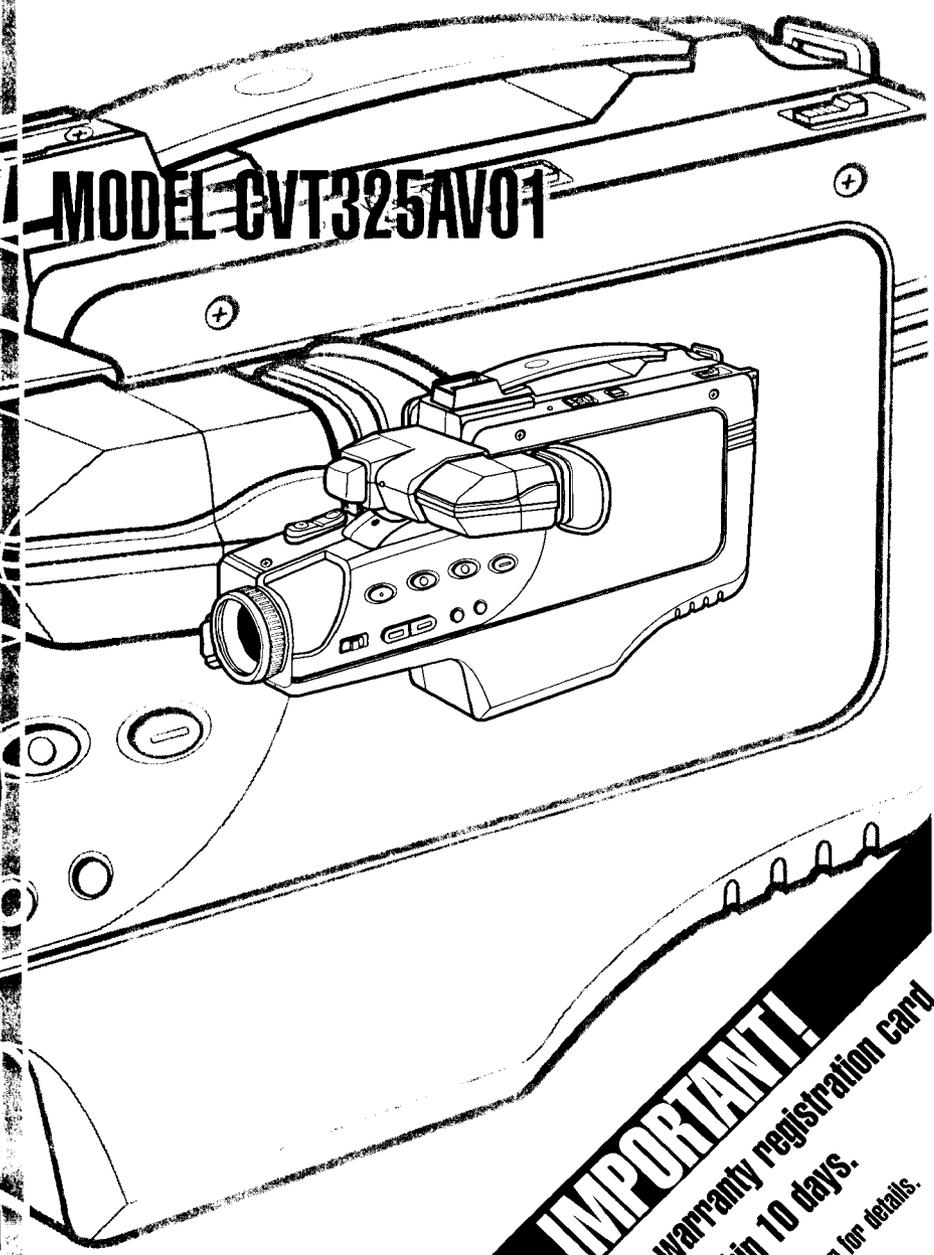


5:51:03:624

MAGNAX

VHS CAMCORDER OWNER'S MANUAL

MODEL CVT325AV01



IMPORTANT!
Return your warranty registration card
within 10 days.
See inside cover for details.

MAGNAVOX
Smart.Very smart.

**WARRANTY
REGISTRATION
CARD**

Return your Warranty Registration Card today to ensure you receive all the benefits you're entitled.

Once your MAGNAVOX purchase is registered, you're eligible to receive all the privileges of owning a MAGNAVOX product. So complete and return the Warranty Registration Card enclosed with your purchase at once. And take advantage of these important benefits.

■ **Warranty Verification**

Registering your product within 10 days confirms your right to maximum protection under the terms and conditions of your MAGNAVOX warranty.

■ **Owner Confirmation**

Your completed Warranty Registration Card serves as verification of ownership in the event of product theft or loss.

■ **Model Registration**

Returning your Warranty Registration Card right away guarantees you'll receive all the information and special offers which you qualify for as the owner of your model.

MAGNAVOX
Smart.Very smart.

Congratulations on your purchase, and welcome to the "family!"

Dear MAGNAVOX product owner:

Thank you for your confidence in MAGNAVOX. You've selected one of the best-built, best-backed products available today. And we'll do everything in our power to keep you happy with your purchase for many years to come.

As a member of the MAGNAVOX "family," you're entitled to protection by one of the most comprehensive warranties and outstanding service networks in the industry.

What's more, your purchase guarantees you'll receive all the information and special offers for which you qualify, plus easy access to accessories from our convenient home shopping network.

And most importantly you can count on our uncompromising commitment to your total satisfaction.

All of this is our way of saying welcome—and thanks for investing in a MAGNAVOX product.

Sincerely,



Robert Minkhorst
President and Chief Executive Officer

P.S. Remember, to get the most from your MAGNAVOX product, you must return your Warranty Registration Card within 10 days. So please mail it to us right now!

HURRY!
Registration
Needed
Within 10
Days.

KNOW THESE SAFETY SYMBOLS

	CAUTION RISK OF ELECTRICAL SHOCK DO NOT OPEN	
<small>CAUTION: TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.</small>		

▲ This "bolt of lightning" indicates uninsulated material within your unit cause an electrical shock. For the safety of everyone in your household, please do not remove product covering.

▲ The exclamation point calls attention to features for which you should read the enclosed literature closely to prevent operating and maintenance problems.

WARNING: TO PREVENT FIRE OR ELECTRICAL SHOCK HAZARD, DO NOT EXPOSE EQUIPMENT TO RAIN OR MOISTURE.

CAUTION: To prevent electric shock, do not touch match wide blade of plug to wide slot and fully insert.

ATTENTION: Pour éviter les chocs électriques, introduire la lame la plus large de la fiche dans la borne correspondante de la prise et pousser jusqu'au fond.

For Customer Use:

Enter below the Serial No. which is located on the rear of the cabinet. Retain this information for future reference.

Model No. _____

Serial No. _____

4

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Doing More

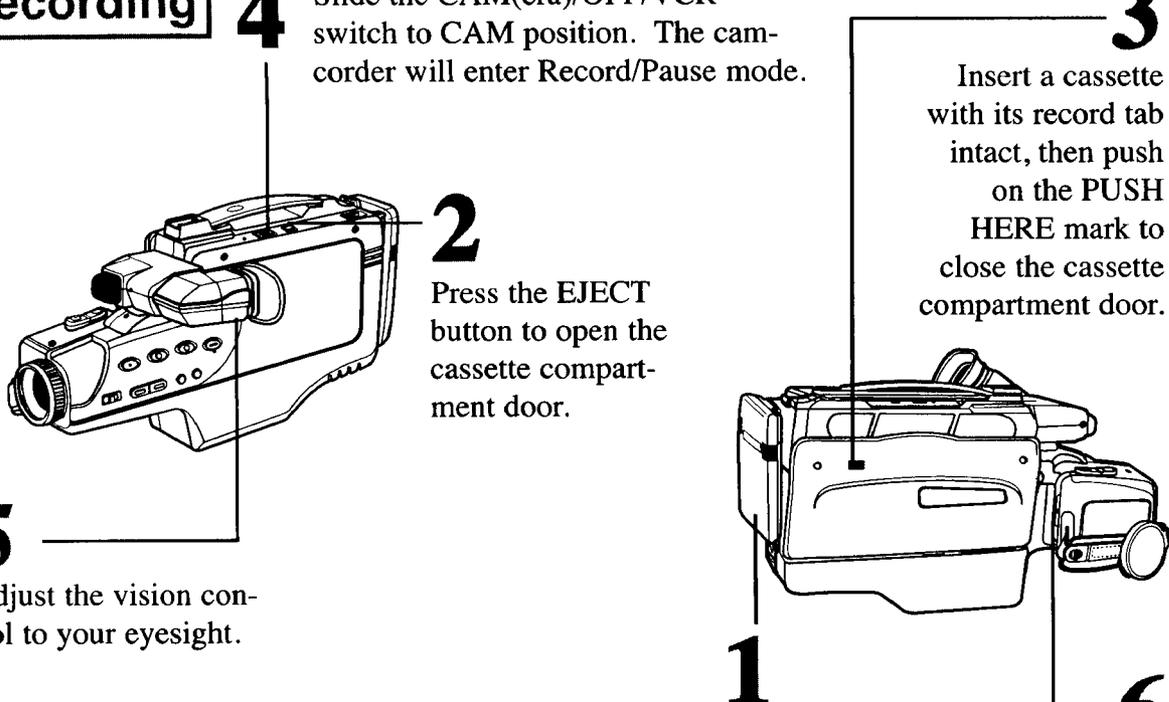
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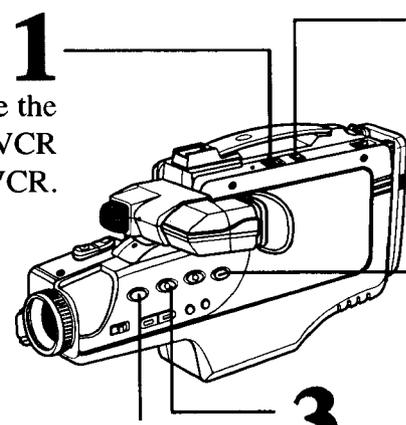
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Quick Use Guide

Recording

- 
- 4** Slide the CAM(era)/OFF/VCR switch to CAM position. The camcorder will enter Record/Pause mode.
- 2** Press the EJECT button to open the cassette compartment door.
- 3** Insert a cassette with its record tab intact, then push on the PUSH HERE mark to close the cassette compartment door.
- 1** Attach a fully charged battery to the camcorder.
- 5** Adjust the vision control to your eyesight.
- 6** Press the Record/Pause button to record.

Playback

- 
- 1** Slide the CAM(era)/OFF/VCR switch to VCR.
- 2** Press the REW(ind) button.
- 3** Press the PLAY/STILL button once to start playback.
- 4** Press the STOP button when playback is finished.
- 5** Press the EJECT button open the cassette compartment door, then remove the tape.

6

Before Using the Camcorder...

...charge the battery.

1

Plug the AC adapter/charger power plug into an AC outlet. The POWER light will come on.

2

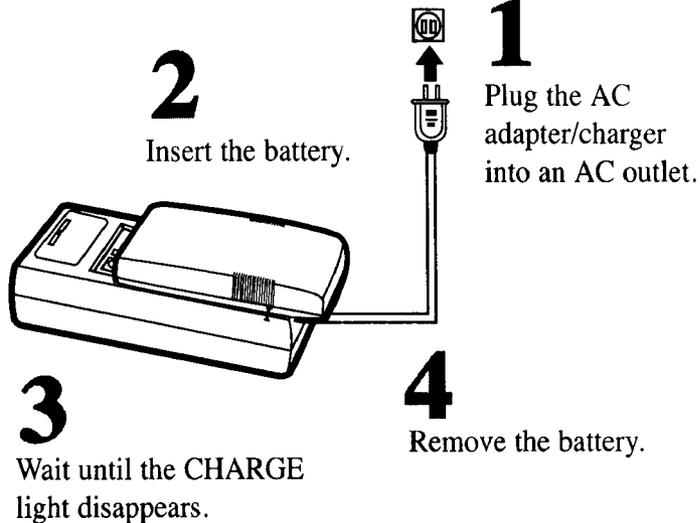
Place the three grooves on the side of the battery into the slots on the AC adapter/charger so the battery rests flat on the AC adapter/charger, as shown at right. The arrows on the each side of the battery should be aligned with the arrows on the AC adapter/charger. Then slide the battery toward the POWER light until it clicks in place. The CHARGE light will appear.

3

Wait for approximately one hour while the battery charges. When the battery is finished charging, the CHARGE light will disappear.

4

Remove the battery from the AC adapter/charger.



NOTES

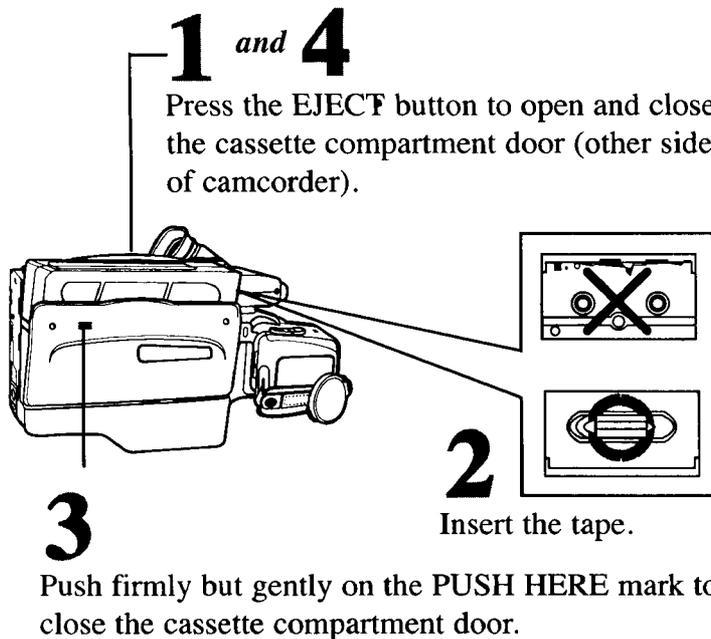
- To preserve the life of the battery, remove the battery from the camcorder and the AC adapter/charger when it's not in use.
- It takes approximately one hour to charge a one-hour (part number V80146BK01) battery and two hours to charge a two-hour (part number 483513817046) battery. The part number can be found on the back of the battery.
- Charging these batteries on a charger other than the one provided may result in over-charging, which reduces battery life.
- The battery must be charged until the CHARGE light disappears to ensure normal battery life of one hour of playing or recording time.
- If the CHARGE light goes out shortly after charging begins, remove the battery and use it. If the battery soon runs low on power, you may need to purchase a new battery.
- Use the battery until it is completely empty (discharged).
- Always charge the battery after soon after using it. A battery that remains uncharged for a long time may never take a charge again.
- Do not use a charger other than that specified.
- Do not try to use an insufficiently charged or worn out battery.



