriangle$ " or " $\blacktriangledown$ ".

Press SELECT button repeatedly to select ENGLISH or SPANISH. (Example: ENGLISH)



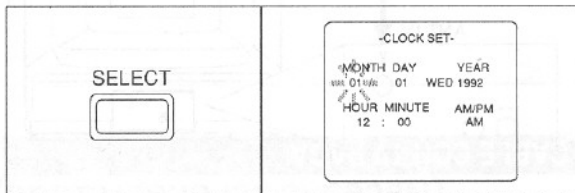
**5**

Select item 1 (CLOCK SET) with number button or the CH " $\blacktriangle$ " or " $\blacktriangledown$ ".



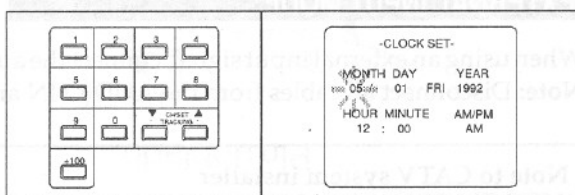
**6**

Press SELECT button. "CLOCK SET" appears on the TV screen. The MONTH digits flash.



**7**

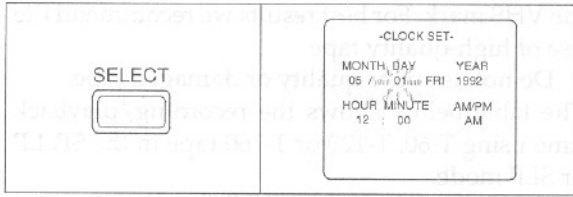
Enter the desired month with number button or CH " $\blacktriangle$ " or " $\blacktriangledown$ " button. (Example: 05)





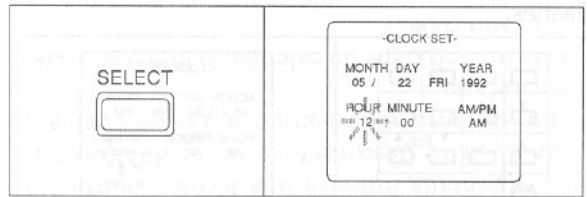
8

Press SELECT button. The DAY digits flash.



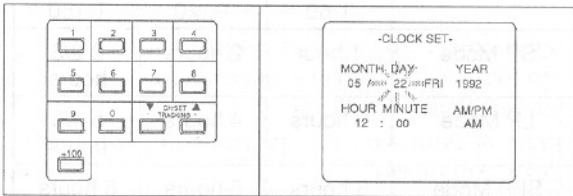
12

Press SELECT button. The HOUR digits flash.



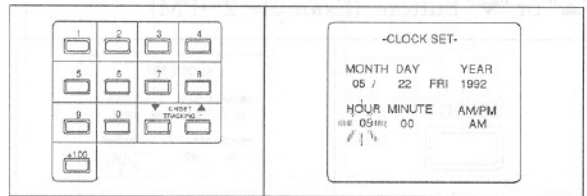
9

Enter the desired day with number button or CH "▲" or "▼" button. (Example: 22)



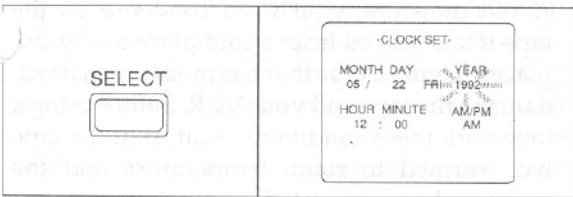
13

Enter the desired hour with number button or CH "▲" or "▼" button. (Example: 05)



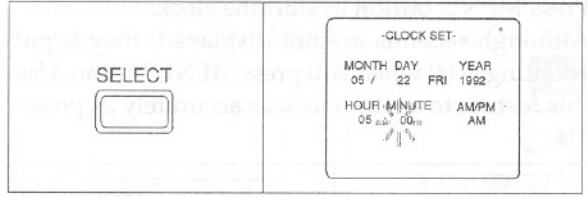
10

Press SELECT button. The YEAR digits flash.



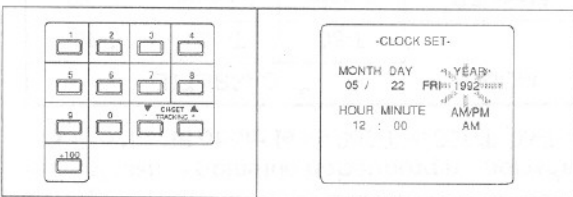
14

Press SELECT button. The MINUTE digits flash.



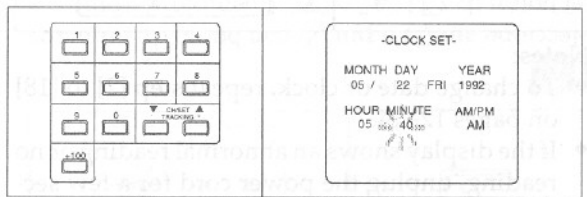
11

Enter the desired year with number button or CH "▲" or "▼" button. The day of the week changes automatically. (Example: 1992)



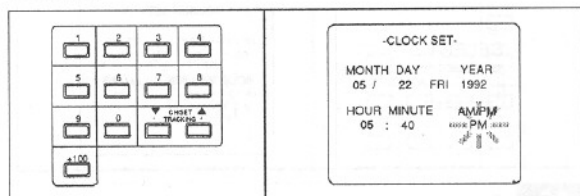
15

Enter the desired minute with number button or CH "▲" or "▼" button. (Example: 40)



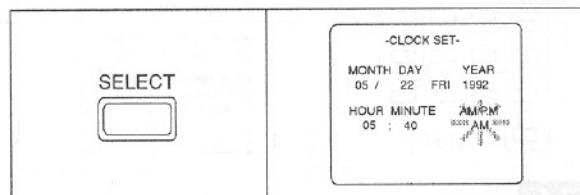
## 16

Press SELECT button. AM/PM selection indicator flashes.



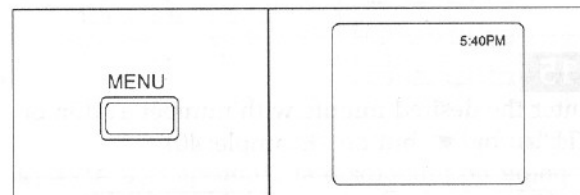
## 17

Select AM(1), PM(2) with number button or CH "▲" or "▼" button. (Example: 2→PM)



## 18

Press MENU button to start the clock. Although seconds are not displayed, they begin counting at 00 when you press MENU button. Use this feature to set the clock as accurately as possible.



### Notes:

- ◆ To change date or clock, repeat step [2] to [18] on pages 12~14.
- ◆ If the display shows an abnormal reading or no reading, unplug the power cord for a few seconds. Then plug it back in.
- ◆ This unit has a built in calendar up to the year 2006.

## VIDEO CASSETTE

This VCR will operate with any cassette that has the VHS mark. For best results we recommend the use of high-quality tape.

◆ Do not use poor quality or damaged tape. The table below shows the recording/playback time using T-60, T-120 or T-160 tape in the SP, LP or SLP mode.

When handling video tapes, take the following precautions

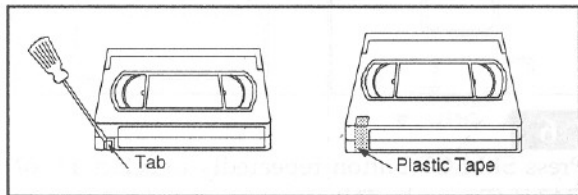
MODE	CASSETTE		
	T-60	T-120	T-160
SP Mode	1 hour	2 hours	2-2/3 hours
LP Mode	2 hours	4 hours	5-1/3 hours
SLP Mode	3 hours	6 hours	8 hours

When handling video tapes, take the following precautions

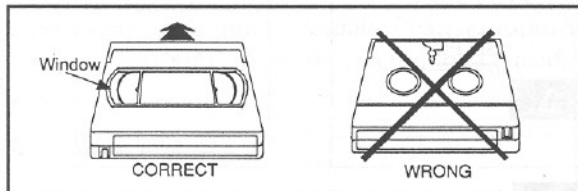
- ◆ Avoid moisture, which can condense on the tape if it is moved from a cold place to a warm place. Playing a tape that has moisture in it will damage the tape and your VCR. Before using a tape with these conditions, wait until the tape has warmed to room temperature and the moisture has evaporated.
- ◆ Avoid extreme heat, high humidity and magnetic fields.
- ◆ Do not tamper with the cassette mechanism.
- ◆ Do not touch the tape with your fingers.

