

**JVC**  
**NIVICO**

**PORTABLE VIDEO  
RECORDER**

**MODEL**

**PV-4500**

**OPERATION MANUAL**







# Operation Manual for Model PV-4500 Portable Video Recorder

1/2" EIAJ standard type Model PV-4500 is a portable video tape recorder designed for easy manipulation, greater, mobility and sturdy construction.

For exclusive use with this video recorder, Model GS-4500 Portable Video Camera and Video Monitor are available.

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## CAUTION:

Avoid recording materials protected by the Copyright Law.



## FEATURES

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- 1 Model PV-4500 conforms with the EIAJ-1 standard pattern.
- 2 Specially designed for greater mobility.
- 3 Fully automatic video and audio recording eliminates level adjustment.
- 4 Available for monitoring reproduced pictures with viewfinder of Model GS-4500 Portable Video Camera.
- 5 3-way power supply: Household AC power, chargeable battery pack and automobile battery.



Model GS-4500

Model PV-4500

## IMPORTANT NOTICE

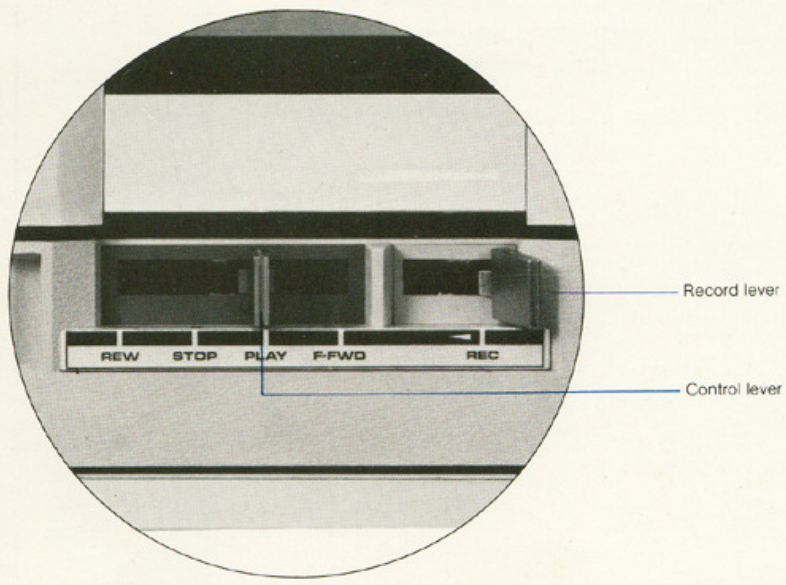
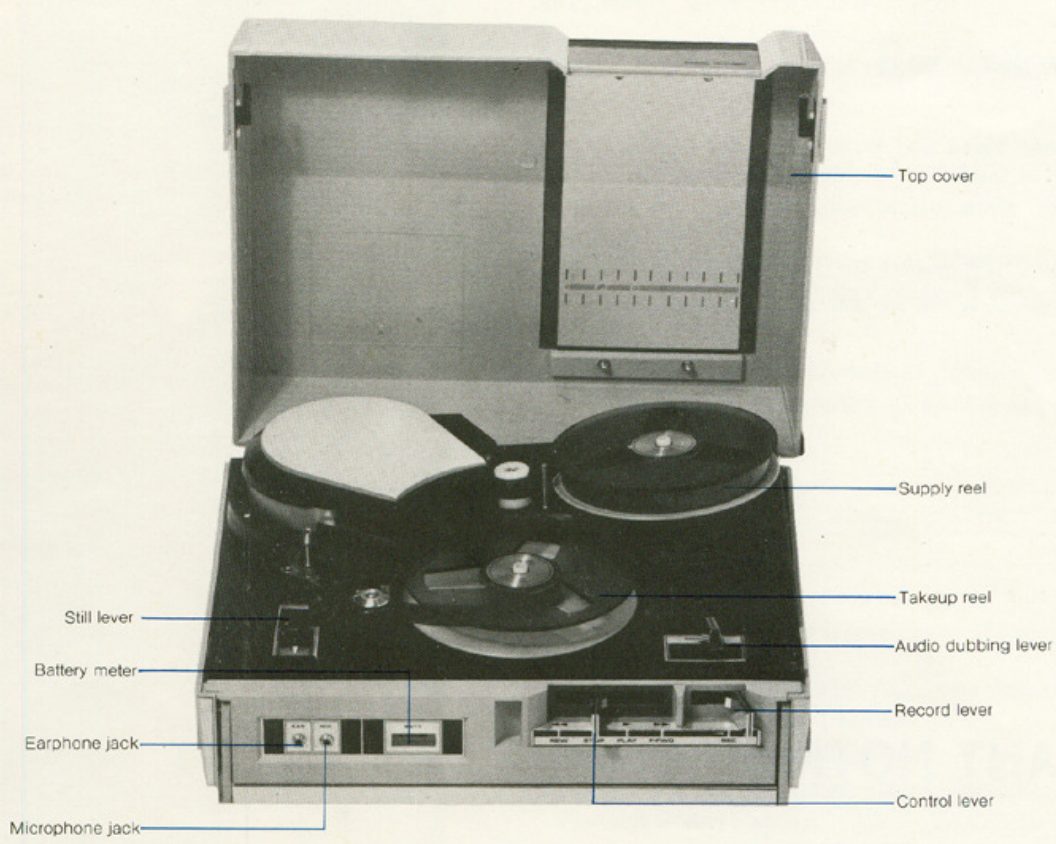
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Model PV-4500 is a precise machine. Read the following notes before use please.

