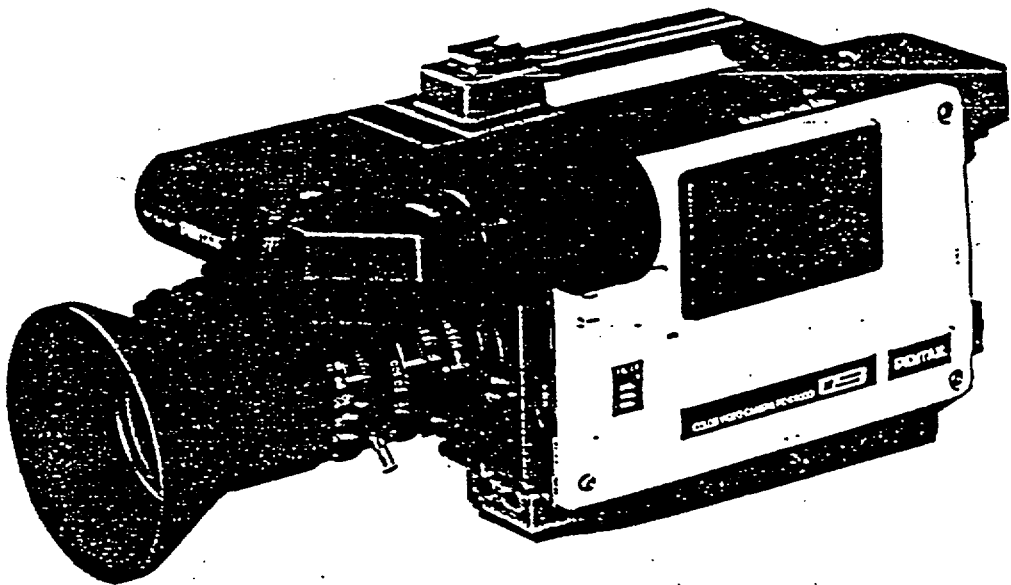


PENTAX

COLOR VIDEO
CAMERA

PC-K9000A



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

MODEL PC-K9000
COLOR CAMERA
Operation Manual

1. GENERAL

The PC-K9000 is a single-tube color camera using a 2/3-inch high band SATICON* tube. The K9000 is developed mainly for broadcasting and sophisticated commercial applications and is provided with high performance and function which are equal to those of a 3-tube color camera. Not only a single set operation with a VTR but also system operation using several cameras can be performed by combining the camera with the remote operation unit (OP-77).

2. FEATURES

2.1 High performance

- **High resolution pick-up tube**
The high carrier SATICON* (2/3-inch, 5 MHz) offers the wide frequency band width of the luminance signal and high horizontal resolution of 360 lines or more.
- **2H enhancer**
The same 2H enhancer used in a 3-tube color camera offers high vertical resolution.
- **High sensitivity and signal-to-noise ratio**
A single carrier frequency separation system and a low noise preamplifier are incorporated to yield a very high signal-to-noise ratio of 50 dB or more.
Even when the quantity of light is insufficient at open aperture, setting the high gain switch to +12 dB and using a 10x f1.6 lens enable an object to be shot under subject illumination of down to 30 lx.
- **Color shading correction**
The K9000 is provided with the color shading correction circuit to produce a flat picture regardless of the frequency separation system.
- **Vertical and horizontal false signal reduction**
The vertical and horizontal false signals are reduced to obtain a high picture quality almost the same as that of a 3-tube color camera.
- **Color reproduction**
Since each of four channels (Y, R, G and B) is provided with a processing amplifier which controls color signal waveform, the color signals are balanced and the color reproduction distortion resulting from changing a pick-up tube is reduced.
As a result, precise color reproduction can be obtained and the color reproduction of each camera is balanced.
- **Automatic Beam Optimizer (ABO) circuit**
An automatic beam optimizer circuit is adopted to suppress the comet-tailing and blooming and to expand the dynamic range.

* SATICON (Trademark)

2.2 Operational functions

- **CAM/BAR select switch**

Since the color bar generator necessary for studio use camera is built in, camera output signals or color bar signals are easily selected by the CAM/BAR select switch.

This camera output and color bar signals switching can be controlled remotely by combining the camera with the remote operation unit (OP-77).

- **Masking circuit**

When two or more cameras are used and they are switched by a switcher, the built-in masking circuit facilitates the matching of color tone among cameras.

- **Auto white balance and preset function**

Auto white balance circuit is built in and the balance is supported by capacitors so that precise white balance can be obtained.

When white balance is obtained, the LED inside the viewfinder lights on. (See Item 6.4)

A preset switch is provided for an emergency shooting and it is convenient to select preset color temperature such as 3200 K for indoor and 6500 K for outdoor shooting without setting the auto white balance.