This camcorder is powered by a rechargeable nickel-cadmium battery. This battery can be recycled at the end of its useful life. A number of states are concerned about disposal of batteries which contain such metals, and require that users recycle such batteries rather than placing them in municipal landfills. Therefore, you should not throw the battery in the trash when you are finished with it. Instead, check with your municipal, county, or state authorities to determine the best method for recycling.

Before Using the Camcorder... (cont'd)

Inserting a Tape



- Store the battery in a cool, dry, dark place.
- Do not drop the battery or subject it to strong jolts.
- Do not use or dispose of the battery near fire.
- Do not use the battery with appliances other than those specified.
- Do not use the battery below 32 degrees F (0 degrees Celsius) or above 104 degrees F (40 degrees C).
- Do not attempt to insert a tape upside down or backwards.
- Tapes are not supplied. Please see the accessories page at the back of this manual to find out what accessories are supplied with your camcorder.
- The camcorder may be on or off when you insert or remove a tape, but the battery or AC adapter/charger must be attached to the camcorder.
- Recording time for a T160 tape is two hours 40 minutes. Recording time for a T120 tape is two hours. Recording time for a T60 tape is one hour.
- To prevent accidental erasure of a tape, break off the record tab with a screwdriver; to record on that tape again, cover the hole with cellophane tape (as shown below).

Preventing Erasure



Recording Again



...attach the battery.

1

Align the arrow on the side of the battery with the arrow on the right side of the back of the camcorder so that the battery fits into the grooves on the camcorder. Slide the battery down until it clicks into place.

2

To remove the battery, slide the battery upward while sliding the BATTERY switch toward the battery.

...insert a tape.

1

Press the EJECT button on the top of the camcorder to open the cassette compartment door.

2

Hold the tape horizontally over the cassette compartment with the window facing away from the camcorder. Slide the tape into the cassette compartment.

3

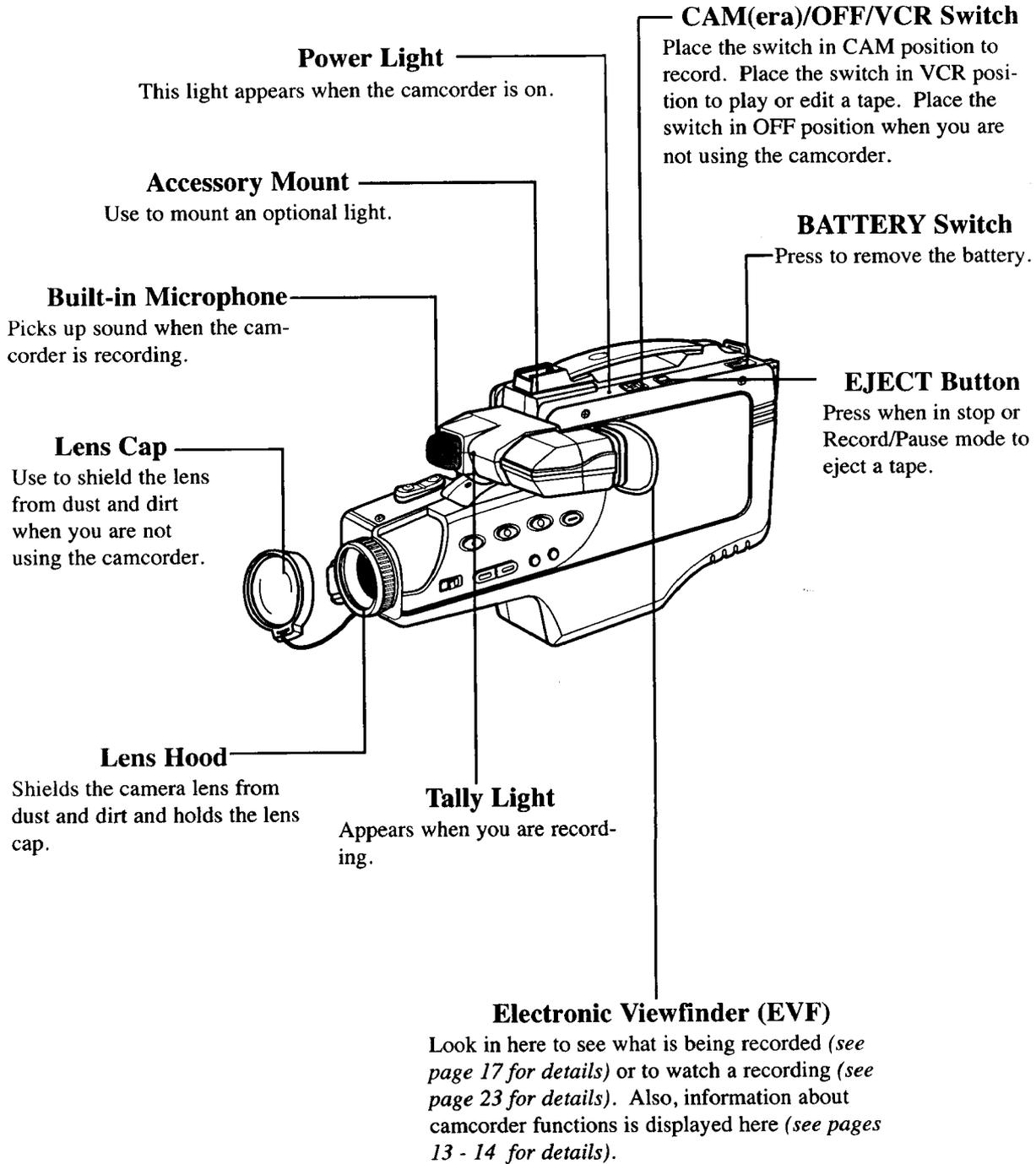
Push firmly but gently on the PUSH HERE mark to close the cassette compartment door.

4

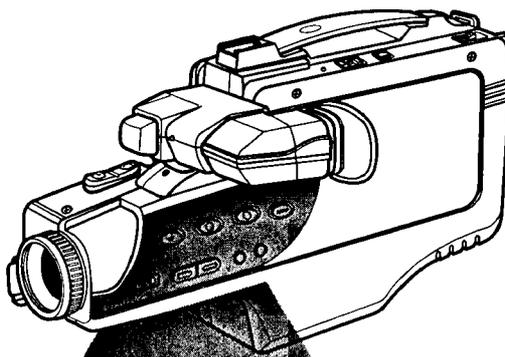
To remove the tape, press the EJECT button to open the cassette compartment door. Then remove the tape.

8

Front View of Camcorder



Front View of Camcorder (cont'd)



PLAY/STILL and FADE Button

Press when the camcorder is in VCR position to play a tape (see page 23 for details) or view still picture (see page 23 for details). Press when the camcorder is in CAM position to fade in and out of recordings (see page 18 for details).

REW(ind) and REC REVIEW Button

When the camcorder is in CAM position, press to review the last few seconds of a recording (see page 17 for details). When the camcorder is in VCR position, press for a fast backward visual search (see page 23 for details).

FOCUS AUTO/MANUAL Switch

Use to select automatic or manual focus. See page 19 for details.

NEAR/∞ Button

Use to adjust manual focus when the camcorder is in CAM position. See page 19 for details.

FF and DATE/TIME Button

When the camcorder is in VCR position, press for a fast forward visual search (see page 23 for details). When the camcorder is in CAM position, press to set, then display, the date and time. See pages 15 - 16 for details.

STOP and H.S. SHUTTER Button

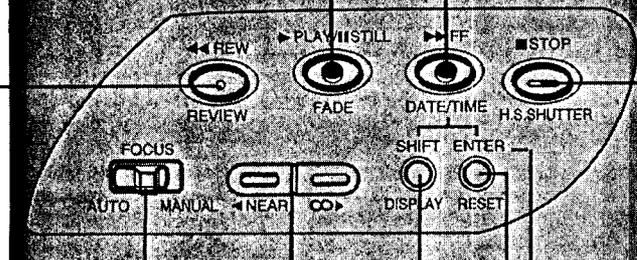
When the camcorder is in VCR position, press to stop playback. When the camcorder is in CAM position, use to select a shutter speed (see page 22 for details).

SHIFT/ENTER Buttons

Use to set the time and date. See pages 15 - 16 for details.

RESET Button

When counter information appears in the EVF, press to reset the counter to 0000. When information about tape time remaining appears in the EVF, pressing this button will set the correct tape time for a T160 tape.

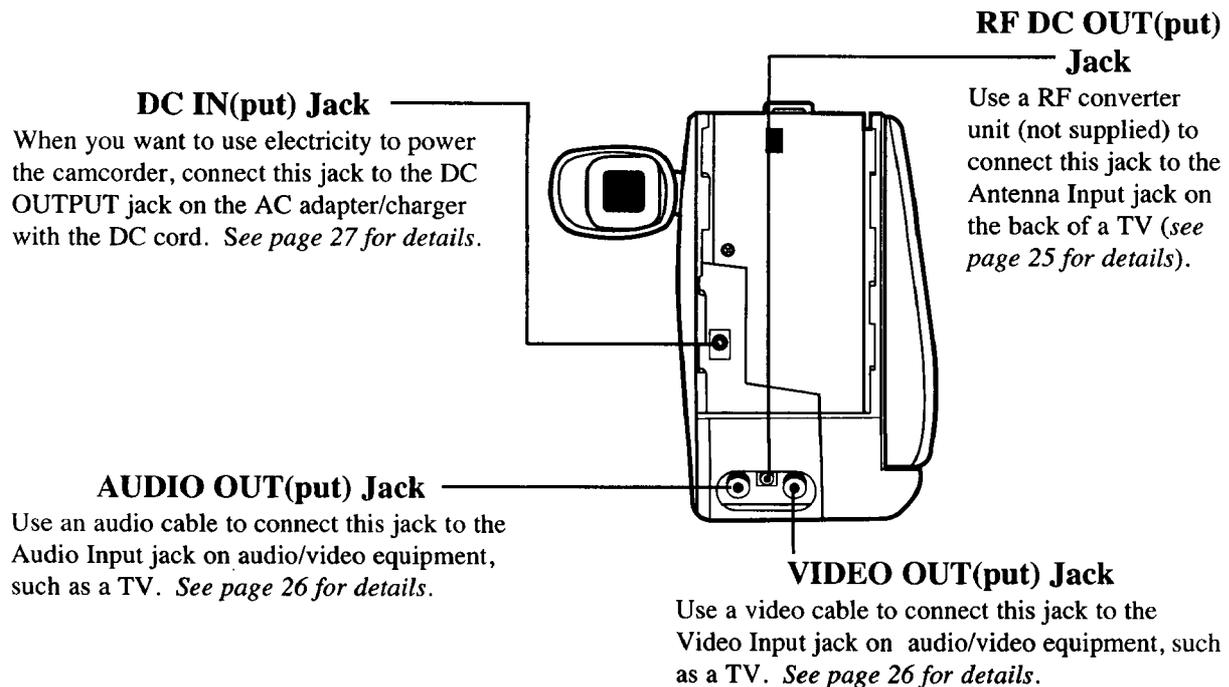
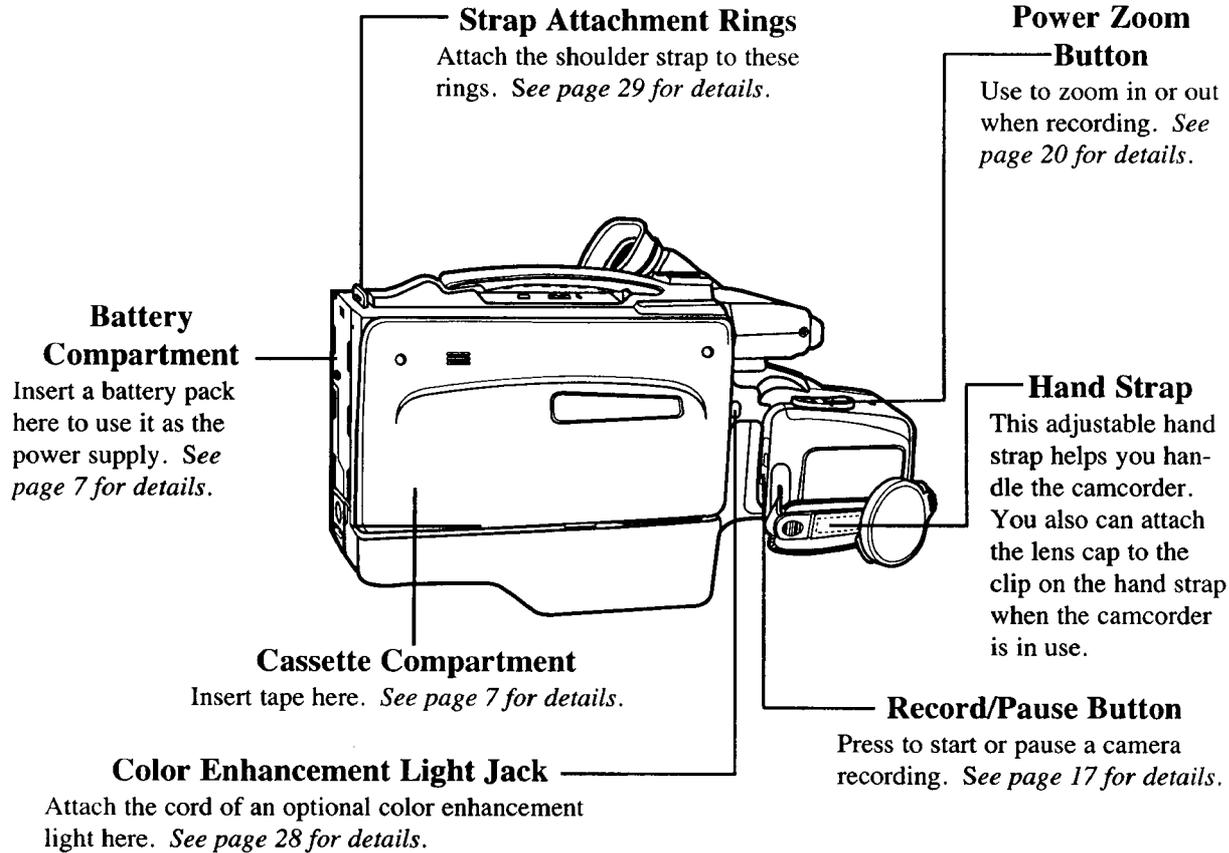


DISPLAY Button

Press when the camcorder is in CAM or VCR position to display indications about the camcorder's functions in the EVF. See pages 13 - 14 for details.