## ERASE PREVENTION

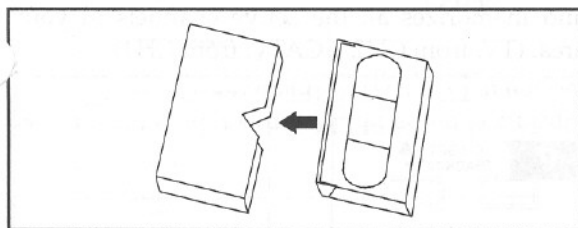
You may prevent accidental erasing of a tape by breaking off the tab on the back edge of the cassette. If you decide to record on the tape again, cover the hole with plastic tape.



Insert the cassette into the VCR as shown.



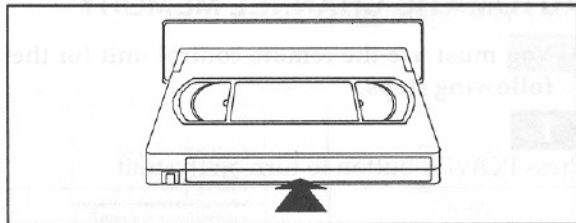
Store the cassette in its case as shown.



## INSERTING A CASSETTE

Insert the cassette in the direction as shown. Push in gently, but continuously, on the center-back of the cassette until it is drawn completely into the VCR.

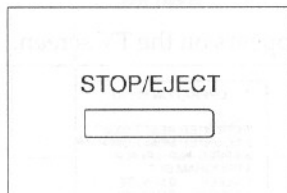
VCR is automatically turned on, and cassette-in indicator will light when the cassette is properly inserted.



## REMOVING A CASSETTE

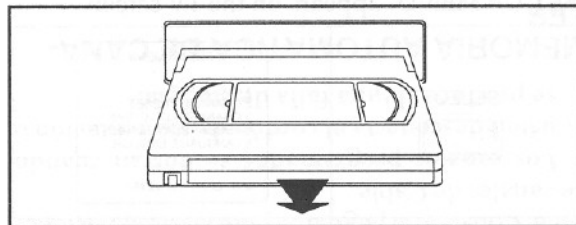
**1**

Press EJECT button on the main unit or on the remote control unit.



**2**

When the cassette-in indicator goes off and the cassette stops moving, pull the cassette out of the cassette compartment and store it properly.



## PROGRAMMING THE TUNER MEMORY

You can program the tuner to scan only the channels you receive in your area. See page 35 for cable channel designations.

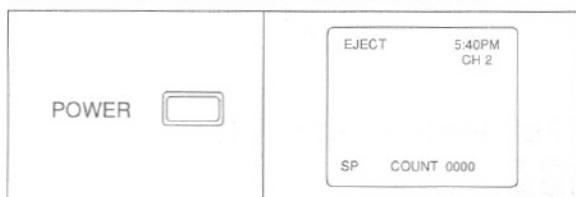
- ◆ Programed channels are erased when you disconnect the power cord or power failure occurs.

## AUTOMATIC CHANNEL MEMORY

- ◆ You must use the remote control unit for the following steps.

1

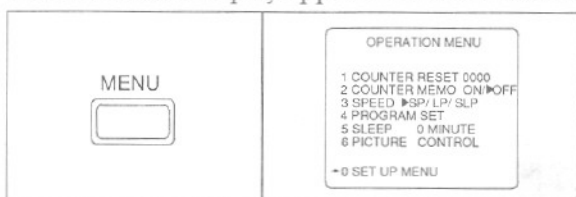
Press POWER button to turn on the unit.



2

Press MENU button.

The main menu display appears on the TV screen.



3

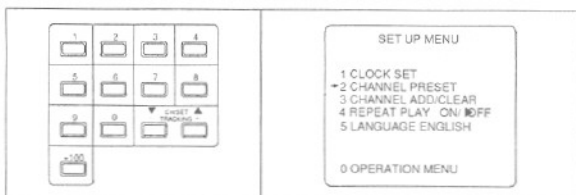
Press SELECT button.

"SET UP MENU" appears on the TV screen.



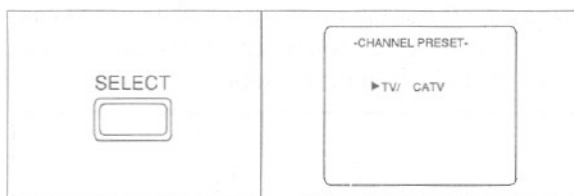
4

Select item 2 (CHANNEL PRESET) with number button or the CH "▲" or "▼" button.



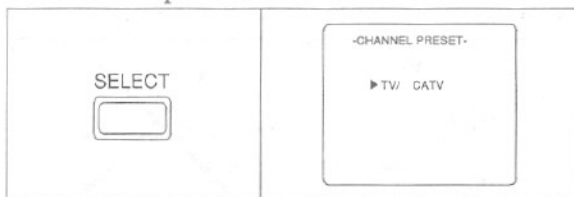
5

Press SELECT button.



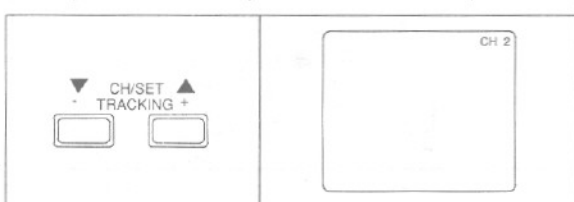
6

Press SELECT button repeatedly to select TV or CATV. (Example: TV)



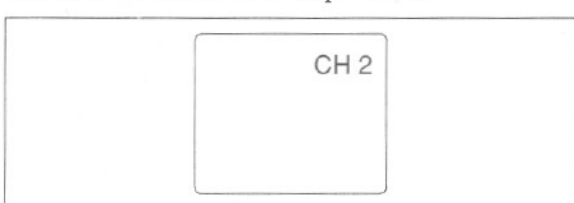
7

Press CH "▲" or "▼" button once. The tuner scans and memorizes all the active channels in your area. (TV: from CH2 / CATV: from CH1)



8

After scanning, the tuner stops on the lowest memorized channel. (Example: CH2)





## TO DELETE OR ADD PRESET CHANNEL

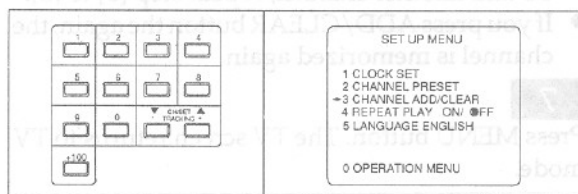
To add or delete the desired channels. Follow steps [1] to [3] on page 16, then step [4] below.

- ◆ You must use the remote control unit for the following steps.

## DELETING PRESET CHANNEL

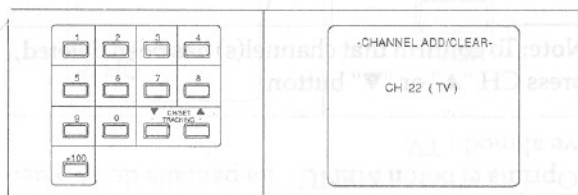
4

Select item 3 (CHANNEL ADD/CLEAR) with number button or CH "▲" or "▼" button. Press SELECT button.



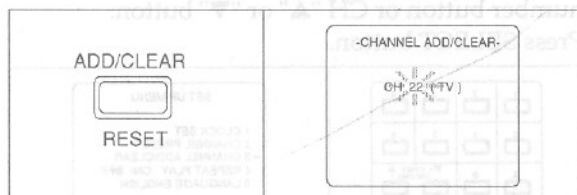
5

Enter the desired channel number using the number button or the CH "▲" or "▼" button. (Example: Channel 22)



6

Press ADD/CLEAR button once. The channel number flashes. The channel is deleted.

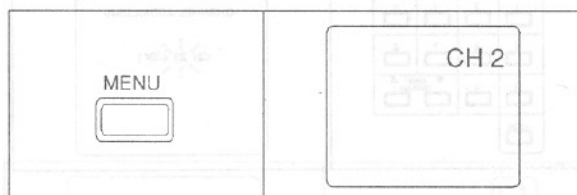


Notes:

- ◆ To delete another channel, repeat step [5] to [6].
- ◆ If you press ADD/CLEAR button again, the channel is memorized again.

7

Press MENU button. The TV screen returns to TV mode.

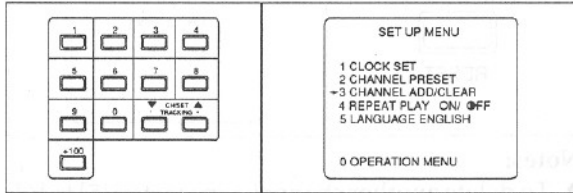


Note: To confirm that channel(s) has been deleted, press CH "▲" or "▼" button.