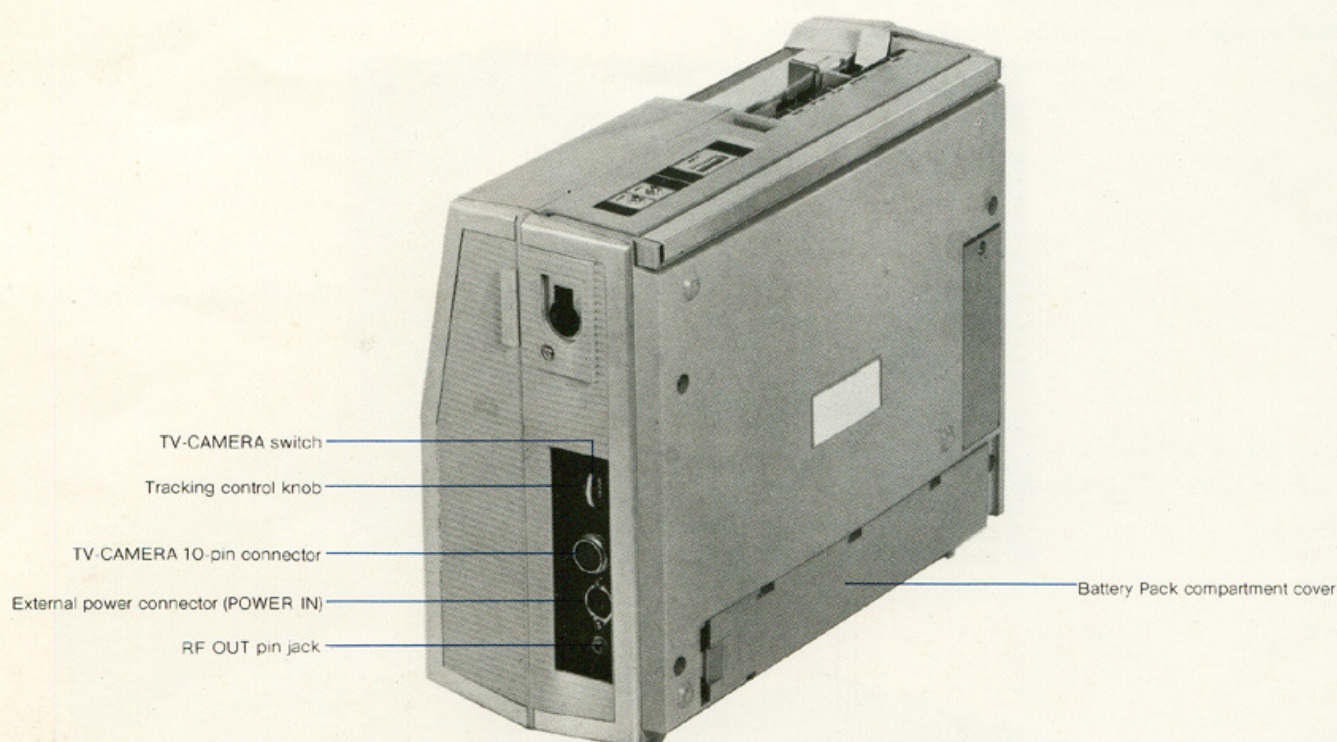
- 1 Keep away from high temperature, high humidity, extremely low temperature, dusty places and strong magnetic areas.
- 2 Avoid giving severe shocks and vibration. Do not place anything on, or push, the head cover.
- 3 Rotary video head is extremely precise in construction. Do not touch unless cleaning is necessary.
- 4 When reproduced pictures become noisy or dirt accumulates on tape, clean the drum, fixed heads and other points of contact with tape. Moisten soft cloth with the accompanying cleaning fluid in doing so.  
(See page 15 for cleaning procedure.)



# TERMINOLOGY OF PARTS







Control lever ..... Manipulates recording, (together with record lever), playback, fast-forward or rewind and turns on power supply simultaneously. (Power supply is also cut off at **STOP** position.)

Record lever ..... Makes recording mode jointly with control lever at **"PLAY"** position.

Audio dubbing lever ..... Use this lever and the control lever at **"STOP"** position for recording sound only on video-recorded tape.

Still lever ..... Still picture is viewed with this lever while control lever is in **"PLAY"** position. When manipulating still lever, be sure to pull until the lever stops.

Head drum ..... Contains built-in rotary video head.

Earphone jack (EAR)..... Connect earphone for monitoring.

Microphone jack (MIC)... Connect microphone for recording sound.

TV-CAMERA switch ... Changes connection either to video monitor or camera.

Battery meter (BATT) ... Measures consumption of built-in battery.

TV-CAMERA 10-pin connector ..... Connects GS-4500 Video Camera or Video Monitor.

External power 4-pin connector (POWER IN) Connect AC Power Adapter (ACP-22K) or an automobile battery.

RF OUT pin jack ..... Acts as an output terminal when RF Unit is built in.