- **Servo zoom and servo iris type 10x f1.6 lens**

This lens has the same function as conventional studio use camera lens. Both zooming and iris can be operated by the servo system and a full range macro and manual iris operation are possible. When the camera is used in a studio, the zoom and focus of the lens can be remotely controlled by the control handles (option) respectively.

- **Turret type color temperature compensation filter and filter position display**

Three color temperature compensation filters for indoor and outdoor uses and fluorescent lamp are provided. Shooting under the best condition can be operated by selecting the filter in accordance with the color temperature of the object illumination source. Selected filter is displayed by the color of the LED inside the viewfinder so that the filter position can be checked.

- **VTR interface**

Since the VTR interface circuit which corresponds to the BCRs [U-matic, VHS] is built in, and only switching operation enables the combination use of the camera and the VTR.

- **Complete system operation**

By combining the camera with the operation unit (OP-77), several cameras can be performed in a system.

The following items can be remotely controlled by the OP-77 and the communication between the operation panel and the camera can be performed by the intercom.

Remote control items by OP-77

R GAIN, B GAIN, CAM/BAR, HIGH GAIN (+6, +12 dB), MASTER BLK, G BLK, B BLK, SC PHASE, H PHASE, IRIS CONT, IRIS A/M, AUTO WHT, GAIN PRESET, CALL TALLY, NORM/NEGA, CABLE LENGTH SELECTION, INTERCOM

- **Independent monitor output**

In addition to the line output, the monitor output is provided so that the color video outputs can be monitored by the waveform monitor, picture monitor or color monitor.

- **Built-in genlock unit**

For EFP and ENG applications, the camera can be used in genlock with other cameras by feeding the genlock input signal to the GENLOCK connector on the camera head.

- **High gain select switch**

The 0 dB/ +6 dB/ +12dB high gain switch provides sharp and clear pictures even in locations under insufficient lighting conditions.

3. SPECIFICATIONS

System:	Single carrier, frequency separation
Pick-up tube:	2/3-inch high-band Saticon (H4170)
Sync system:	Internal or external
Video output	
Line:	1 Vp-p, 75 Ω , BNC or specified 10-pin connector
Monitor:	1 Vp-p, 75 Ω , BNC
Horizontal resolution:	360 lines
S/N:	50 dB
Sensitivity:	f4, 2,000 lux (90% reflectance chart)
Minimum illumination:	23 lux (f1.6, +12 dB) 30 IRE
Auto white:	Built-in (with a memory)
Enhancer:	2 H
Color bar:	Built-in
Lense:	f1.6, 10 to 100 mm, servo system, with zoom lens and macro lens for all iris
Lens mount:	Bayonet
Iris adjustment:	Automatic or manual (Remotely controlled)
Color temperature filters:	3,200 K, 4,500 K, 6,500 K
External mic input:	-72 dB, low impedance
Intercom jack:	Supplied
NEG/NORM conversion:	Available
FADE:	Available
Power consumption.	10.6W approx.
Weight:	4.6 kg (10.1 lb) (W/Lens and VF)
Dimensions:	100(W) x 212(H) x 322(D) mm (3.94 x 8.35 x 12.78 in.)

4. RATINGS

(1) **Input signal**

- (a) **Genlock input:** Black burst or VBS
0.3 \pm 0.1 Vp-p sync,
0.3 \pm 0.1 Vp-p burst
- (b) **Viewfinder AUX input:** VBS 1 Vp-p, BNC
- (c) **Audio signal (Microphone output):** -60 dB m

(2) **Output signal**

- (a) **CAM OUT:** VBS 1 Vp-p, BNC

(3) **Ambient temperature**

(a) **Temperature range:**

All functions operates normally in the ambient temperature ranging from -10 to +40°C (14 to 104°F).

With the adjustment values provided after 30 minutes of warm-up as the reference, all the rated specifications shall be satisfied in the ambient temperature ranging from -10 to +40°C (14 to 104°F) without readjustment over changes of \pm 10°C (\pm 18°F) with respect to the adjusted values.

The allowable changes are as below.

- o **Video signal level change:** \pm 5% max of reference level

(4) **Radio frequency interference:**

Operation in a MW or VHF 120 dB electrical field shall not affect the practical functions of the camera.

(5) **Supply voltage fluctuations:**

Stable operation is provided with a +10.5 to 14V DC power supply.