## ADDING PRESET CHANNEL

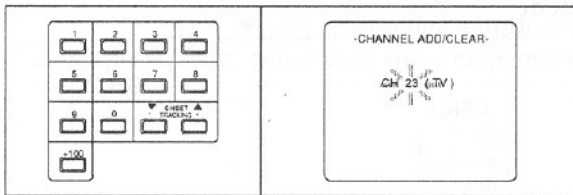
**4**

Select item 3 (CHANNEL ADD/CLEAR) with number button or CH "▲" or "▼" button.  
Press SELECT button.



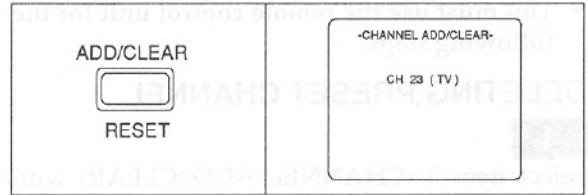
**5**

Select the desired channel number using the number button or the CH "▲" or "▼" button.  
(Example: Channel 23)



**6**

Press ADD/CLEAR button once. The channel is added to the VCR, and stops flashing.

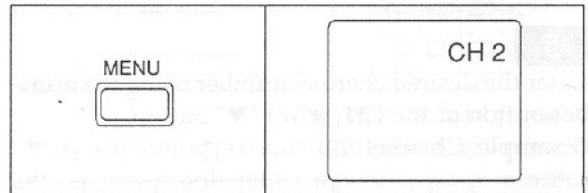


**Notes:**

- ◆ To add another channel, repeat step [5] to [6].
- ◆ If you press ADD/CLEAR button the again, the channel is memorized again.

**7**

Press MENU button. The TV screen returns to TV mode.



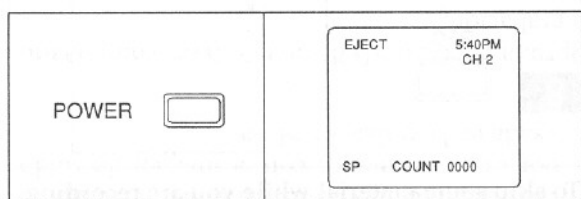
**Note:** To confirm that channel(s) has been deleted, press CH "▲" or "▼" button.

# OPERATION

## T.V. OPERATION

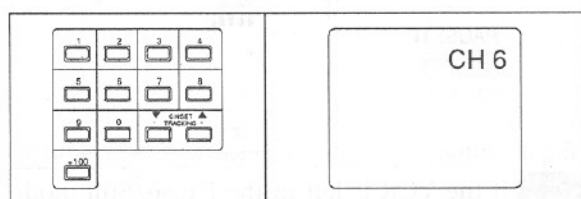
1

Press POWER button to turn on the unit.



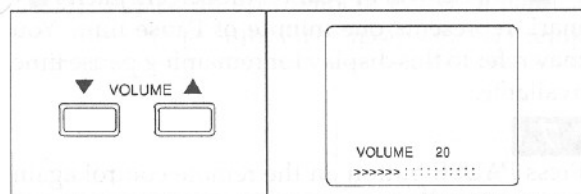
2

Select the desired channel with number button or CH "▲", "▼" button.



3

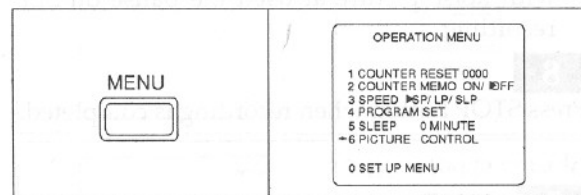
Adjust the VOLUME to desired listening level using the VOLUME "▲", "▼" button.



- ◆ You must use the remote control unit for the following steps.

4

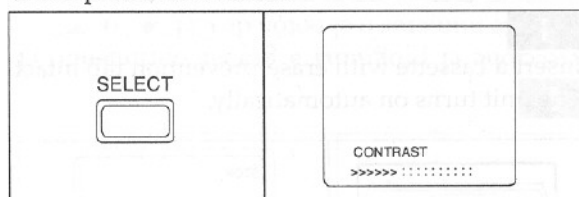
Adjust picture controls for a natural looking image. Press MENU button. Select item 6 (PICTURE CONTROL) with number button or CH "▲", "▼" button.



5

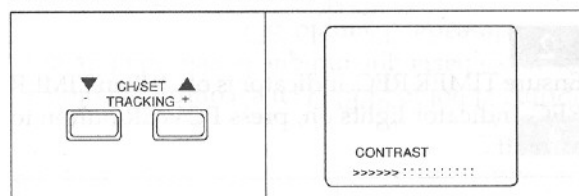
Press SELECT button repeatedly until desired control is displayed.

(Example : CONTRAST)



6

Adjust CONTRAST control to desired contrast with CH "▲", "▼" button.



- ◆ Each time you press SELECT button CONTRAST, BRIGHT, COLOR, TINT and SHARPNESS appear on the screen in order.
- ◆ Your VCR's picture controls — CONTRAST, BRIGHT, COLOR, TINT and SHARPNESS — are preset to the center position. This is usually best, but if you need to make any further adjustments, use the following chart as a guide.

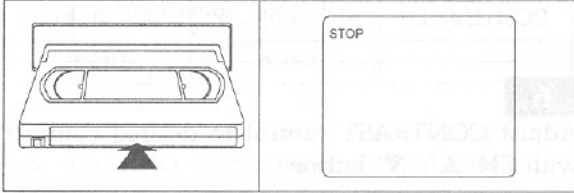
	CH ▼	CH ▲
CONTRAST	to decrease contrast	to increase contrast
BRIGHT	to decrease brightness	to increase brightness
COLOR	to pale	to brilliant
TINT	to green	to purple
SHARPNESS	to soft	to clear

## VIEWING AND RECORDING THE SAME PROGRAM

- You can only watch the same TV program that is being recorded.

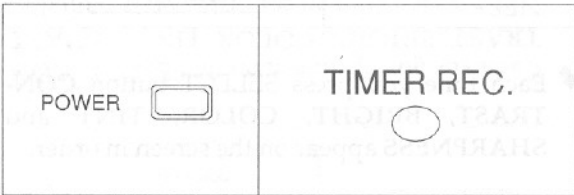
**1**

Insert a cassette with erase-prevention tab intact. The unit turns on automatically.



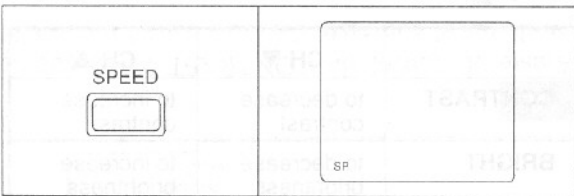
**2**

Ensure **TIMER REC.** indicator is off. When **TIMER REC.** indicator lights on, press **POWER** button to turn off.



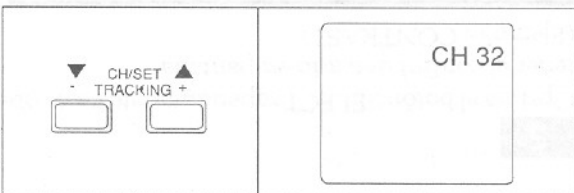
**3**

Press **SPEED** button on the remote control repeatedly until the desired recording speed is displayed. (Example : SP)



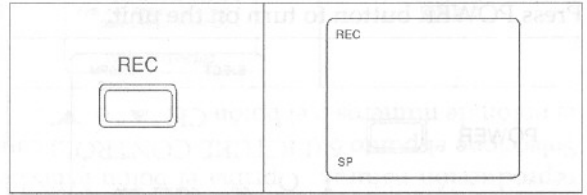
**4**

Select the program to be recording with pressing the number button or the CH "▲", "▼" button.



**5**

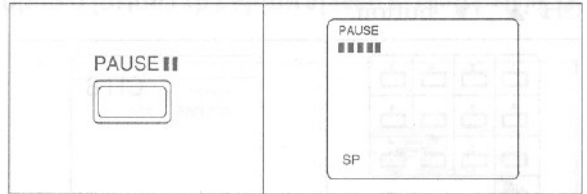
Press **REC** button.



To skip some material while you are recording;

**6**

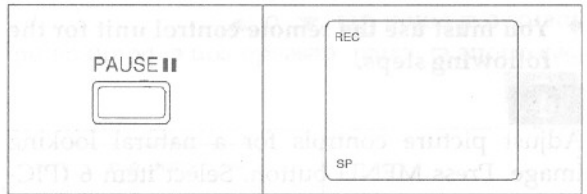
Press **PAUSE** button on the remote control.



**Note:** If the VCR is left in the Pause/Still mode more than 5 minutes during REC mode, It will automatically switch to the recording mode. When in the Pause/Still mode, A display showing 5 "■" marks will appear on the screen. Each "■" mark represents one minute of Pause time. You may refer to this display for remaining pause time available.

