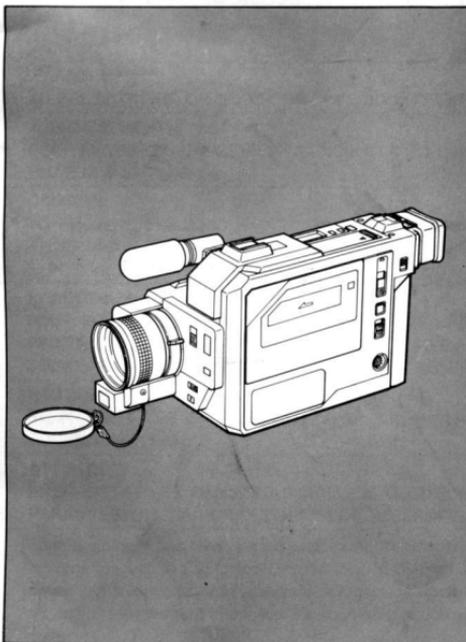


ELMO**Astron movie ECR-8****8****Contents**

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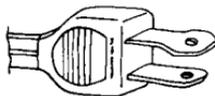
INSTALLATION

Power Sources—This video product 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 products intended to operate from battery power, or other sources, refer to the operating instructions.



Grounding or Polarization—This video product may be equipped with either a polarized 2-wire AC line plug (a plug having one blade wider than the other) or a 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 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.



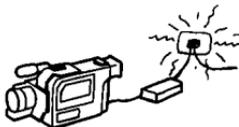
The 3-wire grounding type plug will fit into a grounding type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding type plug.



Power-Cord Protection—Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.



Overloading—Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.



USE

Cleaning—Unplug this video product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.



Attachments—Do not use attachments not recommended by the video product manufacturer as they may cause hazards.

Water and Moisture—Do not use this video product 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.



Ventilation—Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the video product and to protect it from overheating, and these openings must not be blocked or covered. The openings should never be blocked by placing the video product on a bed, sofa, rug, or other similar surface. This video product should never be placed near or over a radiator or heat register. This video product 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.



Lightning—For added protection for this video product 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 product due to lightning and power-line surges.



Object and Liquid Entry—Never push objects of any kind into this video product 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 on the video product.



Servicing—Do not attempt to service this video product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.



SERVICING

Damage Requiring Service—Unplug this video product 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 liquid has been spilled, or objects have fallen into the video product.
- c. If the video product has been exposed to rain or water.
- d. If the video product 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 product to its normal operation.
- e. If the video product has been dropped or the cabinet has been damaged.
- f. When the video product exhibits a distinct change in performance—this indicates a need for service.



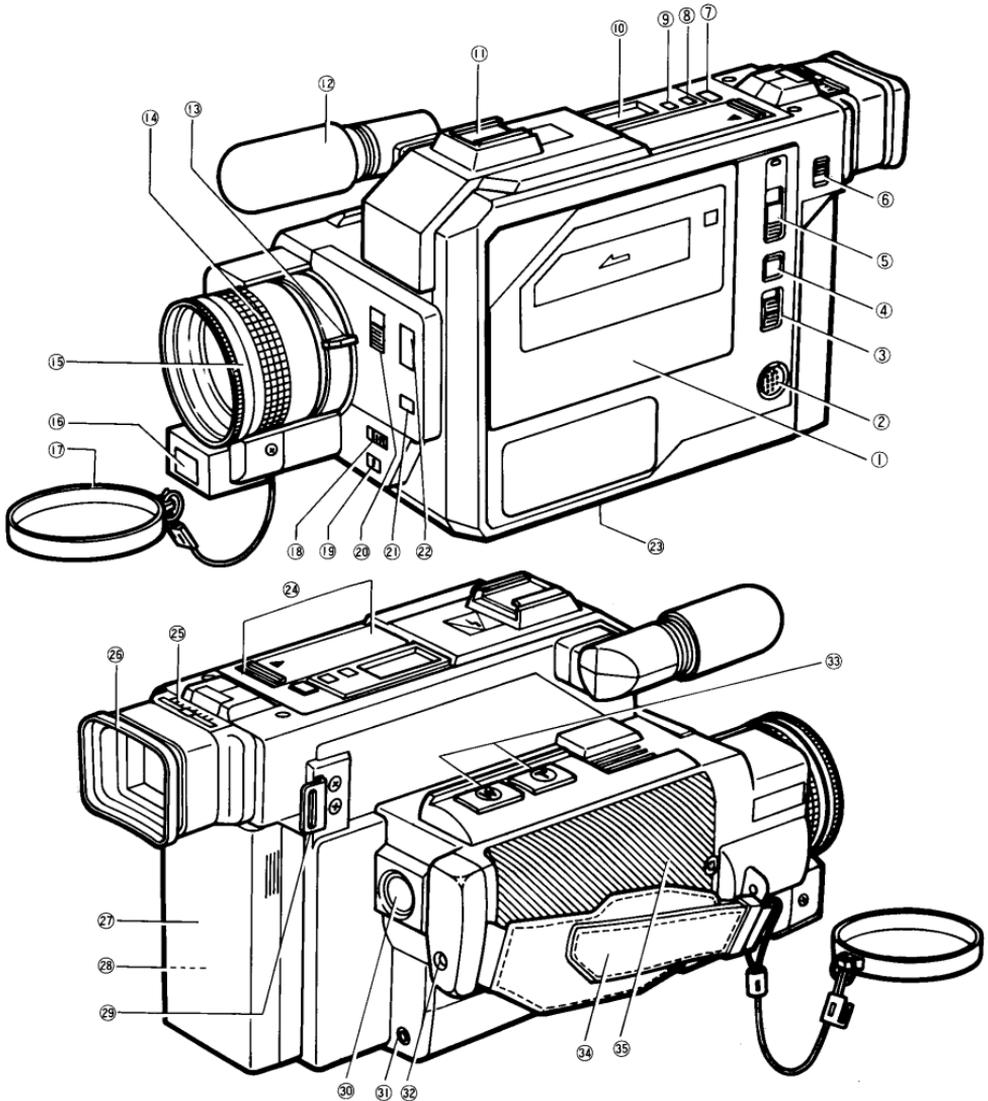
Replacement Parts—When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.



Safety Check—Upon completion of any service or repairs to this video product, ask the service technician to perform safety checks to determine that the video product is in proper operating condition.



CONTROLS AND COMPONENTS



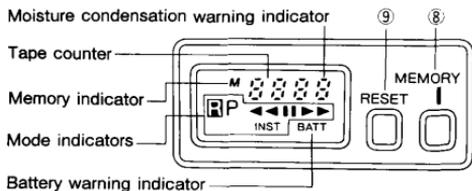
SUPPLIED ACCESSORIES

- * Battery Pack EA-BP8
- * AC Adapter EA-AC8
- * Shoulder Strap
- * Earphone
- * AV Connector
- * AV Cable
- * ANT Plug
- * VHF Cable

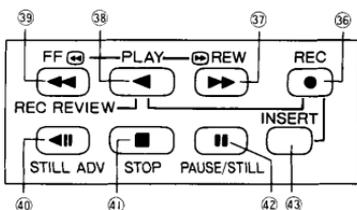
For details on the use of each control, refer to the pages indicated in the brackets.

- | | |
|---|---|
| <ul style="list-style-type: none"> ① Cassette Compartment [10,12] ② Adapter Socket (ADAPTER) [19,22,25] ③ VCR/Camera Selector (VCR/CAMERA) [10,14,22] ④ Stand-by Button (STAND BY) [13] ⑤ Power Switch with red LED (POWER) [10,12,14] ⑥ Battery Eject Button (BATT EJECT) [10] ⑦ Cassette Eject Button (EJECT) [10,12,14] ⑧ Memory Button (MEMORY) [17,27] ⑨ Reset Button (RESET) [17,27] ⑩ Message Window – See below. [11,15,16,17,21,27,34] ⑪ Accessory Shoe [33] ⑫ Built-in Microphone [33] ⑬ Manual Zoom Lever [31] ⑭ Focus Ring [29] ⑮ Lens Hood ⑯ Auto White Balance Sensor [28] ⑰ Lens Cap [12] ⑱ Focus Selector (FOCUS) [29] ⑲ Push Auto Focus Button (PUSH AUTO) [29] ⑳ White Balance Selector (WHITE BALANCE) [28] ㉑ Back-light Control (BACK LIGHT) [30] ㉒ Fade Button (FADE) [30] | <ul style="list-style-type: none"> ㉓ Tripod Receptacle/Fitting for Shoulder Strap [32,33] ㉔ Control Panel with Cover – See below. [11,15,16,26,27] ㉕ Eyesight Adjustment Control [30] ㉖ Electronic Viewfinder – See below. [11,21,28] ㉗ Battery Pack EA-BP8 [10,12,18,21] ㉘ Battery Holder [10] ㉙ Fitting for Shoulder Strap [32] ㉚ Start/Stop Button [11,27] ㉛ Earphone Socket (EAR) [11,15] ㉜ Microphone Socket (MIC) [33] ㉝ Power Zoom Control (W&T) [31] ㉞ Grip Strap [32] ㉟ Handgrip ㊱ Recording Button (REC) [23,26,27] ㊲ Rewind/Review Button (REW) [15,16] ㊳ Play/Rec Review Button (PLAY/REC REVIEW) [14,15,16,23,24,26,27] ㊴ Fast Forward Button (FF) [15,16] ㊵ Still Advance Button (STILL ADV) [16,27] ㊶ Stop Button (STOP) [15] ㊷ Pause/Still Button (PAUSE/STILL) [16,23,27] ㊸ Insert Button (INSERT) [27] |
|---|---|

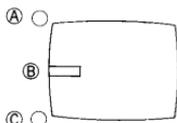
MESSAGE WINDOW ⑩



CONTROL PANEL ㉔



VIEWFINDER ㉖



① White balance indicator [28]

② Iris bar.