5. EXAMPLES OF SYSTEM CONFIGURATION

5.1 ENG application

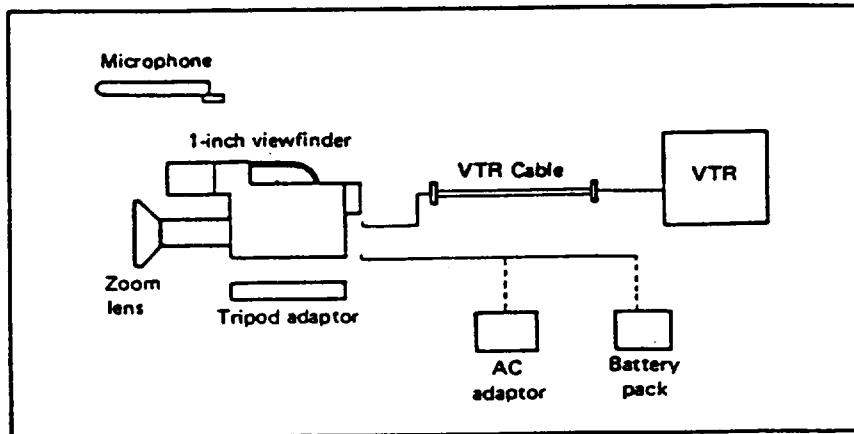


Fig. 5-1

5.2 Studio application

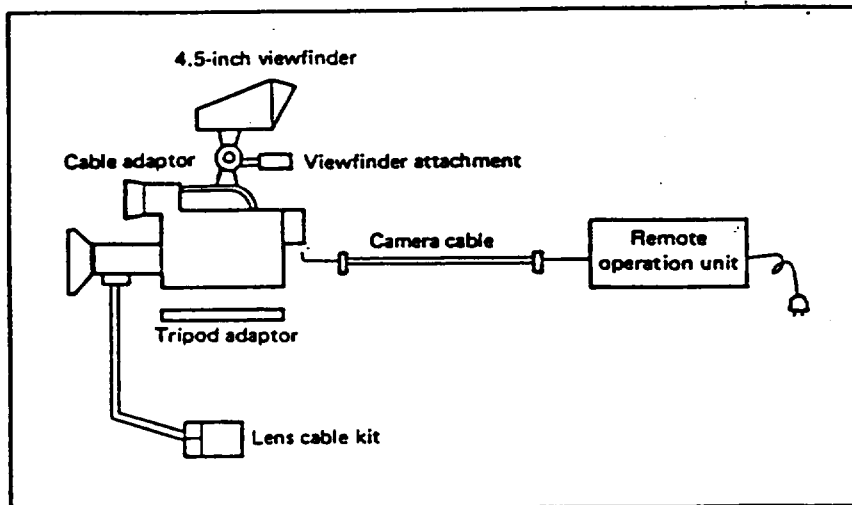


Fig. 5-2

Suggested Compositions

	Component	Type	ENG	Studio	Remarks
1	Camera Head	PC - K 9000	○	○	
2	1-inch Viewfinder	PC-VF4 PC-VF9	○		
3	4.5-inch Viewfinder	GM-5		○	
4	Viewfinder Adaptor	AT-10		○	For 4.5-inch Viewfinder
5	Zoom Lens	N10x10BRM17	○	○	10 x zoom lens
6	Lens Cable Kit	ZL-20W		○	
7	AC Adaptor	AP-60A	○ * 1		
8	AC Adaptor/Charger	AP-61	○ * 1		
9	Battery Pack	DP-15	○ * 1		
10	Battery Adaptor	BA-7	○ * 1		For Anton/Bauer battery pack
11	Battery Adaptor	BA-7/BA-15	○ * 1		For DP-15
12	Operation Unit	OP-77		○	
13	VTR Cable 2m	C-201CE (10 pin)	○ * 2		For VHS & U-matic
14	VTR Cable 2m	C-201VE (14 pin)	○ * 2		For U-matic
15	VTR Cable 5m	C-501CE (10 pin)	○ * 3		For VHS & U-matic
16	VTR Cable 5m	C-501VE (14 pin)	○ * 3		For U-matic
17	Camera Cable 15m	C-152CC		○ * 4	
18	Camera Cable 50m	C-502CC		○ * 4	
19	Tripod Adaptor	TA-1	○	○	
20	Microphone	MC-7	△		
21	Carrying Case	CL-77	○		
22	Cable Adaptor	CA-7		○	For 4.5-inch viewfinder

○: Suggested system

△: Recommended

*: Select any one of the identical numbers in line with the application desired.

