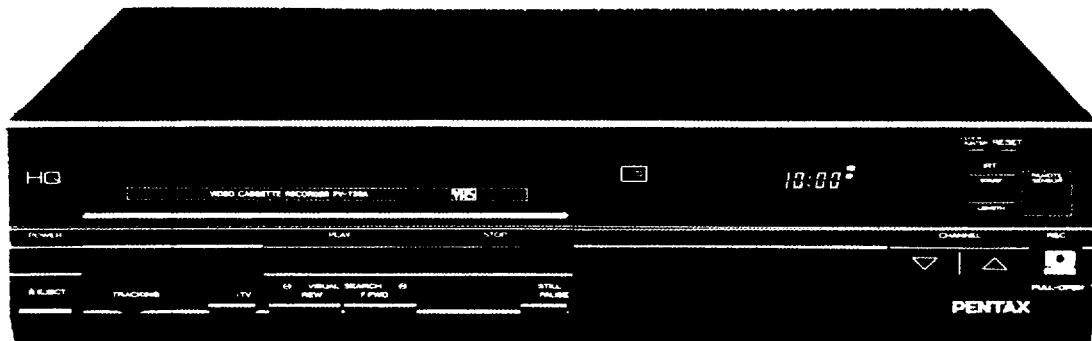


PENTAX

VHS VIDEO DECK

MODEL PV-T30A
INSTRUCTION MANUAL



CONGRATULATIONS

You are now the proud owner of a Pentax VTR. Please read this instruction manual carefully before use and refer to it if any difficulties arise.

FEATURES

- Programmable channel memory with voltage synthesized tuner
- Setting 4 programs within 2 weeks is possible with built-in programmable timer
- Tuning ability for cable systems channel A-2, A-1 and A through W
- Instant recording timer
- Remote control operation
- Maximum 8 hour recording/playback
- Front loading mechanism
- Automatic rewind
- Soft touch control with microprocessor
- Visual search
- Rewind shut-off
- Automatic power on
- One button recording operation

HQ This Video Tape Recorder (VTR) with this marking incorporates **VHS** high-quality picture technology and is compatible with any VTR bearing the **VHS** mark.

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FOR YOUR SAFETY

Power supply: AC 120V, 60 Hz only

The POWER switch located on the front panel of the VTR switches the VTR on and off, leaving the clock/timer unaffected.

If the unit is to be left unattended for a long period and it is not intended to use the timer recording function, it is recommended that the unit be completely switched off and the plug removed. If you intend to record during your absence, remember there is no necessity for the TV receiver to be switched on.

Illustrated below is the label on the back of your unit.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

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

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.

WARNING:

Many television programs are copyrighted. One court has held that private, non-commercial, in-home video taping of copyrighted televised programs constitutes copyright infringement. Purchasers are advised not to copy such programs.

WARNING: TO PREVENT FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

Moisture condensation

If you pour cold liquid into a glass, water vapor in the air will condense on the surface of the glass. This is moisture condensation.

Moisture condensation on the head drum, one of the most crucial parts of the unit, will cause damage to the tape. When the VTR is exposed to a rapid temperature change from cold to warm, some condensation will occur. The presence of internal moisture will cause the stop indicator to flash and the VTR will not operate. If this condition occurs, turn the power off and allow at least 2 hours for the unit to dry out. When the stop indicator no longer flashes, the VTR can be operated.

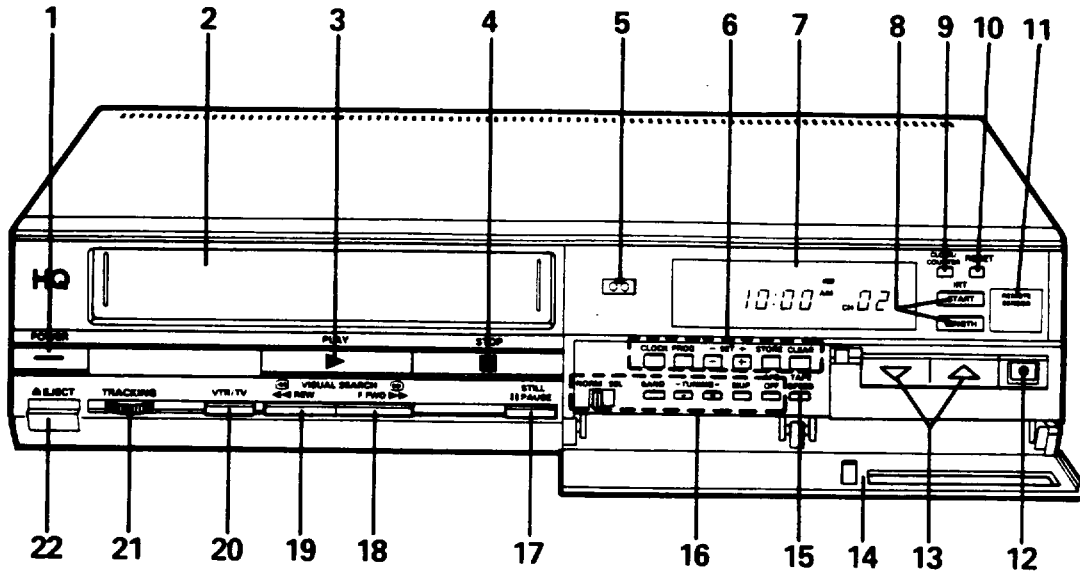
Caution for users living in an area with frequent electrical storms

Your VTR and TV may be damaged during electrical storms if they are connected to a cable system, outside antenna, or they are plugged into the AC outlet. Proper lightning arresters on the antenna and the use of surge protection devices between the VTR plug and AC outlet, and TV and AC outlet will decrease the likelihood of damage from lightning surges in the power line or antenna system. During storms, the VTR and TV should be unplugged from the AC outlet, and the cable or antenna should be disconnected if possible.

Power line surge protection devices often cease to operate when they have handled an overload. When they are external to the unit and become inoperative, they can be replaced without the aid of a technician. Power line surge protection devices are available through electronic stores or computer dealers.

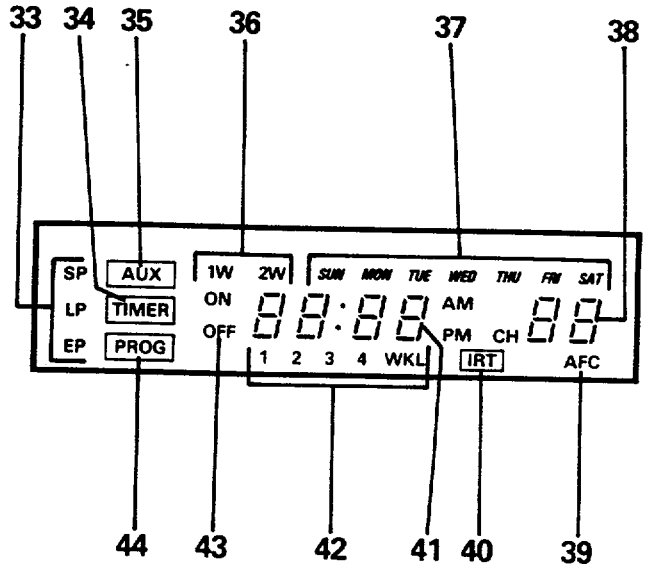
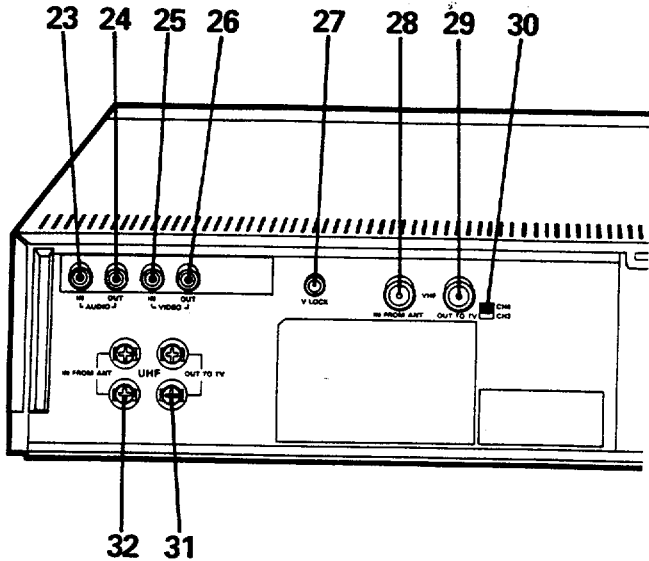
You may also wish to check with your insurance agent about insurance protection for electrical storm damage to this and other electronic appliances in your home.

CONTROLS AND FEATURES



1. **POWER SWITCH**
Turn system power on and off.
2. **CASSETTE COMPARTMENT**
3. **PLAY BUTTON**
Press to start play.
4. **STOP BUTTON**
Press to stop tape. The STOP button must be pressed between "RECORD" and any other operation.
5. **TAPE-IN INDICATOR**
Lights when cassette is located in the compartment.
6. **TIMER CONTROLS**
7. **ELECTRONIC DIGITAL DISPLAY**
See next page for details.
8. **INSTANT RECORDING TIMER BUTTONS (IRT)**
IRT allows unattended recording without programming the timer. See page 17 for details.
9. **CLOCK/COUNTER SELECT BUTTON**
Press to select clock display or counter display.
10. **COUNTER RESET BUTTON**
To reset counter to "0000".
11. **INFRARED RAY RECEIVING SECTION**
Receives the infrared ray from remote control unit.
12. **RECORD BUTTON**
Press to start recording.
13. **CHANNEL SELECT BUTTONS**
Select the channels you wish to view or to record by pressing these buttons.
And you can also select "AUX" by pressing these buttons to record or watch the program input at the VIDEO IN and AUDIO IN.
(One channel position either higher or lower outside the range of your preset channels.)
14. **DOOR FOR SECONDARY CONTROLS**
15. **TAPE SPEED SELECT SWITCH**
Recording time using Cassette tape T-160:
EP: 8 hours
LP: 5.3 hours
SP: 2.6 hours
Note: Playback speed automatically corresponds with recorded speed.
16. **CHANNEL PROGRAMMING CONTROLS**
Program channels for channel up and down selection with these controls.
17. **PAUSE/STILL BUTTON**
Press to pause during recording or playback.
18. **FAST FORWARD/VISUAL SEARCH BUTTON**
Press to activate fast forward.
Press this button during playback of a recorded tape, and forward playback picture at high speed can be seen.
19. **REWIND/VISUAL SEARCH BUTTON**
Press to start rewind.
Press this button during playback of a recorded tape, and reverse playback picture at high speed can be seen.
20. **VTR/TV SELECT SWITCH**
Selects the signal to be viewed.
The VTR indicator comes on when the unit is in VTR mode and the signal received by the VTR is displayed on the TV screen. With the switch in the TV position (indicator light off) the broadcast signal is received directly by your TV set. When the VTR power is turned off, the VTR automatically switches to "TV".
21. **TRACKING CONTROL KNOB**
To minimize noise in playback.
22. **EJECT BUTTON**
With power on, press to remove cassette.