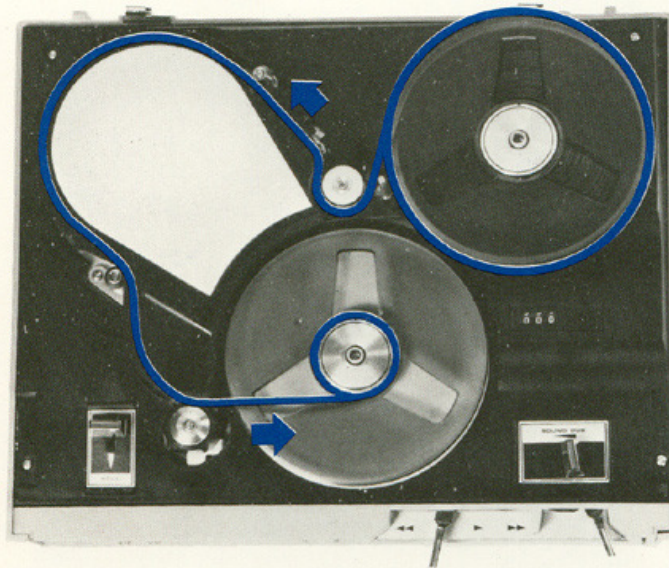
Tracking control knob ... Adjusts tracking when playing back a tape recorded on other VTR. Disorderly track causes blurry picture or noise. If this happens, turn the control knob slowly until picture is balanced.

**IMPORTANT :**  
When reproduction is finished, be sure to turn the control knob forward the arrow until it reaches **"OFF"** with a clicking noise.

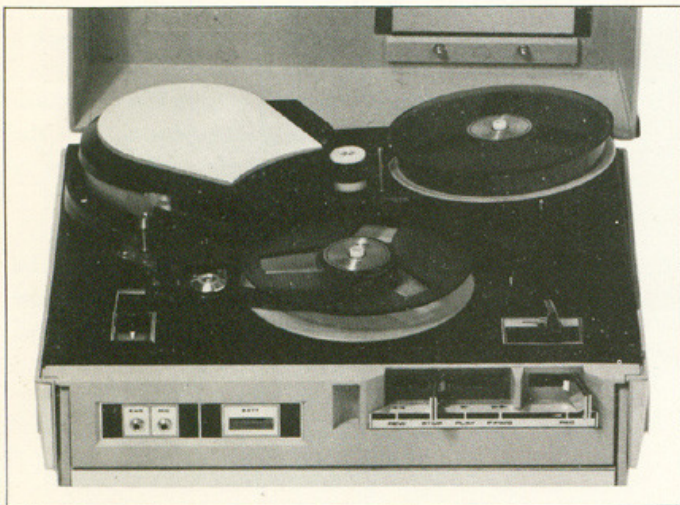


# TAPE THREADING

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- 1 Make sure that control lever is in "STOP" position.
- 2 Set supply and takeup reels on respective reel mounts. Thread tape from supply reel as illustrated, and wind tape on takeup reel a few turns counterclockwise.
- 3 Check if each reel is secure on reel mount.



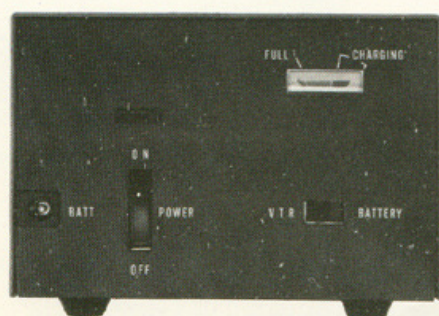
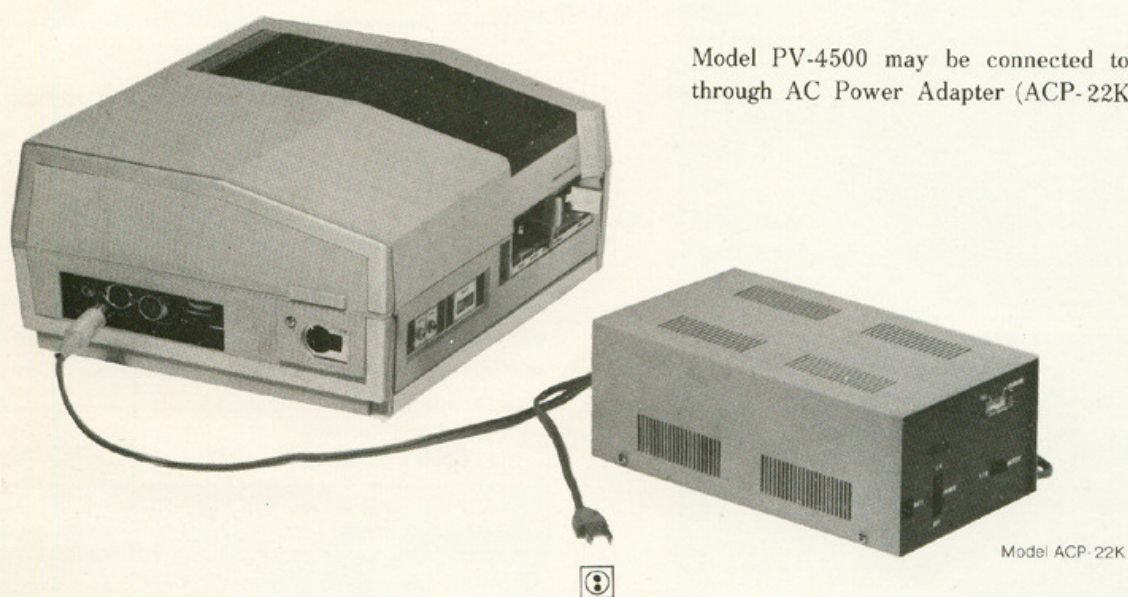


# POWER SUPPLY

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There are three sources of power supply to PV-4500 -AC power adapter (ACP-22K), exclusive battery pack (PBP-1) and automobile battery.