6. DESCRIPTION OF PARTS

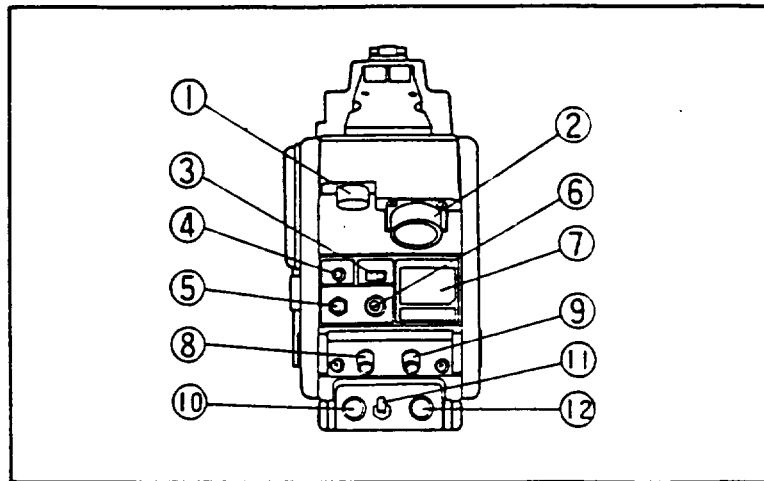


Fig. 6-1

- ① **VTR connector**
Connect the specified VTR cable to this connector when using the VTR.
- ② **CAMERA connector**
Connect the specified cable to this connector when using the operation unit OP-77 or β VTR.
- ③ **TRIGGER polarity selector switch**
Set the position corresponding with the connected VTR.
- ④ **CALL switch**
Used to call a operation panel operator only when the camera is connected to the operation unit.
- ⑤ **INTERCOM jack**
Used for headsets connection.
- ⑥ **Intercom LEVEL control**
Adjusts the intercom level.
- ⑦ **Nameplate**
- ⑧ **VIDEO output connector**
The VBS signal output is obtained.
- ⑨ **GENLOCK signal input connector**
Supply the black burst or color composite signal to this connector for genlock operation.
- ⑩ **FUSE**
- ⑪ **POWER supply input select switch**
Select the power source.

[VTR]* : The power supply is fed from the VTR.

[CAM] : It is fed from the operation unit.

[POWER] : It is fed from the AC adaptor or the battery.

- The setting is not available when the power supply capacity from the VTR is small or the VTR is operated with a battery.

- ⑫ External POWER supply input connector
Connect the AC adaptor or the battery to this connector.

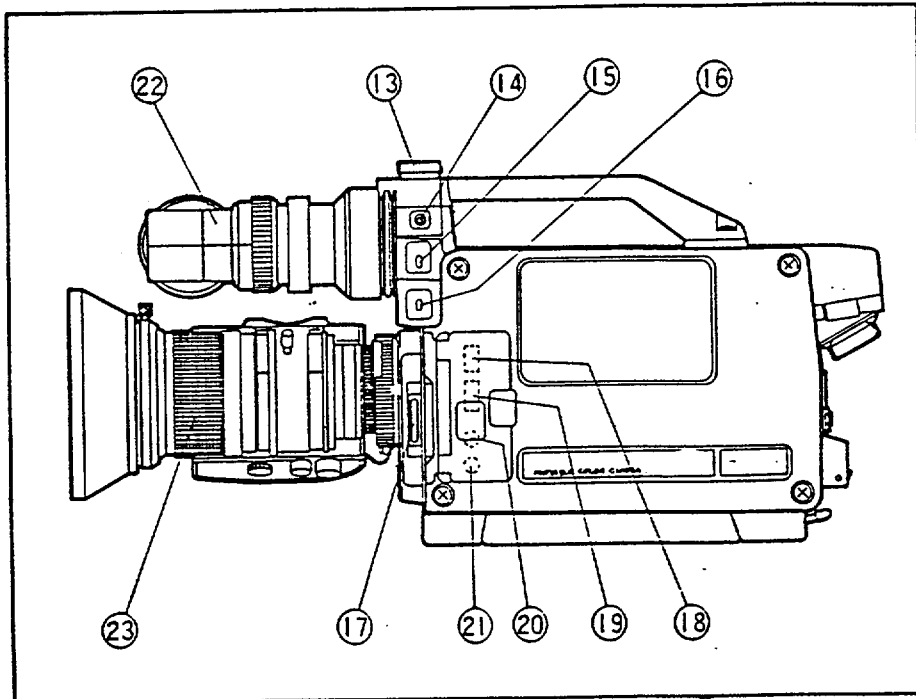


Fig. 6-2

- ⑬ Accessory shoe

- ⑭ INT MIC jack

- ⑮ LEVEL CHECK/REC CHECK switch

When the switch is set to LEVEL CHECK, tiger stripes appears on the VF screen by a signal exceeding 70% of the vated level.

Adjust the iris monitoring the tiger stripes.

The REC CHECK* setting is useful to quick check the recording. After recording, the recorded video is reversely reproduced for the last few seconds of the recording and then normally reproduced by setting to REC CHECK. The VTR is set to the pause mode. Press the VTR trigger switch ⑳ to start recording again.

- Some VTR can not be used for this operation.

- ⑯ POWER ON/OFF switch

Set to ON to operate the camera. When the switch is set to OFF, the camera is in the stand-

by mode and the power supply is fed to the lens circuit and the heater of pickup tube only.

Set the power supply input select switch (11) CAM if the camera in battery operation is not used for a long time.

The power supply to the camera is completely cut off and the battery loss is prevented.

(17) FILTER

Select the filter disk in accordance with the color temperature of the object illumination. The filter position is displayed on the viewfinder.