If this bar is in the middle position, the camera recording is being done under optimum lighting condition.

If in the upper position (or the lower position), it indicates over-exposure (or under-exposure) lighting condition.

③ Record/battery warning indicator [11,21]

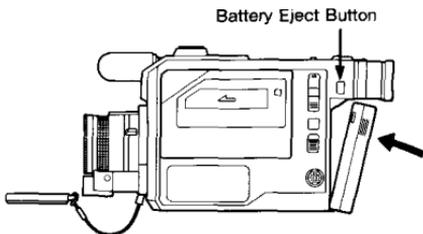
Take the following items in mind.

- * Carry out a trial run to make sure that the video and sound recorded are normal before making an important shooting.
- * ELMO shall not be responsible for failure in video and sound recording caused by some reason while using Astron Movie and tape.
- * This unit only accepts 8mm video cassette tape. Please select a tape with **[M]** mark.
- * This unit is designed to record and play back in SP mode only, and will not perform normal playback for programs pre-recorded in LP mode.

CAMERA RECORDING

1

Attach the fully charged battery pack EA-BP8. Rest the bottom end of the battery pack on the ridge along the bottom edge of the ECR-8, and swing the battery pack into place as shown, making sure it locks. Be sure to charge the battery pack before use.

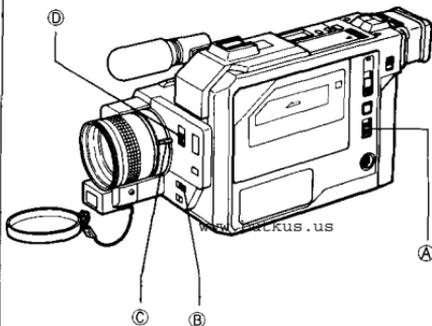


To remove the battery pack, press down the battery eject button while pulling the battery pack away from the ECR-8.

(For the use of the AC adapter EA-AC8, see page 19.)

2

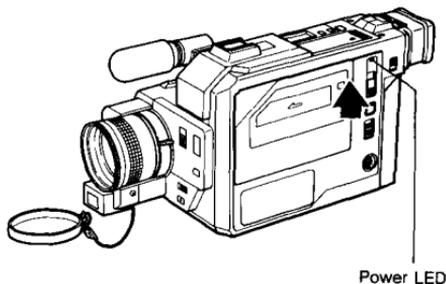
Preset the camera controls as follows.



- (A) VCR/Camera selector to 'CAMERA'
- (B) Focus selector to 'AUTO'
- (C) Release the zoom lever from macro mode. (See page 31.)
- (D) White balance selector to AUTO.

3

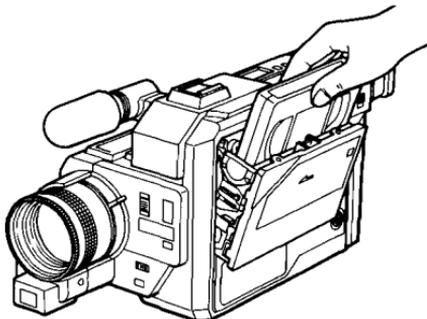
Turn on the power, and power LED comes on.



4

Press the cassette eject button to open the cassette compartment and insert an 8mm video cassette tape, after confirming the setting of erasure prevention tab, facing its window side outside and its erasure prevention tab upside.

Then press the cassette compartment cover until it locks.

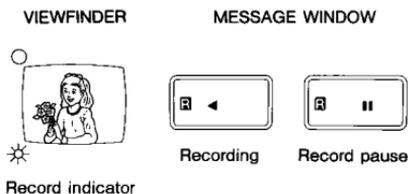


Note: Always insert a cassette in the correct direction. Never insert it upside down.

5

Press the start/stop button.

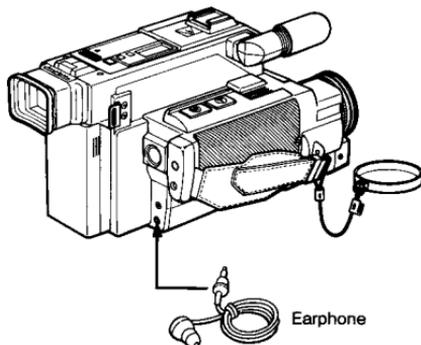
Recording begins and the record indicator in the viewfinder illuminates. Pressing this button again stops recording temporarily (record pause mode) with the record indicator going off.



7

Audio monitoring

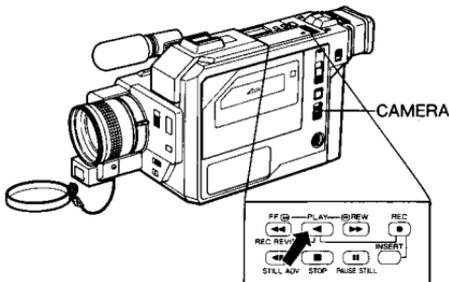
Connect the provided earphone to the earphone socket to monitor the audio during recording and to listen to the recorded sound during playback.



6

Recording review (Instant replay for check)

You can check in the viewfinder if the scenes have been recorded as intended by simply pressing the REC REVIEW (PLAY) button.



Press the REC REVIEW button in the record pause mode. Keep the VCR/Camera selector in the CAMERA position.

The last two seconds of the just-recorded section are played back, then the record pause mode is automatically resumed.

Note: ● When the pause mode continues for more than 5 minutes, the stand-by mode will be automatically entered. Pressing the STAND BY button again returns the ECR-8 to the record pause mode.
(See page 13 for details of the stand-by mode.)

● The ECR-8 stops automatically when the end of the tape is reached during recording. Also, the power automatically shuts off when battery power becomes insufficient.

● When continuing recording again after turning the power off once, a few frames of the last recorded scene will be automatically erased.



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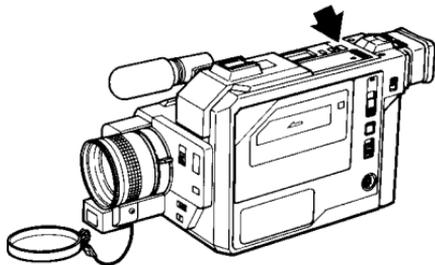
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AFTER RECORDING

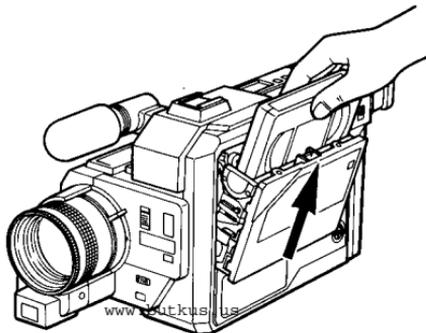
1

Press the cassette eject button.



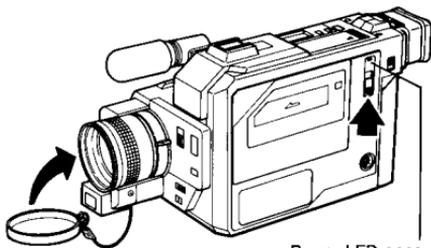
2

Remove the video cassette by pressing white lever at the side of the cassette compartment. Then close the cassette compartment cover.



3

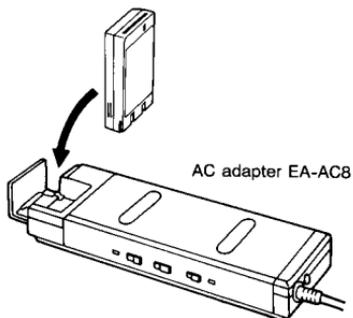
Turn off the power and put on the lens cap.



Power LED goes out.

4

After each use of recording or playback, be sure to recharge the battery pack.



See page 21 for recharging the battery pack.

STAND-BY OPERATION

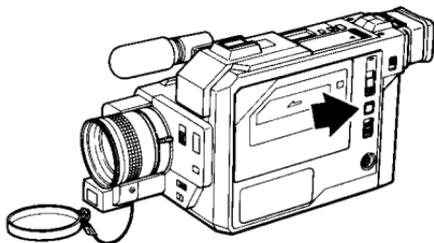
When record pause mode is presumed to continue for a long time, enter the stand-by mode to save the battery power and to have a smooth transition to succeeding recording.

Press the STAND BY button. The picture will disappear from the viewfinder.

Note: ● While recording, always enter pause mode before pressing the STAND BY button.

No recording or playback can take place during stand-by mode.

- While in stand-by mode, power LED goes off and indicators on message window flash.
- To restart recording, press the STAND BY button and then press the start/stop button.