10

Rear View of Camcorder



Underside View of Camcorder

Clock Battery Compartment

Insert the clock battery here. See page 15 for details.

Focus Control

Insert a screwdriver in this hole and twist gently to adjust the focus of the EVF.
Note: Under normal circumstances, you will not need to adjust the focus in this way. However, if you have adjusted the focus with the FOCUS AUTO/MANUAL switch (see page 19), but that has not helped, adjust the focus using this control. Be careful not to damage the miniature controls inside the unit.

Vision Adjustment Slide Switch

Use to adjust the EVF picture to your eyesight.

BRIGHT(ness) Control

Insert a screwdriver in this hole and twist gently to adjust the brightness of the EVF. *Note: Under normal circumstances, you will not need to adjust the brightness, as it has been set at the factory. If you do adjust the brightness, however, be careful not to damage the miniature controls inside the unit.*

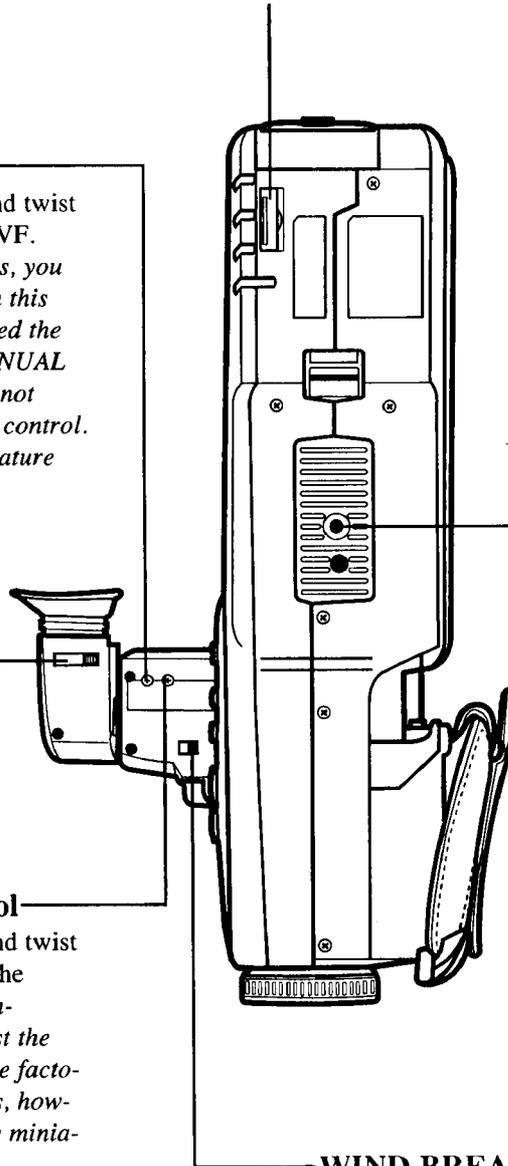
Tripod

Mounting Hole

For mounting a tripod (not supplied).

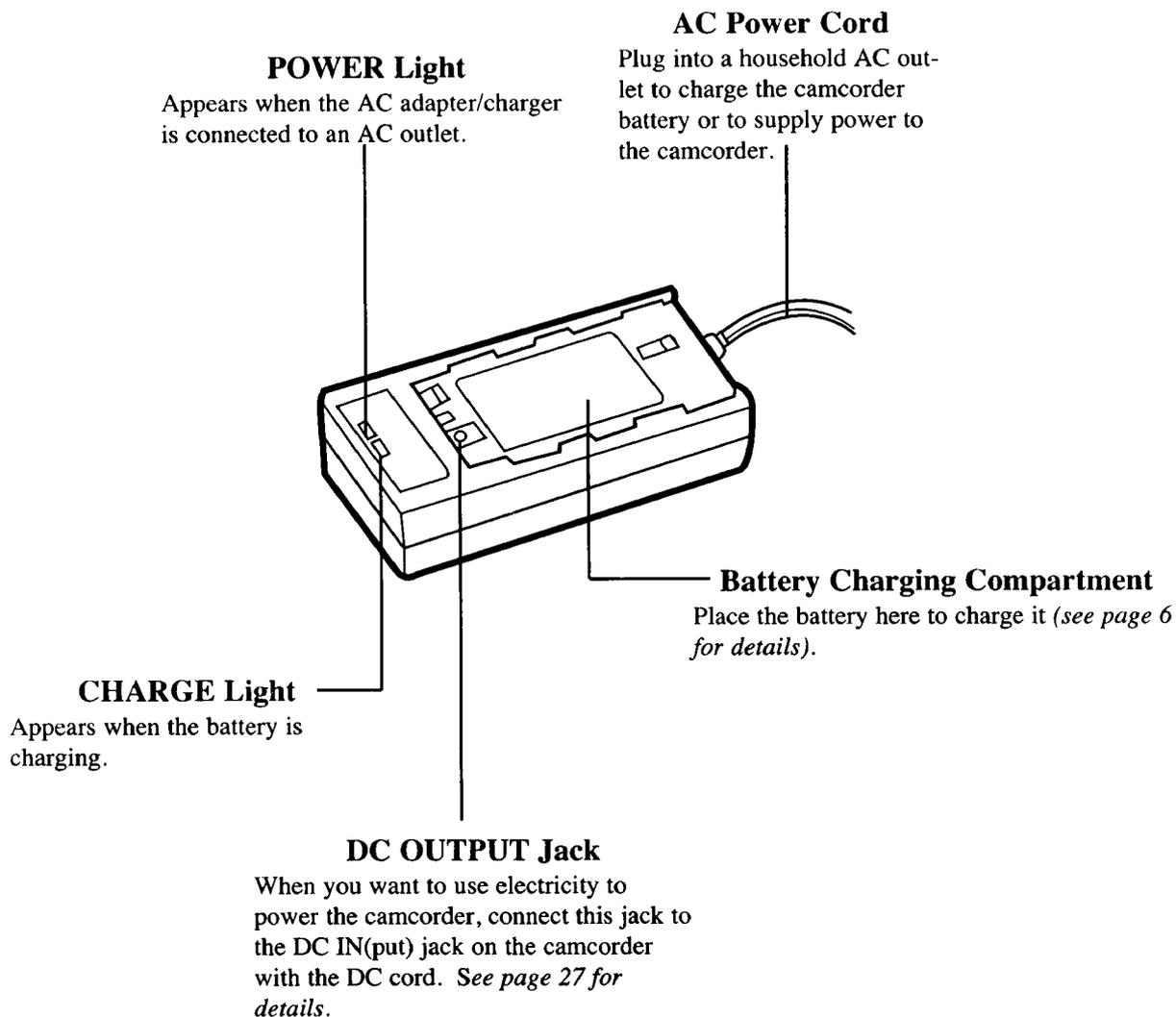
WIND BREAKER Switch

Set to ON to reduce the noise of wind blowing through the microphone.



12

AC Adapter/Charger

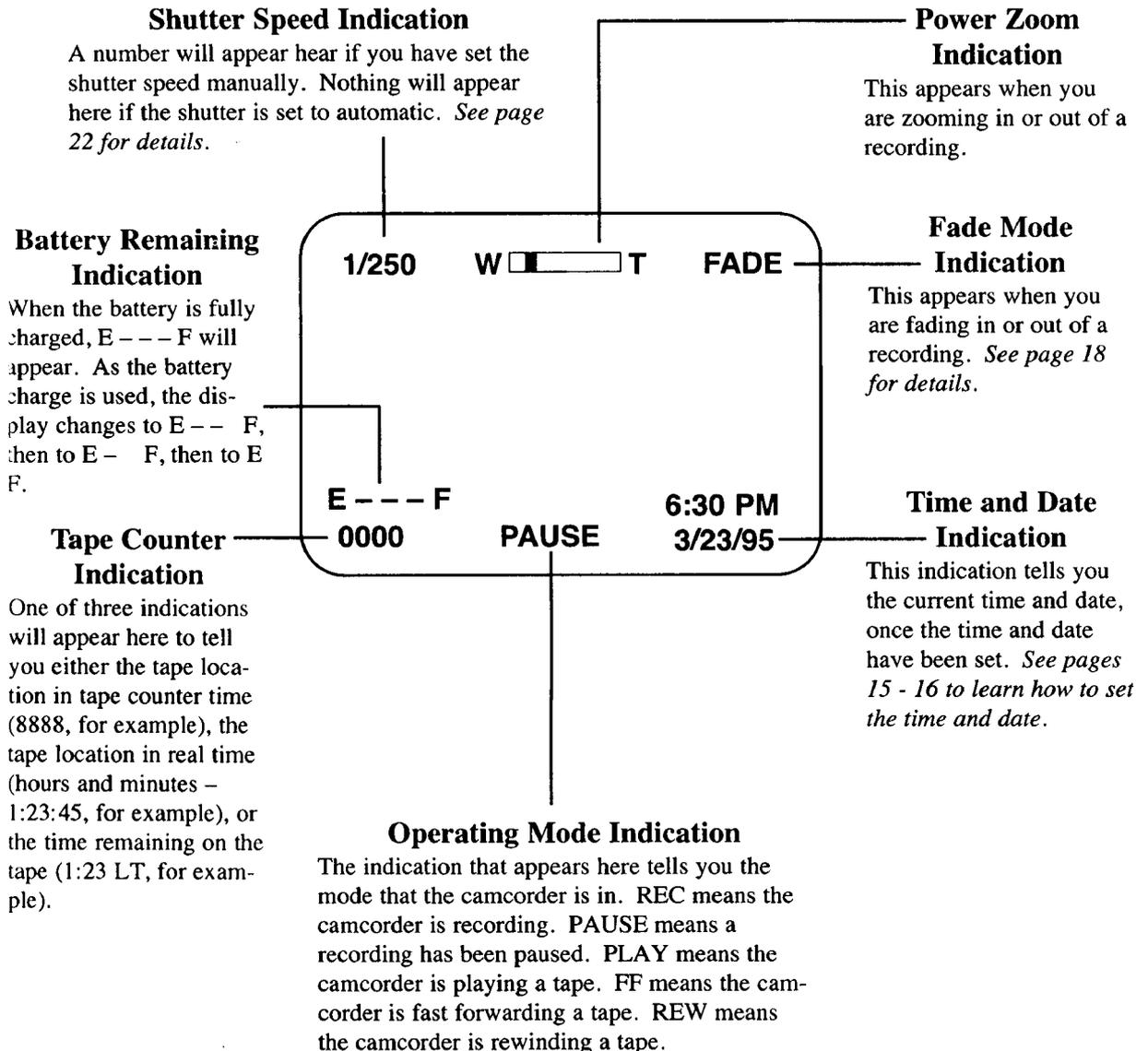


CAUTION
Operating at a voltage setting of 110/120/220/240V AC may require the use of a different AC plug. Please contact either a local or foreign electrical parts distributor for assistance in selecting an alternate AC plug. We recommend using the accessory power plug adapter (part number 4835 464 77083) in an area that has special AC outlets.

13

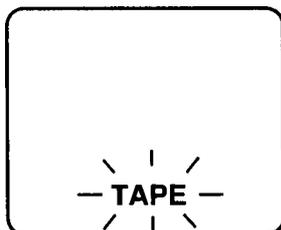
EVF Display

The following information (or similar information) will appear in the EVF when you press the DISPLAY button. The information will change with each press of the DISPLAY button, and when you change from VCR to CAM position.

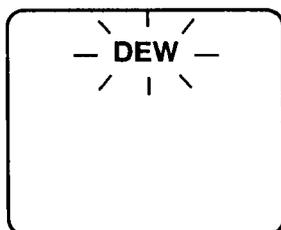


EVF Display (cont'd)

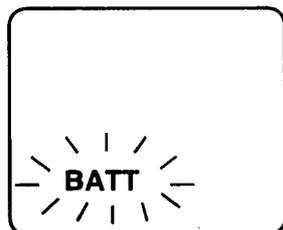
The following indications will sometimes appear in the EVF of the camcorder to give you special information or to warn you about a problem with the camcorder's operations.



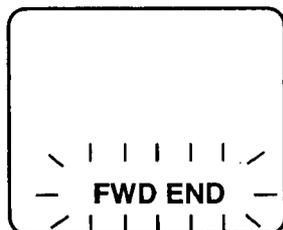
If the record tab is missing on a tape and you attempt to record, the following indication will flash in the EVF and the camcorder will not enter Record mode.



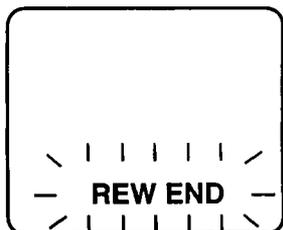
This indication tells you that excessive moisture has condensed in the camcorder, and it thus will not operate. When you turn the camcorder on, the indication will flash for several seconds, then the camcorder will turn itself off. If this happens, you cannot use the camcorder until the moisture inside the camcorder has dried. At that time, the dew indication will disappear.



When the battery needs to be recharged, the following indication will flash in the EVF just before automatic shutoff.



This indication will appear when a tape that is fast forwarding has reached its end.

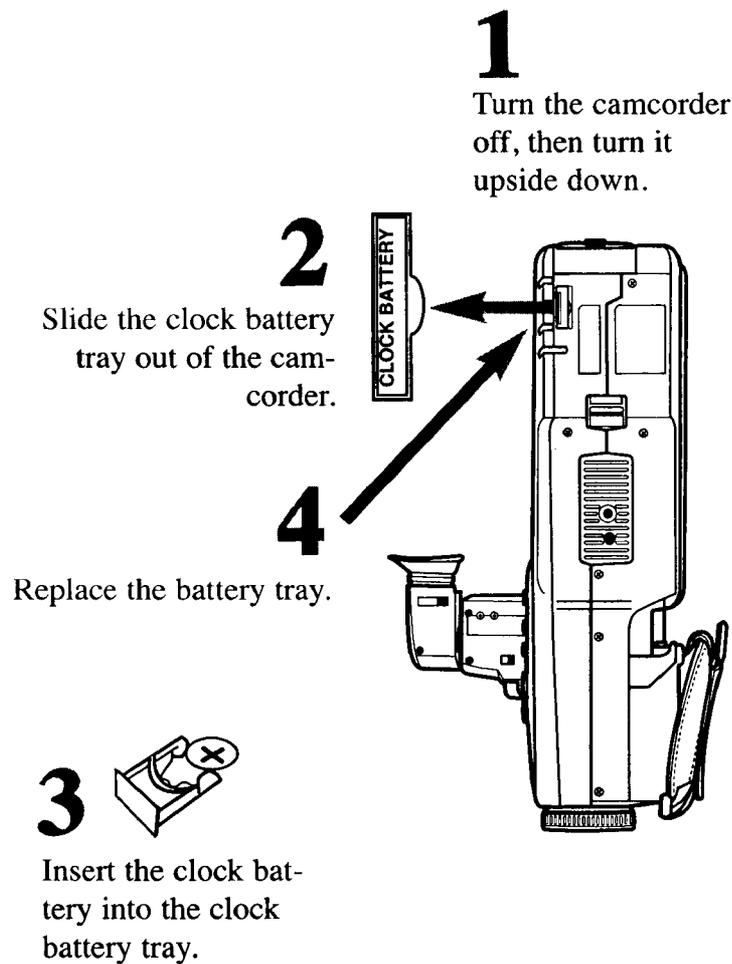


This indication will appear when a tape that is rewinding has reached its end.