Color correction filter	Display	Filter No.	Illumination
3,200 K	Red	1	Tungsten lamp
4,500 K	Amber	2	Fluorescent lamp
6,500 K	Green	3	Outdoor

Table 6-1

(18) BAR/CAM select switch

The color bar signal is obtained by setting the switch to BAR. The color bar signal is available for adjustment of color monitor and color matching of the cameras.

(19) NEG/NORM select switch

The video signal polarity is reversed by setting the switch to NEG, which can be used as a special effect.

(20) High GAIN 12 dB/ 0 dB/ 6 dB select switch

Used to increase the gain of the amplifier for +6 dB or +12dB when the quantity of light is insufficient.

(21) AUTO/PRESET switch

White balance is automatically achieved by shooting a white object and setting the switch to AUTO. Check that the LED "W" lights when white balance is achieved after blinking, and set the switch to OFF.

If the white balance is not achieved and the LED blinks continuously, reselect the proper color temperature filter (17) and set the switch to AUTO again.

When the switch is set to PRESET, the LED "W" in the viewfinder lights. The white balance had been well obtained under tungsten lamp in the PRESET setting.

If there is no white object and it is difficult to perform the white balance setting, set the color temperature filter (17) to the position corresponding to the illumination to obtain the coarse white balance.

(22) 1-inch viewfinder

(23) Lens

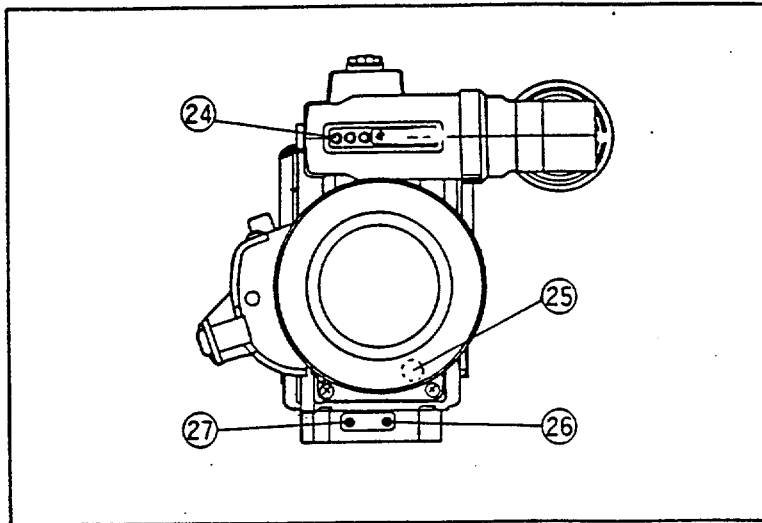


Fig. 6-3

- ②④ **TALLY lamp**
Lights on when the VTR is in the recording mode or when the camera is called from the ROU.
- ②⑤ **FADE switch**
Operates with the VTR trigger switch ③⑧ .
The fade operation is shown in Table 6-2 . (Refer to page 12.)
- ②⑥ **EARPHONE jack**
The VTR playback sound can be monitored.
- ②⑦ **EXT MIC jack**
The external dynamic microphone can be connected.

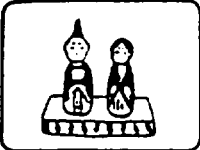

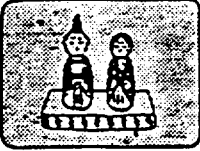




Fade mode	Fade switch	VTR trigger switch	Description
Fade-in	ON	ON	<p>The LED "F" inside the viewfinder lights on.</p>  <p>"F" lights on.</p> <p>Fading start (Fade-in)</p>  <p>"F" lights on.</p> <p>Picture fades in.</p>  <p>"F" lights on.</p> <p>Fading finish</p>  <p>"F" goes off.</p>
Fade-out	ON	ON	<p>The LED "F" inside the viewfinder lights on.</p>  <p>"F" lights on.</p> <p>Fading start</p>  <p>"F" lights on.</p> <p>Picture fades out.</p>  <p>"F" goes off.</p> <p>Fading finish</p>