CONTROLS AND FEATURES



23. AUDIO IN

Receives audio signals from a camera or from another VTR.

24. AUDIO OUT

For a connection to a monitor or another VTR.

25. VIDEO IN

Receives video signal from a video camera or another VTR.

26. VIDEO OUT

For connection to monitor TV.

27. V. LOCK

Use to minimize vertical jitter during still playback.

28. VHF ANTENNA INPUT

Connect the VHF antenna to this terminal.

29. VHF ANTENNA OUTPUT

Connect this terminal to the VHF antenna terminal on the back of the TV.

30. RF CONVERTOR SWITCH

Set this switch to whichever channel (CH3 or CH4) is unused in your area.

31. UHF ANTENNA OUTPUT

Connect these terminals to the UHF antenna terminals on the back of the TV.

32. UHF ANTENNA INPUT

Connect the UHF antenna to these terminals.

33. TAPE SPEED INDICATORS

34. TIMER INDICATOR

Will light when turning power off after programming.

35. AUX INDICATOR

Will light when the AUX position is selected by pressing the channel select buttons. AUX position is used to record or watch the program input at the VIDEO IN and AUDIO IN.

36. WEEK INDICATORS FOR TIMER RECORDING

1W: Up to seven days from the present day.

2W: Eighth day to fourteenth day from the present day.

37. DAY INDICATORS

Normally shows the current day of week. Shows the recording start day when programming the timer.

38. CHANNEL INDICATOR

39. AFC INDICATOR

Shows that Automatic frequency control (AFC) circuit turns on. See page 14.

40. IRT INDICATOR

Lights during Instant recording.

41. CLOCK/TAPE COUNTER DISPLAY

Normally shows the present time or tape counter. Shows time remaining during Instant recording.

42. PROGRAM DESIGNATION FOR TIMER RECORDING

43. ON/OFF INDICATORS FOR TIMER RECORDING

ON shows recording start time.

OFF shows recording stop time.

44. PROG INDICATOR FOR TIMER RECORDING

Lights if any program is in the timer.

INSTALLATION

INTRODUCTION & ANTENNA SYSTEM

INTRODUCTION

Place your Video Tape Recorder (VTR) in a horizontal position on a solid, stable surface near your TV. Connect the VTR AC plug into a non-switched AC outlet. Before you can use your VTR, the TV antenna connection must be moved to the VTR. Then new connections must be added from the VTR to the TV. Several accessories for common connections are included with your VTR. If your installation requires other accessories, they may be purchased at your Dealer or Electronic Parts Stores. There are several installations shown in the following figures. Select the figure which best matches your TV signal source, equipment features, and operating needs. TV broadcasts in your area may be VHF, UHF, or both. In a UHF-only area, use figure A2 for VHF and UHF connections between the VTR and TV. The VHF connection from VTR to TV is always needed for the VTR output channel of VHF Channel 3 or 4. Even if your VTR has Cable Tuning Ability (CTA), cable channels can only be received by connection to a Cable Service.

CABLE SYSTEMS

Cable system features and services vary in each local area. If you presently use your TV with a cable system, please read CABLE SYSTEMS INFORMATION on page 8 before making any connections.

“Note to CATV system installer: This reminder is provided to call the CATV system installer’s attention to Article 820 – 22 of the NEC that provides guide lines 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”.

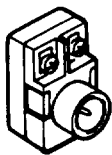
Rabbit ear antenna

Your VTR can be used with this type of antenna only if the picture is very clear and stable. When the antenna is part of the TV, the leads may not reach the VTR. You can either extend the leads, or obtain a movable rabbit ear antenna. We recommend using an outside antenna.

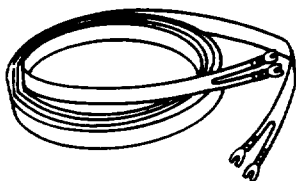
Precautions

- Use the VTR in a horizontal position ONLY.
- Allow air circulation space around, above, and below the VTR.
- Avoid extreme heat, cold, moisture, dust, magnetic fields, and strong vibrations.
- Keep everything, except air circulation and the video tape, from entering the VTR. An object or liquid (coin, paper clip, staple, flower pot soil, tobacco, ash, melted candle wax, drink or other items can cause damage to the VTR. If something gets into the VTR, immediately unplug the VTR and have it cleaned and inspected.
- Protect the VTR from household pets.
- Avoid cabinet finish damage from volatile agents in sprays, nail polish remover, alcohol, strong solvent cleaner, and chemically treated cleaning cloths.
- In areas with frequent electrical storms, lightning protection devices attached to the cable/antenna should be checked each year for good connections and condition. AC power line Surge Protection accessories are recommended for the VTR and TV. Such devices are commonly used for computer protection, and will minimize damage to the TV and VTR in the event of AC surge from lightning strike or other cause. Whenever possible, the TV and VTR should be unplugged from AC, and disconnected from the antenna/cable during electrical storms.

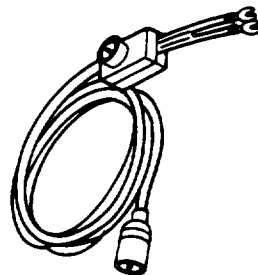
ACCESSORIES PROVIDED WITH VTR



VTR INPUT VHF FLAT TO COAX

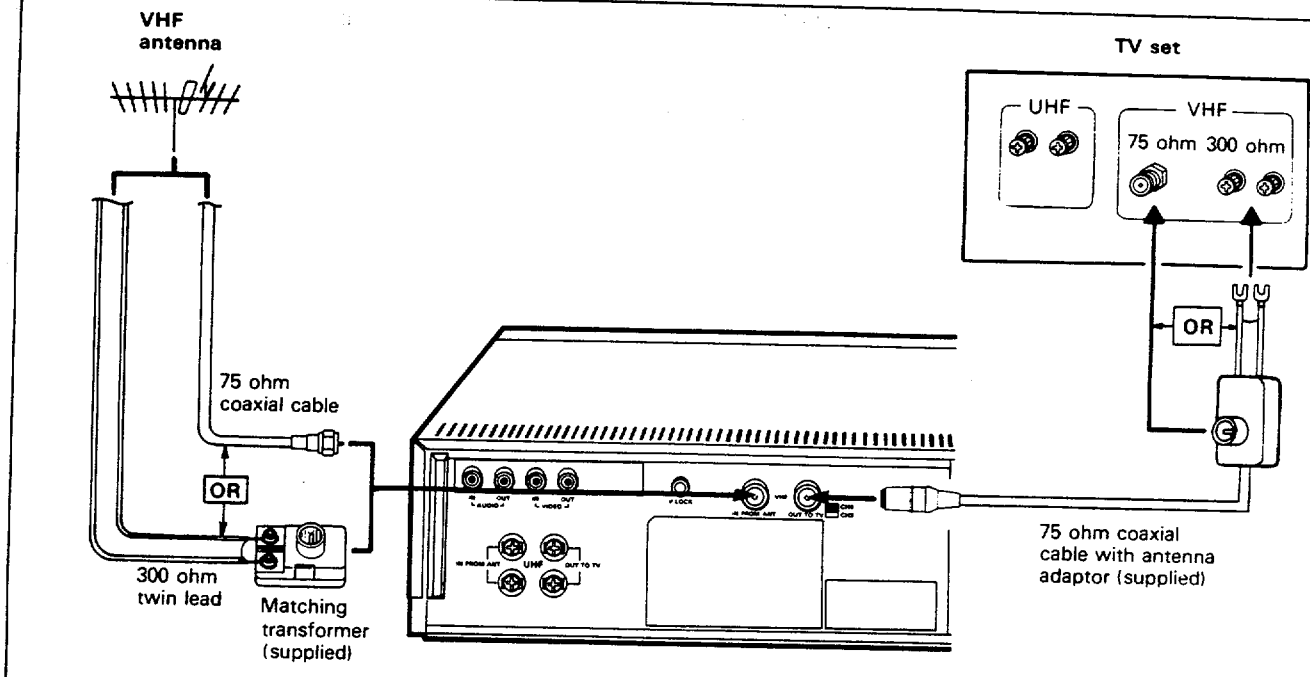


VTR-TV FLAT (300 ohm) UHF CONNECTIONS

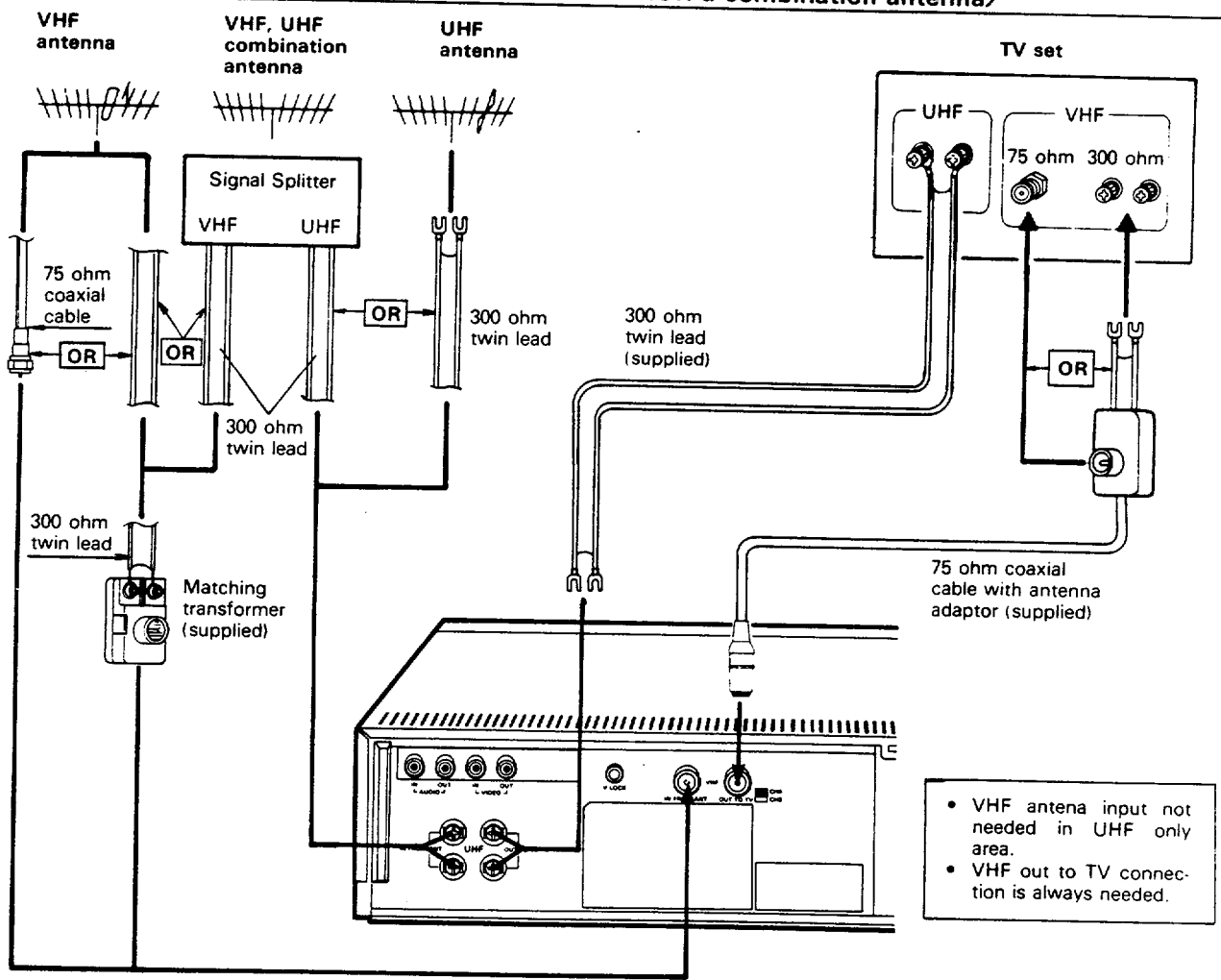


VTR TO TV INPUT CABLE/ADAPTOR

VHF RECEPTION AREA – FIG. A1



BOTH VHF AND UHF RECEPTION AREA (An antenna for each OR a combination antenna) – FIG. A2



- VHF antenna input not needed in UHF only area.
- VHF out to TV connection is always needed.