**7**

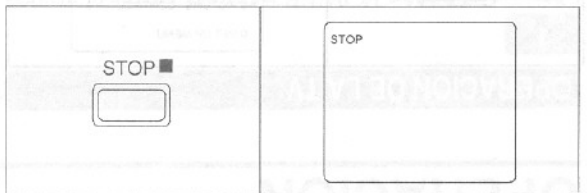
Press **PAUSE** button on the remote control again to resume recording.



- Playback picture will be interrupted for a while with noise picture at used the pause on SLP recording.

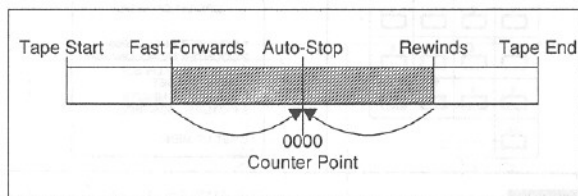
**8**

Press **STOP** button when recording is completed.



## COUNTER MEMORY

The MEMORY can be used during REWIND or F.FWD mode, to stop tape as tape approaches counter display of approx. 0000.

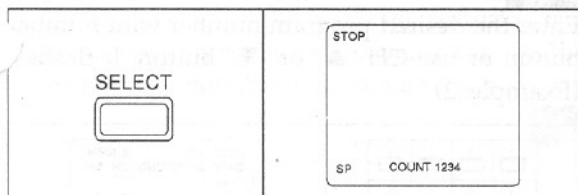


For example, this feature can be used to return the tape to a pre-selected position immediately after recording, or to repeatedly playback a certain portion of a tape.

◆ You must use the remote control unit for the following steps.

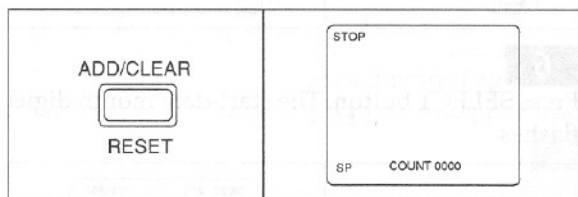
**1**

Before playback or recording, press SELECT button repeatedly until the counter number is displayed.



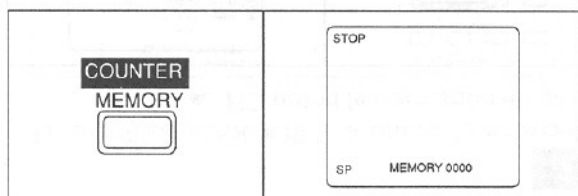
**2**

Press RESET button. The counter reset to 0000.



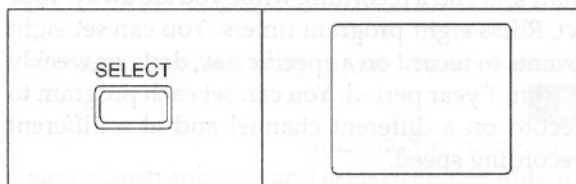
**3**

Press COUNTER MEMORY button.



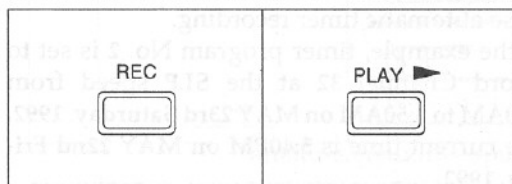
**4**

Press SELECT button repeatedly until the TV screen returns to TV mode.



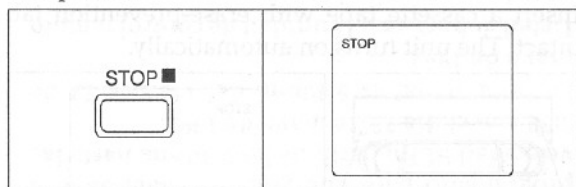
**5**

Press REC or PLAY button.



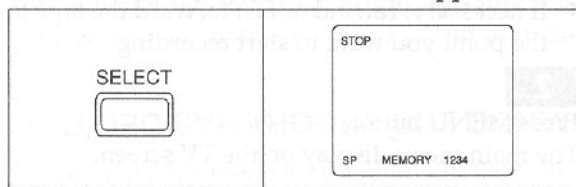
**6**

Press STOP button when recording or playback is completed.



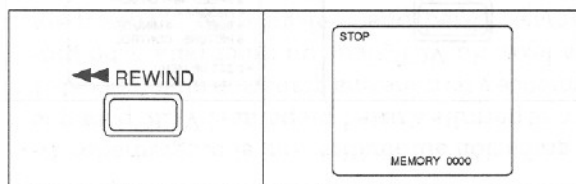
**7**

Press SELECT button. Count mode appears.



**8**

Press REWIND button.



The tape will stop automatically when the counter reaches to approx. 0000.

## AUTOMATIC TIMER RECORDING

Automatic timer recording lets you set the VCR to start and end a recording while you are away. Your VCR has eight program timers. You can set eight events to record on a specific day, daily or weekly within 1 year period. You can set each program to record on a different channel and at a different recording speed.

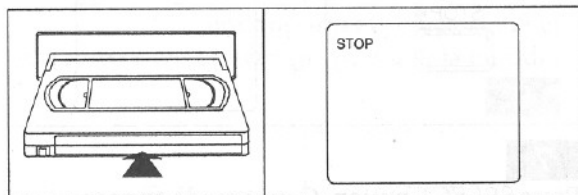
## SETTING THE TIMER PROGRAMS

Be sure the clock is set to the correct time before you use automatic timer recording.

- ◆ In the example, timer program No. 2 is set to record Channel 32 at the SLP speed from 7:30AM to 8:50AM on MAY 23rd Saturday, 1992. The current time is 5:40PM on MAY 22nd Friday, 1992.
- ◆ You must use the remote control unit for the following steps.

**1**

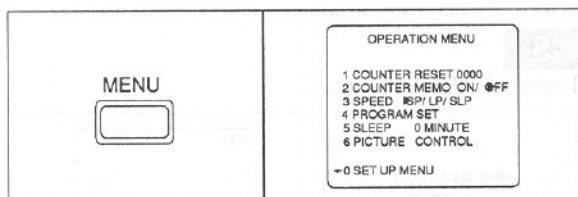
Insert a cassette tape with erase-prevention tab intact. The unit turns on automatically.



- ◆ If necessary, rewind or fast forward the tape to the point you want to start recording.

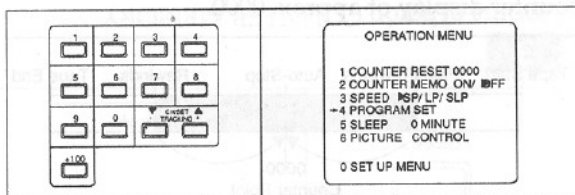
**2**

Press MENU button.  
The main menu display on the TV screen.



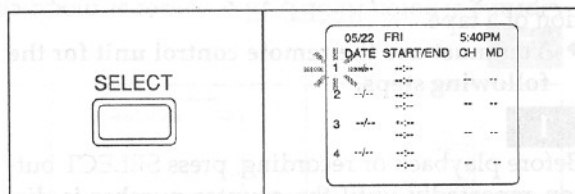
**3**

Select item 4 (PROGRAM SET) with number button or CH "▲", "▼" button.



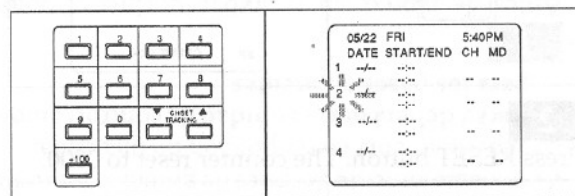
**4**

Press SELECT button.  
Programming mode displays on the TV screen.



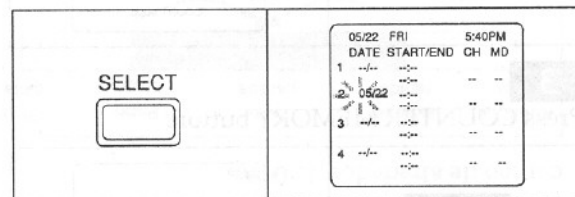
**5**

Enter the desired program number with number button or use CH "▲" or "▼" button. It flashes (Example: 2)



**6**

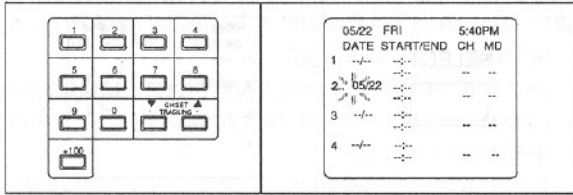
Press SELECT button. The start-date month digits flashes.