The EVF indications described on this page will not be recorded on the tape.

Setting the Clock



The camcorder has a clock that keeps track of the date and time (including leap year) even when the camcorder is off. Before the clock will work, you must install the clock battery and set the date and time. Just follow the steps below to do this.

First, insert the clock battery.

1

Turn the camcorder off and turn it upside down.

2

Slide the clock battery tray out of the camcorder by placing your fingernail under the edge of the compartment labeled **CLOCK BATTERY**, then pulling up.

3

Insert the clock battery into the clock battery tray with the + side facing the three prongs on the battery tray.

4

Gently insert the clock battery tray into the camcorder with the + side of the clock battery facing the caution stickers on the camcorder.

NOTES

- The clock battery should be replaced once a year. Replace the clock battery only with Philips Consumer Electronics part number 4835 138 17043.
- Keep the clock battery away from children. Swallowing it may be harmful.
- The clock battery used in this camcorder may present a fire or chemical hazard if mistreated. Do not recharge it, disassemble it, incinerate it, or heat it above 212 degrees F (100 degrees C).

16

Setting the Clock (cont'd)

Next, set the date and time.

1

Slide the CAM(era)/OFF/VCR switch to CAM.

2

Press and release the DATE/TIME button. 12:00 AM 01/01/95 will flash in the EVF.

3

Press and hold down the DATE/TIME button until the hour section of the date and time display will flash. Then release the DATE/TIME button.

4

Press the ENTER button to select the hour, then press the SHIFT button. The minutes section of the date and time display will flash.

5

Press the ENTER button to select the hour, then press the SHIFT button.

6

AM will flash. Press the ENTER button to select AM or PM, then press the SHIFT button.

7

The month section of the display will flash. Press the ENTER button to select the month, then press the SHIFT button.

8

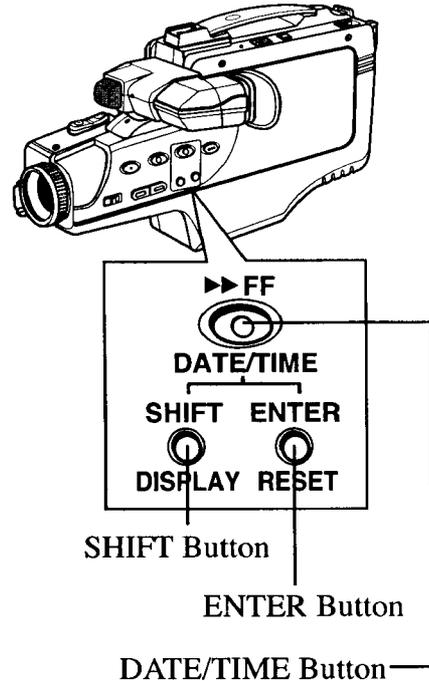
Press the DATE/TIME button to activate the date and time.

9

Press the DATE/TIME button to remove the date and time display from the EVF.

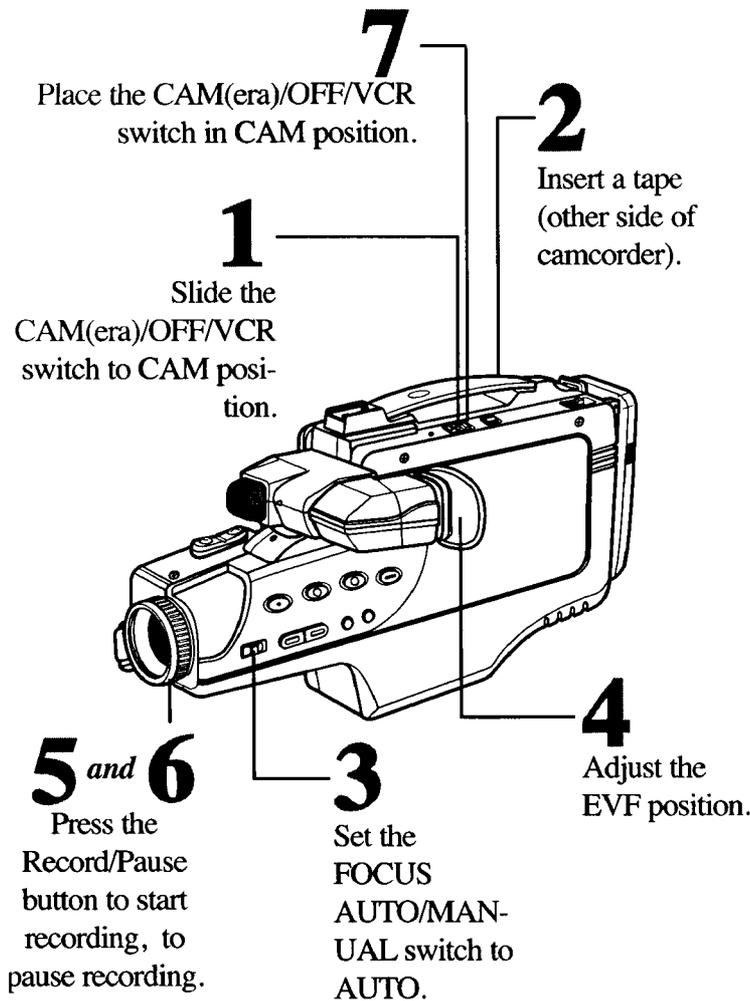
10

Now, when you want to display the date or the date and the time, put the camcorder in CAM position, then press the DATE/TIME button. The first press of the button will bring up the date and time. The second press of the button will bring up the date only. The third press of the button will remove both the date and the time.



NOTES

- To correct the clock during programming, press the SHIFT button until the incorrect digit is flashing. Then use the ENTER button to enter the correct digit.
- To correct date and time information after starting the clock, hold down the DATE/TIME button until the hour flashes, then press the SHIFT button until the section of the date time you want to correct is flashing. Use the ENTER button to make corrections, then press the DATE/TIME button to set the clock.
- The date and time display or the date display will be recorded whenever it appears in the EVF.



Follow the steps below to record with the camcorder.

- 1** Slide the CAM(era)/OFF/VCR switch to CAM position.
- 2** Place a tape in the camcorder, if necessary. See page 7 for details.
- 3** Set the FOCUS AUTO/MANUAL switch to AUTO. Or, if you prefer, follow the steps on page 19 to adjust the focus manually.
- 4** Slide the black box that attached the EVF to the camcorder away from the camcorder, toward the EVF. Then swivel the EVF until you are comfortable with its position.
- 5** Press the Record/Pause button. Recording will start. The Tally light will appear on the front of the camcorder. REC will appear in the EVF.
- 6** Press the Record/Pause button again. Recording will pause. The Tally light will disappear. REC will change to PAUSE in the EVF. Press the Record/Pause button once more to return to recording.
- 7** To stop recording, press the Record/Pause button, then set the CAM(era)/VCR/ OFF switch to OFF position.

NOTES

- The date and time display will be recorded whenever they appear in the EVF at the time of recording. No other EVF displays (such as REC or PAUSE) will be recorded.
- The camcorder will go into Standby mode when it has been in Record/Pause mode for five minutes. To start recording again, press the Record/Pause button.
- You can review a recording while the camcorder is in Record/Pause mode. To do so, press the REC REVIEW button. The camcorder will rewind several seconds on a tape, then play up to the position at which you stopped recording.
- The underside of the back of the camcorder is specially designed to rest on your shoulder while you record.
- When your camcorder is aimed at a scene that contains a very bright light (such as the sun), a vertical bar may appear across the picture. This is normal. It shows that the camcorder's charge coupling device is working. If this happens, you should try not to aim the camcorder directly at a bright light.

Fading In and Out

This feature lets you add a professional touch to your recordings by fading in and out of scenes. When you fade into a scene, the recording will start with a blank screen and the picture will appear gradually. When you fade out of a scene, the picture will disappear gradually.

1

With the camcorder in CAM position, press the Record/Pause button twice to put the camcorder in Record/Pause mode.

2

Press the FADE button. FADE will appear in the EVF.

3

Press the Record/Pause button to start recording. The picture will disappear from the EVF, recording will begin, then the picture will gradually reappear in the EVF.

4

While you are recording, press the FADE button. FADE will appear in the EVF.

5

Press the Record/Pause button to stop recording. PAUSE will appear in the EVF. The picture will gradually disappear from the EVF, then recording will stop. Finally, the picture will reappear in the EVF.

To do this...



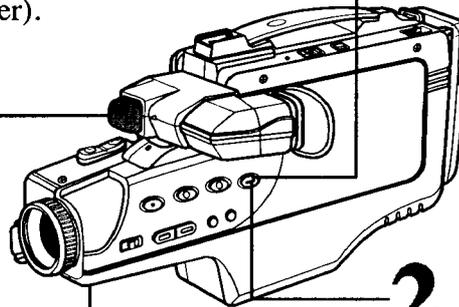
...follow these steps:

5

When you're ready to fade out of the recording, press the Record/Pause button to stop the recording (other side of camcorder).

4

Press the FADE button again.



3-1

Press the Record/Pause button to fade into the recording (other side of camcorder).

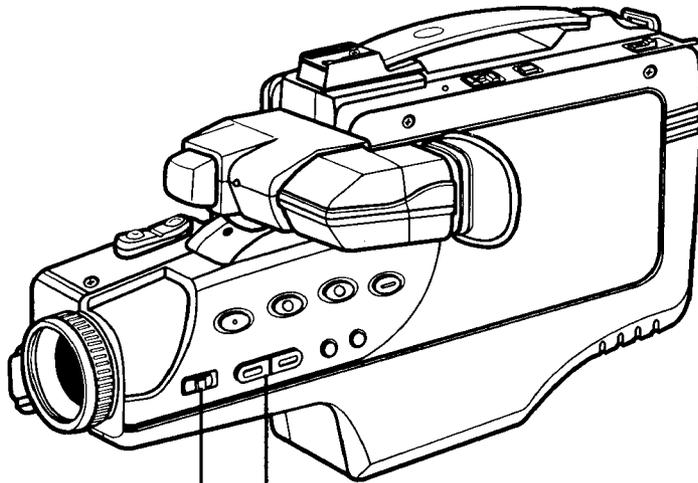
Put the camcorder in Record/Pause mode (other side of camcorder).

2

Press the FADE button.

NOTES

- The sound as well as the picture will gradually appear or disappear when using this feature.
- The fade speed is automatically controlled by the camcorder.
- You can fade into a recording without fading out of a recording, and you can fade out of a recording without fading into a recording.



1
Set the
FOCUS
AUTO/MAN-
UAL button
to MANUAL.

2
Use the NEAR/∞ button to
adjust focus.

Your camcorder will focus automatically on the subject in the center of the EVF (even when you are zooming in and out) when the FOCUS AUTO/MANUAL switch is set to AUTO. However, we recommend that you focus the camcorder manually under certain conditions – specifically, when filming:

- a subject through glass.
- a nearby subject with a distant background.
- a subject with distinct horizontal stripes.
- a subject that is not in the center of the EVF.
- a subjects with a shiny surface.
- an obliquely angled subject.
- a flat surface, such as a white wall, in low light.
- a fast motion, like a golf swing.

To focus manually, follow the steps below.

1

Set the FOCUS AUTO/MANUAL button to MANUAL.

2

Use the NEAR/∞ button to adjust focus.

Zooming In and Out

This feature allows you to zoom in for close-up shots and zoom out for distance shots.

1

Aim your camcorder at the scene to be recorded.

2

Press and hold the T (telescopic) side of the Power Zoom button to zoom in on a subject.

3

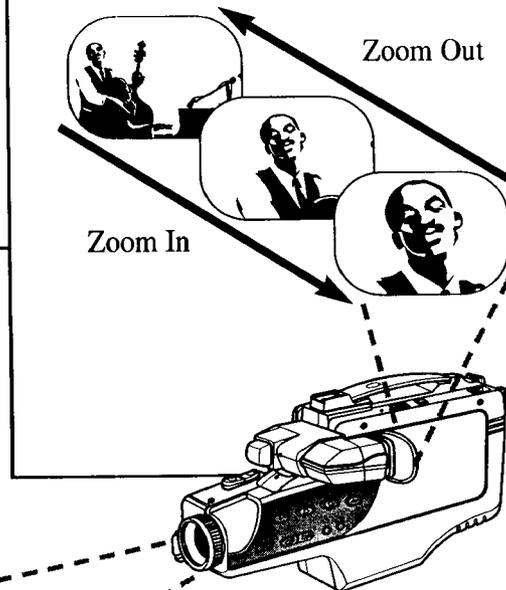
Press the W (wide angle) side of the Power Zoom button to back away from the subject you are recording.

3

Press and hold the W (wide angle) side of the Power Zoom button to zoom out.

2

Press and hold the T (telescopic) side of the Power Zoom button to zoom in on a subject.



1

Aim your camcorder at the scene to be recorded.

NOTES

- When using this feature, it may be helpful to steady your camcorder by mounting it on a tripod.
- If the FOCUS AUTO/MANUAL switch is set to AUTO, the camcorder should stay in focus during zooming. It also should refocus itself when zooming is finished. If the FOCUS AUTO/MANUAL switch is set to MANUAL, the picture may be blurry during zooming, and you will have to refocus the camcorder when zooming is finished.

Using the Tape Counter

1 Insert a tape in the camcorder and place the CAM(era)/OFF/VCR switch in CAM or VCR position.

2 Go to the tape location you would like the camcorder to memorize.

3 Press the DISPLAY button until the tape counter or real time counter appears in the EVF.

4 Press the RESET button.

first press of DISPLAY button

second press of DISPLAY button

third press of DISPLAY button

fourth press of DISPLAY button

No Overlay

E --- F
0000

Tape Counter

E --- F
1:23:45

Real Time Counter

E --- F
1:06

Tape Remaining Counter

You can easily have the camcorder “memorize” an important tape location so that you can easily return to it later. Just follow the steps below.