## 1. WHEN USING AC POWER ADAPTER

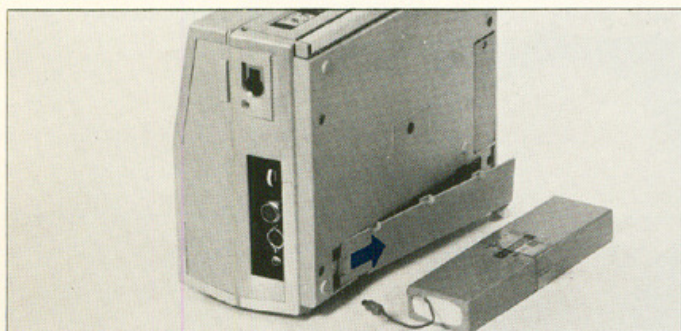


### NOTE :

Make sure that "VTR-BATTERY" switch on front panel of ACP-22K is in "VTR" position and operation lever of model PV-4500, in "STOP" position. Do not change over the VTR-BATTERY switch of ACP-22K while operating model PV-4500.



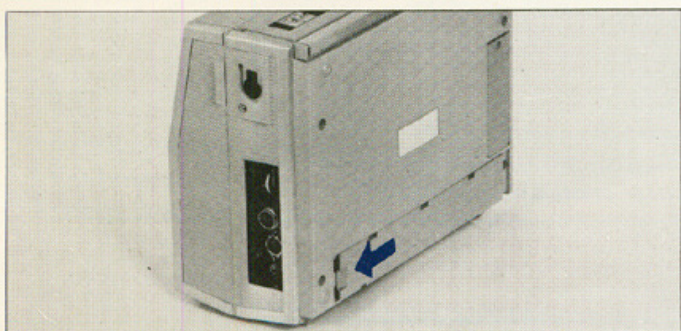
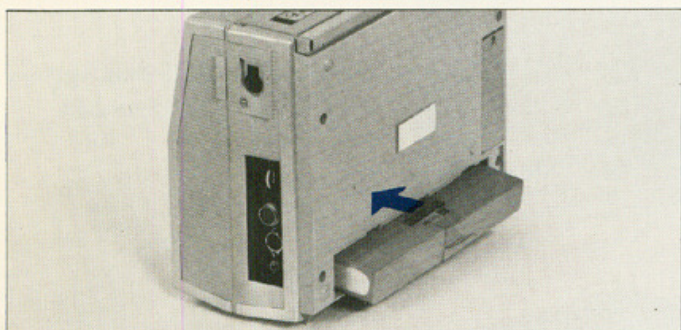
## 2. WHEN USING BATTERY PACK EXCLUSIVELY FOR PV-4500



**1** Slide the cover of battery compartment at rear to right and remove the cover.

**2** Connect battery cord, and then place battery pack in the compartment.

**3** Close battery compartment by sliding cover to left.

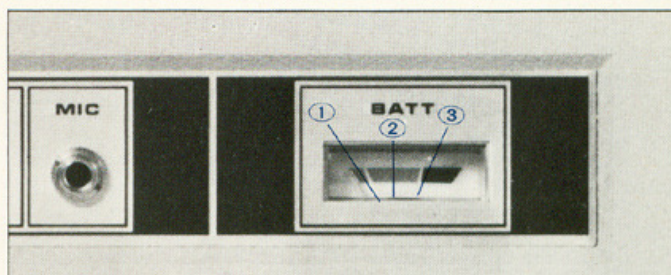


### NOTES:

PBP-1 is chargeable. (See page 9 for charging procedure.)

Fully charged battery is capable of standing over an hour of continuous use while connected to GS-4500 camera, at temperature above 50° F.

Battery is in normal condition if "BATT" meter points to ①. Replace battery or charge by using AC power adapter if meter points to ② or thereabouts. (See page 9). When the meter points to ③, check if control lever is at "STOP" position, whether safety switch has pushed the tape back or if fuse is broken.



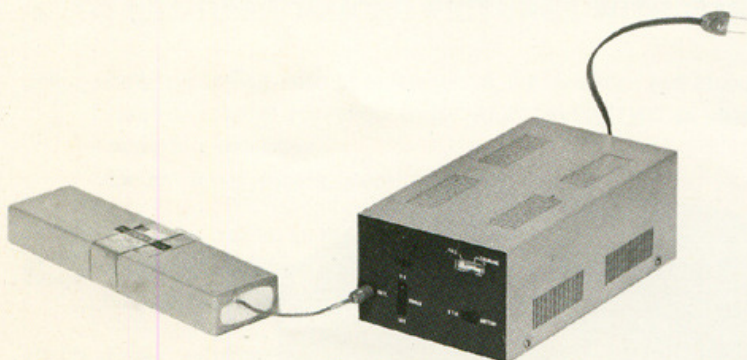
### CAUTIONS FOR USING PBP-1:

- ※ PBP-1 is a lead acid battery. When the battery pack is used at a cold place (below 5°C-41°F), its function is reduced to half that of normal temperature. Be careful in this respect.

### CHARGING PBP-1:

- ※ Use AC Power Adapter (ACP-22K) to charge PBP-1. 8 to 10 hours are needed for charging PBP-1 that has been discharged completely.