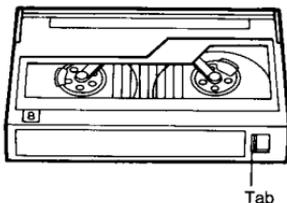
THE TAB ON THE CASSETTE

When a new recording is made on a previously recorded cassette, the previous recording will be automatically erased. To avoid erasing a recording, slide the tab out to cover the opening.

When the tab is out, a recording cannot be made. To re-record on a cassette, slide the tab in.

Note:

Never insert anything in the small holes on the rear of the cassette. These holes are used to sense the kind of tape, thickness of tape, if the tab is out or in, etc.

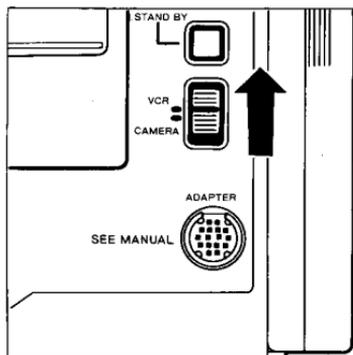


PLAYBACK

The recorded tape can be played back and viewed either in the viewfinder of the ECR-8 or on the screen of a TV connected to the ECR-8. (See page 22 for connection with a TV set.)

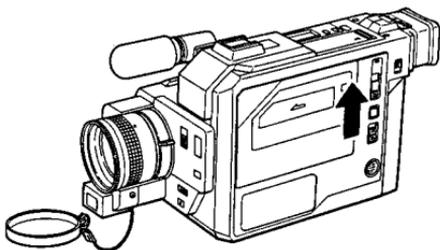
1

Set the VCR/Camera selector to VCR.



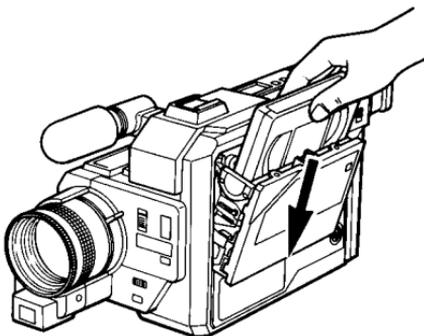
2

Turn the power switch on, and the power LED comes on.



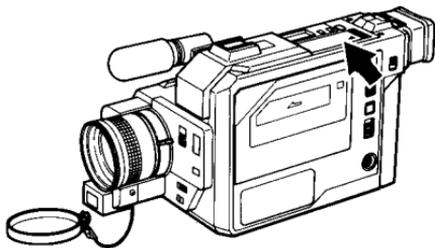
3

Press the cassette eject button and load a recorded video cassette.



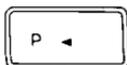
4

Open the control panel cover, and press the PLAY button.
(See page 15 and 16 for details of control buttons.)

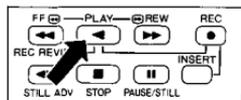


CONTROL PANEL

- Press PLAY button, and the playback begins.



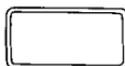
MESSAGE WINDOW



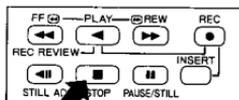
CONTROL PANEL

Connect the provided earphone to the earphone socket to monitor the recorded sound.

- Press STOP button to stop the playback.



MESSAGE WINDOW



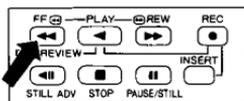
CONTROL PANEL

Press the PLAY button again to resume playback mode.

- Press the FF button in the stop mode for fast forward.

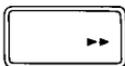


MESSAGE WINDOW

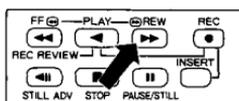


CONTROL PANEL

- Press the REW button in the stop mode for rewind.



MESSAGE WINDOW



CONTROL PANEL

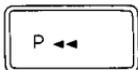
Note: When the battery pack is used as a power supply and the stop mode continues more than 5 minutes, the ECR-8 enters the stand-by mode automatically. Press the STAND BY button followed by the PLAY button to resume playback.

When tape end is reached during playback, fast forward or rewind, the tape is automatically rewound to its beginning and the stop mode is entered.

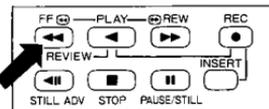
VARIOUS PLAYBACK FUNCTIONS

Various playback modes are available using the following controls in the play mode.
No audio is heard while engaged in these modes.

MESSAGE WINDOW



CONTROL PANEL



FF/CUE

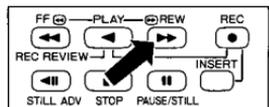
Picture is played back while the tape fast forwards at 7 times normal speed when the FF button is held pressed in the play mode.



MESSAGE WINDOW



CONTROL PANEL



REVIEW

Picture is played back while the tape rewinds at 7 times normal speed when the REC button is held pressed in the play mode.

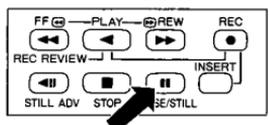
Bar noise appears on the screen.

If picture rolls vertically, adjust vertical hold knob on your TV set.

MESSAGE WINDOW



CONTROL PANEL



STILL

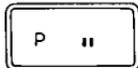
Still picture remains on the screen after this button is pressed in the play mode. Pressing this button again restores normal playback.

Stop mode is entered automatically, if still mode continues longer than 5 minutes.

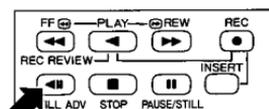
The picture may sway a little in the still mode.



MESSAGE WINDOW



CONTROL PANEL



STILL ADVANCE

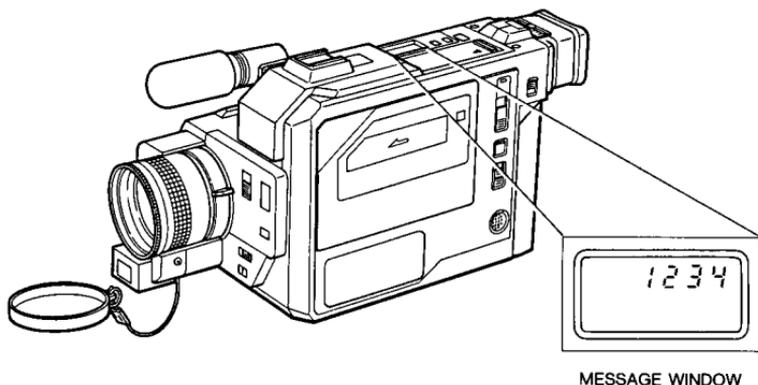
While in still mode, each press of this button advances the still picture by one frame.

Keeping this button pressed continuously presents frames successively for a slow motion effect.

Bar noise may appear while in the still advance mode.

If picture rolls vertically, adjust the vertical hold knob on your TV set.
Other irregularities may appear on some TV sets.

TAPE COUNTER



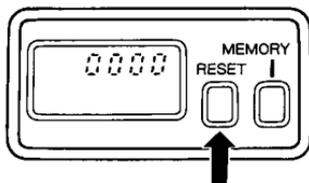
The tape counter indicator is displayed on the message window. It changes as the tape advances and is useful for locating specific scenes later.

Pressing the reset button resets the tape counter to "0000".

Note: The counter reading and the point of the tape may not correspond exactly.

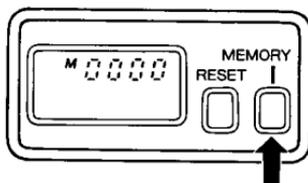
COUNTER MEMORY

1. Press the reset button at the point you wish to return to during playback.



Tape counter resets to "0000".

2. Press the memory button.



"M" is displayed.

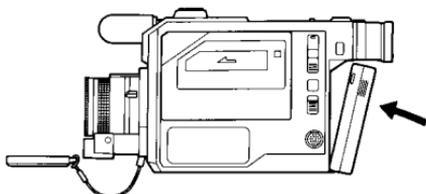
3. The tape will automatically stop around the counter reading of "0000" when fast forwarding or rewinding. This is convenient for locating the same scene for repeated viewing.

4. Pressing the counter memory button once again releases the counter memory mode, and the "M" in the message window disappears.

POWER SUPPLIES

Battery Pack EA-BP8

Be sure to charge the battery pack with the AC adapter EA-AC8 before use. See page 10 for mounting the battery pack on the ECR-8.



Operating Time with Battery Pack

- This ECR-8 can record continuously for approx. one hour at normal temperatures (25°C) with a fully charged battery pack EA-BP8.
If the ECR-8 is used for recording intermittently or at low temperatures, the total possible recording time will be reduced. It is recommended to turn off the ECR-8 or to switch over to the stand-by mode when not in actual recording.
- Never use an insufficiently charged or exhausted battery pack. If you use such a battery pack, voltage drops during recording or playback will cause the ECR-8 to be switched off to protect the battery pack and the ECR-8 itself.
- The battery pack becomes exhausted not only during recording and playback, but also when it is in stand-by mode. It is recommended to carry extra battery packs along which will last two or three times of the intended recording duration.