1

Insert a tape in the camcorder and place the CAM(era)/OFF/VCR switch in CAM or VCR position.

2

Fast forward, rewind, or play the tape to the location you would like the camcorder to “memorize.”

3

Press the DISPLAY button until the tape counter (a number similar to 1234) or real time counter (a number similar to 1:23:45) appears in the EVF.

4

Press the RESET button to reset the tape counter or real time counter to zero (0000 or 0:00:00).

5

Now, whenever the camcorder is in VCR position and the tape counter or real time counter reaches the point at which it was reset to zero, it will stop.

NOTES

- When using an extended length T-160 cassette tape, you must press the RESET button when the tape remaining display appears in the EVF for an accurate reading. LT will appear in the EVF.
- The battery use indication will always be present when you use this feature.
- To exit this feature, you can 1) press the DISPLAY button until no displays appear in the EVF, or 2) reset the tape counter or real time counter to zero at the beginning of the tape.

Shutter Speeds

Your camcorder is equipped with a high speed shutter to prevent blurring when you record fast movements. Normal shutter speed is 1/60 of a second, but it can be changed to a faster speed, up to 1/10,000 of a second. To select a shutter speed, follow the steps below.

1

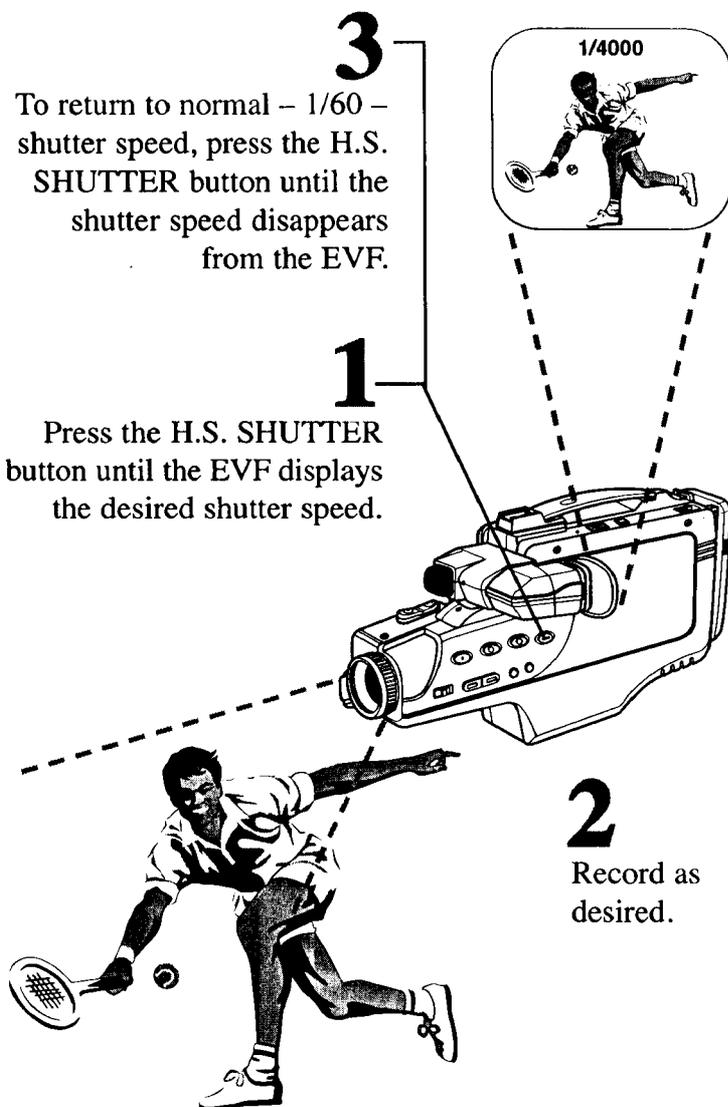
When in Record or Record/Pause mode, press the H.S. SHUTTER button until the desired shutter speed— 1/250, 1/1,000, 1/4,000, or 1/10,000 — appears in the EVF.

2

Record as desired.

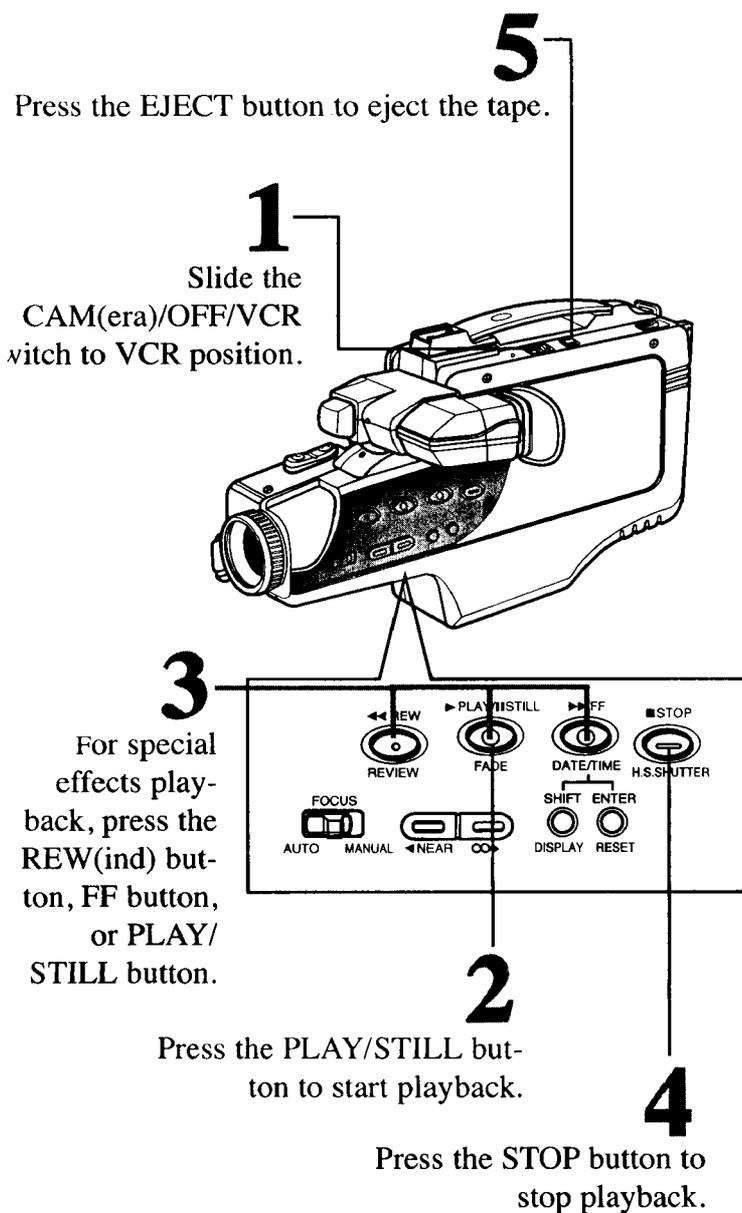
3

To return to normal — 1/60 — shutter speed, press the H.S. SHUTTER button repeatedly until the shutter indication disappears from the EVF.



NOTES

- If no shutter speed appears on the display screen of the EVF, the shutter speed is 1/60 of a second.
- The shutter speed will return to 1/60 of a second when the camcorder is turned off.
- The high speed shutter requires more light than the standard speed shutter. If adequate lighting is not available, you may have to switch back to standard shutter speed.
- The high speed shutter requires a lot of light. For proper color reproduction, you should use it outdoors. But, if you use it indoors, you should provide additional light with a halogen or tungsten light (fluorescent light will result in poor picture quality.)
- The camcorder may not focus automatically when you are using the high speed shutter without enough light.



Follow the steps below to watch a recording in the camcorder's EVF.

1

With a tape in the camcorder, slide the CAM(era)/OFF/VCR switch to VCR position.

2

Press the PLAY/STILL button. Playback will begin.

3

For a forward or backward visual search, press the REW(ind) button or FF button during playback. Search speed is about three times normal speed. To view a still picture, press the PLAY/STILL button; to return to playback, press the PLAY/STILL button again.

4

Press the STOP button when playback is finished.

5

Press the EJECT button to eject the tape.

NOTES

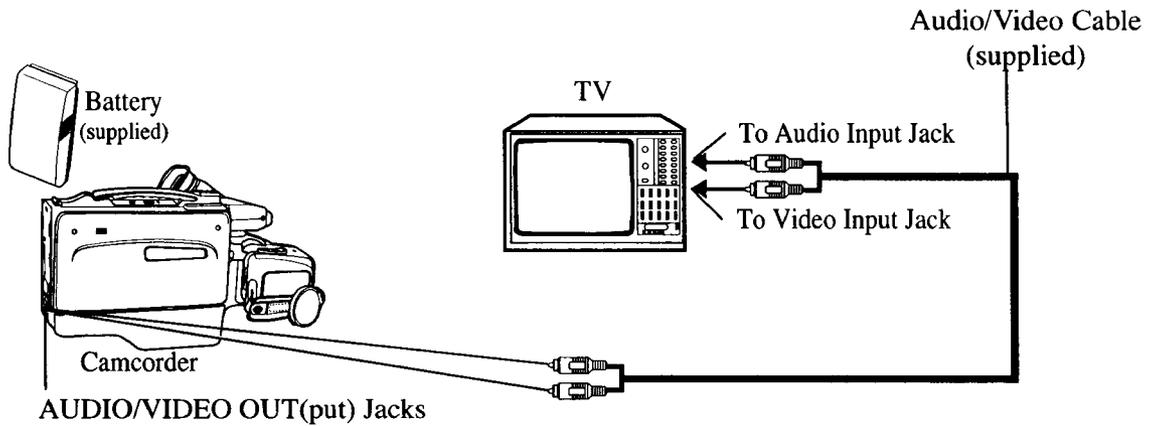
- During searching, horizontal noise bars will appear across the picture, and there will be no sound.
- To protect its video heads and the tape, after being in Still mode for three minutes, the camcorder will go to Stop mode. After being in Stop mode for five minutes, the camcorder will turn itself off.

Playing (or Monitoring a Recording) on a TV

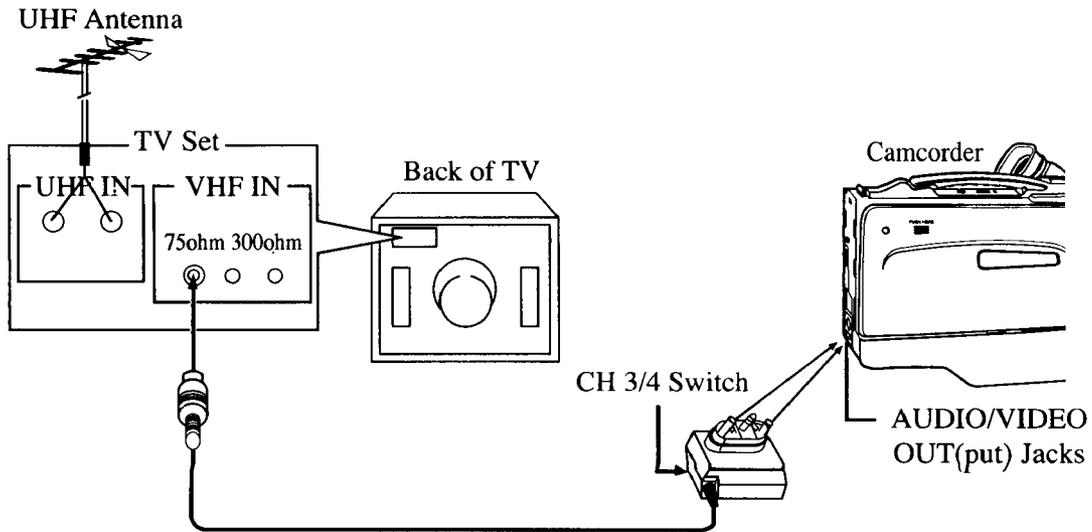
You can monitor camcorder recordings on a TV while you make them. You can play recordings you made with your camcorder on a TV. Or, you can use the camcorder like a VCR to play tapes that already have recorded material on them. Just follow the steps below to make the appropriate connection and start playback.

1 Choose the hookup below that best matches your TV system, then make the connections.

Hookup A: When Your TV Has Audio/Video Input Jacks



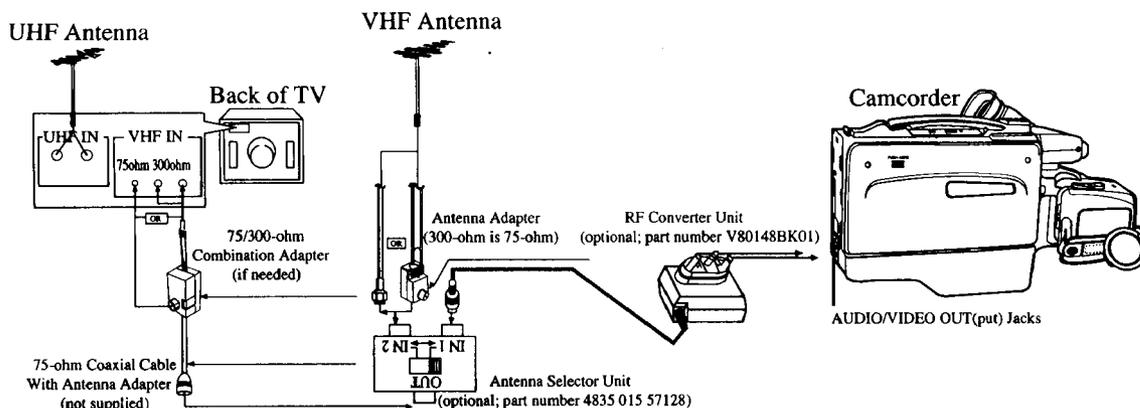
Hookup B: When Your TV Does Not Have Audio/Video Input Jacks



Continued on the next page..

Playing (or Monitoring a Recording) on a TV (cont'd)

Hookup C: Using an Antenna Selector Unit



2 Turn on both the camcorder and the TV.

3 Hookup A
Set the RF converter unit to channel 3 or 4 – whichever the CH 3/4 switch on the back of the TV is set to.

Hookup B
Set the RF converter unit to channel 3 or 4 – whichever the CH 3/4 switch on the back of the TV is set to.

Hookup C

- Set the RF converter unit to channel 3 or 4 – whichever the CH 3/4 switch on the back of the TV is set to.
- Slide the IN1/IN2 switch on the antenna selector unit to IN1.
- Set the TV to accept line or auxiliary input.