**1** Set "VTR-BATT" switch of ACP-22K at "BATT" position and plug the PBP-1 into "BATT" jack of ACP-22K.

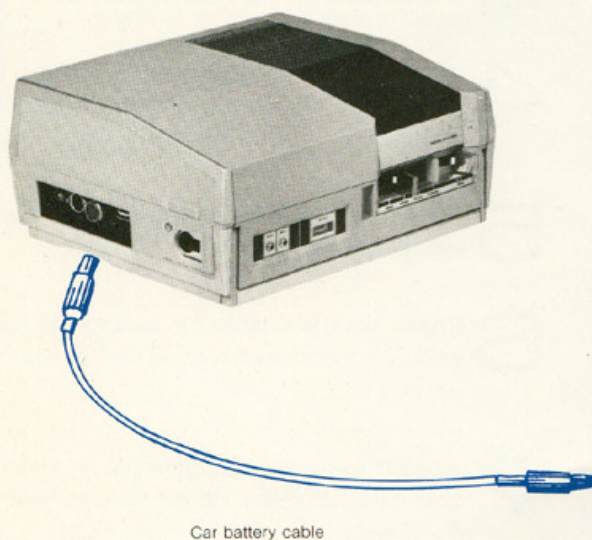
**2** Connect AC power cord of ACP-22K to household AC power outlet and turn POWER switch to "ON".

**3** Indicator of ACP-22K points to "CHARGING". When charging begins and to "FULL". When it is completed.

### CAUTIONS FOR STORING PBP-1 :

- ※ Charge PBP-1 immediately after use. The battery may over-discharge if left unused for a lengthy period, causing possible damage to components or shortening its life.
- ※ PBP-1 discharges itself while left unused. When storing the battery pack, charge it at least once every six months.
- ※ Be careful not to short-circuit the battery output. Short-circuit causes battery to discharge over of current which is very clangerous.
- ※ When storing PBP-1, select a dry, cool place to prolong battery life.
- ※ When discarding PBP-1, do not burn it. The battery pack is sealed and may explode in fire.

### 3. WHEN USING AUTOMOBILE BATTERY

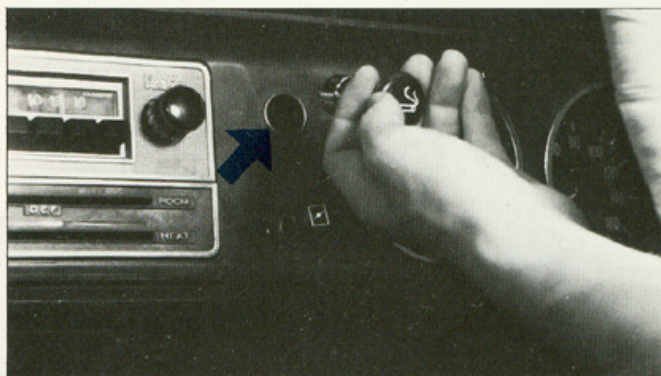


Connect of DC output plug (4-pin) of the car battery cable(option) to "POWER IN" of PV-4500 and DC input plug of the cable to cigarett-lighter.

#### NOTE :

When connecting the car battery cable, make sure that control lever of PV-4500 is in "STOP" position. When operating PV-4500 on car battery, it is recommended to keep the engine running.

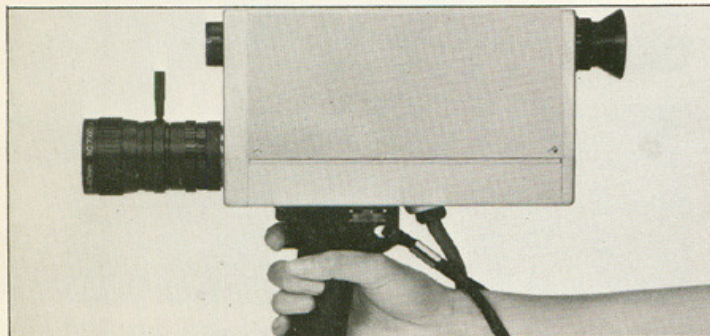
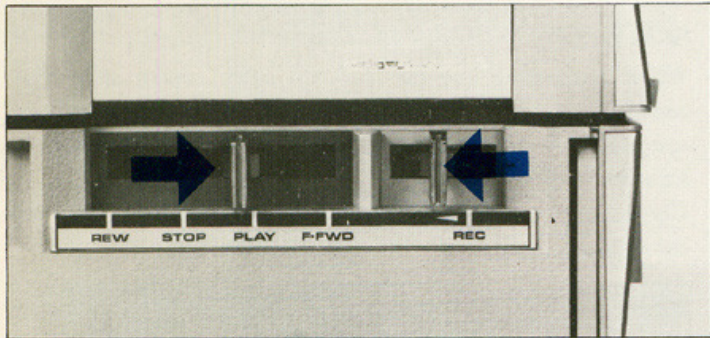
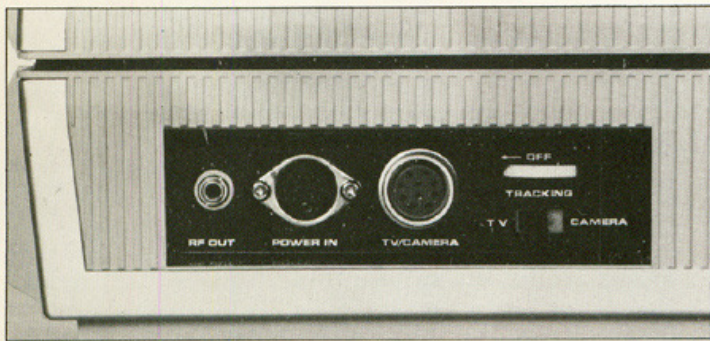
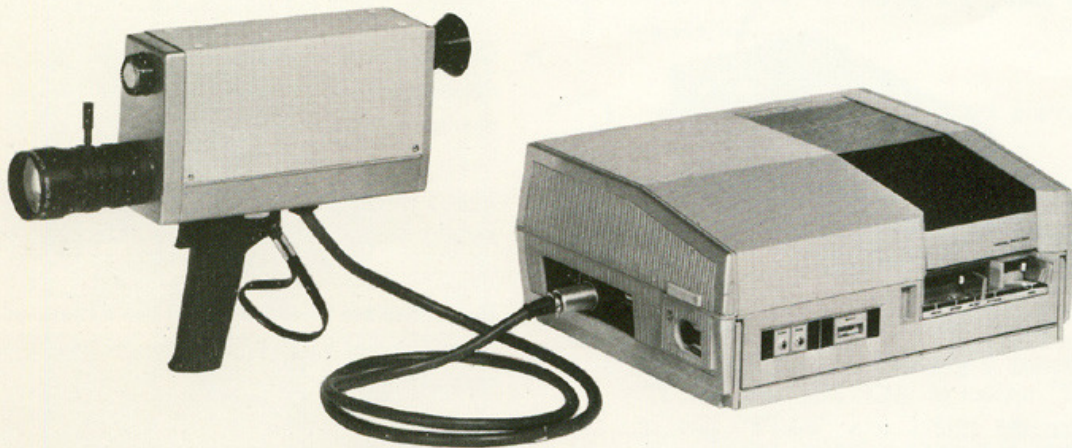
Car battery cable is connected for negative (-) grounded car battery.