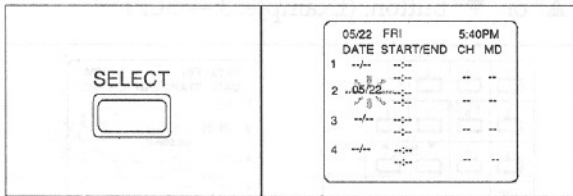


**7**

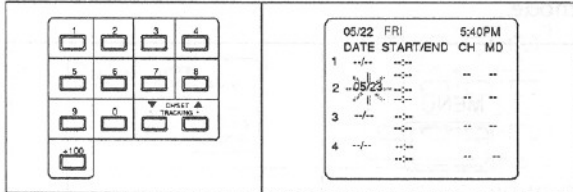
Enter the desired month. Use two digits for entry. Or use CH "▲" or "▼" button. (Example: 05)

**8**

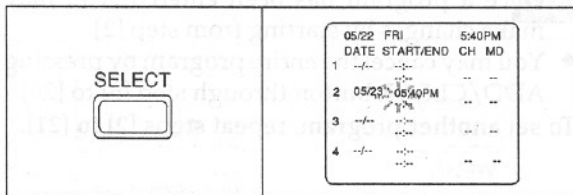
Press SELECT button. The start-date day digits flashes.

**9**

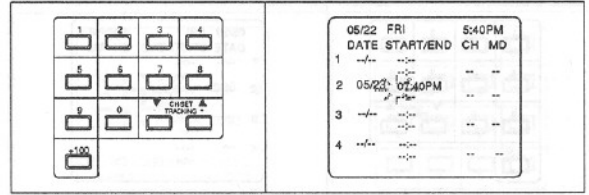
Enter the desired day. Use two digits for entry. Or use CH "▲" or "▼" button. (Example: 23)

**10**

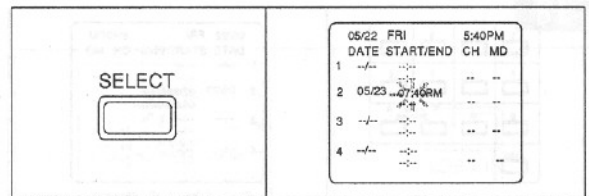
Press SELECT button. The start-time hour digits flashes.

**11**

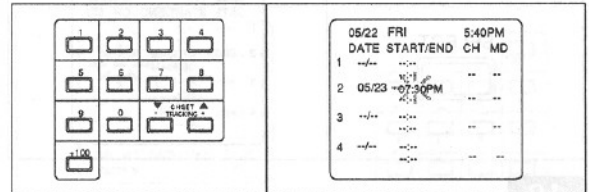
Enter the desired hour. Use two digits for entry. Or use CH "▲" or "▼" button. (Example: 07)

**12**

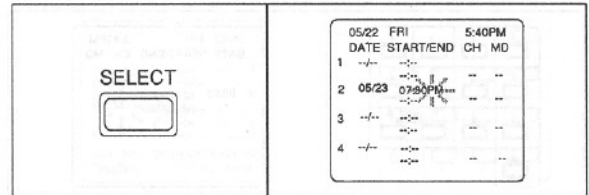
Press SELECT button. The start-time minutes digits flashes.

**13**

Enter the desired minutes. Use two digits for entry. Or use CH "▲" or "▼" button. (Example: 30)

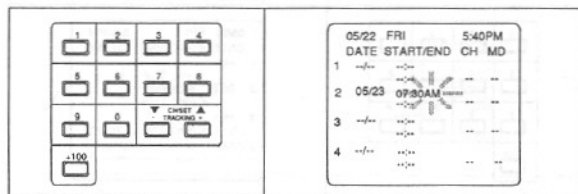
**14**

Press SELECT button. The AM/PM indicator flashes.

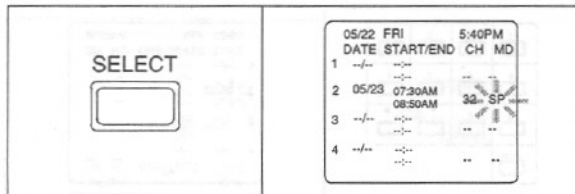


**15**

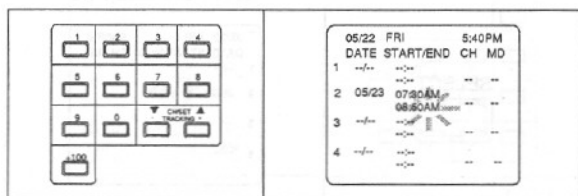
Press number button to select AM(1) or PM(2). Or use CH "▲" or "▼" button. (Example: 1 →AM)

**19**

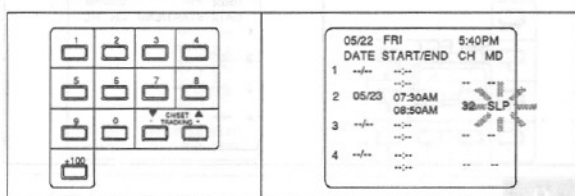
Press SELECT button. The tape speed indicator flashes.

**16**

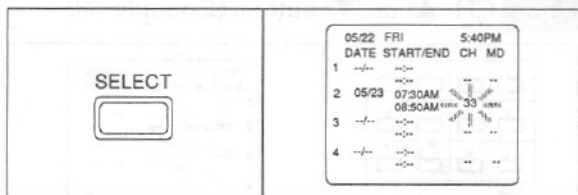
Repeat steps [10]~[15] to set the end time. (Example: 08:50AM)

**20**

Press the number button to select the desired recording speed SP(1), LP(2) or SLP(3). Or use CH "▲" or "▼" button. (Example: 3 → SLP)

**17**

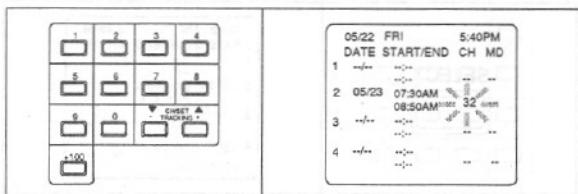
Press SELECT button. CH digits flashes.

**21**

Press MENU button. The TV screen returns to TV mode.

**18**

Enter the desired channel number. Use two digits for entry. Or use CH "▲" or "▼" button. (Example: 32)



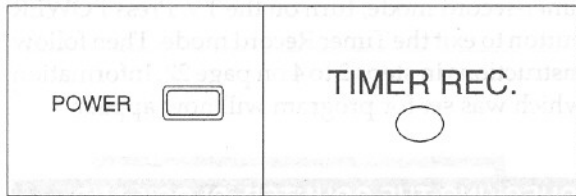
Program 2 is now completed.

**Notes:**

- ◆ Once a program has been entered, you may make changes by starting from step [2].
  - ◆ You may cancel the entire program by pressing ADD/CLEAR button through step [6] to [20].
- To set another program, repeat steps [2] to [21].

## 22

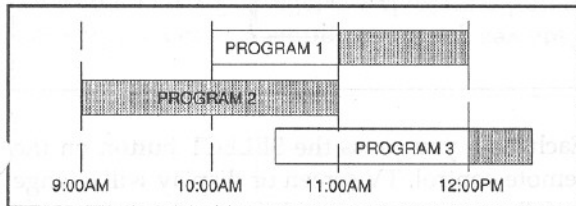
Press POWER button. TIMER REC. indicator lights.



While you keep watching TV, "TIMER REC STANDBY" start flashing on display one minute before to programmed start time.

You must turn power off to execute programmed timer recording.

**Note:** When programs overlap, the earliest time set program has priority.



**Example:** If you programmed as illustrated, they will execute in the following order.

9:00AM-11:00AM for PROGRAM 2

11:00AM-12:00PM for PROGRAM 1

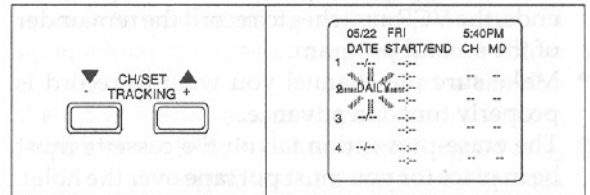
12:00PM- for PROGRAM 3

## DAILY PROGRAM (MONDAY~ SUNDAY)

To record a program at the same time on the same channel every day, follow steps [1] to [6] on page 22 then continue with step [7a] below.

### 7a

Press CH/SET "▲" or "▼" button. "DAILY" appears on the TV screen.



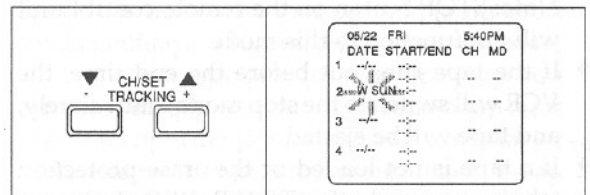
Continue with steps [10] onwards.