4 Slide the CAM(era)/OFF/VCR switch on the camcorder to CAM position.

5 To start playback, press the PLAY/STILL button on the camcorder.

6 To return to playback, turn off the camcorder and select a channel at the TV. (If you used hookup C, you will also have to slide the antenna selector switch to IN2 and exit Line Input mode.)

Rerecording

Follow the steps below to copy a tape.

1

Make the connections shown at right.

2

Turn the TV on and set it to accept line or auxiliary input.

3

Slide the CAM(era)/OFF/VCR switch on the camcorder to VCR.

4

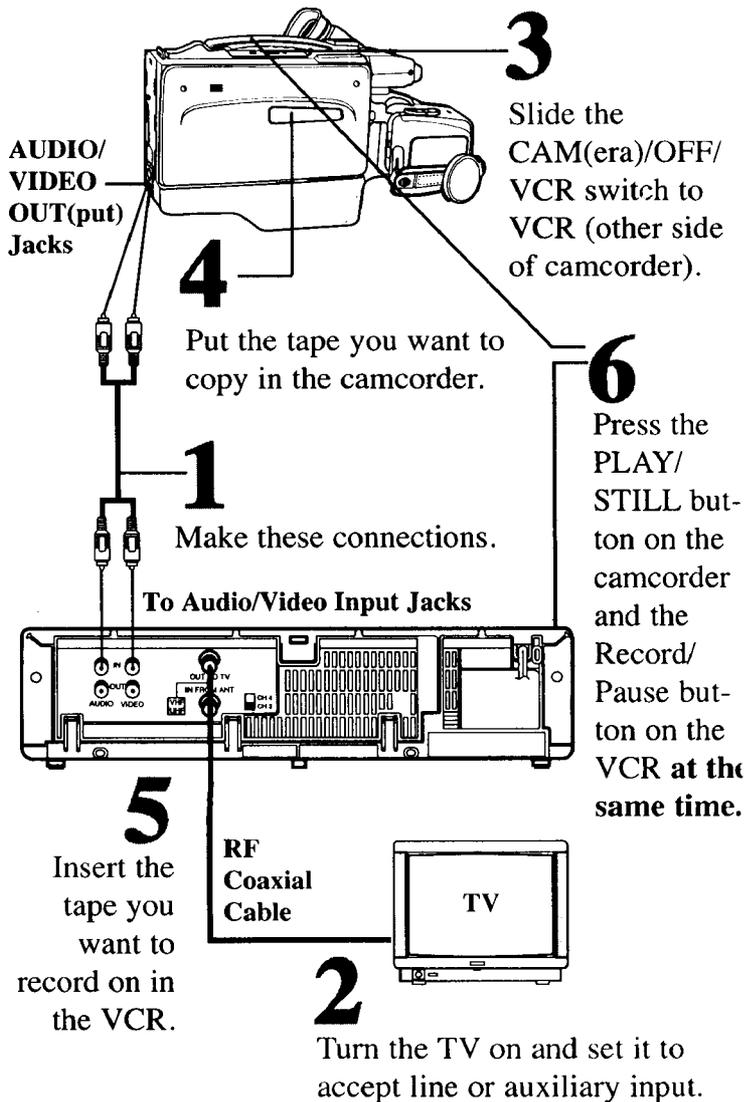
Insert the tape you want to copy in the camcorder.

5

Insert the tape you want to record on in the VCR.

6

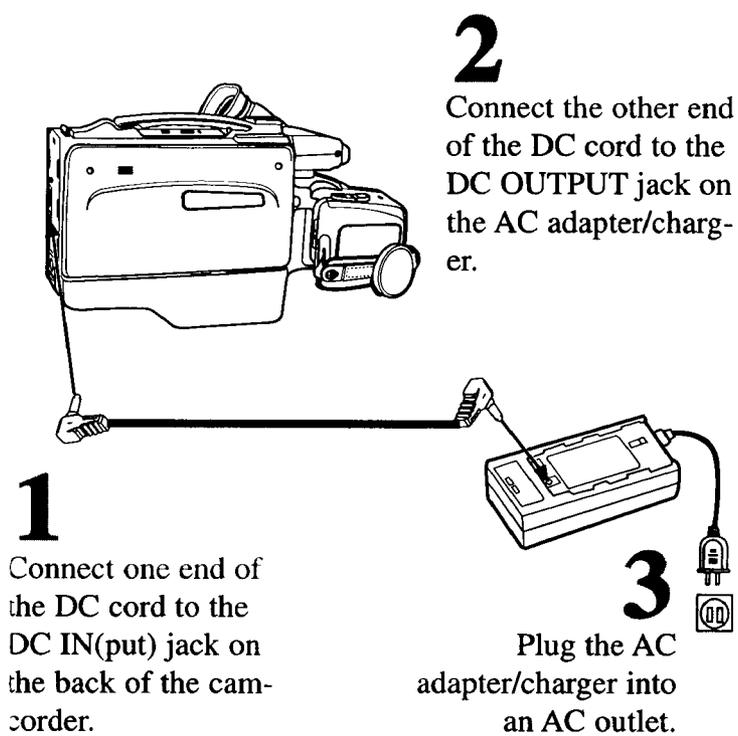
Press the PLAY/STILL button on the camcorder and the Record/Pause button on the VCR at the same time.



NOTES

- *Unauthorized exchanging and/or copying of copyrighted recordings infringes on the rights of copyright owners and violates copyright laws.*
- *The tape you record on must have either a record tab or a piece of cellophane tape covering the hole where the record tab used to be. See page 7 for details.*
- *To monitor dubbing on a TV, turn the TV on and select its VCR channel (3, 4, or line/auxiliary input). Then place the VCR in VCR position.*
- *Tapes recorded in units other than the camcorder must have been recorded in SP for camcorder playback.*
- *Dubbing a tape may reduce its quality.*

Alternate Power Supply



On pages 6 and 7 we described how to use the battery that came with the camcorder to supply power to the camcorder. You can also use the AC adapter/charger and the DC power cord that came with the camcorder to supply the camcorder with electrical power. Just follow the steps below.

1

Connect one end of the DC cord to the DC IN(jack) on the back of the camcorder.

2

Connect the other end of the DC cord to the DC OUTPUT jack on the AC adapter/charger.

3

Plug the AC adapter/charger into an AC outlet. The POWER light will come on. Your camcorder will now have power.

NOTES

- When the camcorder is in CAM or VCR position and is powered by the battery, the camcorder will turn itself off if it is not used for several minutes. When the camcorder is in CAM position and is powered by the AC adapter/charger, the camcorder will turn itself off if it is not used for several minutes.
- You cannot charge the battery and supply the camcorder with power using the AC adapter/charger at the same time.

Color Enhancement Light (Optional)

You can attach an optional color enhancement light if you want to improve recordings made in dark places.

Attaching a Color Enhancement Light

1

Make sure a fully charged battery is or the AC adapter/charger attached to the camcorder and the CAM(era)/OFF/VCR switch is in OFF position.

2

Slide the color enhancement light onto its base on the top of the camcorder.

3

Turn the camcorder on and slide the POWER switch on the color enhancement light.

4

When you are finished using the color enhancement light, remove it from the camcorder by pressing the LOCK button on the light and sliding the light forward at the same time.

Front Case Replacement

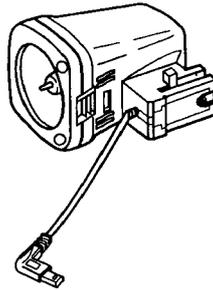
1

To remove the front case, press and hold the tab, then slide off the front case.

2

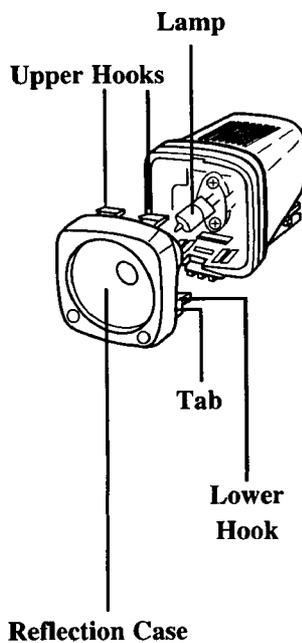
To replace the front case, pass the lamp through the hole on the reflection plate of the front case. Attach the upper hooks to the color enhancement light. Finally, attach the lower hooks to the color enhancement light while pressing the tab.

Front Case Replacement



1

To remove the front case, press and hold the tab, then slide off the front case.



2

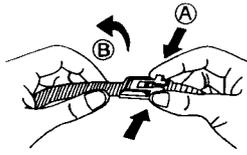
To replace the front case, pass the lamp through the hole on the reflection plate of the front case. Attach the upper hooks to the color enhancement light. Finally, attach the lower hooks to the color enhancement light while pressing the tab.

NOTES

- You can use the color enhancement light with a battery or the AC adapter/charger.
- Because the color enhancement light uses a lot of power, the battery will not last as long when a color enhancement light is being used.
- When the camcorder is turned on, a current always flows to the terminal that the color enhancement light is attached to. Never touch the terminal with your fingers or metal when the color enhancement light is attached to the camcorder.
- Do not touch the lamp with your fingers.
- After removing the front case of the color enhancement light, make sure the front case of the color enhancement light is reattached properly.

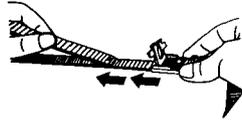
Shoulder Strap

1
Pinch together the tabs on the sides of the clasp (A), then raise the clasp (B).

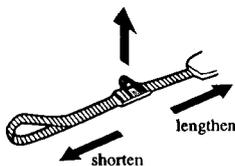
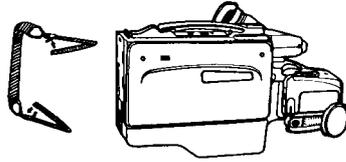


2

Unhook the strap from the buckle catches.



3
Remove the end of the shoulder strap from the buckle and slide the shoulder strap through the strap attachment rings.



5

Adjust the length of the strap by pulling loose a loop of the strap in the buckle, then pulling the strap through the buckle in either direction.

1

Pinch together the tabs on the sides of the clasp, then raise the clasp.

2

Unhook the strap from the buckle catches.

3

Remove the end of the shoulder strap from the buckle. Slide the shoulder strap through the strap attachment rings on the camcorder.

4

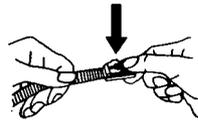
Thread the end of the strap back into the buckle. Pinch the tabs on the sides of the clasp and push it down to hold the strap in the buckle.

5

To adjust the length of the strap, pull loose a loop of the strap in the buckle, then pull the strap through the buckle

4

Thread the end of the strap back into the buckle and close the clasp.



Notes On Operations (cont'd)

.....
 Your camcorder is designed for normal scenic illumination of 150 footcandles (1500 lux). However, the camcorder may be used at F (F-stop) 1.8 if illumination is more than 0.1 footcandles (1 lux). The table below shows the approximate values of brightness.

CAMCORDER SETTINGS	NATURAL LIGHT CONDITIONS	KELVIN COLOR TEMPERATURE	ARTIFICIAL LIGHT SOURCE	COLOR TINT MIXTURE
Amber Filter Range	• Fair weather, blue sky	-10,000	• Color television	Bluish
	• Slightly cloudy sky • Cloudy or rainy sky	-8,000 -7,000		
Outdoor	• Sunlight, in clear weather at midday	-6,500 -6,000	• Fluorescent lamp (daylight) • Camera flash bulb	Whitish
	• Average sunlight, in clear weather	-5,500 -5,000	• Blue lamp for photography	
	• Sunlight, two hours after sunrise and before sunset	-4,500 -4,000 -3,500	• Fluorescent lamp (white) • Normal flash bulb • Fluorescent lamp (off-white) • Tungsten lamp for photography	
Indoor	• Sunlight 40 minutes after sunrise and before sunset	-3,200		
Blue Filter Range	• Sunlight, 30 minutes after sunrise and before sunset	-2,800	• Halogen lamp • Iodine lamp • Tungsten lamp • Acetylene lamp • Kerosene lamp • Candlelight	Yellowish
	• Sunlight, 20 minutes after sunrise and before sunset	-2,000		Reddish

NOTES

Light filters extend your control of any lighting situation. You can cover the lens hood with any standard or special effect photographic lens filter that is 37 mm in diameter.

Before Requesting Service

.....

Periodic maintenance is required in order to maintain the camcorder's continued excellent performance. After a period of time, the video heads will require cleaning or replacement. If cleaning or replacement of the video heads is required, this service should be performed by an authorized service center. But, before requesting service, check the list below. You may be able to solve the problem yourself.

No Power

- Make sure a power source is connected.
- Make sure the CAM(era)/OFF/VCR switch is in CAM or VCR position.
- Check the dew indication.
- Make sure the battery is fully charged.
- Make sure all necessary cables are connected correctly and firmly.
- Make sure the lens cap is off.

Cannot Insert Tape

- Make sure a power source is connected.
- Insert the tape with the window side facing out and the record tab facing up.

Cannot Remove Tape

- Make sure a power source is connected.

No Buttons Work

- Check the dew indication.

Some Buttons Do Not Work

- Make sure the CAM(era)/OFF/VCR switch is in CAM position.

Cannot Record

- Make sure the record tab is intact.
- Make sure the battery is fully charged.
- Check the dew indication.

Automatic Focus Will Not Work

- Make sure the FOCUS AUTO/MANUAL switch is set to AUTO.
- Make sure the CAM(era)/OFF/VCR switch is in CAM position.

No Sound

- Make sure the unit is in Record or Record/Pause mode.

Playback Picture is Dark

- Make sure the shutter speed is 1/60 of a second.

Playback Picture is Blurred

- If the motion you recorded was rapid, this is normal.

Specifications

Power Source:

- VHS camcorder: DC 9.6V
- AC adapter: 110/120/220/240V AC, 50/60 Hz

Power Consumption:

- VHS camcorder: 9.6V DC 9.6W
- AC adapter: 30W

Video Signal:

- EIA standard (525 lines, 60 fields) NTSC color signal

Video Recording System:

- two rotary head helical scanning system

Audio Track:

- one track

Pickup System:

- sequential color difference field reverse system

Pickup Device:

- one integral color filter charge coupled device (CCD)

Lens:

- nn12:1 zoom lens, f1.8 with auto iris control
- focal length: 6.2mm-50mm
- power zoom function
- lens filter diameter: 37mm

Viewfinder:

- 2/3 inch electronic viewfinder

Minimum Illumination Required:

- 1 Lux (F1.8) 0.1 footcandles

External Microphone Input Level:

- -70dB, 4.7K ohms unbalanced

Operating Temperature:

- 32°F~104°F (0°C~40°C)

Operating Humidity:

- 10%~75%

Weight:

- VHS camcorder: 4.6 lbs.
- AC adapter: 0.6 lbs.