If the car battery cable is used on positive grounded car battery, please contact the dealer you purchase it.



# RECORDING AND PLAYBACK WITH MODEL GS-4500 PORTABLE VIDEO CAMERA



## RECORDING

- 1 Set "TV-CAMERA" switch to "CAMERA".
- 2 Slide recording lever to left and leave it there. Then move control lever to right until it reaches "PLAY". Both the PV-4500 and GS-4500 are now ready for action. Aim camera at the object to be recorded.
- 3 Object appears on viewfinder of the camera. Adjust zoom lens for desired angle and correct focus.
- 4 Press grip switch of the camera. Pilot lamp of the viewfinder lights to indicate that recording is in progress and simultaneously, tape starts to turn.
- 5 Press grip switch again to stop recording. Pilot lamp goes out and the tape stops.
- 6 Repeat same procedure for succeeding scenes. Spend at least one minute on recording each scene for a good program.
- 7 When microphone is connected to video's "MIC", priority goes to microphone rather than to built-in microphone of the camera.
- 8 Sound being recorded can be monitored by connecting earphone to "EAR" jack of PV-4500.



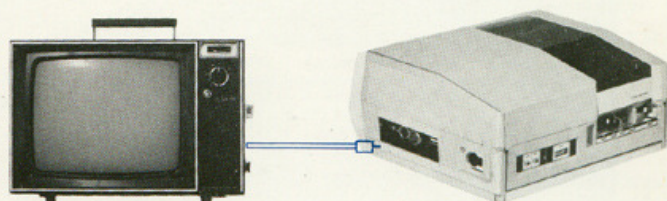
## 1. TO SEE REPRODUCED PICTURES WITH VIEWFINDER OF PORTABLE CAMERA (GS-4500)

- 1 Stop recording with grip switch of the camera, and change control lever of PV-4500 from "REC" to "STOP" to check recording condition.  
(Do not touch record lever; it resets by itself.)
- 2 Move control lever to "REW" and rewind. When tape is rewound to a fixed point, bring control lever to "STOP" before setting it to "PLAY".
- 3 Press grip switch when viewfinder of the camera turns bright to see reproduced pictures.  
(Pilot lamp does not come on when reproducing.)
- 4 Connect earphone to "EAR" jack of PV-4500 to monitor sound while watching reproduced pictures in the viewfinder.



## 2. TO SEE REPRODUCED PICTURES WITH VIDEO MONITOR

- 1 Connect PV-4500 to Video Monitor with Model VC-15P Cable (sold separately).
- 2 Set TV-CAMERA switch of PV-4500 to "TV".
- 3 Set TV-VTR switch located on rear of Video Monitor, to "VTR".
- 4 Move video's lever of PV-4500 from "STOP" to "PLAY" to reproduce pictures and sound with Video Monitor.

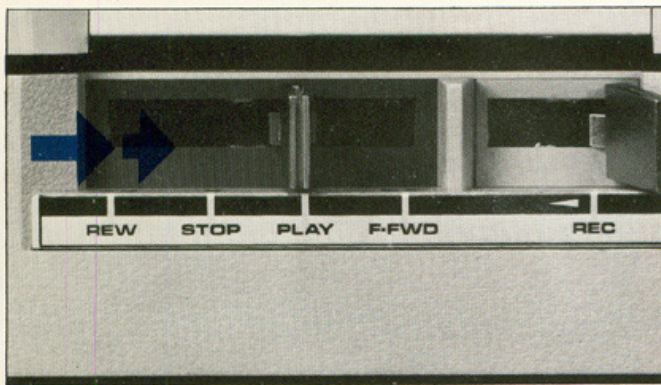
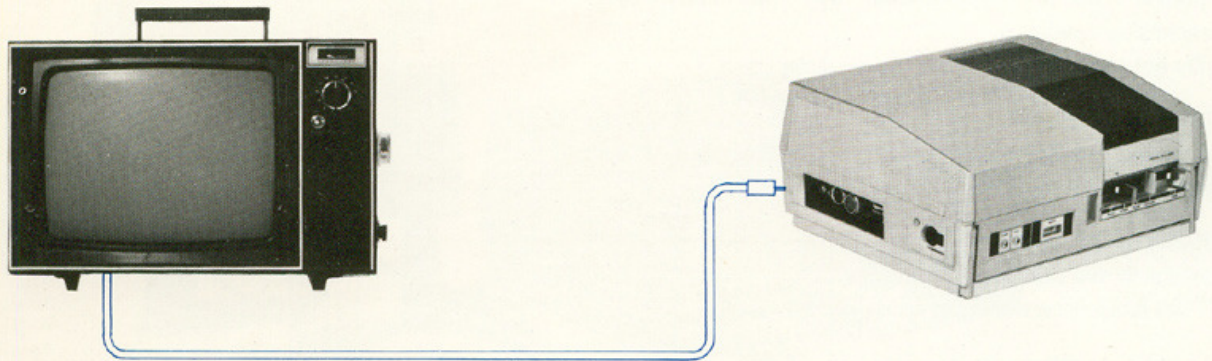