CABLE SYSTEM INFORMATION

Cable systems vary in features and services. The information and figures which follow cover most installations. If you need information about other installations, please write to Service at the nearest Pentax address listed at the back of this manual. The tuning abilities of your VTR and the type of cable service you have will determine what connections can be used. The VTR Tuning Range is listed in the rear of this Manual. VTRs with Cable Tuning Ability (CTA) are able to tune channels listed for CATV. Most cable services will be one of the following four types.

1. **Basic Cable:** Apartment buildings and planned communities may provide this type of service. No channel selection Cable Box is used with the TV. All channels are received using VHF channels 2 – 13. With this system, no special connections or operating procedures are needed. Connect the VTR and TV as shown in figure C1.
2. **Extended Cable — A Cable Box is used for TV Channel Selection:** The TV is usually set to channel 3 or 4, and all channel selection is performed using the cable company supplied Cable Box. In this type of system, no extra cost channels are available, and no channels are scrambled.
A CTA VTR can select channels on this system without a Cable Box, if the channels on the cable are in the VTR tuning range. The Cable Box may still be needed for the TV, unless the VTR is used as a cable converter. You can use figure C1, C2, or C3 for Extended Cable connection. Connections in C1 and C2 need no additional accessories. The connection of figure C3 allows recording and watching different programs but operation is more complicated.
3. **Extended Cable With Extra Cost Channels — No Scrambled Channels On System-Cable Converter Box Used For TV:** In this type of cable system, extra cost channels are added or deleted before the cable enters the customer home.
If a CTA VTR and CTA TV are used, a Cable Box is not needed. Connections can be made as shown in figure C1. If a non-CTA TV is used with a CTA VTR, either figure C2 or C3 can be used. If both non-CTA VTR and TV are used, figure C2 must be used.
4. **Extended Cable With Extra Cost Channels — Scrambled Channels on System-Cable Descrambler/Converter Box Used For TV:** In this type of system the cable company supplied Box must always be used to get proper reception of Extra Cost channels. All Extra Cost channels on the cable are scrambled, but the Cable Box unscrambles any that you pay extra to view. Channels included in the basic cable service fee are usually not scrambled, and can be tuned by a CTA VTR or CTA TV.

ADDITIONAL INFORMATION

When any type of scrambling is used for Extra Cost channels, the Cable Box must be used to view or record those channels. A CTA VTR does not include unscrambling ability. That ability is restricted to only cable company supplied equipment. On cable systems with scrambled channels, you have several choices. Among them are:

- a. Recording and watching only channels selected by the Cable Box (see figure C2).
- b. Adding a second cable company supplied Box.
- c. Adding switches to allow either recording and watching the channel selected by the Cable Box or recording a channel which is non-scrambled while watching another channel selected by the Cable Box (see figure C3).

Two Cable Systems: In some areas, two cables are used as inputs to the Cable Box. One cable may contain mostly non-scrambled channels, the other mostly Extra Cost scrambled channels. When you have a two-cable system, the cable with non-scrambled channels you wish to record (Cable A or Cable B) can usually be connected as in figure C3. One Cable can be connected directly, or both cables can be accessed by using the Cable Box. If you need to use both cables directly, write Pentax service for a connection diagram.

CAUTION: Only high quality, low loss switches and splitters should be used. All connections must be with shielded Coax cable. If your added connections degrade the performance of Extra Cost channels, all connections should be removed. The circuit of figure C2 should cause least signal loss. If even the circuit of figure C2 is not satisfactory, consult your cable company about installation.

CABLE SYSTEM VTR OPERATION

Direct Cable Connection

When a direct cable connection is used as in figure C1, VTR operation requires no special procedures.

Setting VTR Channels For Cable

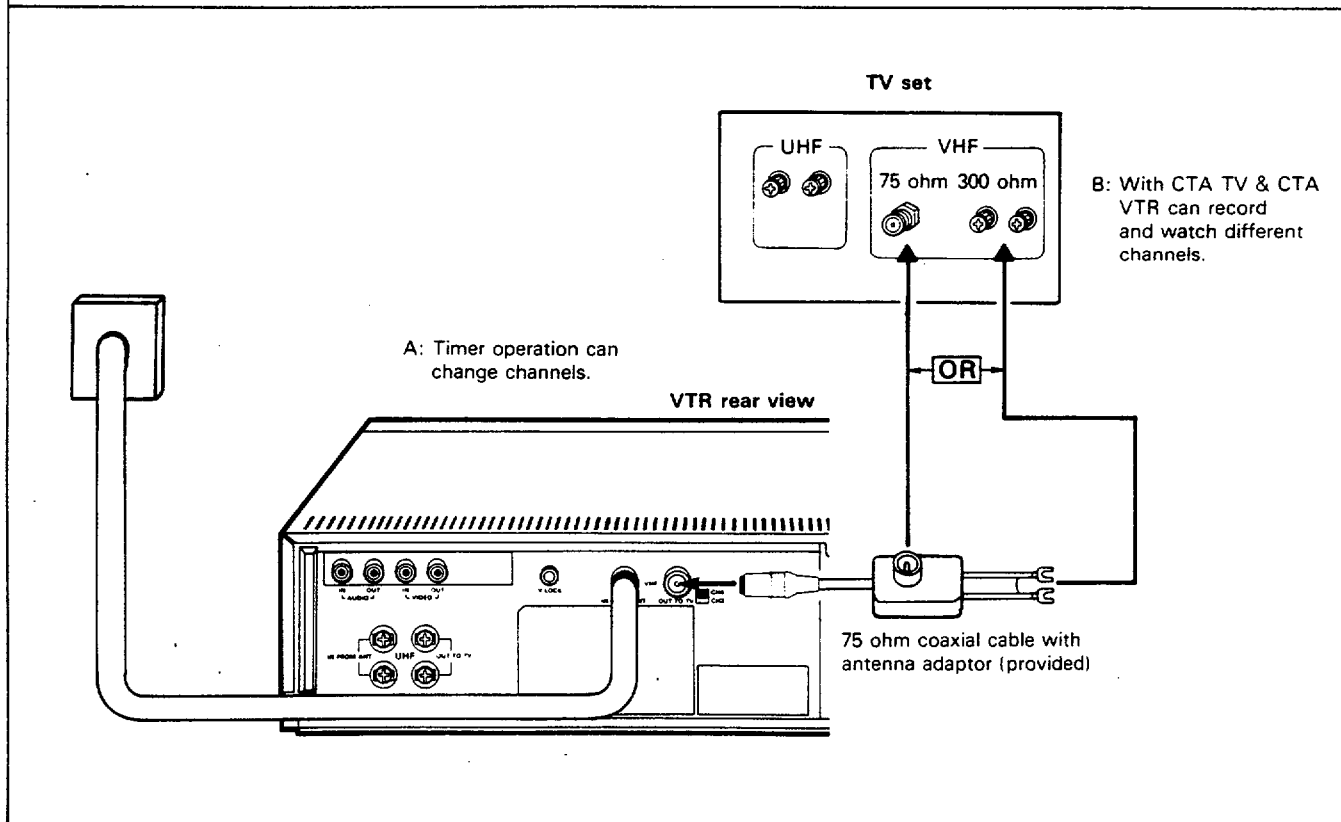
Due to the many channels available on Cable, programming channel memory will require patience. Although the VTR is preset for channels 2–13 (air signals), the sequence of channels may be different on cable. For example, channel 6 of the VTR may actually receive channel 28, as identified by the station. Any VTR channel memory position can be programmed to select any channel. Please refer to the section on programming channel memory for details. The basic procedure is as follows:

1. Set the VTR/TV switch to the VTR position, and set the channel selector of the TV to the Video channel output by the VTR (CH 3/4 setting on RF modulator).
2. Select various channels with the VTR channel UP/Down buttons, and you should be able to view several channels through the TV. If not, re-check your switches, connections, and TV fine tuning. Setting TV fine tuning is often easiest by playing a pre-recorded tape.

3. Using your TV program guide, decide on a channel to preset. Set the VTR NORMAL/SELECT switch to the SELECT position. Advance the VTR channel using Channel Up/Down until the Channel number on the VTR matches the number of the channel listed in the program guide.
4. Press TUNING (+) on the VTR and TUNE until the picture of the correct channel is shown. Patience is needed during this procedure because Tuning must be repeated through many channels in sequence, until you identify the desired channel. Another person and second TV can be helpful in identifying the channels.
5. When the picture of the correct channel is shown, return the NORMAL/SELECT switch to the NORMAL position. Repeat steps 3–5 for each station setting.