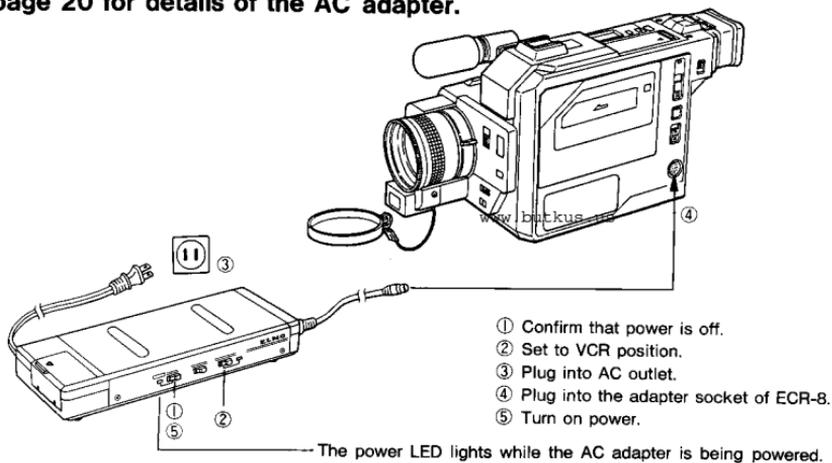
To Extend the Battery Life

- Be sure to recharge the battery pack soon after use. If the battery pack is left in discharged condition for a long period of time, it cannot be recharged any more.
- Be sure to recharge the battery pack before use. If the battery pack was stored for a long time after recharging it, the battery level may be reduced and the possible operation time may be shortened.
- Be sure to recharge the battery pack once every six months even if it is not used.
- To protect the battery pack, do avoid recharging it for more than 24 hours.

- Note:**
- Do not overcharge nor completely discharge it. It is not possible to recharge a battery pack which was left in discharged condition for a long time.
 - Store it in a dry and cool place.
 - Be careful so as not to give any shock to the battery since it may cause the characteristics to deteriorate or/and the trouble may occur.

AC Adapter EA-AC8

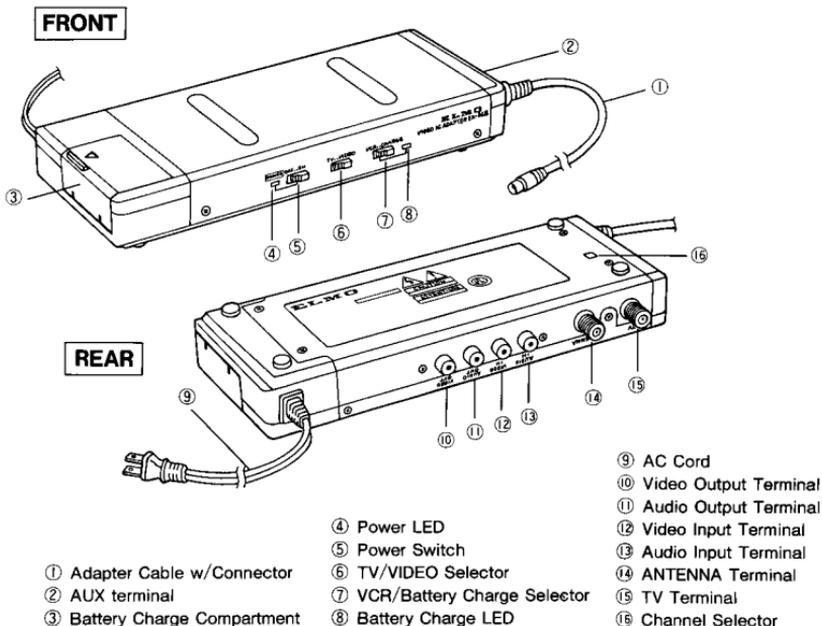
See page 20 for details of the AC adapter.



Note: When AC adapter is disconnected during recording or playback, the tape remains wound around the head cylinder in contact with the video heads and may become damaged. Therefore, be sure to turn the ECR-8 off before disconnecting.

AC ADAPTER EA-AC8

Part Names



- ① Adapter Cable w/Connector
- ② AUX terminal
- ③ Battery Charge Compartment

- ④ Power LED
- ⑤ Power Switch
- ⑥ TV/VIDEO Selector
- ⑦ VCR/Battery Charge Selector
- ⑧ Battery Charge LED

- ⑨ AC Cord
- ⑩ Video Output Terminal
- ⑪ Audio Output Terminal
- ⑫ Video Input Terminal
- ⑬ Audio Input Terminal
- ⑭ ANTENNA Terminal
- ⑮ TV Terminal
- ⑯ Channel Selector

CAUTION: Voltage settings 110V, 220V and 240V are not intended for use in U.S.A. and Canada.

ATTENTION: Les positions 110V, 220V, et 240V ne sont pas prévues pour une utilisation aux Etats-Unis et au Canada.

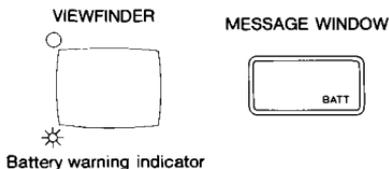
Using as a Power Source

* See page 19 for connection with the ECR-8.

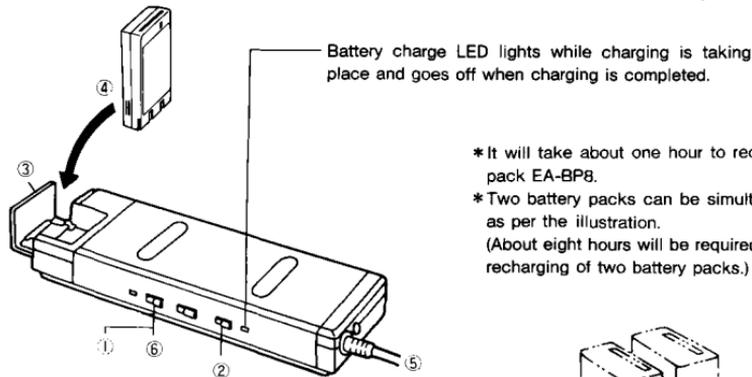
Cautions

- Do not keep the adapter at places with unfavorable heat radiation effect such as on blankets, etc., and do not put things on the adapter, since it deteriorates the ventilation.
- Keep off the flammables at the time of charging for safety's sake.
- Do not insert metals into or touch with the electrode parts of the adapter cable, battery charge terminal and battery holder, since it may cause trouble.
- The adapter is usable in AC 100 to 240V range. However, when using the adapter in abroad with different shape of AC power outlet, it is necessary to buy a conversion plug.
- Only the TV sets of NTSC television system can be connected to this adapter.
- When listening to the radio while the adapter is in use, noise may be produced from the radio. In such case keep the radio away from the adapter.

Charging Battery Pack

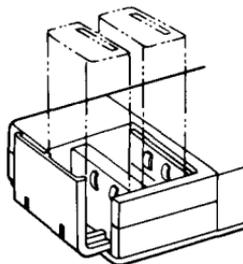


The viewfinder's record/battery warning indicator blinks when the battery pack's power is getting low. (When recording is taking place, it lights, but will not blink even if the battery's power gets low.) When the BATT indicator appears on the message window, there is enough power left for a few more minutes of operation. Recharge the battery pack or exchange your current battery for a fully charged one.



- ① Confirm that the power is off.
- ② Set the VCR/battery charge selector to CHARGE position.
The battery pack can not be recharged when this switch is set at VCR position.
- ③ Open the battery charge compartment cover.
- ④ Set the battery pack in the battery charge compartment.
- ⑤ Plug into AC outlet.
- ⑥ Switch the power on.

- * It will take about one hour to recharge one battery pack EA-BP8.
- * Two battery packs can be simultaneously charged as per the illustration.
(About eight hours will be required for simultaneous recharging of two battery packs.)



7. Operation at voltage setting 110/220/240V AC may require the use of a different AC plug. See example below. Please contact either a local or foreign electrical parts distributor for assistance in selecting the right AC plug.
Example (220/240V European configuration)



Specifications

Power Source:
 USA & Canada120V 60Hz
 Foreign110/220/240V 50/60Hz
 Rated DC Output: 8.5V
 Weight: Approx. 0.8kg (Approx. 1.8 lbs)
 Dimensions: 235 × 34.5 × 90mm (9.3 × 1.4 × 3.5in.)

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

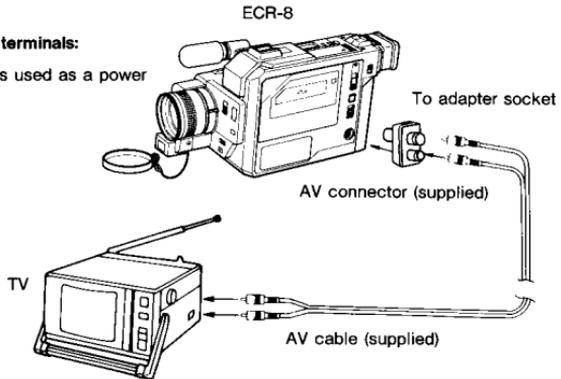
CONNECTION TO TV OR VCR

By connecting the ECR-8 to a TV set or a VCR, you can play back the picture on a TV screen or record a TV programme or dub the pre-recorded tape.