## WEEKLY PROGRAM

To record a program at the same time on the same channel every week, follow steps [1] to [6] on page 22 then step [7b] below.

### 7b

Press CH/SET "▲" or "▼" button repeatedly until desired date of the week is displayed.



Continue with steps [10] onwards.

## AUTOMATIC TIMER RECORDING HINTS

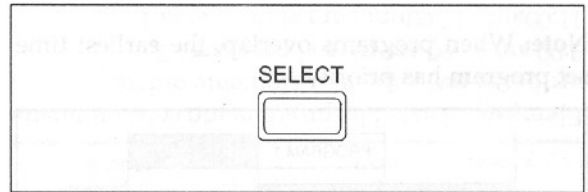
- ◆ If there a power failure or the VCR is unplugged for more than a few seconds, the clock setting and all timer settings are lost. At this time, display will automatically return to clock set mode when you choose program set mode.
- ◆ If two timer programs overlap, the one that starts first has priority. When the first program ends, the VCR switches to record the remainder of the second program.
- ◆ Make sure the channel you want to record is properly tuned in advance.
- ◆ The erase-prevention tab on the cassette must be in place (or you must put tape over the hole).  
**Note:** A cassette without erase-prevention tab will be ejected when POWER button is pressed.
- ◆ It is not necessary to press REC button for timer recording.
- ◆ Recording begins automatically at the set Start time.
- ◆ If you are recording using the Programmed Automatic Timer, you may not operate the unit manually, but, you may still stop the recording by pressing STOP button on the VCR.  
**Note:** STOP button on the remote control unit will not function in this mode.
- ◆ If the tape runs out before the end time, the VCR will switch to the stop mode immediately, and tape will be ejected.
- ◆ If a tape is not loaded or the erase-protection tab is removed, the TIMER REC. indicator flashes and automatic timer recording cannot occur. Press POWER button to stop the flashing. Then, load a tape that allows recording.

## CHECKING TIMER PROGRAMS

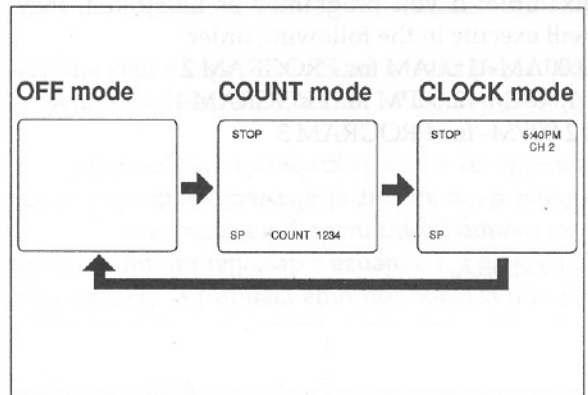
To check a program that is to be recorded using the Automatic Timer Program when the VCR is in the timer-record mode, turn on the TV. Press POWER button to exit the Timer Record mode. Then follow instructions in steps 2 to 4 on page 22. Information which was set for program will now appear.

### CHECKING THE COUNTER, CLOCK AND CHANNEL NUMBER

To see the COUNT, CLOCK and CHANNEL number on the TV screen or display, press the SELECT button on the remote control.



Each time you press the SELECT button on the remote control, TV screen or display will change as follows.



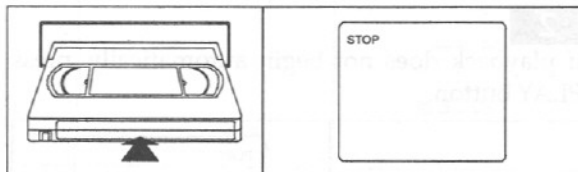
## OTR (ONE TOUCH RECORDING)

The One Touch Record function enables you to record a program simply by pressing OTR button on the VCR.

According to the table, simply press OTR button as many times as needed to set the desired recording length. The channel number to be recorded and recording length will be shown on the VCR display.

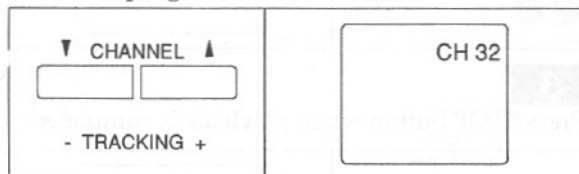
**1**

Insert a cassette with erase-prevention tab intact. The unit turns on automatically.



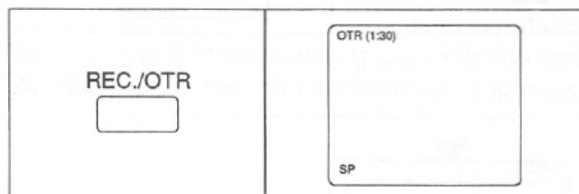
**2**

Select the program to be recorded.



**3**

Press REC./OTR button on the VCR. (Example: 4 pushes for 90 minutes)



Recording starts if the REC./OTR button is pressed even while watching a TV program.

Push(es)	DISPLAY	LENGTH
1 push	NORMAL REC MODE	
2 pushes	0:30	30 minutes
3 pushes	1:00	60 minutes
4 pushes	1:30	90 minutes
5 pushes	2:00	120 minutes
6 pushes	2:30	150 minutes
7 pushes	3:00	180 minutes
8 pushes	3:30	210 minutes
9 pushes	4:00	240 minutes
10 pushes	4:30	270 minutes
11 pushes	5:00	300 minutes
12 pushes	5:30	330 minutes
13 pushes	6:00	360 minutes
14 pushes	6:30	390 minutes
15 pushes	7:00	420 minutes
16 pushes	7:30	450 minutes
17 pushes	8:00	480 minutes
18 pushes	NORMAL REC MODE	

The timer on the VCR display counts down as the recording progresses.

Notes:

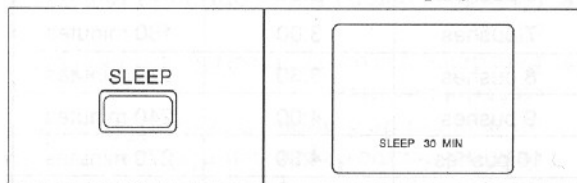
- ◆ When you push OTR button, you will extend recording time by 30 minutes at a time up to 8-hours (or to the end of the tape).
- ◆ To stop the OTR operation, press STOP button.
- ◆ When OTR button is pushed 18 times the VCR will record continuously until the end of the tape.
- ◆ The recording length time remaining is indicated on the VCR display as the recording
- ◆ Recording stops when 0:00 is reached.
- ◆ Please note that in the SLP (tape speed) mode maximum recording time, assuming the tape is started of the beginning, is 8 hours using T-160 (or 6 hours using T-120).

## SETTING THE SLEEP TIMER

The sleep timer function enables you to shut off the power without pressing POWER button after a desired period.

◆ You must use the remote control unit for the following steps.

Press SLEEP button on the remote control repeatedly until desired SLEEP time is display.



The shut off time can be determined by the number of times you press the button.

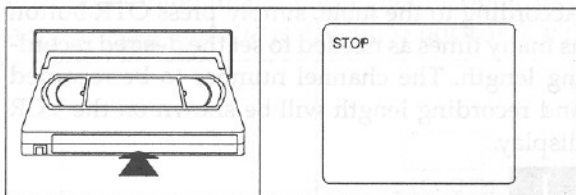
(The sleep timer will be displayed on the screen when you press the SLEEP button on remote control.)

	SLEEPTIME	DISPLAY
1 push	30 minute	30 MIN
2 pushes	60 minutes	60 MIN
3 pushes	90 minutes	90 MIN
4 pushes	120 minutes	120 MIN
5 pushes	0 minutes	0 MIN

## PLAYBACK

1

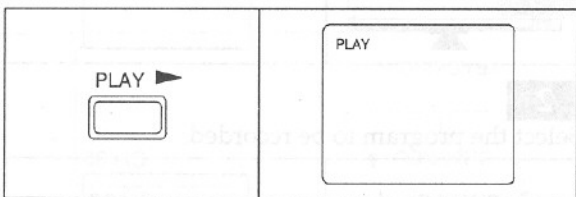
When a tape is inserted, the unit turns on automatically.



**Note:** If the erase-protection tab has been removed, the VCR will start playback automatically.

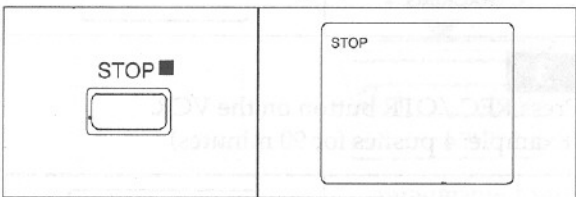
2

If playback does not begin automatically, press PLAY button.