CABLE: FIG. C1

DIRECT TO CABLE (No scrambled channels)



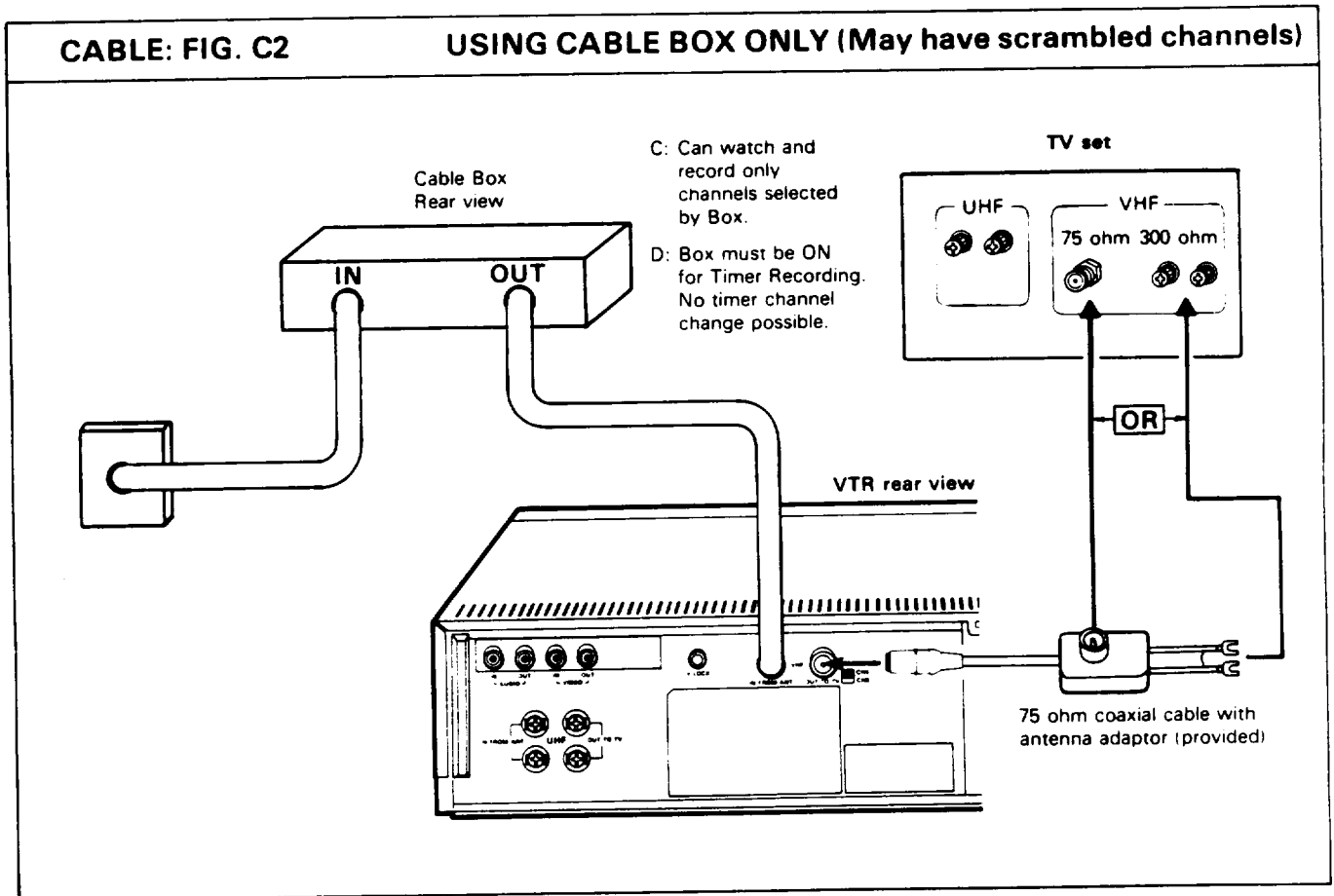
Cable Connection Using Cable Box Only
Interconnect as in figure C2.

1. Set the TV, Cable Box, and VTR power ON. Select a channel on the Cable Box.
2. Set the VTR/TV switch to the VTR position, and set the channel selector of the TV to the Video channel output by the VTR (CH 3/4 setting on RF modulator).
3. Using Channel Up/Down on the VTR, select the channel used for Cable Box output to the TV. You should be able to view the Cable Box output in only one VTR channel setting. If you are correctly set to the Cable Box, changing the channel setting of the VTR to any other channel will provide only a snowy picture. If no picture is obtained, re-check your connections and TV tuning to the VTR output channel. Setting TV tuning to view the VTR output is often easiest by playing a pre-recorded tape.

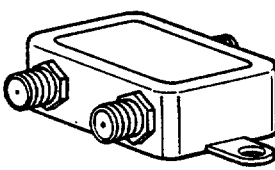
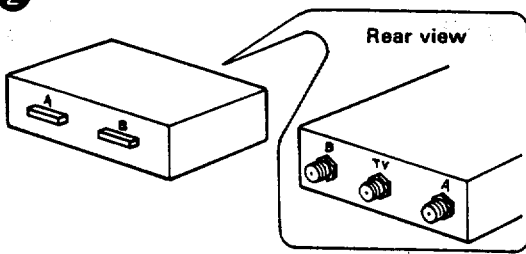
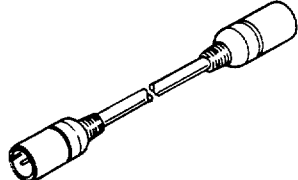
The VTR should now be set to tune the Cable Box. To record from the Cable Box, the Cable Box must be turned ON. If the Cable Box is used to control TV power, and you do not wish to have the TV on during Recording or Timer Recording, turn the TV OFF with the power switch on the TV. If the Cable Box controls the TV volume using a Remote Control, the volume setting must be set to normal.

Timer Recording: When you program the Timer for unattended recording, set the VTR to select the VTR channel used to view the Cable Box. The same VTR channel setting must be used for all timer programs. The VTR is unable to control channel selection when it is used with the Cable Box. The VTR can only select the Cable Box or no picture.

Before leaving the VTR to perform Timer Recording, be sure to activate the timer mode, set the Cable Box power ON, and set the channel on the Cable Box to the channel you want to record.

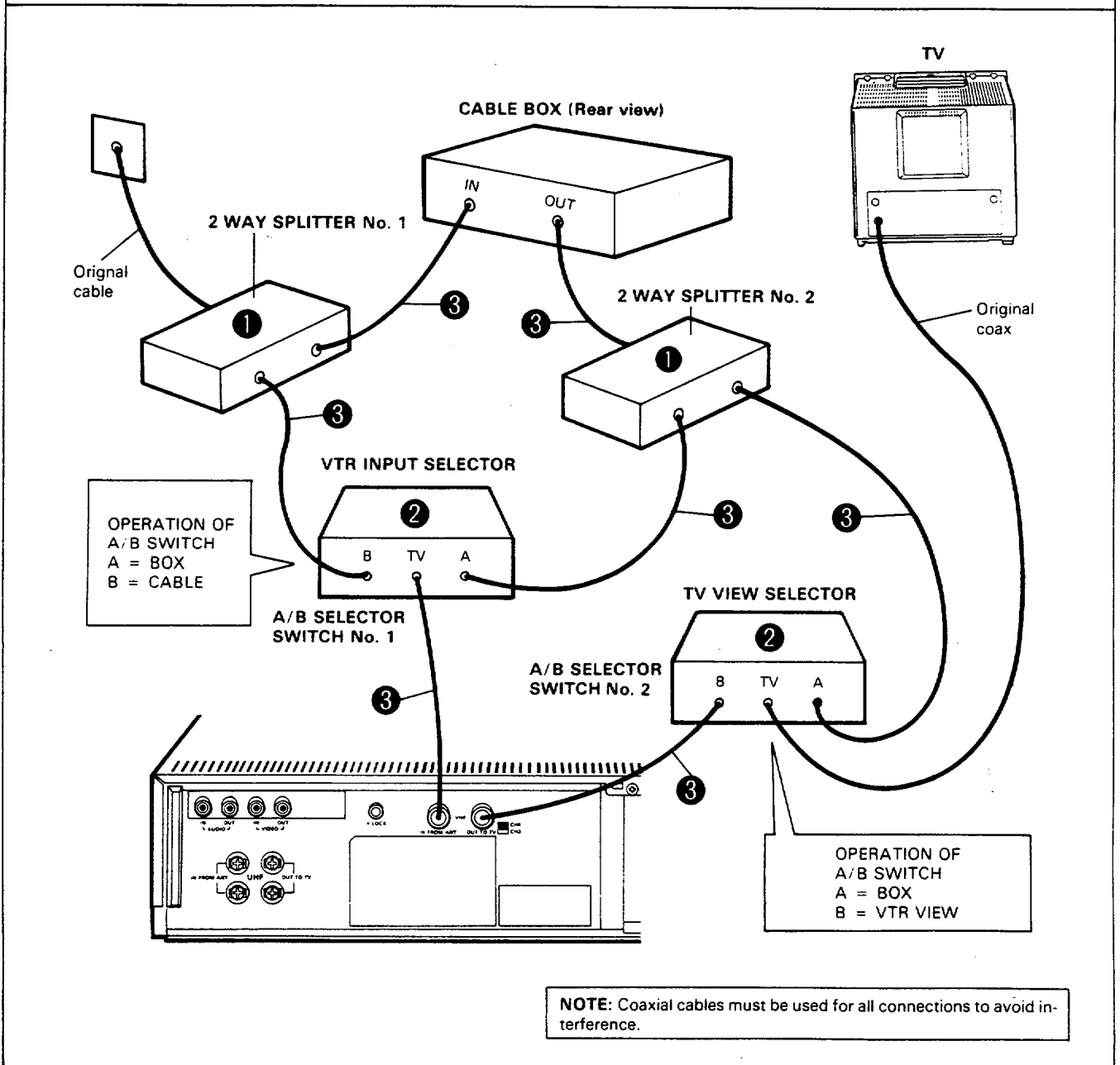


ACCESSORIES REQUIRED FOR OPTIONAL CABLE CONNECTIONS – NOT PROVIDED

<p>①</p> 	<p>②</p> 	<p>③</p> 
<p>2 WAY SPLITTER (2 used)</p>	<p>A/B SELECTOR SWITCH (2 used)</p>	<p>COAX CABLE (7 used)</p>

CABLE FIG. C3

DIRECT OR USING BOX



Cable Connection Direct or Using Cable Box

When using figure C3 with a non-scrambled cable system, the VTR Input Selector Switch No. 1 and the 2 Way Splitter No. 2 can be omitted, along with the coax interconnecting the two. Connect the VTR Input directly to splitter No. 1, and the cable box Output directly to A/B switch No. 2.

Function of Accessories

2 Way Splitter No. 1: Divides the cable signal so the signal is provided to the VTR and the Cable Box.

A/B Selector Switch No. 1, VTR Recording Input Selector: Used to select the Source for VTR use. In one position, the cable can be recorded directly. In the other position, the VTR can record the Cable Box.

2 Way Splitter No. 2: Divides the signal from the Cable Box so the VTR can record it, or it can be viewed on TV.

A/B Selector Switch No. 2, TV Viewing Switch: Used to allow the TV to View the Cable Box while the VTR is recording Direct cable sources. In the other position, TV can view VTR Recording or Playing. (VTR/TV switch of video tape recorder must be in VTR mode.)