CONNECTION TO TV

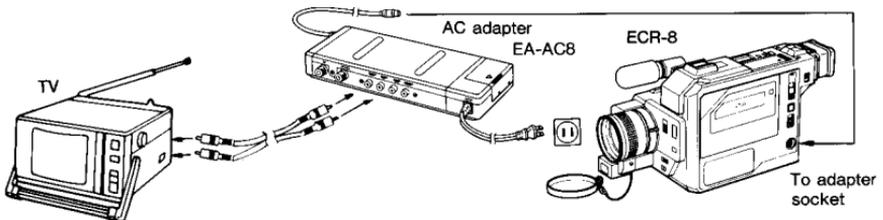
When using a TV with Audio/Video terminals:

(A) When the battery pack EA-BP8 is used as a power source:



| SETTING | AV connector switch | AV cable | TV terminals | ECR-8 VCR/ Camera selector |
|-----------|---------------------|---------------------------------|------------------------|-------------------------------|
| Playback | Out | Video (Yellow) Audio (White) | VIDEO IN AUDIO IN | VCR |
| Recording | In | Video Audio | VIDEO OUT AUDIO OUT | VCR |

(B) When the AC adapter EA-AC8 is used as a power source,



| SETTING | AC adapter | AV cable | TV terminals | ECR-8 VCR/ Camera selector |
|-----------|------------------------|---------------------------------|------------------------|-------------------------------|
| Playback | VIDEO OUT AUDIO OUT | Video (Yellow) Audio (White) | VIDEO IN AUDIO IN | VCR |
| Recording | VIDEO IN AUDIO IN | Video Audio | VIDEO OUT AUDIO OUT | VCR |

AFTER THE CONNECTION AND SETTING AS ABOVE:

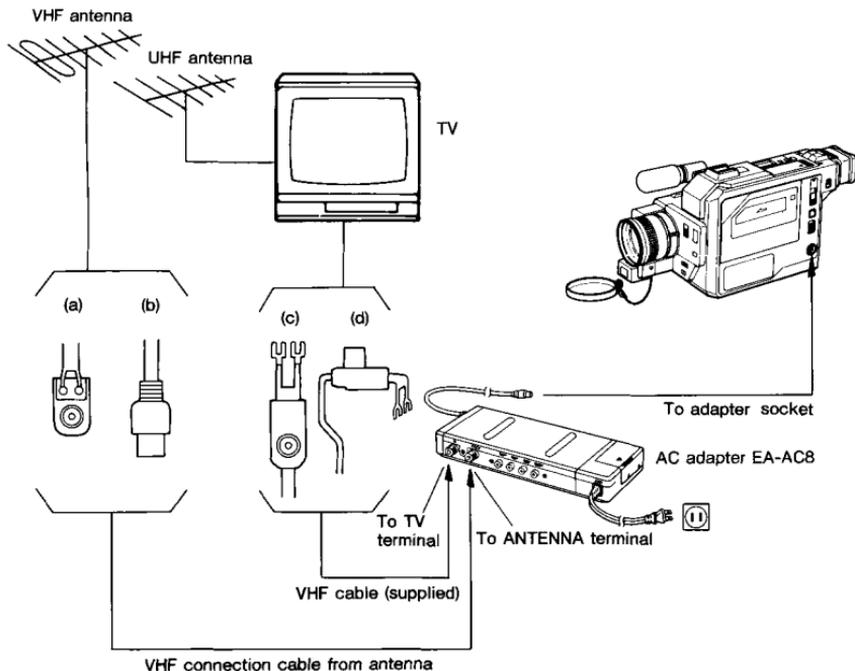
1. In case the AC adapter is used, set its TV/Video selector to VIDEO and the VCR/Battery charge selector to VCR positions respectively. Set the channel selector of the AC adapter to CH3 or CH4 where is not used in your area. If both channels are used, select the least viewed. The unit will override unwanted signals when in the playback mode.



2. Press the PLAY button of the ECR-8 for playback on a TV screen. Or, while pressing the REC button, press the PLAY button for recording of a TV programme.
3. The tape stops when the PAUSE/STILL button is pressed, and pressing this button again will release the stop mode.
When the pause mode lasts for more than 5 minutes, the stop mode will be automatically entered.
4. Press the stop button when your playback/recording is finished.

When using a TV without Audio/Video terminals (PLAYBACK only):

(AC adapter EA-AC8 is required.)



AFTER THE CONNECTION AND SETTING AS ABOVE:

1. Connect the TV and the TV terminal of the AC adapter with the VHF cable (supplied).

Note: If you have the alternate switch on your VHF connection cable, set as follows:

If using connector (c) in the illustration in page 23, set the switch to the lower (300 ohms) position.

If using connector (d) in the illustration, set the switch to the upper (75 ohms) position.

2. Connect the VHF antenna line and the ANTENNA terminal of the AC adapter so that you may watch the TV programme when the ECR-8 is not in operation.

Note: There are two types of antenna leads.

● 300 ohms twin lead (flat) cable as (a) in the illustration in page 23:

Use a 300 ohms-75 ohms antenna adapter.

● 75 ohms coaxial cable as (b) in the illustration:

Use an F-connector.

Use the ANTENNA plug (supplied), if necessary. (See below.)

3. Set the VCR/Camera selector of the ECR-8 to VCR position.

4. Set the TV/VIDEO selector of the AC adapter to VIDEO and the VCR/ Battery charge selector to VCR positions respectively. (Set the TV/VIDEO selector to TV for watching a TV programme.)

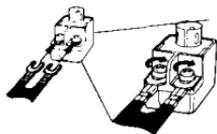
5. Set the channel selector of the AC adapter to CH3 or CH4 where is not used in your area. If both channels are used, select the least viewed.

6. Press the PLAY button for playback.

HOW TO ATTACH THE VHF ANTENNA CABLE TO ANTENNA PLUG

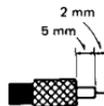
In case the coaxial cable is used as an antenna cable:

In case the feeder is used as an antenna cable:



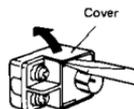
Insert the feeder and firmly tighten with a screwdriver.

1 Work the end.

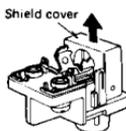


Fold back the braided wire.

2 Detach the cover with a minus (slotted) screwdriver.

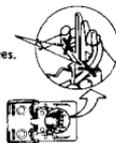


3 Detach the shield cover.

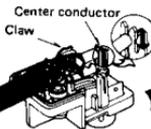


4 Cut at two places.

Cut at two places.



5 Insert the coaxial cable, and crush the claws with a pincher.

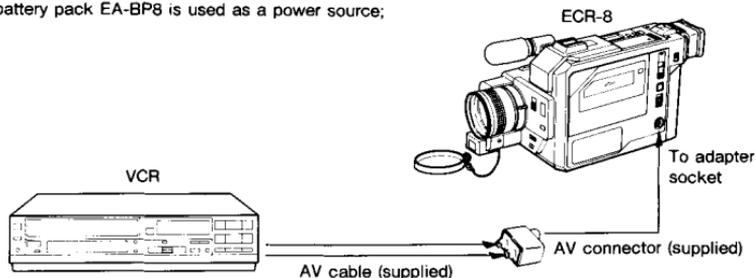


6 Attach the shield cover before attaching the cover.



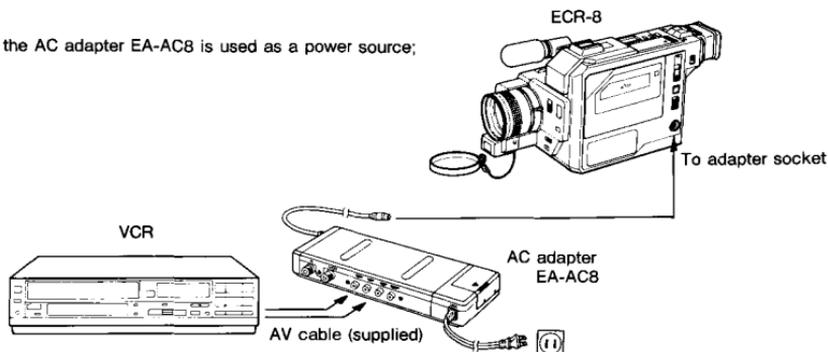
CONNECTION TO VCR

(A) When the battery pack EA-BP8 is used as a power source;



| SETTING | AV connector switch | AV cable | VCR |
|---------------------------|---------------------|---------------------------------|------------------------|
| Dubbing from ECR-8 to VCR | OUT | Video (Yellow) Audio (White) | VIDEO IN AUDIO IN |
| Dubbing from VCR to ECR-8 | IN | Video Audio | VIDEO OUT AUDIO OUT |

(B) When the AC adapter EA-AC8 is used as a power source;



| SETTING | AC adapter | AV cable | VCR |
|---------------------------|------------------------|---------------------------------|------------------------|
| Dubbing from ECR-8 to VCR | VIDEO OUT AUDIO OUT | Video (Yellow) Audio (White) | VIDEO IN AUDIO IN |
| Dubbing from VCR to ECR-8 | VIDEO IN AUDIO IN | Video Audio | VIDEO OUT AUDIO OUT |

HOW TO DUB THE PRE-RECORDED TAPE

(For operation of the VCR, refer to its operation manual.)

*Make connection as illustrated in page 25.

Dubbing from ECR-8 to VCR:

1. Set the VCR/Camera selector of the ECR-8 to VCR position.
2. Load the VCR with a new tape and set it at recording mode.
3. Press the PLAY button of the ECR-8.