Table 6-2 Fade Operation

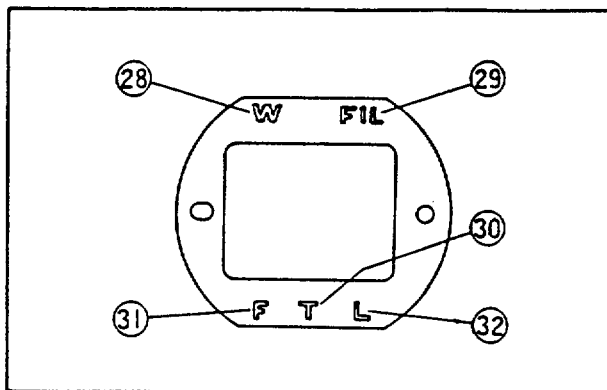


Fig. 6-4

- ②⑧ **Auto white indicator (LED) [W]**
 Used to check if the white balance is obtained.
 Refer to item ②① for details.
- ②⑨ **Filter disc position indicator (LED) [FIL]**
 Used to check the filter disc position. Refer to item ①⑦ for details.
 Also used for the battery voltage check. Blinks when the battery voltage is near by exhausted.
 The camera will not operate properly in a few minutes after the LED "FIL" blinks. In this case recharge or replace the battery with a fresh one as soon as possible.
- ③⑦ **Tally indicator (LED) [T]**
 Lights on when the VTR is in the recording mode or when the camera is called from the operation unit.
- ③① **Fade indicator (LED) [F]**
 Lights on during the fade-in or fade-out operation. Refer to item ②⑤ for details.
- ③② **Low light indicator (LED) [L]**
 Lights on when the object illumination is insufficient.
 When the LED "L" lights on, set the high gain select switch ②⑩ to the appropriate position.
 If the LED "L" still lights on, apply more light to the object.

- ③③ **BRIGHT**
- ③④ **CONTRAST**

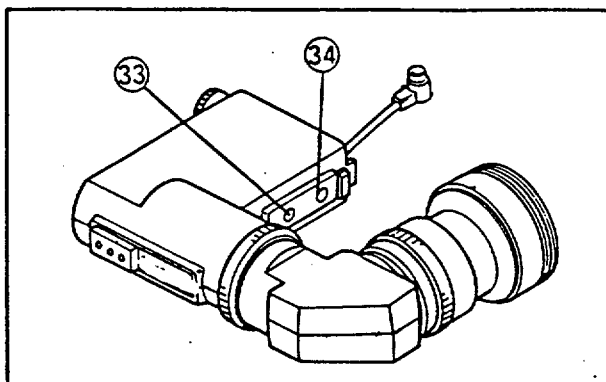


Fig. 6-5 Viewfinder

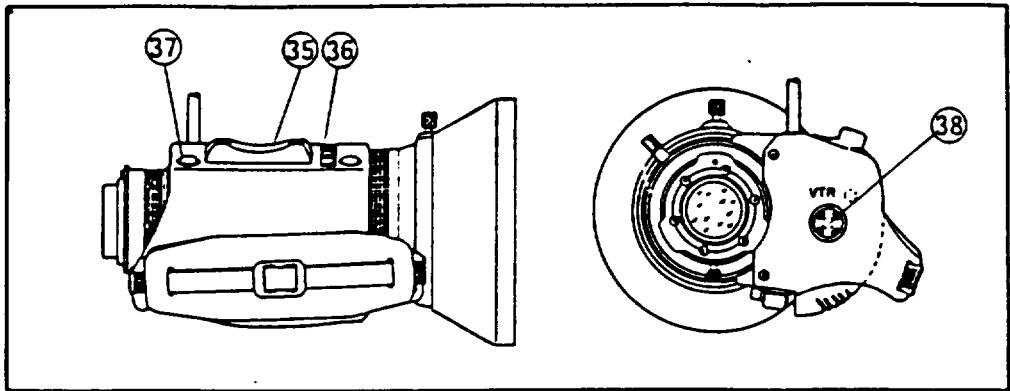


Fig. 6-6 Lens-1

- ③⑤ **W-T Rocker switch for zoom control**
- ③⑥ **R/M/A Isis select switch**
 R : Used when the camera is remotely controlled by the operation unit.
 M : Used when the iris is manually controlled.
 A : Used when the iris is automatically controlled.
- ③⑦ **Viewfinder RET switch**
 Used to display the auxiliary signal supplied to the operation unit.
 (The return signal of the two-wire system VTR can be displayed on the viewfinder.)
- ③⑧ **VTR trigger switch**
 Controls the recording start and stop.

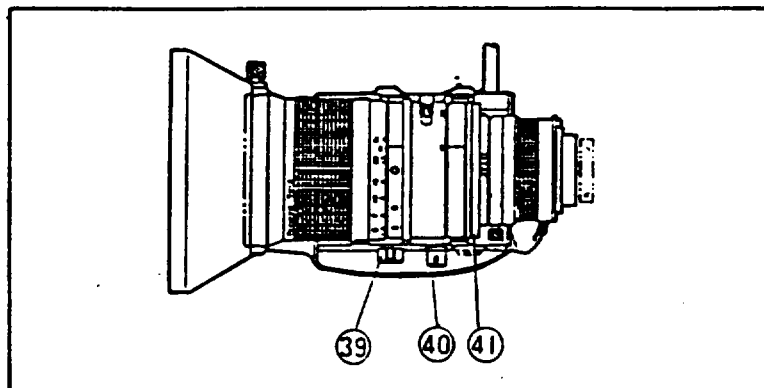


Fig. 6-7 Lens-2

- ③⑨ **Zoom manual/servo select switch**
 M : Manual zooming
 S : Servo (Power) zooming system adjustment
- ④⑩ **Focus servo connector**
 A focus servo module (option) is connected
- ④⑪ **Lens grip connector**
 A lens grip (option) is connected.