Operation: After completing connections, set A/B No. 2 to A position. Verify cable channels to TV. In this position, the TV and Cable Box can be used as previously, except when making unattended recording of the Cable Box. Then the Cable Box power must remain ON. To view what the VTR is Recording or playing, set the switch to position B. Tune the TV to the VTR output channel, and set the VTR/TV Switch to the VTR mode.

Operation of VTR

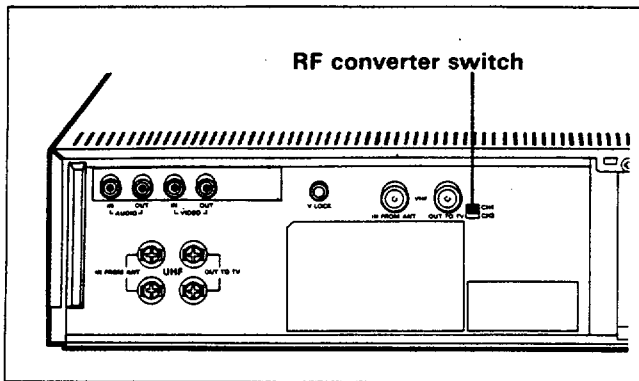
When the VTR Input Selector Switch A/B No. 1 is in position A, the VTR can record the Cable Box. One channel position of the VTR should be set to tune the Cable Box. Channel position 01 is recommended. Set the VTR as in the section for Using Cable Cable Box Only, when using position A.

When the A/B No. 1 is in position B, the VTR operates as indicated in Direct Connection to Cable. Refer to Setting channels for Cable.

Remember that when making a Timer Recording using the Cable Box, the Cable Box channel must be programmed into the Timer, the A/B No. 1 switch must be set to A, and Cable Box power must be left ON. When recording the Cable directly, be sure to set the switch to position B. The VTR cannot select between the Cable Box and Direct Cable inputs, so unattended recordings of both sources alternately should not be programmed unless someone is available to change the setting of switch A/B No. 1 during Timer operation.

VIDEO CHANNEL SETTING

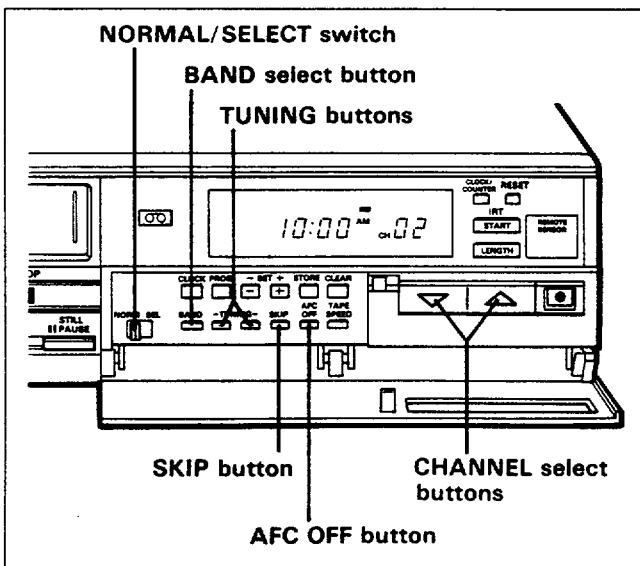
The RF converter changes the video and audio signals from the tuner or tape playback, to a standard television broadcast signal on channel 3 or 4. To obtain video recorder output on either channel 3 or 4, set the RF converter switch to CH 3 or 4 whichever channel is unused in your area.



CHANNEL TUNING

Your VTR can be preset for up to 80 memorized channels. It has been preset to receive VHF channels 2 through 13 when shipped. The channel number in the display will originally match the actual TV channel selected. During the procedure which follows, you can reprogram any display channel number, so that it selects any actual TV channel. This means that after programming of the memorized channels, the display can indicate a different number than the actual TV channel tuned by that channel memory position.

You can set any channel memory position to receive any station. This ability is most useful when the tuner is used in CATV installations. To add UHF or CATV channels not factory preset, or to preset the VHF channels in some other order, use the procedure which follows.



1. Turn on the TV and VTR.
2. Set the TV to Channel 3 (or 4).
3. Set the RF converter switch of VTR to channel 3 (or 4).
4. Open the door for secondary controls.
5. Set the NORMAL/SELECT switch to "SELECT". Time indication will change to band indication.
Note: When the switch is set to "SELECT", the display should indicate the band indication. If not, turn off VTR power, and then turn it on again to indicate the band indication.
6. Select the channel number to be memorized by pressing the CHANNEL select buttons.
Note:
 1. Your VTR can use the following numbers as TV channel presets: 00, 01 through 72, 91, 92, 95 through 99.
 2. Your VTR has been preset to receive VHF channels 2 through 13.
 3. You should determine which channel memory positions have not been preset before entering programming information. New information automatically erases previous programmed data.
7. Press the BAND select button to select either "L", "H" or "U" according to the channel number as listed below.

Indication on display	Channels to be received
L	VHF low channels 2~6
H	CATV channels A-2, A-1 and A~1 VHF high channels 7~13 CATV channels J~W
U	UHF channels 14~83

For example, if you're going to tune one of UHF channels 14 through 83, display the letter "U" by pressing the BAND select button.

8. Press and hold the TUNING button (+) until the picture for the channel you are programming appears on the TV screen. (For fine tuning tap on the "+" and "-" TUNING button alternately.) The active channel with lowest number in the band being programmed will appear, followed in order by the other active channels, as in the "Channel frequency spectrum" on next page.

Note:

1. Holding down the TUNING button (+) at the end of band will result in tuning into the next band. The band display will change to the next higher band.
2. If you press the TUNING button (-) at first, the band will change to adjacent band immediately. The active channel with the highest frequency in the band will first appear, followed in opposite sequence by the other active channels.

3. Speeds of picture scanning from the lowest channel to the highest in each band are as follows;

Band	Speeds
L	About 20 seconds
H	About 40 seconds
U	About 80 seconds

9. After releasing the TUNING button when the channel picture appears for the channel number you are programming, press the up (+) and down (-) TUNING buttons to fine tune the TV channel.
10. Repeat steps 6 through 9 for other channels.
11. Return the NORMAL/SELECT switch to "NORMAL".
12. To check programming, press the CHANNEL select buttons to cycle the VTR tuner through all the channels you have programmed. If a channel was missed or requires fine tuning, repeat above steps for the channel involved.

Always return the NORMAL/SELECT switch to "NORMAL" after preprogramming is complete.

AFC (Automatic Frequency Control)

A channel is fine tuned using up (+) and down (-) TUNING buttons. When the NORMAL/SELECT switch is returned to "NORMAL", AFC is turned on and the channel "locks in". The AFC electronically optimizes the fine tuning adjustment.

If a TV channel signal is marginal due to graininess or ghosting, the picture may sometimes be improved by manually tuning for best picture and then defeating the AFC action. To turn AFC off, follow the procedure below.

AFC off tuning procedure

1. Make sure that NORMAL/SELECT switch is set to "NORMAL".
2. Select the desired channel by pressing CHANNEL select button.
3. Set the NORMAL/SELECT switch to "SELECT".
4. Press the AFC OFF button.
"AFC" indication under the channel indication display will disappear.
5. Return the NORMAL/SELECT switch to "NORMAL".

Note:

1. The AFC is only switched off for the channel you have been programming. AFC remains in effect on all other channels. To defeat the AFC for additional channels, repeat the above steps.
2. Pressing the AFC OFF button once again will turn the AFC on.

Eliminating unwanted preset channels

You can rearrange the desired channels by eliminating unwanted preset channels for channel up/down selection.

1. Set the NORMAL/SELECT switch to "SELECT".
2. Press the CHANNEL select buttons until an unwanted channel is tuned.
3. Press SKIP button.
Sound will go off indicating the channel has been erased from memory.
4. Repeat steps 1 through 3 until all unwanted channels have been eliminated.
5. Return the NORMAL/SELECT switch to "NORMAL".

Channels which have been eliminated cannot be selected by the CHANNEL select buttons.

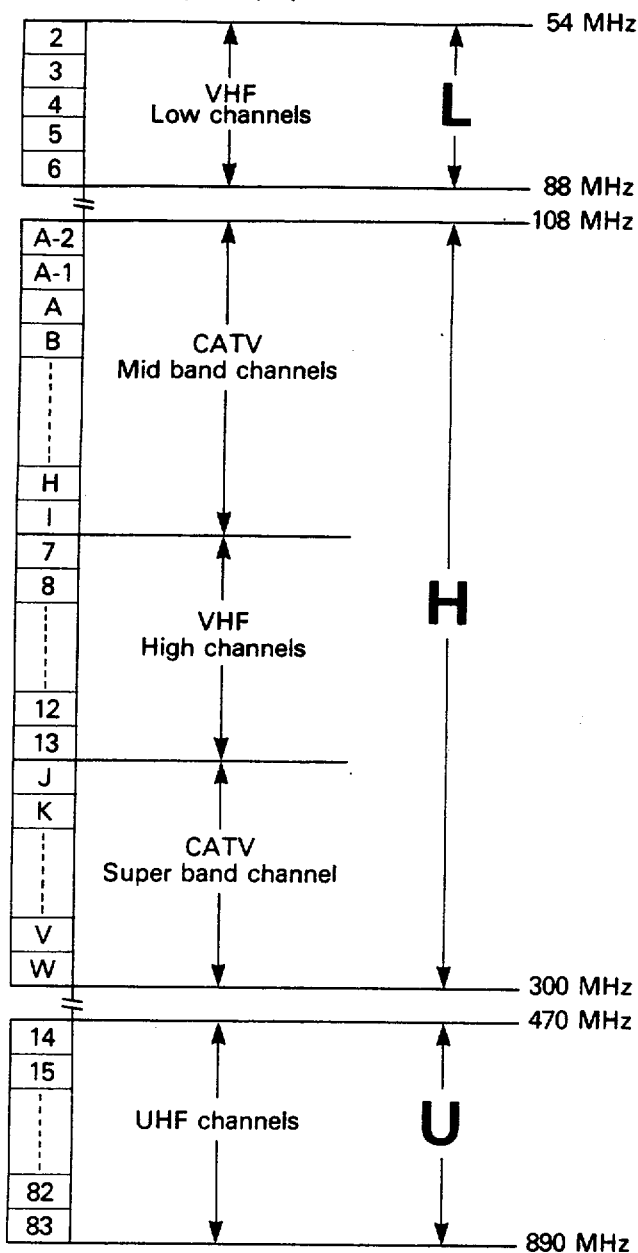
Note: To restore the erased channel, repeat the above steps 1 through 3.

Your VTR has been preset to select the "AUX" position by pressing the CHANNEL select buttons.