Dubbing from VCR to ECR-8:

1. Set the VCR with the pre-recorded tape at the playback mode.
2. Load the ECR-8 with a new tape and set the VCR/Camera selector to VCR position.
3. While pressing the REC button, press the PLAY button.

Note: ● Dubbing introduces some degree of picture quality deterioration.

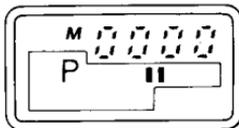
- Connect a TV to the VCR and confirm that the playback picture and sound are normal.
- Dubbing is possible with a VCR of any format (8mm/VHS/Beta) so long as it follows the NTSC TV standard.

INSERT RECORDING

You can insert (record) video/audio through the ECR-8 onto the pre-recorded tape as follows:

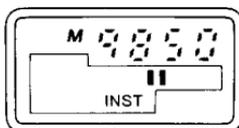
1. Load the ECR-8 with the pre-recorded tape which you want to make an insertion.
2. Set the VCR/Camera selector to VCR position.
3. While observing the picture of the recorded tape in the viewfinder, press the PAUSE button at the position to be the end of the insert part.
4. Press the reset button and the memory button successively. The counter resets to '0000', and 'M' is displayed in the message window.

MESSAGE WINDOW



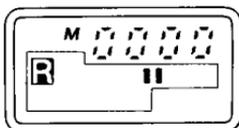
5. Rewind the tape back to the point where you want to start the insertion, and leave the ECR-8 in PLAY+PAUSE mode. (STILL ADV button is effective for accurate hunting.)
6. While pressing the INSERT button, press the REC button, and 'INST' is displayed in the message window.

MESSAGE WINDOW



7. If you want to make an insertion with a TV or a VCR, press the PAUSE button again to release the pause mode.
8. If you want to make an insertion through camera recording, set the VCR/Camera selector to CAMERA position, and press the start/stop button for insert camera recording. Red record indicator in the viewfinder comes on.
9. The insert recording stops at the counter reading '0000'. 'INST' disappears and 'R' is displayed in the message window.

MESSAGE WINDOW



10. Set the VCR/Camera selector to VCR position to confirm the insertion. (Rewind and play back the tape.) Press the memory button and 'M' in the message window disappears.

FOR BETTER CAMERA RECORDING

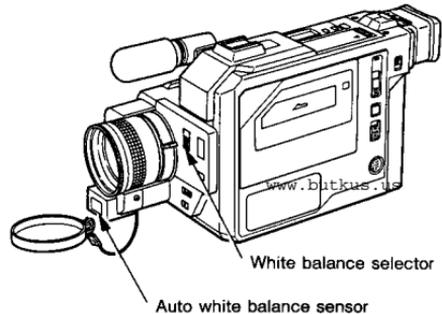
White Balance

What's White Balance?

The colors of the pictures recorded by video camera differ according to the color temperature under which the shooting is done. The ECR-8 like any video camera responds differently depending on the weather or the time, even under the seemingly same sunlight. The adjustment necessary to assure natural color condition is called "white balance adjustment".

The white balance will be automatically adjusted when the white balance selector is set to AUTO. Usually keep the selector at this AUTO position.

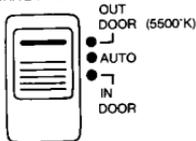
Be sure not to cover the auto white balance sensor.



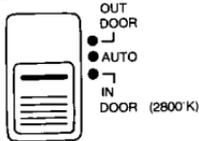
PROGRAMME MODE

For best results, when the white balance of the light is adjusted to 2800°K or 5500°K as in a studio, use the programme mode by selecting one of the color temperature settings. While in programme mode, the viewfinder's white balance indicator blinks.

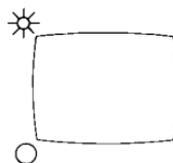
WHITE BALANCE



WHITE BALANCE



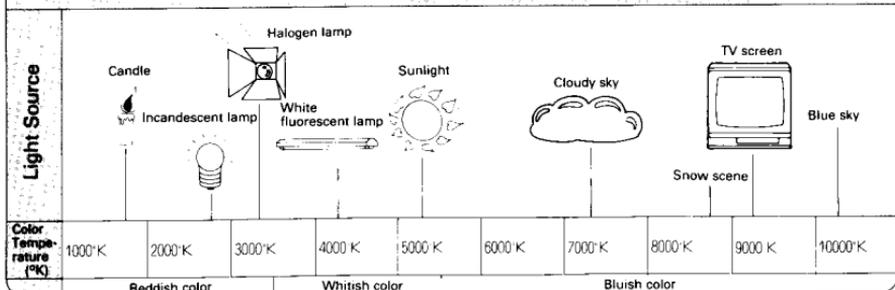
White balance indicator



VIEWFINDER

Color temperature of light source:

The color temperature is a term to express the characteristic of the light, and the unit is Kelvin (°K). The larger the value of color temperature, the bluish the picture, and the smaller the value, the reddish the picture. The value is not directly related with the luminosity.



Focus

AUTOFOCUS

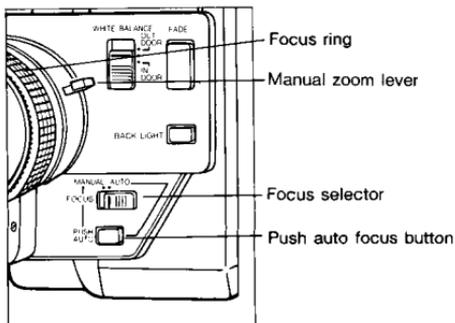
Set the focus selector to AUTO, and the focus is adjusted automatically.

MANUAL FOCUS

1. Set the focus selector to MANUAL.
2. Zoom up the subject.
3. Adjust the focus by turning the focus ring.

Note: ● To focus the image, set the zoom lever at the telephoto position to make the object as large as possible in the viewfinder.

- If focused in the wide position, the object may go out of focus when you zoom to the telephoto position.



PUSH-AUTO FOCUS

When the focus selector is on MANUAL, the autofocus only functions while the push auto focus button is pressed.

Note: Focus is adjusted in approx. 2 seconds, so press the push auto focus button before starting camera recording to get a well-focused picture from the beginning of the recording.

Exceptions of Autofocus

Under the following situations, the autofocus can not function properly, and select manual focus mode.

- * When shooting a subject through glass.
- * When shooting a subject with shiny surface.
- * When shooting an oblique subject.
- * When shooting subjects which are located at a distance and close up at a same time.
- * When shooting a subject with distinct horizontal stripes.
- * When shooting a flat subject like a white wall.
- * When no part of the subject is in the focusing zone frame.
- * When shooting with the macro close-up function or with a special lens attached.
- * When shooting moving subjects like moving crowd.

OTHERS

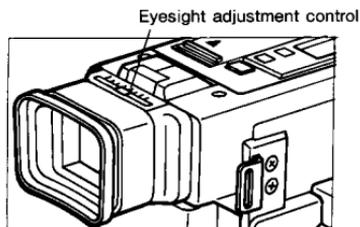
Eyesight Adjustment

What is Eyesight Adjustment Control?

Since each person's eyesight is different, an eyepiece adjustment is provided to compensate for the difference. Each time the camera is used, or when it is used by a different person, the eyepiece should be adjusted. If it is not adjusted properly, the eyes will get tired, or correct focusing cannot be performed.

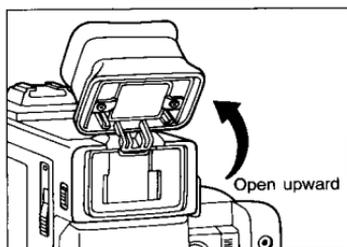
How to adjust

1. Press your eye closely to the eye cup.
2. Adjust your eye until you are able to see the subject through the viewfinder clearly by moving the eyesight adjustment control.



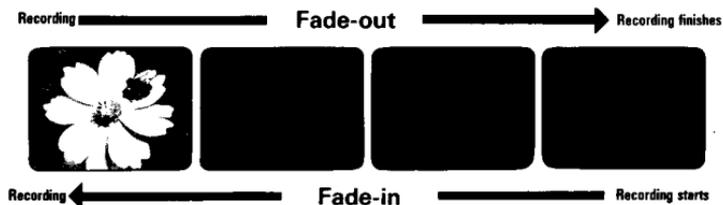
Eyecup

Open upward when viewing apart from the viewfinder.



Fade Button

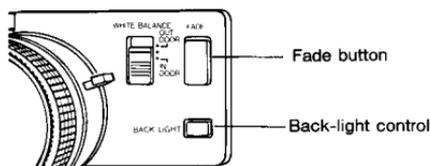
While pressing the FADE button, the picture is faded-out. Releasing the FADE button will make fade-in recording.



Back-light Control

When the background is excessively bright or/and when the sky largely comes into view, during shooting, the object appears blackish.

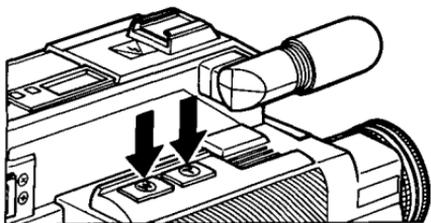
In such a case, reduce the causes of "back light" or/and press the back-light control button while observing the viewfinder.