3

Press STOP button when playback is completed.





## AUTO REPEAT PLAYBACK

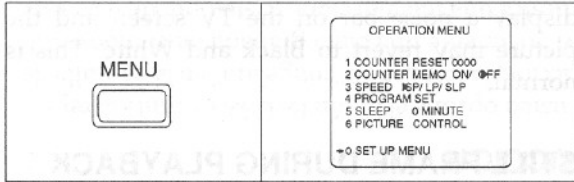
This function enables you to repeat playback between the beginning and end of the tape.

◆ You must use the remote control unit for the following steps.

**1**

Press MENU button.

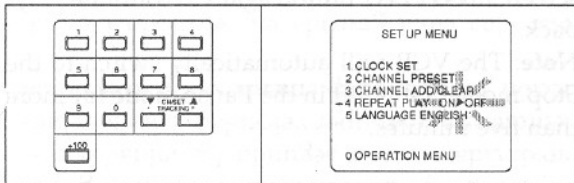
The main menu display on the TV screen.



**2**

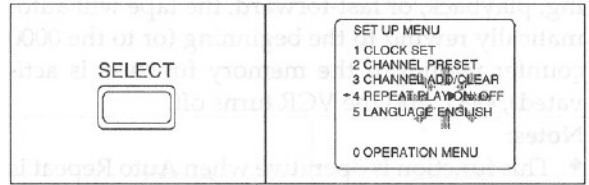
Press SELECT button.

Select item 4 (REPEAT PLAY) with number buttons or CH "▲", "▼" button.



**3**

Press SELECT button repeatedly to select ON.



Repeat playback will start automatically.



Once you select the repeat play mode, it stays in effect even after you turn off the VCR.

To exit the repeat play mode, repeat steps 1 and 2. Then, follow step [3], but select OFF instead of ON for normal play.

**Note:** The VCR's display does not show if repeat play is active or not.

## AUTO REWIND-EJECT

When the end of a tape is reached during recording, playback, or fast-forward, the tape will automatically rewind to the beginning (or to the 0000 counter reading if the memory function is activated), eject, and the VCR turns off.

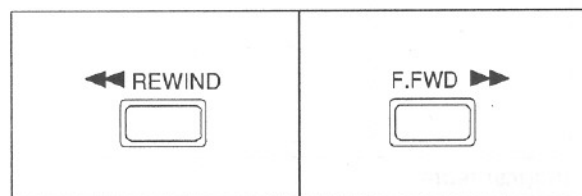
### Notes:

- ◆ This function is operative when Auto Repeat is set to the off position.
- ◆ The tape will not auto-rewind during timer recording or One Touch Recording.
- ◆ When tape is rewound to the preset memory position, tape will not be ejected and VCR will not shut off.

## VISUAL SEARCH

You may view the video program at a high speed in either a forward or reverse direction. When in the play mode, press F.FWD button to view the tape at a fast speed in the forward direction. To view the tape at a fast speed in the reverse direction, press REWIND button. The sound will be muted.

This feature is useful in finding or skipping over a particular section of a tape. When you wish to view the tape in normal speed, simply press PLAY button.



### Notes:

- ◆ The picture will not be as good as in normal playback (SP or LP) during Visual Search.
- ◆ When video searching a pre-recorded tape, it may cause noise bars (white lines) to move vertically. Also, the picture color fluctuates on and off. This is not an indication of trouble.
- ◆ You will get best results when playing back tapes that were recorded in the SLP mode.

## SUPER HIGH SPEED SEARCH (LP/SLP MODE)

For Visual Search in super high speed, press either F.FWD or REWIND button while the unit is in the play mode. Release button, then depress again and hold for approximately one second. The unit will now search in super high speed. For normal playback, simply press PLAY button.

**Note:** Tape recorded in the LP, SLP mode will display a noise bar on the TV screen and the picture may revert to Black and White. This is normal.

## STILL FRAME DURING PLAYBACK

If you press PAUSE button during playback, the picture will "freeze" on the TV screen. Only recorded tape in SLP mode shows clear picture. You may use this feature to study details of a particular screen. Press PLAY button again to continue playback.

**Note:** The VCR will automatically switch to the Stop mode, if it is left in the Pause mode for more than five minutes.

## NOISE CANCELLING

If you use the PAUSE button to freeze the picture during playback with tape recorded in SLP mode, usually there will be video "noise bars" on the TV screen. This is normal, however, this VCR has a special feature that allows you to reposition or reduce the lines. Each time you press PAUSE button the lines will change position on the TV screen. This enables you to see the picture in its entirety without distracting noise lines.

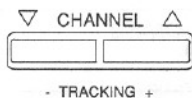
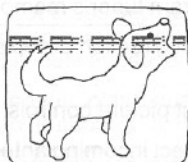
If the tape was originally recorded in SP or LP mode, the still picture will, in addition to the "noise bars", be black and white.

**THIS IS NOT A FAULT OF THE MACHINE BUT MERELY A BY-PRODUCT OF THE TECHNOLOGY INVOLVED IN PRODUCING A VCR WITH LONG-PLAY MODE.**

## TRACKING ADJUSTMENT

When playing pre-recorded tapes or tapes recorded on units other than your own, noise lines (black and white streaks) may appear on the playback picture. If this occurs, adjust the TRACKING control by pressing TRACKING "+" or "-" button until the streaks disappear.

To set to center position, press both TRACKING "+" and "-" buttons at the same time. (This function is operative only by buttons on Main Unit.)



Main unit



Remote control unit

## DEGAUSS

Magnetism from nearby appliances might affect the color of the TV picture. If this happens, move this unit away from the appliance. If the color is still not correct, disconnect power cord from AC outlet then reconnect it after 30 minutes over.

# TROUBLESHOOTING GUIDE

If you have followed the instructions contained in this manual and have difficulty in operating your unit, locate the SYMPTOM in the left column below. Check the corresponding POSSIBLE CAUSE and CORRECTIVE ACTION columns to remedy the problem.

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
No power.	<ul style="list-style-type: none"> <li>◆ Power cord is not connected.</li> <li>◆ Power is turned off.</li> </ul>	<ul style="list-style-type: none"> <li>◆ Connect power cord to AC outlet.</li> <li>◆ Press POWER button on.</li> </ul>
No picture and sound.	<ul style="list-style-type: none"> <li>◆ TV is not plugged into an active AC outlet.</li> <li>◆ Antenna is not connected.</li> <li>◆ No channel in memory.</li> </ul>	<ul style="list-style-type: none"> <li>◆ Plug power cord into an active AC outlet.</li> <li>◆ Check antenna connection.</li> <li>◆ Program tuner's memory.</li> </ul>
Sound OK; poor picture.	<ul style="list-style-type: none"> <li>◆ Direction or condition of antenna is not good.</li> <li>◆ Picture control is not good.</li> <li>◆ Interconnecting cable is connected to another source.</li> </ul>	<ul style="list-style-type: none"> <li>◆ Adjust direction or replace antenna.</li> <li>◆ Adjust picture controls.</li> <li>◆ Connect incoming antenna directly to the television.</li> </ul>
Picture OK; poor or no sound.	<ul style="list-style-type: none"> <li>◆ Volume control on remote control unit or set is in minimum position.</li> <li>◆ MUTE button on the remote control unit is in the ON position.</li> </ul>	<ul style="list-style-type: none"> <li>◆ Adjust volume control on remote control unit or set.</li> <li>◆ Press MUTE button.</li> </ul>
Timer recording is not possible.	<ul style="list-style-type: none"> <li>◆ The timer program is set incorrectly.</li> <li>◆ The POWER is turned off.</li> </ul>	<ul style="list-style-type: none"> <li>◆ Set the timer program correctly.</li> <li>◆ Press POWER button on.</li> </ul>
Record mode cannot be engaged.	<ul style="list-style-type: none"> <li>◆ The erasure prevention tab on cassette is missing.</li> </ul>	<ul style="list-style-type: none"> <li>◆ Place vinyl tape over missing erasure prevention tab on the tape cassette.</li> </ul>
Picture is poor on playback.	<ul style="list-style-type: none"> <li>◆ The TRACKING control is not set to best position.</li> </ul>	<ul style="list-style-type: none"> <li>◆ Adjust TRACKING control for better picture.</li> </ul>
Noise in picture on playback.	<ul style="list-style-type: none"> <li>◆ Video head is dirty.</li> </ul>	<ul style="list-style-type: none"> <li>◆ Head cleaning is necessary, consult the nearest Funai Authorized Service Center.</li> </ul>
No operation by infrared Remote Control.	<ul style="list-style-type: none"> <li>◆ No power to TV or VCR.</li> <li>◆ Weak battery.</li> </ul>	<ul style="list-style-type: none"> <li>◆ Make sure the AC cord is connected to an AC outlet.</li> <li>◆ Check the batteries of infrared Remote Control.</li> </ul>

## CABINET CLEANING

- ◆ Wipe the front panel and other exterior surfaces of the unit with a soft cloth immersed in luke-warm water and wrung dry.
- ◆ Never use a solvent or alcohol. Do not spray insecticide liquid near the unit. Such chemicals may cause damage and discoloration to the exposed surfaces.