7. INSTALLATION

7.1 Installation and connections

7.1.1 Mounting/removing the lens

A bayonet type of lens mount is used. Secure the lens to the camera using the lens hold lever (A).

Connect the plug from the lens to the lens connector (B).

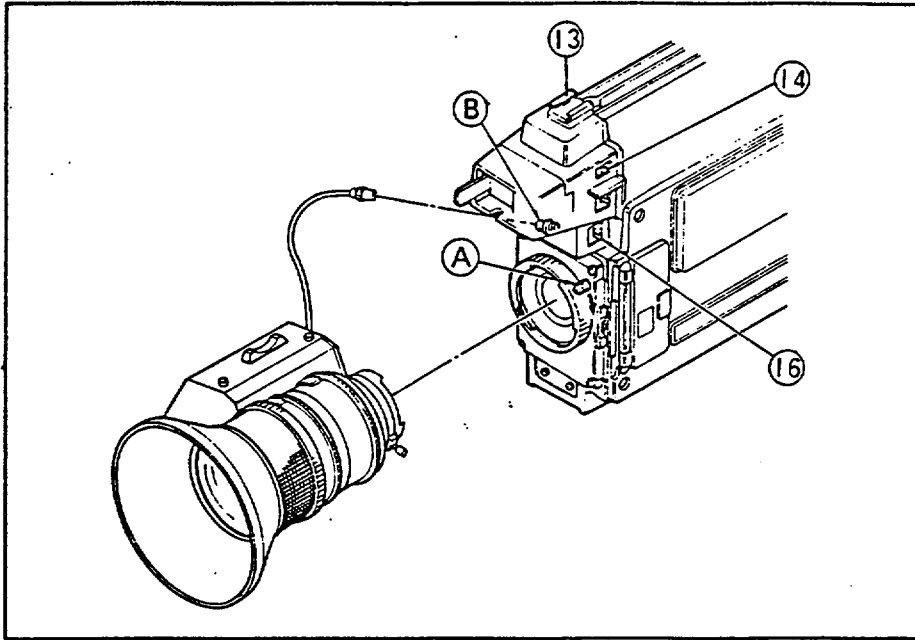


Fig. 7-1

Sure to set the power switch (16) to OFF before mounting or removing the lens.

After removing the lens, set the attached bayonet lens mount cover to the camera to prevent the light from entering from the faceplate of the pickup tube (Prevention of burning).

7.1.2. Connecting the microphone

When the using the microphone secured to the camera, mount the microphone onto the mic mounting shoe (13) and lock in position using the tightening nut.

Connect the microphone cord to the mic connector (14).

7.1.3 Mounting the tripod

- (1) Mounting by the screw hole on the bottom of the camera.

Mount the tripod on the camera by using the screw hole (C) on the bottom of the camera.

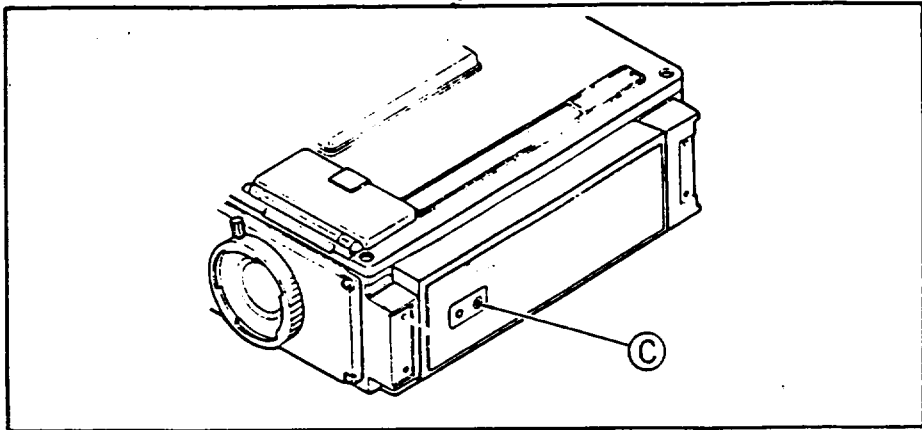


Fig. 7-2 Camera head bottom view

- (2) Mounting the tripod adaptor onto the camera

- i) Set the camera on the adaptor by inserting the mounting bracket (D) to the fixed hook (E).
- ii) Tighten the movable hook (G) to secure the adaptor to the camera by screwing the mounting knob, confirming that the mounting bracket (F) is inserted to the hook (G). There are two kinds of screws holes, 3/4-inch and 3/8-inch provided at the bottom of the tripod adaptor. Use an appropriate screw hole.