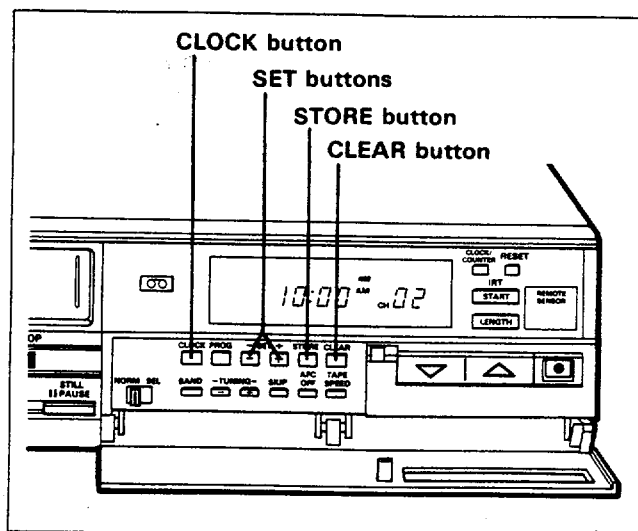
This AUX position is used to view or record the program input at the VIDEO IN and AUDIO IN on back of VTR.

The "AUX" position can be eliminated for channel up/down selection and also can be re-entered in memory by following the steps 1 through 3 on "Eliminating unwanted preset channels".

Channel frequency spectrum



CLOCK TIME SETTING



- When VTR is plugged into an AC outlet for first time, the clock display shows "--:--".

The clock is set using the CLOCK, SET and STORE buttons. The CLOCK button selects the clock setting mode. The SET buttons advance the Day, Hours or Minutes. The STORE button stores the Day, Hours or Minutes. After the Day is entered with STORE, the next press of the STORE button will enter the hours, and next press will enter the minutes. To indicate the "DAY" mode, the day will flash. To indicate the "HOUR" mode, the hours digits will flash. To indicate the "MINUTE" mode, the minutes digits will flash. When the STORE button is pressed, the flashing digits will be stored in memory.

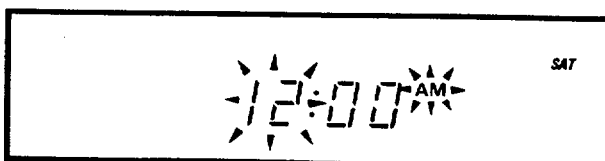
If you input erroneous information by mistake during clock setting, press the CLEAR button then input correct information again.

Before setting the clock, program your VTR tuner. (See page 13.)

1. Press the CLOCK button.



2. Press the SET button (+ or -) repeatedly to select the present day of the week. Hold the button down to advance rapidly. When the present day of the week appears, press the STORE button.



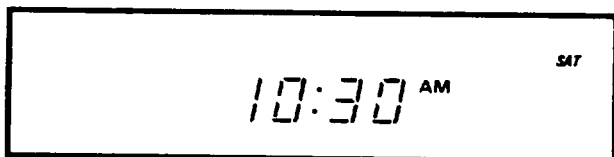
For example, the diagram shows that Saturday (SAT) has been set.

3. Press the SET button (+ or -) to set the present hour.
Hold the button down to advance rapidly. Press the STORE button when the present hour appears.



For example, the diagram shows that "AM 10" hour has been set.

4. Press the SET button (+ or -) to set the minute.
Hold the button down to advance rapidly. Press the STORE button when the present minute appears.



For example, the diagram shows that "30" minutes has been set.

Now the clock has been set to the correct time of day.

For zero second setting, set the minutes to one minute ahead of present time and press the STORE button when the exact start of the next minute is reached.

- Note:**
- If your clock display shows "--:--", your home had a power failure. The time should be reset.
 - 12:00 AM is midnight; 12:00 PM is noon.

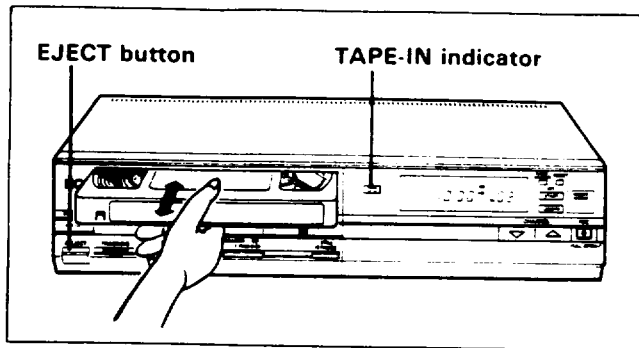
NORMAL TV VIEWING

You do not need to disconnect VTR from your TV set to watch TV. When you turn off the POWER switch on your VTR, the VTR automatically switches to "TV".

To watch TV, turn on TV and select a channel as usual.

CASSETTE TAPES

Insertion and removal of cassettes



Insertion

1. Insert the cassette.

Note:

- When the cassette is loaded, power is turned on automatically and TAPE-IN indicator lights.
- When a cassette is inserted diagonally or too quickly into the cassette compartment, the cassette cannot be drawn into the VTR. In this case, do not pull or push the cassette forcibly. The cassette will be ejected in a few seconds. Push it in again gently.

Removal

Note: Before removing cassette, be sure to turn the POWER switch on.

1. Turn on power.
2. Press EJECT button.
3. Remove the cassette.

Types of video cassette

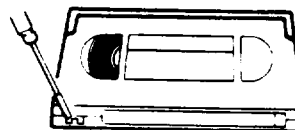
Use video cassettes with the **VHS** mark in this VTR. The table below shows how to distinguish difference in recording time of cassettes.

TYPES	RECORDING TIME		
	SP	LP	EP
T-30	30 min.	60 min.	90 min.
T-60	60 min.	120 min.	180 min.
T-120	120 min.	240 min.	360 min.
T-160	160 min.	320 min.	480 min.

It is recommended that the SPEED select switch of the VTR is set to "SP" to obtain better picture and sound quality when recording a music program.

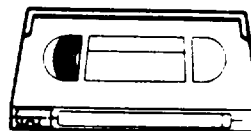
To avoid erasing a recording

Break off the safety tab using a screwdriver or similar tool.



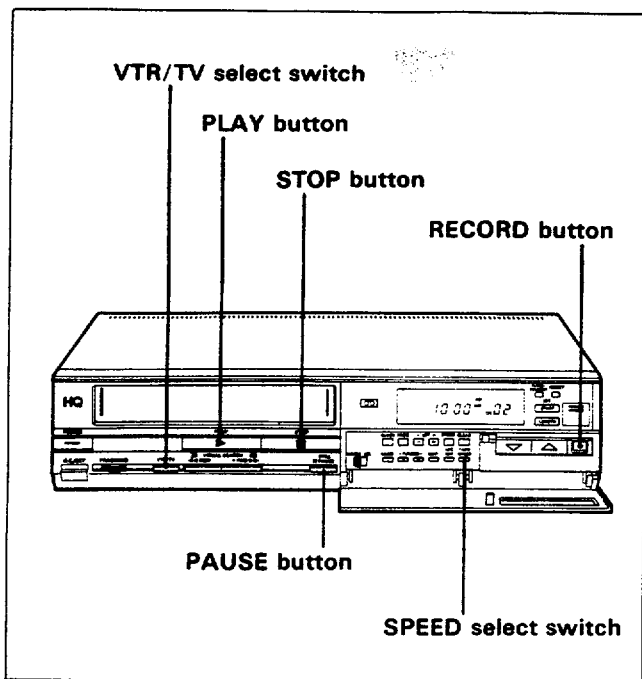
To re-record on a cassette which has its safety tab removed

Cover the hole with cellophane tape.



Refer to the instructions included with cassettes for more information.

RECORDING TV PROGRAMS



1. If you wish to view a program being recorded, turn on TV and select the channel 3 or 4 for your video channel.
2. Insert Cassette.
VTR power is turned on automatically.
Be sure to check that the record safety tab is not missing.
3. Set SPEED select switch to "SP", "LP" or "EP".
"SP" speed is recommended when recording a music program.
4. Set the VTR/TV select switch to "VTR" (VTR indicator lights). If you wish to view a program being recorded.
5. Select channel to be recorded.
6. Press RECORD button. Recording will start.
7. Press PAUSE/STILL button to stop recording temporarily. Press again to release.
Note: To prevent tape damage, do not leave the unit in the pause mode for more than 5 minutes.
8. Press STOP button to stop recording.

To record one program while viewing another

You can record one program while viewing another by merely selecting the channel on your TV after setting the VTR/TV select switch to "TV". The recorded program can be viewed later at your convenience.

To change the channel to be recorded while in record mode

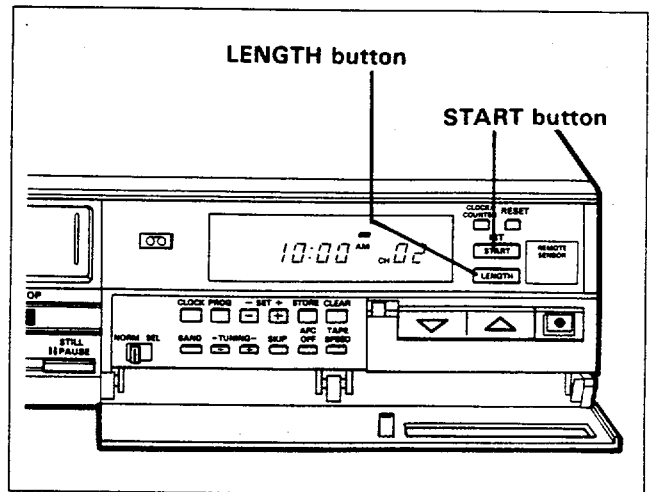
During recording, the channel lock function operates and channel cannot be changed if the channel select button is pressed.

If you wish to change channel, proceed as follows.

1. Press the PAUSE/STILL button.
2. Change channel desired.
3. Press the PAUSE/STILL button to release record pause mode.

INSTANT RECORDING

Instant recording timer (IRT) allows you to start an unattended recording without programming the timer. It is convenient if you are interrupted while viewing a program and want to record the balance of it. By using the delayed start feature you can delay the recording start up to 24 hours. Although you do not need to program the timer for IRT, the clock must be set.



IRT with immediate start

1. Follow the steps 1 through 5 on "RECORDING TV PROGRAM".
2. Press the LENGTH button to select the recording time. Pressing the button once sets the timer to "0:00". The recording time changes in hour and minute in the order of 0:30, 1:00, 1:30, 2:00, 3:00 and 4:00 every time the button is pressed. IRT will begin when 0:30 is displayed and the TIMER and IRT indicators will come on. During recording, the remaining IRT time appears on the timer display.
3. At the end of recording the display reads 0:00; the VTR will automatically shut off.

Note:

1. IRT feature does not operate during play and unattended recording modes.
2. If the LENGTH button is pressed during rewind operation, VTR enters the IRT mode after rewinding tape.

Delayed start IRT

You can delay the start of an IRT by using the START button.

1. Follow the steps 1 through 5 on "RECORDING TV PROGRAM".
2. Press the START button to set the start time.
The start time may be set to begin on any hour or half hour, up to 24 hours from present.
For example, the present time is 9:15 and you want to record a program that starts at 10:30. Just press the START button three times.