## VCR HEAD CLEANING

- ◆ Picture playback may become blurred or interrupted while the TV program received is clear. This does not mean that the recorded program has been erased. Dirt accumulated on the head after long periods of use, or usage of rental or old tape causes this problem. In this case, head cleaning requires highly technical attention, therefore consult the nearest Funai Authorized Service Center. Clean heads only when problems occur.

## SERVICING

- ◆ Should your unit become inoperative, do not try to correct the problem by yourself. There are no user-serviceable parts inside. Switch power off, unplug the power cord, and take the unit to your nearest Funai Authorized Service Center for servicing.

# SPECIFICATIONS

## GENERAL SPECIFICATIONS

CRT	: 13 inch in-line gun, 90° deflection tube
Television system	: NTSC-M
Recording system	: Rotary two-head helical scan system
Tape width	: 1/2 inch
Tape speed	
SP	: 33.40mm/sec.
LP	: 16.67mm/sec.
SLP	: 11.12mm/sec.
Tuner channel	
TV VHF Low	: #2~#6
TV VHF High	: #7~#13
TV UHF	: #14~#69
CATV	
VHF	: 5A
MID band	: A5~A1, A~I
SUPER band	: J~W
HYPER band	: W+1~W+84
Terminals:	
Antenna input	VHF/UHF 75 ohms unbalanced
Video input	RCA connector
Audio input	RCA connector

## ELECTRICAL SPECIFICATIONS

Video input level	: 0.5~2.0V <sub>p-p</sub>
Audio input level	: -15dBs
Video S/N ratio	: More than 46dB
Audio S/N ratio	: More than 43dB

## OTHER SPECIFICATIONS

Power requirement	: AC 120V/60Hz
Power consumption	: 85W
Dimensions:	372(W) x 387(H) x 360(D) mm
Weight:	12 kg
Accessories	: Remote Control 2 "AAA" Batteries Rod Antenna Owner's Manual

- ◆ Design and specifications are subject to change without notice.



# CABLE CHANNEL DESIGNATIONS

This model is capable of receiving 125 cable channels. The channels are displayed as 1 ~ 125. Cable companies often designate the other channels with letters or letter-number combinations. Please check with your local cable company. The following is a chart of common cable channel designations.

CATV Channel	5A	2	3	4	5	6	7	8	9	10	11	12	13	A	B
VCR Display	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
CATV Channel	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
VCR Display	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
CATV Channel	R	S	T	U	V	W	W+1	W+2	W+3	W+4	W+5	W+6	W+7	W+8	W+9
VCR Display	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
CATV Channel	W+10	W+11	W+12	W+13	W+14	W+15	W+16	W+17	W+18	W+19	W+20	W+21	W+22	W+23	W+24
VCR Display	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
CATV Channel	W+25	W+26	W+27	W+28	W+29	W+30	W+31	W+32	W+33	W+34	W+35	W+36	W+37	W+38	W+39
VCR Display	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
CATV Channel	W+40	W+41	W+42	W+43	W+44	W+45	W+46	W+47	W+48	W+49	W+50	W+51	W+52	W+53	W+54
VCR Display	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
CATV Channel	W+55	W+56	W+57	W+58	A-5	A-4	A-3	A-2	A-1	W+59	W+60	W+61	W+62	W+63	W+64
VCR Display	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105
CATV Channel	W+65	W+66	W+67	W+68	W+69	W+70	W+71	W+72	W+73	W+74	W+75	W+76	W+77	W+78	W+79
VCR Display	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
CATV Channel	W+80	W+81	W+82	W+83	W+84										
VCR Display	121	122	123	124	125										

# FUNAI CORPORATION LIMITED WARRANTY

FUNAI CORP. will repair this product, free of charge in the USA in the event of defect in materials or workmanship as follows:

## **DURATION:**

**PARTS:** FUNAI CORP. will provide parts to replace defective parts without charge for one (1) year from the date of original retail purchase. Two (2) years for Picture Tube. Certain parts are excluded from this warranty.

**LABOR:** FUNAI CORP. will provide the labor without charge for a period of ninety (90) days from the date of original retail purchase.

## **LIMITS AND EXCLUSIONS:**

This warranty is extended only to the original retail purchaser. A purchase receipt or other proof of original retail purchase will be required together with the product to obtain service under this warranty.

This warranty shall not be extended to any other person or transferee.

This warranty is void and of no effect if any serial numbers on FUNAI/SYMPHONIC product are altered, replaced, defaced or missing. This FUNAI CORPORATION Limited warranty does not apply to any FUNAI/SYMPHONIC product not purchased and used in the United States.

This warranty only covers failures due to defects in material or workmanship which occurs during normal use. It does not cover damage which occurs in shipment, or failures which are caused by repairs, alterations or product not supplied by FUNAI CORP., or damage which results from accident, misuse, abuse, mishandling, misapplication, alteration, faulty installation, improper maintenance, commercial use such as hotel, rental or office use of this product or damage which results from fire, flood, lightning or other acts of God.

**THIS WARRANTY DOES NOT COVER PACKING MATERIALS, ANY ACCESSORIES (EXCEPT REMOTE CONTROL), ANY COSMETIC PARTS, COMPLETE ASSEMBLY PARTS, DEMO OR FLOOR MODELS.**

FUNAI CORP. AND ITS REPRESENTATIVES OR AGENTS SHALL IN NO EVENT BE LIABLE FOR ANY GENERAL, INDIRECT OR CONSEQUENTIAL DAMAGES ARISING OUT OF OR OCCASIONED BY THE USE OF OR THE INABILITY TO USE THIS PRODUCT. THIS WARRANTY IS MADE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, AND OF ALL OTHER LIABILITIES ON THE PART OF FUNAI, ALL OTHER WARRANTIES INCLUDING THE WARRANTY OF MERCHANTABILITY, AND FITNESS FOR A PARTICULAR PURPOSE, ARE HEREBY DISCLAIMED BY FUNAI AND ITS REPRESENTATIVES IN THE UNITED STATES. ALL WARRANTY INSPECTIONS AND REPAIRS MUST BE PERFORMED BY FUNAI AUTHORIZED SERVICE CENTER. THIS WARRANTY IS VALID WHEN THE UNIT IS CARRIED-IN TO FUNAI AUTHORIZED SERVICE FACILITY.

WHEN YOU ARE RETURNING THE PRODUCT FOR SERVICE TO FACTORY SERVICE CENTER, PLEASE CONTACT THE FUNAI SERVICE DEPARTMENT TO RECEIVE M.R.A. (MERCHANDISE RETURN AUTHORIZATION) NUMBER PRIOR TO SHIPPING. ANY POSTAGE, INSURANCE AND SHIPPING COST, INCURRED IN PRESENTING OR SENDING YOUR FUNAI/SYMPHONIC PRODUCT FOR SERVICE ARE SHIPPER'S RESPONSIBILITY.

CAREFULLY PACK WITH PROPER PACKING MATERIALS, PREFERABLY IN THE ORIGINAL CARTON.

ATTACH WRITTEN DOCUMENTATION DETAILING THE COMPLAINT, TO THE OUTSIDE OR INSIDE OF THE CARTON.

THE PRODUCT MUST BE ACCOMPANIED BY A COPY OF THE ORIGINAL RETAIL PURCHASE RECEIPT. IF NO PROOF OF PURCHASE IS ATTACHED, THE WARRANTY WILL NOT BE HONORED AND REPAIRS COSTS WILL BE CHARGED.

## **IMPORTANT:**

THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, YOU MAY HAVE OTHER RIGHTS THAT VARY FROM STATE TO STATE, IF, AT ANY TIME DURING THE WARRANTY PERIOD, YOU ARE UNABLE TO OBTAIN SATISFACTION WITH THE REPAIR OF THIS PRODUCT, PLEASE CONTACT FUNAI CORP.

## **ATTENTION:**

FUNAI CORP. RESERVES THE RIGHT TO MODIFY ANY DESIGN OF THIS PRODUCT WITHOUT PRIOR NOTICE.

For information of your nearest FUNAI Authorized Service Center or general service procedure, please call or write to the following:

FUNAI CORPORATION  
Corporate Headquarters & Factory Service Center  
Address :100 North Street Teterboro, NJ 07608  
Tel :201-288-2666  
(Eastern Time 9:00 AM - 4:30 PM)