Zooming

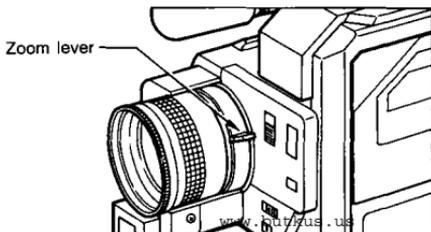
Power Zooming:

Press the power zoom control for smooth power zooming between wide-angle (W) and telephoto (T) position.

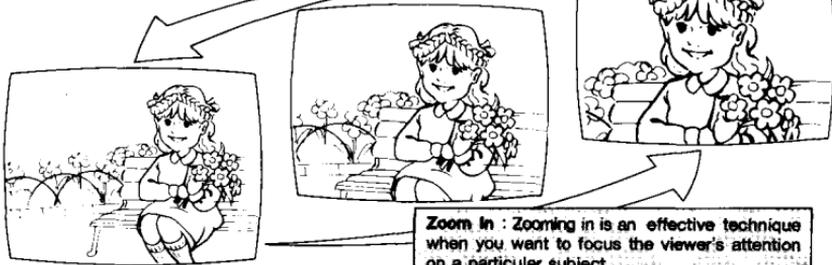


Manual Zooming:

Use the zoom lever for manual zooming. With quick zooming you can give a scene some shock effect.



Zoom Out: Zooming out can be very effective way of showing the surrounding circumstances and to explain the development of the story.

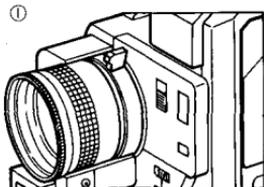


Zoom In: Zooming in is an effective technique when you want to focus the viewer's attention on a particular subject.

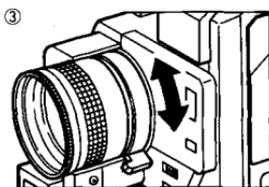
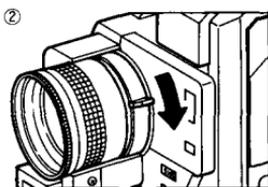
Macro Close-up

Macro close-up recording mechanism is built-in. The macro function allows shooting small plants and tiny insects. It is also possible to shoot photos from a photo album and enjoy watching them on a TV screen.

- ① Set the focus selector to Manual.
- ② Turn the manual zoom lever all the way to "MACRO" position.
- ③ Turn the zoom ring slowly and focus on the desired object.

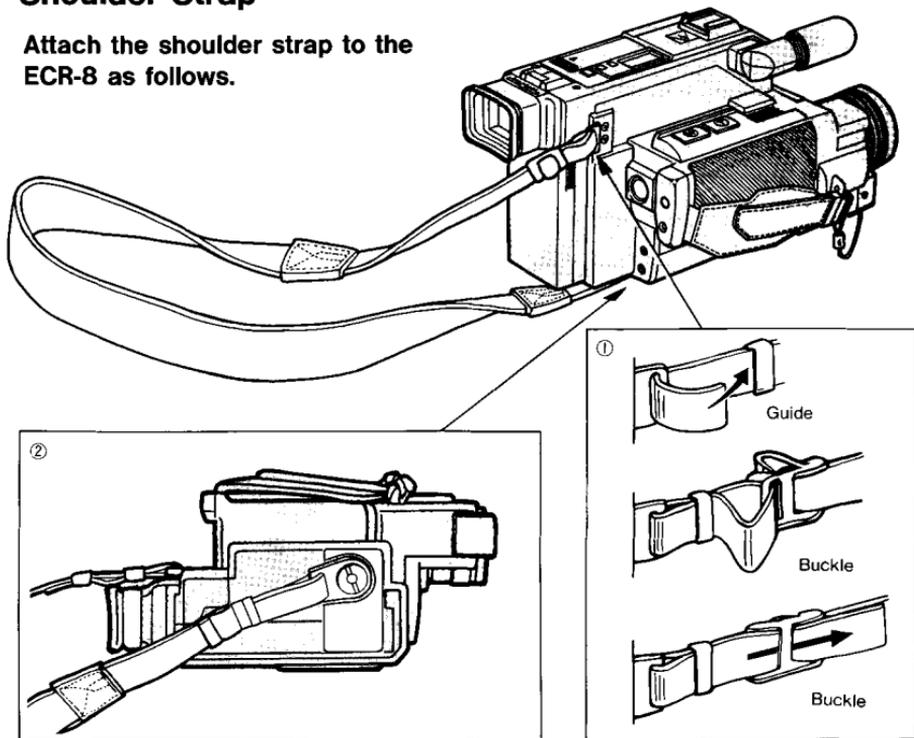


Focus selector



Shoulder Strap

Attach the shoulder strap to the ECR-8 as follows.



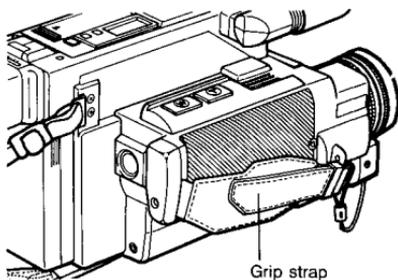
② Screw the strap-mounting screw on the other end of the strap into the tripod mount screw hole on the bottom of the ECR-8, with the guide pin in the guide hole on the bottom.

① Guide one end of the strap through the fitting on the side of the ECR-8, the strap's guide and the adjustment buckle. Adjust the strap to a comfortable length.

Grip Strap

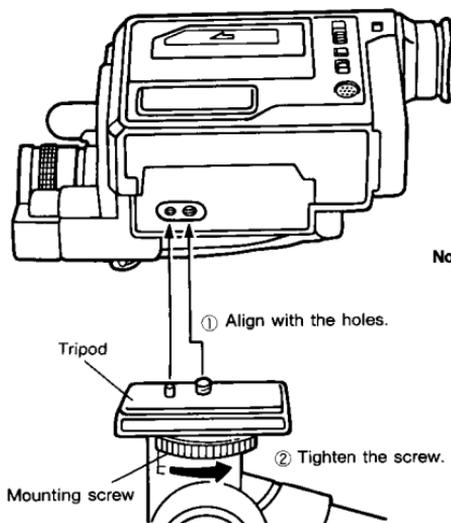
Adjust the grip strap as follows.

1. Position your right hand so that your fingertips can easily manipulate the start/stop button and the power zoom control.
2. Adjust the strap so that your grip on the camera feels secure.



Tripod Receptacle

Mount the ECR-8 on the tripod as follows:

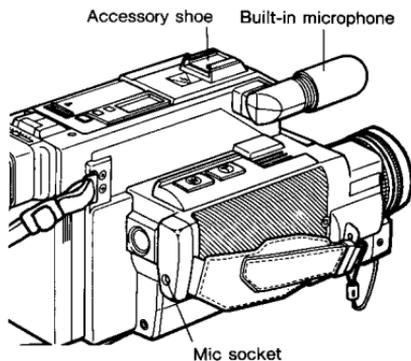


Note: ● Use a tripod designed specifically for video cameras.

● Use the tripod in a stable position with its legs fully spread.

Built-in Microphone

The built-in microphone is a sensitive uni-directional electric condenser microphone. The microphone socket is provided for the use of an external microphone.



Accessory Shoe

Accessory shoe is provided for mounting a video light.

CAUTIONS

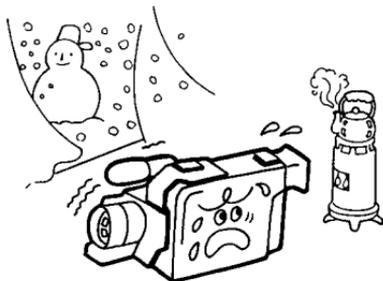
Please read these cautions before operating the ECR-8.

If Condensation Forms Inside the ECR-8

Condensation (dew) forms when warm air comes in contact with a cold object, for example on a window in a heated room in winter.

Condensation may form in the ECR-8 and damage the tape and the video heads, if:

- The ECR-8 is in a room where the heater has just been turned on.
- The ECR-8 is in a room with steam or high humidity.
- The ECR-8 is brought from cold surroundings into a well-heated room.
- The ECR-8 is suddenly brought from cool surrounding, such as an air-conditioned room or car, to place which is hot and humid.



- When condensation has formed inside the ECR-8, blinking an indicator appears on message window and the power will automatically turn off in a few seconds.

When a video cassette inside, turn the ECR-8 on and take out the cassette immediately. Wait about one hour before operating the ECR-8 again. Depending on the surrounding conditions, it may take several hours before the ECR-8 can be used again.

- As condensation forms gradually, it may take about 10-15 minutes after condensation starts forming till the ECR-8 turns itself off.
- In an extremely cold place, condensation may freeze and turn into frost. In this case, it may take quite some time for the frost to melt and turn into dew.
- When you bring the ECR-8 from a very cold place, e.g. the ski slopes, into a heated room, keep it in a tightly closed plastic bag or the like to prevent condensation.
- The ECR-8 has a built-in heating device which prevents condensation. This heater operates even if the ECR-8 is switched off provided the AC adapter is used as power supply.

Operating Place



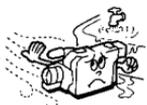
Keep the ECR-8 away from Oily Smoke and Steam

Never use or leave the ECR-8 in places where there is oily smoke or steam.