PLAYBACK

3. Press the LENGTH button repeatedly to select the desired recording time. The recording time changes in hour and minute in the order of 0:30, 1:00, 1:30, 2:00, 3:00 and 4:00 every time the button is pressed.

4. Turn off the VCR power.

The TIMER indicator will come on, and IRT will begin at the time you selected.

During recording, the remaining IRT time appears on the timer display.

Note: Delayed IRT will not begin if the VTR is turned on at the start time.

Recalling the IRT

Press the START or LENGTH button only once to recall the start time or recording time respectively. The display shows start time or recording time for about 8 seconds and returns present time of day or counter reading.

Note: To recall the recording time, press the LENGTH button only once. If you press the button twice or more, the recording time will be changed.

To extend the recording time

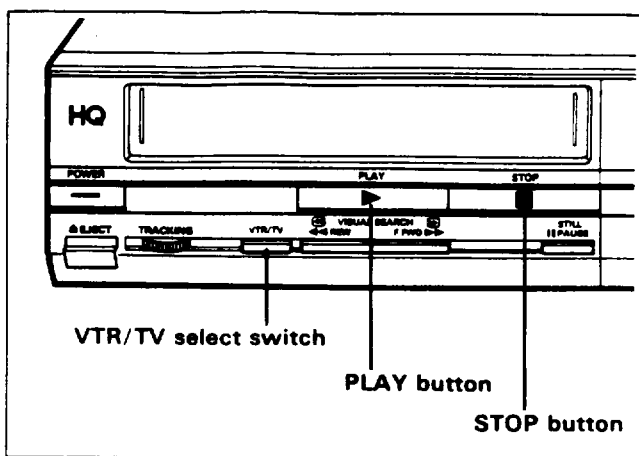
The recording time can be extended anytime by pressing the LENGTH button. The timer display will reset to 0:30, 1:00, 1:30, 2:00, 3:00 or 4:00 as selected.

To cancel IRT

You can clear IRT by pressing the LENGTH button until time remaining is 0:00, or by pressing the POWER button and then the STOP button within 10 seconds.

Note:

1. When the recording is not taking place, press the LENGTH button until the display reads 0:00 to cancel IRT.
2. The presetting of IRT is not possible when the previous information is still stored.



1. Insert the cassette.
VTR power is turned on automatically.
2. Turn the TV set on and select the video channel.
3. Set the VTR/TV select switch to "VTR". (VTR indicator lights.)
4. Press the PLAY button.
5. Press the STOP button to stop playback.

Tracking control adjustment

When playing prerecorded tapes or those recorded on units other than you own, black and white streaks may appear on your TV screen. If this occurs, turn the TRACKING control slowly in either direction until the streaks disappear. When playback of this particular tape is over, readjust the TRACKING control to its original position. The original position is normally in the center position.

Still playback

Press the PAUSE/STILL button to stop the picture on the screen during playback.

During still playback, press the PAUSE/STILL button to return to normal playback, or the STOP button to enter the VTR to the stop mode.

Note:

- If you see vertical shaking on the TV screen in the still playback mode, rotate the V. LOCK control on the back of the VTR to minimize shaking.
- When the still playback mode continues for about 5 minutes, the VTR switches to the stop mode automatically to prevent damage to the tape.
- The playback picture will have some noise in the still playback mode.

Visual search

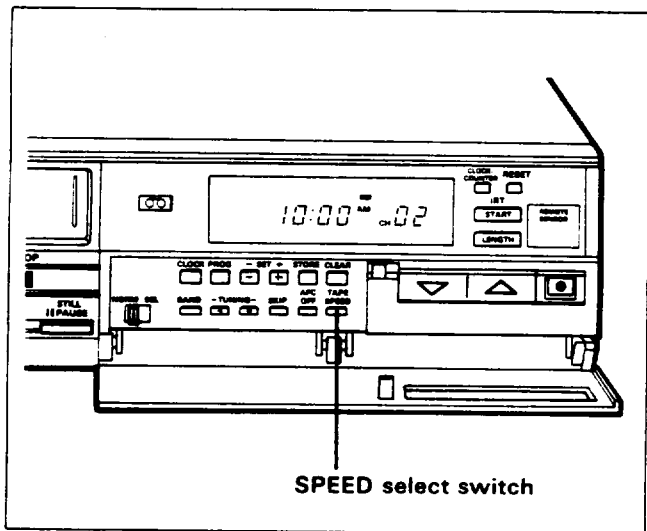
This allows you to view the picture from a recorded tape at high speed in both the forward and reverse directions.

Press the PLAY button to play a tape, then press either the VISUAL SEARCH button REW or F.WD. Pictures can be viewed at high speed in either the forward or reverse direction.

Note: The playback picture will have some noise in the visual search mode.

TIMER RECORDING

The programmable electronic clock/timer permits the unattended recording of up to 4 preselected programs, including one program on the same day of each week or one program at the same time Monday through Friday. It can be preset up to 14 days in advance to record your favorite programs. It turns the unit on and off and changes channels automatically.



- Your TV does not have to be on to make a recording because the VTR records TV programs without the aid of your TV. Your TV is used only to view the program during recording or play.

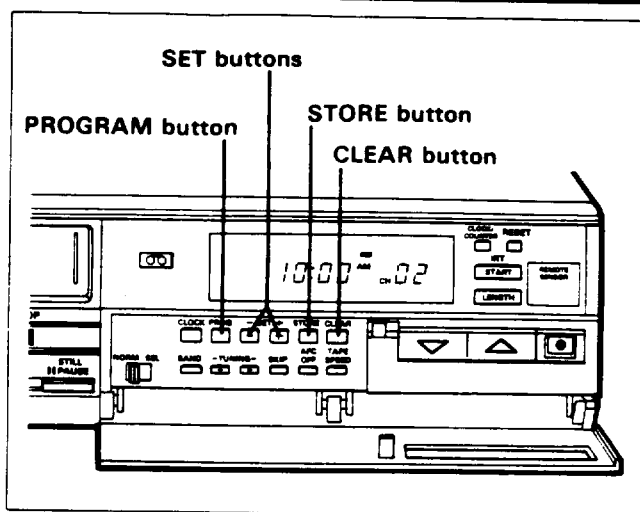
1. Insert the Cassette.
2. Set the SPEED select switch to "SP", "LP" or "EP".
Note: "SP" speed is recommended when recording a music program.
3. Set the program timer.
"START (ON) TIME", "STOP (OFF) TIME", "DAY" etc. See below.
4. Turn power off. Now recording will begin automatically at the start time.

Note:

- It is not necessary to press RECORD button.
- The TIMER indicator flashes to warn that recording will not occur because cassette has not been inserted. If the safety tab on the cassette has been removed, the VTR will automatically eject the cassette when placed in the Timer mode.

Programming the timer for unattended recording

For unattended recording the timer needs to know what **day** to make the recording, the **time to start**, the **time to stop**, and the **channel to be recorded**.

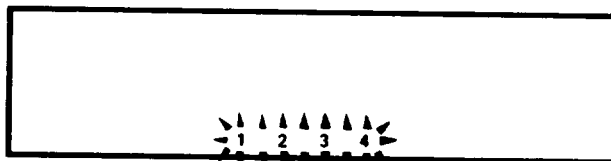


The timer is programmed using the PROGRAM, SET and STORE buttons. The PROGRAM button selects the timer programming mode. The SET buttons advance the Program indicators, Channel, Day, Hours or Minutes for recording. The STORE button stores them. The digits flash in sequence, so input the correct data to the flashing digits. When the STORE button is pressed, the flashing digits will be stored in memory. If you input erroneous information by mistake when programming the timer, press the CLEAR button and input the correct information again.

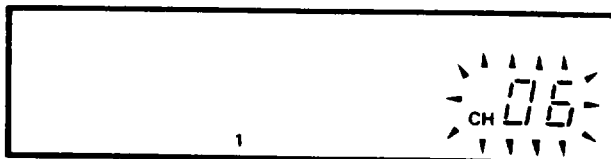
1. Press the PROGRAM button.

Program indicators (1 through 4) flash to indicate which memory positions have not been programmed. If a memory has been programmed, its indicator will not flash.

Note: You should determine which memory positions have not been programmed before entering new programming information. New information automatically erases previous programming.

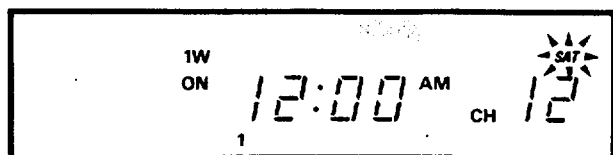


2. Press the SET button (+) to select the program indicator to be programmed. Program indicators (1 through 4) light alternately across bottom of digital display. Press the ENTER button when the desired program number is displayed. Channel indicator starts flashing.



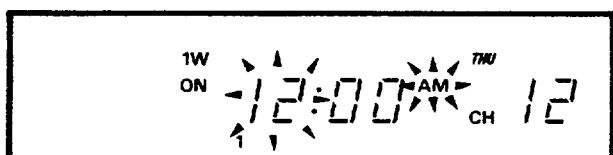
For example, diagram shows program "1" has been set.

- Choose the channel to be recorded by pressing the SET or CHANNEL select button. Then press the STORE button.



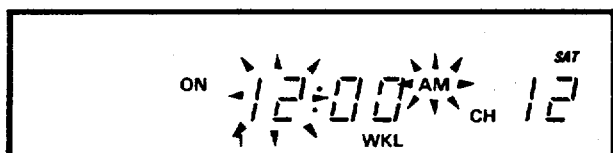
For example, diagram shows channel "12" has been set.

- Press the SET button to select the day of recording. Make sure desired Week indicator (1W or 2W) lights. Continuing forward will advance timer to Week two. Press the STORE button after selecting the day of recording. "AM 12" hour starts flashing.



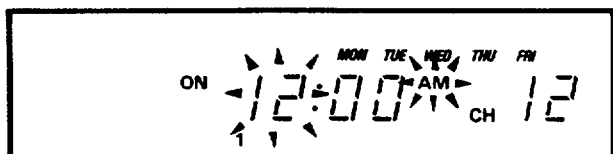
For example, diagram shows recording on Thursday within 1 week from today.

To record on a specified day at the same time each week: Press the SET button until the "WKL" indicator lights and then press the SET button to select the day of recording. Then press the STORE button.

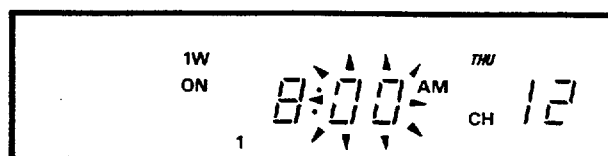


For example, diagram shows recording on Saturday of each week.

To record at the same time on Monday through Friday: Press the SET button until Monday through Friday indicators light, then press the STORE button.