### NOTE:

When using Video Monitor, avail yourself of AC Power Adapter wherever possible to prevent Battery Pack from going down.



# RECORDING AND PLAYBACK WITH VIDEO MONITOR

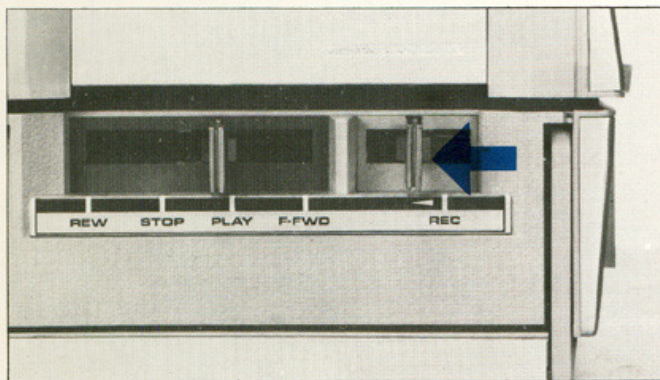


## RECORDING

- 1 Connect portable video and video monitor with VC-15P Cable sold separately.
- 2 Set "TV-CAMERA" switch of portable video to "TV".
- 3 Set "TV-VTR" switch located on rear of monitor TV to "VTR".
- 4 Turn back numerals on video's tape counter to "000" with reset button and move recording lever to "REC".

### NOTE:

Adjust monitor TV for clearest pictures.



## PLAYBACK

Bring control lever to "REW" for rewinding tape. When tape has been rewound to desired place while observing tape counter, reset control lever from "REW" to "STOP", and then to "PLAY".



# HOW TO RECORD SOUND (DUBBING)

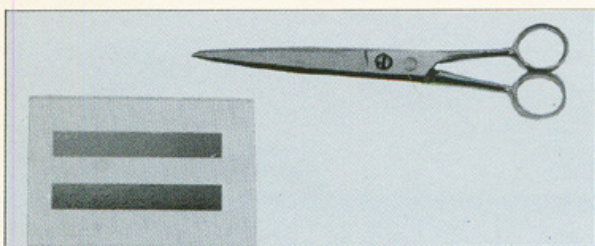
Follow procedures below in dubbing sound while monitoring on the viewfinder of Video Camera.

- 1) Link Video Camera with TV/CAMERA connector and set "TV/CAMERA" switch to "CAMERA".
- 2) Move operation lever to "PLAY" while pushing the sound dubbing lever.
- 3) Talk while watching viewfinder of video camera. Microphone built into camera does the sound dubbing operation

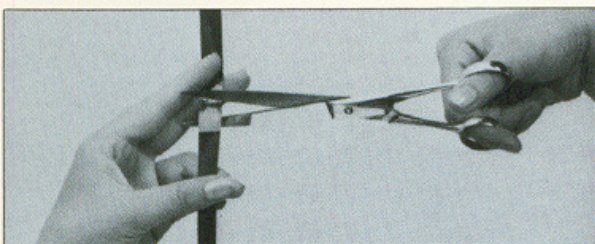
## NOTE :

You cannot dub sound by using monitor cable VC-15P.

## TAPE SPLICING

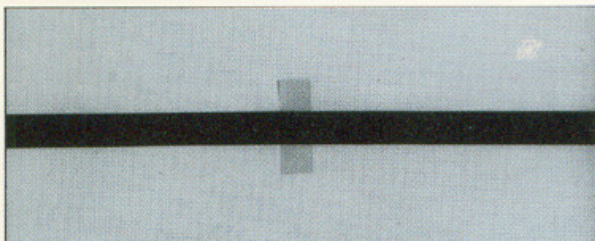


Creased or wrinkled video tape deteriorates picture quality when played back. Cut off such portion and splice tape in the following manner.

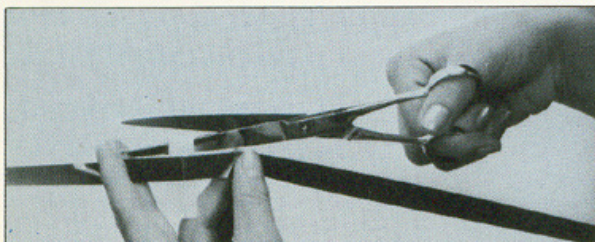


1 Take a pair of scissors and the accompanying splicing tape.

2 Cut off creased or wrinkled portion. Place one end of the tape over the other, and cut at right angles.



3 Match both ends exactly — one end should not overlap the other, nor should there be any opening between tape ends. Then mate with splicing tape on the side that does not touch the head.