Dimensions:

- VHS camcorder: 4.5" (W) x 8.07" (H) x 14.5" (D)
100(W) x 205 (H) x 368 (D) mm
- AC adapter: 3.15" (W) x 1.58" (H) x 6.1" (D)
80 (W) x 40 (H) x 155 (D) mm

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

This equipment has been tested and found to comply with the limits for Class B digital devices, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur with a particular installation. If the equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference using one or more of the following measures: 1) relocate or reposition the receiving antenna, 2) increase the spacing between the equipment and receiver, 3) connect the equipment to an outlet on a circuit different from that to which the receiver is connected, and 4) consult the dealer or an experienced radio/TV technician for help.

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: 1) this device may not cause harmful interference, and 2) this device must accept any interference received, including interference that may cause undesirable operation.

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

FCC Warning: Any unauthorized changes or modifications to this equipment voids the user's authority to operate it.

LIMITED WARRANTY

CAMCORDER

90 Days Free Labor

One Year Free Service on Parts

This product must be carried in for repair.

WHO IS COVERED?

You must have proof of purchase to receive warranty service. A sales receipt or other document showing that you purchased the product is considered proof of purchase.

WHAT IS COVERED?

Warranty coverage begins the day you buy your product. *For 90 days thereafter*, all parts will be repaired or replaced, and labor is free. *From 90 days to one year from the day of purchase*, all parts will be repaired or replaced, but you pay for all labor charges. *After one year from the day of purchase*, you pay for the replacement or repair of all parts, and for all labor charges.

All parts, including repaired and replaced parts, are covered only for the original warranty period. When the warranty on the product expires, the warranty on all replaced and repaired parts also expires.

WHAT IS EXCLUDED?

Your warranty does not cover:

- labor charges for installation or setup of the product, adjustment of customer controls on the product, and installation or repair of antenna systems outside of the product.
- product repair and/or part replacement because of misuse, accident, unauthorized repair or other cause not within the control of Philips Consumer Electronics Company.
- reception problems caused by signal conditions or cable or antenna systems outside the unit.
- a product that requires modification or adaptation to enable it to operate in any country other than the country for which it was designed, manufactured, approved and/or authorized, or repair of products damaged by these modifications.
- incidental or consequential damages resulting from the product. (Some states do not allow the exclusion of incidental or consequential damages, so the above exclusion may not apply to you. This includes, but is not limited to, pre-recorded material, whether copyrighted or not copyrighted.)
- damage caused by the use of non-VHS tapes or tapes that have not been tested and labeled for use in two, four, six and eight hour VHS recorders.

WHERE IS SERVICE AVAILABLE?

Warranty service is available in all countries where the product is officially distributed by Philips Consumer Electronics Company. In countries where Philips Consumer Electronics Company does not distribute the product, the local Philips service organization will attempt to provide service (although there may be a delay if the appropriate spare parts and technical manual(s) are not readily available).

MAKE SURE YOU KEEP...

Please keep your sales receipt or other document showing proof of purchase. Attach it to this owner's manual and keep both nearby. Also keep the original box and packing material in case you need to return your product.

BEFORE REQUESTING SERVICE...

Please check your owner's manual before requesting service. Adjustments of the controls discussed there may save you a service call.

TO GET WARRANTY SERVICE IN U.S.A., PUERTO RICO OR U.S. VIRGIN ISLANDS...

Take the product to a Philips factory service center (see enclosed list) or authorized service center for repair. When the product has been repaired, you must pick up the unit at the center. Centers may keep defective parts.

(In U.S.A., Puerto Rico and U.S. Virgin Islands, all implied warranties, including implied warranties of merchantability and fitness for a particular purpose, are limited in duration to the duration of this express warranty. But, because some states do not allow limitations on how long an implied warranty may last, this limitation may not apply to you.)

TO GET WARRANTY SERVICE IN CANADA...

Take the product to a Philips consumer service center (listed below), self-servicing dealer or authorized service depot.

Philips Electronics Ltd.

601 Milner Avenue, Scarborough, Ontario, M1B 1M8

(416) 292-5161

4977 Levy Street, St. Laurent, Québec, H4R 2N9

(514) 956-0210

3695 Grandview Highway, Vancouver, B.C., V5M 2G7

(604) 435-4411

(In Canada, this warranty is given in lieu of all other warranties. No other warranties are expressed or implied, including any implied warranties of merchantability or fitness for a particular purpose. Philips is not liable under any circumstances for any direct, indirect, special, incidental or consequential damages, howsoever incurred, even if notified of the possibility of such damages.)

REMEMBER...

Please record the model and serial numbers found on the product below. Also, please fill out and mail your warranty registration card promptly. It will be easier for us to notify you if necessary.

MODEL # _____

SERIAL # _____

This warranty gives you specific legal rights. You may have other rights which vary from state to state.

Philips Service Company

401 East Andrew Johnson Highway
(615) 475-8869

Jefferson City, Tennessee 37760

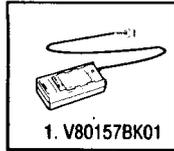
34

Notes

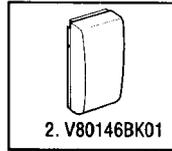
Supplied Accessories

Check to be sure the following items are packed with your camcorder. These accessories are provided to help you use or set up your camcorder.

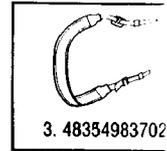
1. AC Adapter/Charger



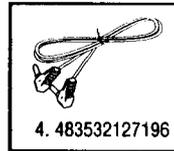
2. Battery Pack



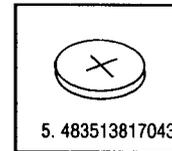
3. Shoulder Strap



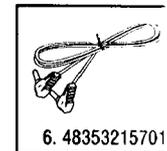
4. Audio/Video Cable



5. Clock Control Battery



6. DC Power Cable



Optional Accessories

Prices subject to change without notice. Availability subject to change at time of purchase. When ordering accessories outside the U.S.A., please refer to the accessories material, address, and prices for that country.

Maximize your viewing pleasure with state-of-the-art accessories designed specifically for your

camcorder. The optional accessories shown in this booklet

may be purchased from your local dealer, or may be ordered

direct from Phillips Consumer

Electronics Company.

Call toll free

1-800-292-6066

Or write

Phillips Consumer

Electronics Co.,

Accessories Marketing Dept.,

P.O. Box 967,

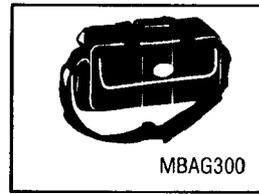
Greenville, TN 37744-0967



Heavy-Duty Tripod

Your Cost \$59.99

- Quick-release shoe
- Three-way pan head
- Bubble level
- Three-section legs
- Titan color
- Metal crank
- Leg braces
- Accessory hook
- Versatile feet (spiked or rubber)
- Geared center column
- Holds up to 15 pounds



8mm/VHS Camcorder or Camera Bag

Your Cost \$34.95

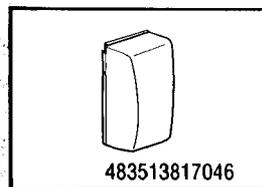
- Protects camcorder whether carried or stored
- Two bags in one; free "quick-carry" bag included
- Three exterior pockets allow for additional storage
- Double zipper allows for easy access to camcorder
- Supplied dividers allow you to customize storage space for camcorder accessories
- Adjustable, removable shoulder strap
- Velcro-closed handle
- Made of black, water-resistant fabric
- Bottom straps for transporting tripod



VHS Head Cleaner

Your Cost \$4.99

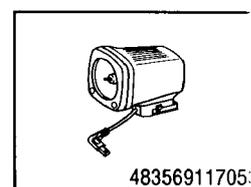
- Wet/dry head cleaner for VHS format camcorders and VCRs
- Advanced alternating wet/dry system removes dust and dirt, without leaving residue
- Keeps camcorder and/or VCR clean, for best picture clarity and sound reproduction
- Easily stores along with other VHS tapes
- Cleaning fluid stores in



Battery

Your Cost \$69.95

Back up your supplied one-hour battery with this extended play, two-hour rechargeable battery



Color Enhancement Light

Your Cost \$48.33

Record in low light with this detachable color enhancement light.

QUALITY SERVICE IS AS CLOSE AS YOUR TELEPHONE! SIMPLY LOOK OVER THE LIST BELOW FOR THE NUMBER OF A FACTORY SERVICE CENTER NEAR YOU. WHEN YOU CALL, A SERVICE REPRESENTATIVE WILL GLADLY DIRECT YOU TO ONE OF OVER 1100 DROP-OFF SITES LOCATED NATIONWIDE. YOUR PRODUCT WILL RECEIVE EFFICIENT AND EXPEDIENT CARRY-IN, MAIL-IN, OR IN-HOME SERVICE, AND YOU WILL RECEIVE PEACE OF MIND, KNOWING YOUR PRODUCT IS BEING GIVEN THE EXPERT ATTENTION OF PHILIPS' FACTORY SERVICE. AND, IF THE PHONE NUMBER LISTED FOR YOUR AREA IS LONG DISTANCE, CALL 1-800-242-9225 FOR FACTORY SERVICE.

COMMENT OBTENIR NOTRE SERVICE APRÈS VENTE RAPIDE ET EFFICACE SOIT PAR COURRIER, À DOMICILE, OU EN SE PRÉSENTANT À UN CENTRE DE SERVICE PHILIPS. PLUS DE 600 CENTRES DE RÉCEPTION DE PRODUITS À RÉPARER À TRAVERS LE PAYS: CONTACTER LE CENTRE DE SERVICE AUX CONSOMMATEURS LE PLUS PROCHE POUR SAVOIR L'EMPLACEMENT DE CES DÉPÔTS DANS UN RAYON DE 50 À 75 MILES (80 KM À 120 KM) DU CENTRE DE SERVICE LOCAL.

CÓMO OBTENER UN SERVICIO OPORTUNO Y EFICIENTE POR CORREO, EN CASA O EN PERSONA PARA SU PRODUCTO A TRAVÉS DE UN CENTRO PHILIPS DE SERVICIO. MAS DE 600 SITIOS POR TODO EL PAIS PARA LA RECEPCION DE PRODUCTOS NECESITADOS DE REPARACIONES: COMUNICARSE CON EL CENTRO DE SERVICIO DE FABRICA MAS CERCAÑO PARA ESTOS LUGARES DENTRO DE UN RADIO DE 80 A 120 KM (50 A 75 MILLAS) DEL CENTRO DE SERVICIO LOCAL.

**Atlanta–Athens–
Macon–Chattanooga, TN–
North Georgia Area**
1898 Leland Drive
Marietta, GA 30067
(404) 952-3279
Over 100 drop-off locations.

**Boston–Southern Maine–
Southern New Hampshire Area**
1 North Avenue
Burlington, MA 01803
(617) 272-4825
Over 60 drop-off locations.

**Charlotte–Winston Salem–
Greensboro–Chapel Hill–
Raleigh–Spartanburg, SC Area**
520-G Clanton Road
Charlotte, NC 28217
(704) 529-6330
Over 25 drop-off locations.

**Chicago–Milwaukee–
Gary Area**
1360 W. Hamilton Parkway
Itasca, IL 60143
(708) 775-0990
Over 80 drop-off locations.

**Cleveland–Akron–
Youngstown Area**
24090 Detroit Road
Westlake, OH 44145
(216) 899-2040
Over 65 drop-off locations.

**Columbus–Dayton–
Cincinnati Area**
5164 Blazer Parkway
Dublin, Ohio 43017
(614) 792-1495
Over 19 drop-off locations.

**Connecticut–Rhode Island–
Springfield, MA Area**
1294 Blue Hills Avenue
Bloomfield, CT 06002
(203) 726-9612
Over 45 drop-off locations.

Dallas–Ft. Worth Area
1901 N. Glenville Drive
Richardson, TX 75081
(214) 690-8440
Over 25 drop-off locations.

Detroit/Toledo Area
25173 Dequindre
Madison Heights, MI 48071
(810) 544-2110
Over 30 drop-off locations.

**Knoxville–Greeneville–
Tri Cities–East Tennessee Area**
6700 D. Papermill Road
Papermill Plaza
Knoxville, TN 37919
(615) 584-6614
Over 7 drop-off locations.

**Ft. Myers–Naples–
Southwest Florida Area**
11601 Cleveland Ave., Suite 15
Ft. Myers, FL 33907
(813) 278-4242
Over 30 drop-off locations.

**Houston–Galveston–
Beaumont–Austin–
San Antonio Area**
1110 North Post Oak Road
Suite 100
Houston, TX 77055
(713) 682-3990
Over 40 drop-off locations.

Los Angeles–San Diego Area
2910 E. LaPalma, Suite E
Anaheim, CA 92806
(714) 238-7250
Over 70 drop-off locations.

Miami–Southeast Florida Area
2099 W. Atlantic Blvd.
Pompano Beach, FL 33069
(305) 978-0467
Over 45 drop-off locations.

**North NJ–Staten Island–
Rockland County, NY Area**
140J Commerce Way
Totowa, NJ 07512
(201) 890-7200
Over 50 drop-off locations.

New York Metro Area
116 Charlotte Avenue
Hicksville, NY 11801
(516) 933-1780 Nassau County
Over 40 drop-off locations.

**Orlando–Jacksonville–North
Florida–Southeast Georgia Area**
2452 Sand Lake Road
Orlando, FL 32809
(407) 857-8998
Over 30 drop-off locations.

**Philadelphia/Lancaster/
S. New Jersey Area**
352 Dunks Ferry Road
Bensalem, PA 19020
(215) 638-7500
Over 35 drop-off locations.

**Phoenix–Scottsdale–
Mesa–Tempe Area**
5032 S. Ash Avenue, Ste. 101
Tempe, AZ 85282
(602) 897-7358
Over 20 drop-off locations.

**Pittsburgh, PA–Steubenville, OH–
Wheeling/Morgantown, WV Area**
2891 Banksville Road
Pittsburgh, PA 15216
(412) 563-8020
Over 11 drop-off locations.

**Rockford–Kenosha–
Beloit–Madison Area**
5602 N. Second
Loves Park, IL 61111
(815) 654-7343
Over 5 drop-off locations.

**San Francisco–Oakland–
San Jose Area**
3370 Montgomery Drive
Santa Clara, CA 95054
(408) 492-9013
Over 30 drop-off locations.