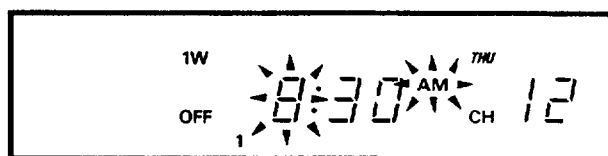


- Select the hour for recording to start by pressing the SET button. Hold down button to advance rapidly. Advance hours for AM/PM. Press the STORE button after selecting the hour for recording to start. "00" minutes starts flashing.



For example, the diagram shows "AM 8" hours has been set.

- Select the minutes for recording to start by pressing the SET button. Hold down button to advance rapidly. Press the STORE button after selecting the minute for recording to start. "OFF" will appear instead of "ON". "AM 8" hour starts flashing.



For example, the diagram shows "30" minutes has been set.

- Select the hour and minute to stop recording in the same procedures described in steps 5 and 6. Be sure to press the STORE button after selecting the minute.

Programming of one timer event has now been completed. Display shows the start time when pressing the STORE button. After few seconds the display shows stop time, the display returns the clock time display together with letters "PROG" automatically.

"PROG" shows that timer has been programmed; it lights whenever the timer-programming is done regardless of whether the power ON/OFF. To set the next program, repeat steps 1 through 7.

Note: If a power failure occurs and the clock display shows "--:--", programming information previously set is cleared. The programming information should be reset.

To clear a program

- Press the SET button (+) until desired program indicator lights. The start time appears on the display.
- Press the CLEAR button.

The display returns the clock time display to show that the programming has been cleared. Be sure to press the CLEAR button while the display shows the start or stop time. The programming does not clear if the CLEAR button is pressed when the display returns the clock time display.

To stop a timer recording while in progress

Press the POWER button and then press the STOP button within 10 seconds.

The program that was being recorded will be erased from the timer's memory.

To check programming

Press the SET button (+).

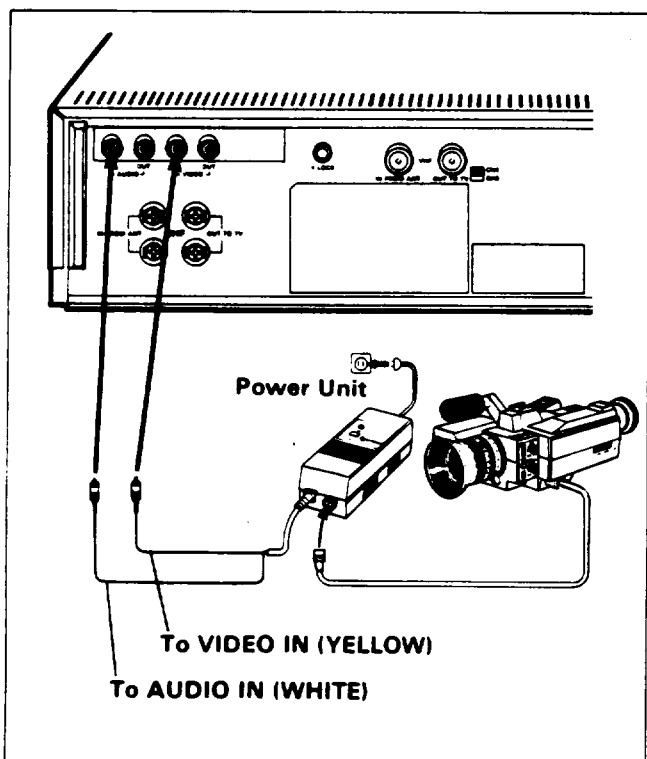
The program indicator "1" lights. If the program No. 1 has been already programmed, the "ON" indicator lights and the clock/timer display shows the starting time. Then the "OFF" indicator lights and the display automatically shows the time to stop recording in a few seconds with the channel number to be recorded lighting up. The display then automatically returns to the present time of day.

Programming errors

If programs overlap, the VTR will select the program with the earliest start time. When that program is over, the VTR will switch to the next program. If the start times are the same, the VTR will select the programs in numerical order.

RECORDING FROM A VIDEO CAMERA

You will need a Video Camera and Power Supply for Video camera. At first you must connect the Video Camera to Power Supply and then connect Power Supply to Video Deck. (Refer to the Instruction Manual of the Camera as well as these instructions.)



1. Turn on Power Unit.
2. Insert cassette.
VTR power is turned on automatically.
3. Set the SPEED select switch to "SP", "LP" or "EP".
4. Press the CHANNEL select button until the AUX indicator lights up on the display. If you have skipped the AUX position from the VTR tuner, restore it. See page 14 for details.
5. Adjust focus and white balance on camera. (Refer to Instruction Manual of video camera.)
6. Press RECORD button.
7. Press STOP button to stop recording.

HEAD CLEANING

- Picture playback may become blurred or be interrupted while the TV program received is clear. This does not mean that the recorded program has been erased. (See figure below.)
- Dirt accumulated on the head after long periods of use causes this problem. In this case, head cleaning requiring highly technical care is necessary.
- Video heads rotate rapidly and are easily damaged if they contact objects other than video tape. Under most conditions, they tend to be self cleaning due to contact with the tape. If the video heads become dirty, the picture will become snowy. Only when the picture becomes snowy and the tracking control has no effect, should the heads be cleaned.

Head Cleaning Cassettes are available in the marketplace for customer use, but the quality and effectiveness of these Cleaning Cassettes ranges from satisfactory to poor. Some cleaning cassettes increase head wear or cause damage to the video heads. Others may become stuck in the machine. We recommend that head cleaning be performed only by qualified video recorder technicians. Head cleaning or malfunctions caused by head cleaning is not covered by the Limited Warranty.



Example of playback with dirty video heads

PERIODIC MAINTENANCE

The VTR is a precision electromechanical device which will require periodic maintenance after a period of normal use. We expect that no maintenance other than head cleaning will be required during the warranty period by most users, unless the VTR is heavily used or seldom used. Normal maintenance is the responsibility of the user, although defective parts are covered during the warranty period. Consult your VTR Service Center to determine recommendations for normal maintenance based on your location, use patterns and machine age.

PROBLEM GUIDE

PROBLEM	THINGS TO CHECK	SOLUTION
No power	<ul style="list-style-type: none"> • Is power cord connected? 	<ul style="list-style-type: none"> • Connect power cord to AC outlet.
Timer recording is not possible.	<ul style="list-style-type: none"> • Is the program timer set correctly? • Is the POWER switch set to "OFF"? • Is the record safety tab missing? 	<ul style="list-style-type: none"> • Set the program timer correctly. • Set the POWER switch to "OFF". • Place cellophane tape over missing safety tab.
REC mode cannot be engaged.	<ul style="list-style-type: none"> • Is the record safety tab missing? 	<ul style="list-style-type: none"> • Place cellophane tape over missing safety tab.
Picture is poor on playback.	<ul style="list-style-type: none"> • Is the TV channel selector on the proper channel? • Is the TV fine tuning set correctly? 	<ul style="list-style-type: none"> • On playback, the TV channel selector should be on channel 3 or 4. • Fine tune your TV.
Noise in picture on playback	<ul style="list-style-type: none"> • Is Video Head clean? 	<ul style="list-style-type: none"> • Head cleaning is necessary.
No picture on playback	<ul style="list-style-type: none"> • Is the TV set to the proper channel? 	<ul style="list-style-type: none"> • Set to correct channel, CH3 or 4. (for your video channel)
Playback picture is partially noisy.	<ul style="list-style-type: none"> • Is the TRACKING control set to center position? 	<ul style="list-style-type: none"> • Adjust TRACKING control for better picture.
TV program cannot be recorded or cannot be seen.	<ul style="list-style-type: none"> • Is connection correct? 	<ul style="list-style-type: none"> • Connect correctly.
Camera recording is not possible.	<ul style="list-style-type: none"> • Is the AUX indicator on? 	<ul style="list-style-type: none"> • Press CHANNEL select button until the AUX indicator lights up on the display.
VTR does not operate if any button on the remote control unit is pressed.	<ul style="list-style-type: none"> • Are the batteries inserted into the battery compartment of remote control unit? 	<ul style="list-style-type: none"> • Insert batteries.

SPECIFICATIONS

Recording:	Rotary two head Helical Scan Azimuth Recording
Video:	NTSC Color EIA Standard
Cassette:	VHS Type
Heads:	2 video heads: 2 for SP/LP/EP 1 Full track audio/video erase head 1 Combination head for control track, audio erase and audio record/play (3 heads/single housing)
Tape Speed:	33.35 mm/sec (SP), 16.67 mm/sec (LP), 11.12 mm/sec (EP)
Tape Width:	12.7 mm
RF Output:	Channel 3 or Channel 4
RF Input:	VHF 75 ohm, UHF 300 ohm
Tuning Range:	VHF LOW, CH2 ~ 6 (54 MHz - 88 MHz) VHF HIGH, CH7 ~ 13 (174 MHz - 216 MHz) VHF MID. CH A-2, A-1 and A ~ 1 (108 MHz - 174 MHz) CATV VHF SUPER CH J ~ W (216 MHz - 300 MHz) CATV UHF CH, 14 ~ 83 (470 MHz - 890 MHz)
Video Input:	1 - 2 Vp-p 75 ohm Unbalanced
Video Output:	1 Vp-p 75 ohm Unbalanced
Audio Input:	316 mV rms (-7.8 dB) 100 kohm
Audio Output:	316 mV rms (-7.8 dB) 600 ohm
Video Recording S/N:	Better than 46 dB (SP), Better than 43 dB (LP), Better than 40 dB (EP)
Horizontal Resolution:	240 lines (SP), 230 lines (LP), 230 lines (EP)
Audio Response:	50 Hz - 10 kHz (SP), 50 Hz - 7 kHz (LP), 100 Hz - 6 kHz (EP)
Audio S/N:	Better than 43 dB (SP), Better than 40 dB (LP), Better than 40 dB (EP)
Power Input:	AC 120V 60 Hz
Power Consumption:	32W Nominal
Cabinet Size:	17-1/8"(W) x 3-3/4"(H) x 12-3/4"(D) 43.5(W) x 9.5(H) x 32.4(D) cm
Weight:	17.2 lbs (7.8 kg)
Accessories:	1 - Coaxial cable with antenna adaptor 1 - UHF twin lead 1 - Matching transformer 300 - 75 ohm 1 - Remote control unit 2 - Batteries

Design and Specifications subject to change without notice.

PENTAX

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Service information : (303) 799-8000

PENTAX CORPORATION. 1101 Stewart Ave. Garden City, NY 11530
Service information : (516) 222-0830

PENTAX CORPORATION. 350 East Devon Ave. Itasca, IL 60143
Service information : (312) 250-9000

PENTAX CORPORATION. 8363 Reseda Blvd. Northridge, CA 91324
Service information : (818) 701-5080