4 Trim off excessive splicing tape to ensure smooth feeding.



# SPECIFICATIONS AND ACCESSORIES

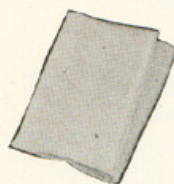
Video recording system	: Rotary 2-head system
Tape width	: $\frac{1}{2}$ inch
Tape speed	: 16.322 cm/s (6.426 ips)
Reel size	: 5 inches
Recording time	: 35 minutes or more at maximum
Video input	: 0.5 to 1.5 Vp-p, 75 unbalanced
Video output	: 1 Vp-p, 75 unbalanced
Resolution	: 240 lines
Video signal-to-noise ratio	: Better than 40 dB
Audio input level	: MIC — 65 dB, 600 unbalanced Line: — 20 dB
Audio output level	: 0 dB $\pm$ 2 dB (open)
Audio frequency response	: 150 to 7,000 Hz
Audio-Signal-to-noise ratio	: Better than 40 dB
Operating ambient temperature range	: 0 to 40°C 32°F to 104°F
Semiconductors	: 101 transistors, 7 IC, 76 diodes
Input/output terminals	: 10-pin connector (TV-CAMERA) 4-pin connector (POWER IN) Microphone jack Earphone jack
Power requirement	: 12 V DC
Power consumption	: 20 W (including GS-4500 Portable Video Camera)
Dimensions	: 147 (H) $\times$ 333 (W) $\times$ 270 (D) mm (5-13/32 $\times$ 13-3/32 $\times$ 10-19/32")
Weight	: 7.3 kg (16.1 lbs), including PBP-1 Battery Pack and VR-12P Reel

## STANDARD ACCESSORIES:

Above specifications are subject to change without notice.



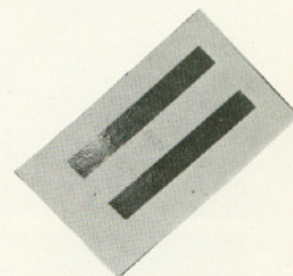
Model VR-12P  
Empty Reel



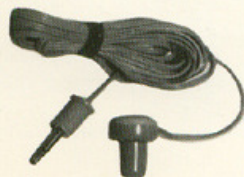
Cleaning cloth



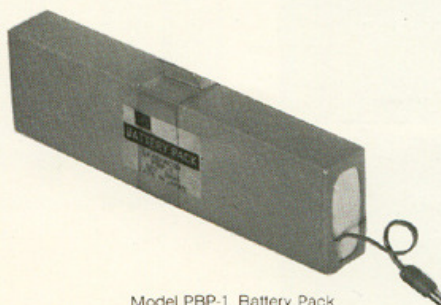
Cleaning fluid



Splicing tape



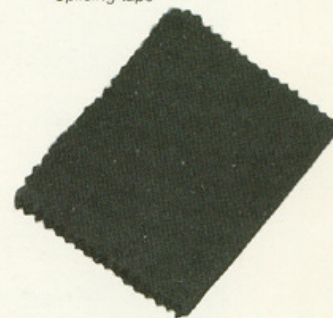
Earphone



Model PBP-1 Battery Pack



Spare fuse



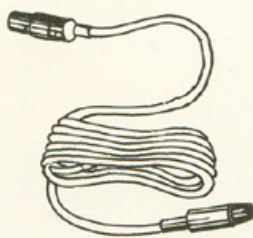
Polishing cloth



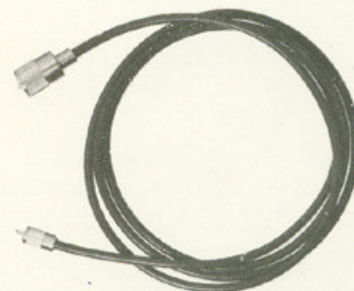
## OPTIONAL ACCESSORIES



Model VT-12P Video Tape

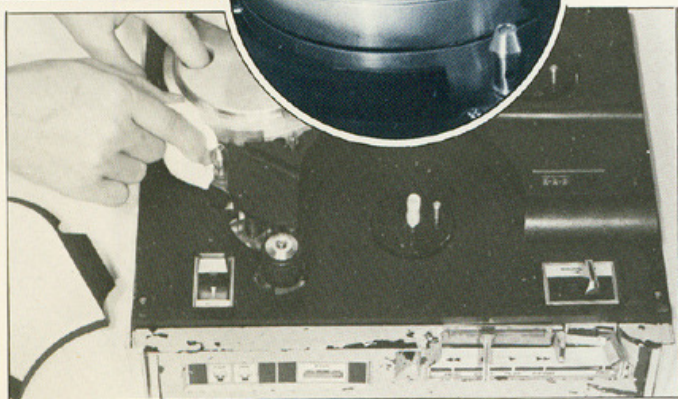
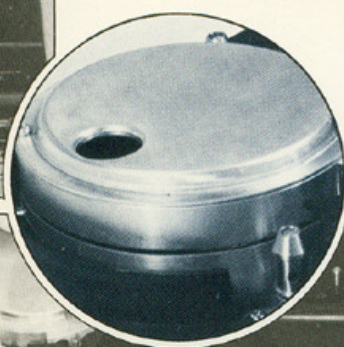


Car battery cable



Model VC-15P Cable

## HEAD CLEANING



Dusty parts in tape passage, especially the head assembly, deteriorates picture quality in playback.

- 1 Set video's control lever to "STOP". (Wait until rotary video head stops completely.)
- 2 Lift and remove video head cover.
- 3 Put your finger into hole in top of video head as illustrated, and turn rotary head so that one of the head tips comes to position ② in the photo.
- 4 Dampen gauze with cleaning fluid and gently rub the head tip to remove dust.



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