Operating Temperature

Use the ECR-8 under conditions where the temperatures are between 0°C and 40°C and where the humidity is between 35 and 80%. To avoid deformation of the outer cover and other damage, do not leave it exposed direct sunlight for any length of time, also never leave it behind in a closed automobile.



Protect the ECR-8 from Humidity and Dust

Avoid places with high humidity or much dust. Keep the ECR-8 in a well-ventilated place to prevent mildew from forming on the lens.



Keep the ECR-8 away from Heaters
Keep the ECR-8 away from heaters to protect the body and internal parts.

Operating Place



Keep the ECR-8 away from TV sets
Do not place the ECR-8 near a TV set because it might impair the picture and sound quality of the recorded tape.



Keep Magnets Away
Never bring a magnet or magnetized object such as fluorescent lamps, motors and TV sets close to the ECR-8 because this could adversely affect its performance.



Keep the ECR-8 Away from Areas with Strong Electric Waves
The picture may become distorted when the ECR-8 is used in places with strong electric waves, such as near TV and radio antennas.

Outdoor Operation



Operation on the Beach
Take care not to splash any water on the ECR-8 and protect it from sand.



Operation in the Rain
Take care that the ECR-8 does not get wet.



Do not Use the ECR-8 in a Thunderstorm
Stop operating the ECR-8 when a thunderstorm approaches. Especially operation in a wide open space would be dangerous.

For Your Safety



Never put any Objects Inside
Never insert any object other than a video cassette into the ECR-8. If any object is dropped into it or if any liquid is spilled into it, consult your video dealer. Operating it with some foreign matter inside may cause fire or electric shock.



No Fingers Inside
Touching internal parts of the ECR-8 is very dangerous and may cause serious damage to the ECR-8. Do not attempt to disassemble it. For internal inspection, adjustment or repairs, consult your video dealer.

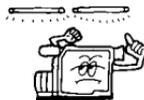


In Case of Accident
Do not use the ECR-8, if it emits smoke, strange noises or smell. Have it checked by your video dealer and repaired, if necessary.

Handling



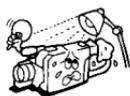
Handle with Care
Never drop the ECR-8 or expose it to strong shocks. Shocks during use may result in picture noise.



Proper Illumination for Shooting
Shooting should be done under lighting as bright as possible to obtain vivid color pictures. Fluorescent lamps tend to give natural colors a hard appearance, so choose suitable lighting.



Cover the Lens with the Cap after Shooting
Disconnect the cables from the ECR-8 after you finish shooting and be sure to place the lens cap on the lens.



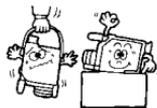
Keep the ECR-8 Away from Strong Light

Do not expose the ECR-8 to strong light, because the heat from it may cause deformation and other damage.



Keep Magnets Away

Do not bring any magnets, electric clocks or magnetized objects near the ECR-8, because it might impair the picture and sound quality of the recorded tape.



When Carrying and Transporting the ECR-8

- Take care not to bump the ECR-8 against any object.
- Remove the video cassette from the ECR-8 in case of transporting it.



When the ECR-8 is not Used for Long period of Time

Turn the ECR-8 on occasionally and operate it to protect the ECR-8 from malfunction.



When the ECR-8 is not Being Used

Remove the video cassette and turn the ECR-8 off with the Operation Switch.



Battery Pack

Be sure to recharge the battery pack soon after use.



Cleaning the ECR-8

- The body of the ECR-8 is made of plastic materials. Never use benzine, thinner or other chemicals for cleaning, because the color might be changed and the body surface might be damaged.
- Wipe the body and operation panel with a soft, clean cloth. For persistent stains, use a cloth moistened with mild detergent and water, and then wipe with a dry cloth.
- Clean the lens with a blower brush (used for photo cameras) or lens cleaning tissue (used for glasses and cameras).



Keep Insecticide Spray Away

Never spray things like insecticide on the lens and body of the ECR-8. Also, never leave rubber or vinyl objects in contact with any part of it for a long time, because the color might change and the body surface might be damaged.



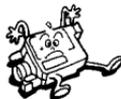
Connection to other Equipment

Carefully read the operating instructions for all equipment to be connected. Keep these operating instructions handy for future reference.



Tripod

Never use the compact, portable tripod since some of them is hard to fit the camera onto it and is unstable.



Never place the ECR-8 with the cassette compartment side facing down

Never use the ECR-8 with the cassette compartment facing down as this might cause uneven winding and slacking of the tape.

When connected to AC adapter

- Be sure to turn the power of the ECR-8 to OFF before turning off the power of the adapter.
- The dew preventing circuit of the ECR-8 activates even if the power switch is turned to OFF.
- When the camera is not to be used for a long time, keep the AC adapter plug disconnected for saving electricity.

Video Cassette Tapes

- Keep the video cassettes away from places with direct sunlight, strong heat, high humidity and much dust.
- Keep the video cassettes away from magnetized objects as they could adversely affect the tape.
- Never drop the video cassettes or subject them to other strong shocks.
- Wind the tape evenly.
- To store a video cassette, put it back into its case and place it upright.

TROUBLESHOOTING

- Check the following points once again.

| SYMPTOM | CAUSE | REMEDY |
|---|--|---|
| Power Source | | |
| Power does not turn on. | Safety devices are operating. | After turning the power off, disconnect the power cord of AC Adapter and then plug it in again. |
| | The ECR-8 is in the stand-by mode. | Press the STAND BY button. |
| Power turns on, but it turns off again immediately. | Battery pack is exhausted. | Use a fully recharged battery pack. |
| | Condensation has formed in the ECR-8. | Wait until the dew disappears. |
| Camera Recording | | |
| Power is on, but no picture appears on the viewfinder. | ECR-8 is in the stand-by mode. | Press the STAND BY button. |
| | Lens is covered with the lens cap. | Remove the lens cap. |
| | The iris is not properly adjusted. | Check FADE button. |
| Camera recording cannot be performed. | The tab of the cassette is out. | Slide the tab in. |
| Color is not proper. | TV set is not properly tuned. | Properly tune the TV set. |
| | White balance is not properly adjusted. | Check the white balance selector. |
| | Illumination is not proper. | Use proper lighting. |
| Picture is obscure. | Lens is covered with dust. | Clean the lens. |
| | Subject is not in focus. | Check the focus selector. |
| Autofocus does not work. Out of focus. | Focus selector is in Manual position. | Set the focus selector to Automatic. |
| | Shooting an object which does not suit autofocus shooting. | Set the focus selector to Manual. |
| Playback | | |
| No playback picture is reproduced on the TV set. | Connection with TV set is not correct. | Connect the ECR-8 to the TV set correctly. |
| | TV set is not tuned to the video playback channel. | Tune TV set to the video playback channel. |
| Color is not proper. | White balance was not properly adjusted during shooting. | Adjust the white balance before shooting. |
| Playback picture is not in color. | Video heads are clogged with dirt. | Consult qualified service personnel. |
| | Video heads are abraded. | Consult qualified service personnel. |
| Playback picture has large amounts of flickers, like flake of snow. | Tape is old. | Use new tape. |
| Playback picture is unstable. | Battery is insufficient. | Recharge the battery pack. |

- Refer servicing to qualified service personnel.

If the playback image appears to be like the one below.



Cleaning of the video head is necessary. The recording and playback capability lowers if the video head becomes contaminated with dirt, etc. The head can also be cleaned easily by means of a cleaning cassette (available in the market).

Wear out of the head:

Similar to the needle for record player, the video head also wears out. When this wears out, a clear picture may not be obtained. In such case, replace the video head. For replacement, consult the store you've bought the ECR-8.

SPECIFICATIONS

| | |
|---------------------------|---|
| Television system: | EIA standard (525 lines, 60 fields) NTSC color signal |
| Tape format: | 8mm video format |
| Tape speed: | 14.345mm/sec. (0.56 in./sec.) |
| Record/playback time: | 120 min. with P6-120 tape |
| Fast forward/rewind time: | Approx. 3.5 min. with P6-90 tape |
| Imaging device: | 1/2" CCD (Charge Coupled Device) |
| Camera lens: | 6:1 zoom lens f/1.2 with auto aperture control Focal length 9-54mm Power zoom and macro functions Filter diameter 49mm |
| Focusing: | Auto focus (Piezo focus), manual focus and push auto focus |
| Electronic viewfinder: | Built-in 2/3" B&W CRT w/eyesight adjustment |
| Microphone: | Uni-directional electric condenser microphone |
| White balance control: | Full auto white balance plus 2 programmed positions |
| Minimum light intensity: | 7 lux at f/1.2 |
| Video output level: | 1.0 Vp-p 75 ohms unbalanced |
| Audio output level: | 400mV 600 ohms |
| Microphone input level: | -70 dB 4.7K ohms |
| Earphone output: | 8 ohms (mini jack) |
| Dimensions: | 124 × 256 × 137mm (4.9 × 10.1 × 5.4in.) |
| Weight: | 1.3kgs (2.9 lbs) without battery pack |
| Power source: | DC 7.2V |
| Power consumption: | 7.0W (recording mode) 0.7W (stand-by mode) |

Weight and dimensions are approximate.

Specifications and design are subject to change without prior notice.