Seattle–Tacoma/Olympia Area
1055 Andover Park East
Tukwila, WA 98188
(206) 575-6288
Over 20 drop-off locations.

**Tampa–St. Petersburg–
Sarasota Area**
Center Point Business Park,
Building B-1, Suite 100
1911 U.S. Hwy. 301 North
Tampa, FL 33619
(813) 621-8181
Over 75 drop-off locations.

**Washington, DC–Baltimore–
Richmond, VA Area**
6671-J Santa Barbara Road
Elkridge, MD 21227
(410) 796-0105
Over 55 drop-off locations.

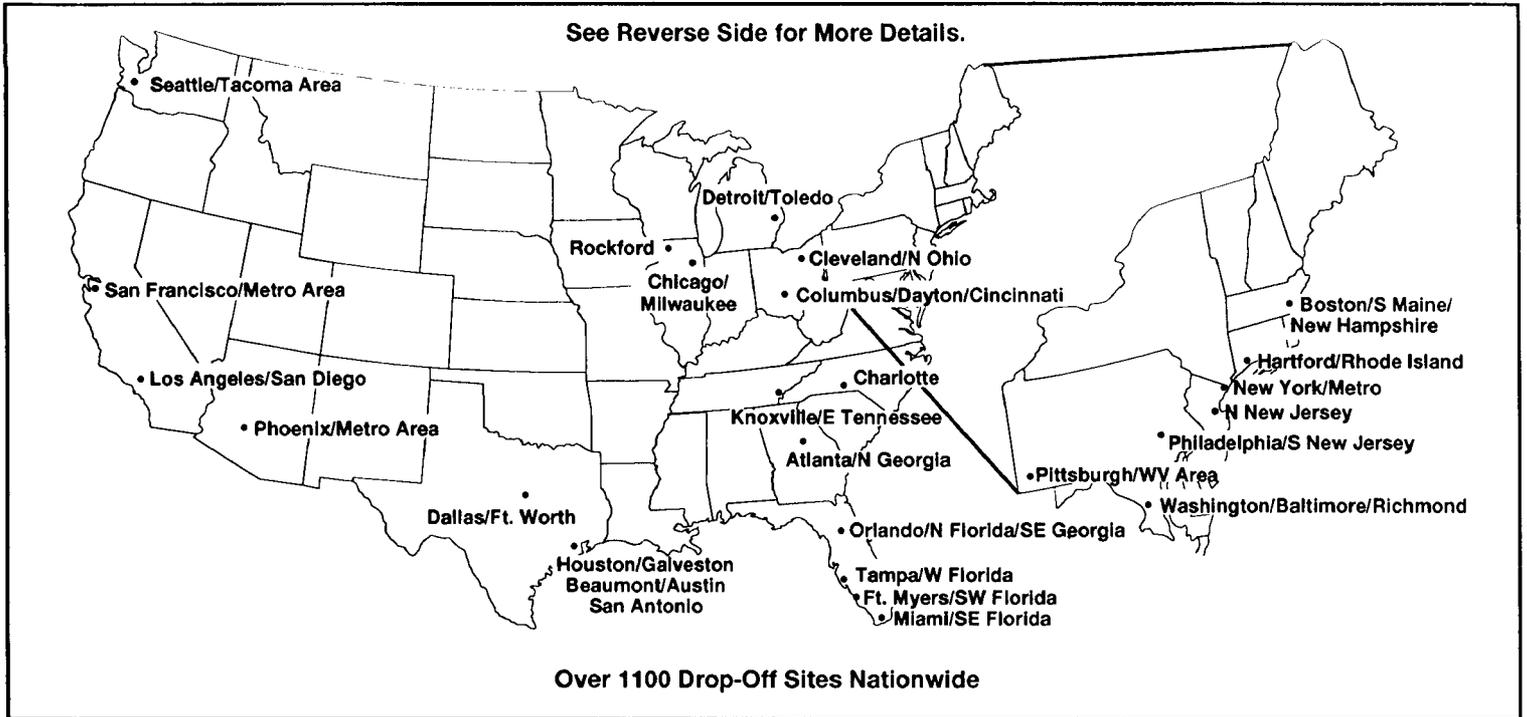
HOW YOU CAN OBTAIN EFFICIENT AND EXPEDIENT CARRY-IN, MAIL-IN, OR IN-HOME SERVICE IN CANADA FOR YOUR PRODUCT THROUGH A PHILIPS CONSUMER SERVICE CENTER

COMMENT OBTENIR NOTRE SERVICE APRÈS VENTE RAPIDE ET EFFICACE SOIT PAR COURRIER, À DOMICILE, OU EN SE PRÉSENTANT À UN CENTRE DE SERVICE PHILIPS

CÓMO OBTENER UN SERVICIO OPORTUNO Y EFICIENTE POR CORREO, EN CASA O EN PERSONA EN EL CANADA PARA SU PRODUCTO A TRAVÉS DE UN CENTRO PHILIPS DE SERVICIO AL CONSUMIDOR

<p>TORONTO 601 Milner Avenue Scarborough, Ontario M1B 1M8 (416) 754-6064 (Tel.) (416) 292-5161 (Tel.) (416) 754-6290 (Fax)</p>	<p>MONTREAL 4977 Levy Street St. Laurent, Québec H4R 2N9 (514) 956-0120 (Tel.) (514) 956-0828 (Fax)</p>	<p>VANCOUVER 1741 Boundary Road Vancouver, B.C. V5M 3Y7 (604) 294-3441 (Tel.) (604) 294-3574 (Fax)</p>
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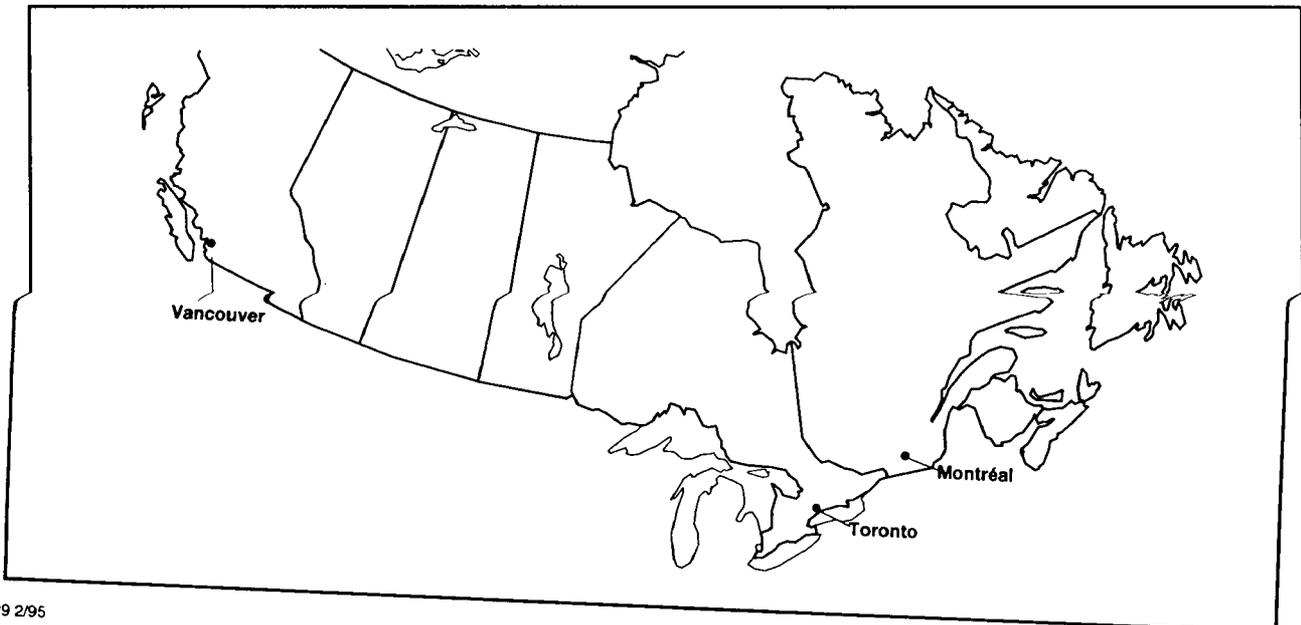
Philips Consumer Electronics Company Factory Service Center Locations



NOTE: If you reside in one of our Philips Factory Service Branch areas (see directory on back), you can contact the nearest Service Branch to obtain efficient and expedient repair for your product. If your product is In-Warranty, you should have proof-of-purchase to ensure No Charge Service. For Out-of-Warranty service, call the location nearest you.

NOTA: Si vous résidez dans une des régions desservies par une succursale de service après vente du fabricant Philips (voir liste ci-dessous), vous pourrez contacter la branche de service après vente la plus près de chez vous pour obtenir un service après vente rapide et efficace. Si le produit est sous garantie, il suffira de présenter une preuve d'achat pour bénéficier d'un service sans frais. Pour les produits non couverts par la garantie, contactez le centre le plus près de chez vous.

NOTA: Si Ud. reside en una de nuestras zonas para sucursales Philips de servicio al de fábrica (ver directorio más abajo), Ud. puede comunicarse con la sucursal de servicio más cercana para obtener una reparación oportuna y eficaz de su producto. Si su producto está todavía bajo garantía, Ud. debe presentar comprobante de compra para no ocasionar ningunos cargos por servicio. Para servicio después del vencimiento de la garantía, llame al lugar más cercano de los abajo indicados.



IMPORTANT SAFEGUARDS AND PRECAUTIONS

1. Read Instructions – All the safety and operating instructions should be read before the unit is operated.
2. Retain Instructions – The safety and operating instructions should be retained for future reference.
3. Heed Warnings – All warnings on the unit and in the operating instructions should be adhered to.
4. Follow Instructions – All operating and maintenance instructions should be followed.
5. Cleaning – Unplug this video unit from the wall outlet before cleaning. Do not use liquid or aerosol cleaners. Use a dry cloth for cleaning.
6. Attachments – Do not use attachments not recommended by the video product manufacturer as they may be hazardous.
7. Water and Moisture – Do not use this video unit 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 video unit on an unstable cart, stand, tripod, bracket, or table. The video unit may fall, causing serious injury to a child or adult, and serious damage to the unit. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the video unit. Any mounting of the unit 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.



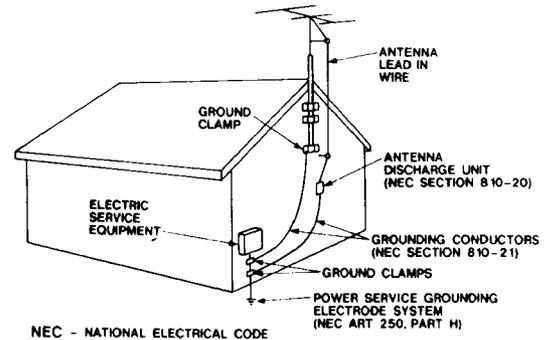
9. Ventilation – Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the video unit and to protect it from overheating. These openings must not be blocked or covered. Never place the video unit on a bed, sofa, rug, or other similar surface, or near or over a radiator or heat register. This video unit 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 video unit 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 video units intended to be operated from battery power, or other sources, refer to the operating instructions.

11. Grounding or Polarization – This video unit may be equipped with either a polarized 2-wire AC (Alternating Current) line plug (a plug having one blade wider than the other) or 3-wire grounding type plug, a plug having a third (grounding) pin.

The 2-wire polarized 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 still fails to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.

The 3-wire grounding type plug will fit into a grounding type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding type 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 of plugs, convenience receptacles, and the point where they exit from the unit.
13. Outdoor Antenna Grounding – If an outside antenna or cable system is connected to the video unit, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Part 1 of the Canadian Electrical Code, in USA Section 810 of the National Electrical Code, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.



IMPORTANT SAFEGUARDS AND PRECAUTIONS

14. **Lightning** – For added protection of this video unit 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 video unit 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. **Objects and Liquids** – Never push objects of any kind into this video unit through openings as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind onto the video unit.
18. **Servicing** – Do not attempt to service this video unit 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 video unit from the wall outlet and refer servicing to qualified service personnel under the following conditions:
 - a. When the power-supply cord or plug is damaged.
 - b. If any liquid has been spilled onto, or objects have fallen into the video unit.
 - c. If the video unit has been exposed to rain or water.
 - d. If the video unit does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the video unit to its normal operation.
 - e. If the video unit has been dropped or the cabinet has been damaged.
 - f. When the video unit 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 has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.
21. **Safety Check** – Upon completion of any service or repairs to this video unit, ask the service technician to perform safety checks to determine that the video unit is in safe operating order.

PRECAUTIONS

USE & LOCATION

- **TO AVOID SHOCK HAZARD** ... Your Camcorder and power supply should not be exposed to rain or moisture. Do not connect the power supply or operate your Camcorder if it gets wet. Your Camcorder has been designed for outdoor use in all kinds of weather, however it will probably not survive any type of direct exposure to water, rain, sleet, snow, or a direct splashing from a pool or even a cup of coffee. Do not attempt to disassemble this unit. There are no user serviceable parts inside. Unplug your Camcorder from the power supply before cleaning.
- **DO NOT AIM YOUR CAMCORDER AT THE SUN OR OTHER BRIGHT OBJECTS**
- **DO NOT EXPOSE YOUR CAMCORDER TO EXTENDED HIGH TEMPERATURE** ... Such as, in direct sunlight, inside a closed car, next to heater, etc.. This action could permanently damage the internal parts of your Camcorder.
- **AVOID SUDDEN CHANGES IN TEMPERATURE** ... If the unit is suddenly moved from a cold place to a warm place, moisture may form on the tape and inside the unit.
- **DO NOT LEAVE YOUR CAMCORDER OR THE POWER SUPPLY TURNED ON WHEN NOT IN USE**
- **STORAGE OF YOUR CAMCORDER** ... Store and handle your Camcorder in a manner that will not subject it to unnecessary movement (avoid shaking and striking). Your Camcorder contains a sensitive pick-up device which could be damaged by improper handling or storage.

CARE

- **TO CLEAN YOUR CAMCORDER** ... Do not use strong or abrasive detergents when cleaning your Camcorder body.
- **TO PROTECT THE LENS** ... Do not touch the surface of the lens with your hand. Use a commercial camcorder lens solution and paper when cleaning the lens. Improper cleaning can scratch the lens coating.
- **TO PROTECT THE FINISH OF YOUR CAMCORDER** ... Before handling your Camcorder, make sure your hands and face are free from any chemical products such as suntan lotion as it may damage the finish.