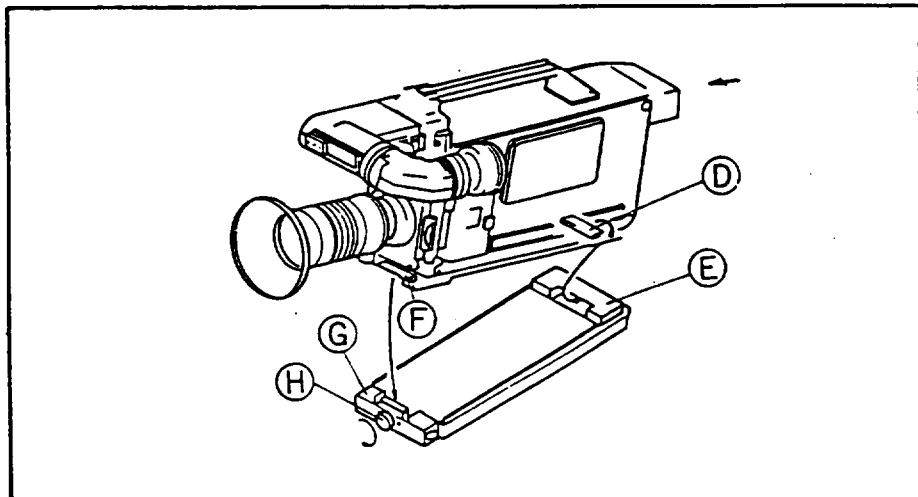


Fig. 7-3 Mounting the tripod adaptor

7.1.4 Mounting the viewfinder

(1) 1-inch viewfinder ~~PC-VF9~~ PC-VF9

- i) Align the viewfinder position by the guide pin (L) on the camera head.
Attach the ~~PC-VF9~~ to the camera using the viewfinder mounting knob screw (J) and the screw knob (K).
- ii) Connect the viewfinder connector (M) to the connector (N) located beneath the viewfinder mounting bracket on the camera head.

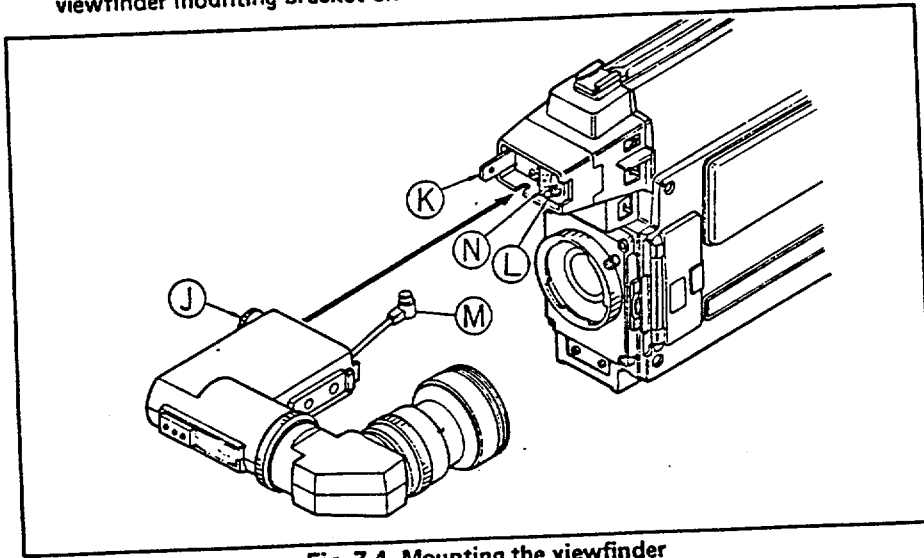







Fig. 7-4 Mounting the viewfinder

(2) 4.5-inch viewfinder GM-5

- i) Screw the viewfinder stopper in the direction shown by the arrow into the bottom of the 4.5-inch viewfinder.
 - * Refer to Fig. a to remove the viewfinder from the pan head. Raise the lever in the direction of arrow 1: set the lever in the  state from the  state.
- ii) In the raised state , place the viewfinder on the pan head. (Fit the viewfinder stopper into the hole on the pan head.)
- iii) Return the lever in the direction of arrow 2 (Fig. a) to the  state, and tighten the lever up in the direction of arrow 3 (Fig. b) as far as it will go: set the lever in the  state (Fig. b). Now the lever is properly secured.
- iv) Mount the viewfinder together with the pan head to the camera by using the three mounting screws on the pan head.
- v) Mount the cable adaptor (P) to the camera by the mounting screw (R).
- vi) Connect the cable adaptor connector (S) to the camera's VF connector (N).
- vii) Connect the viewfinder connector (T) to the connector (U) on the bottom of the cable adaptor.

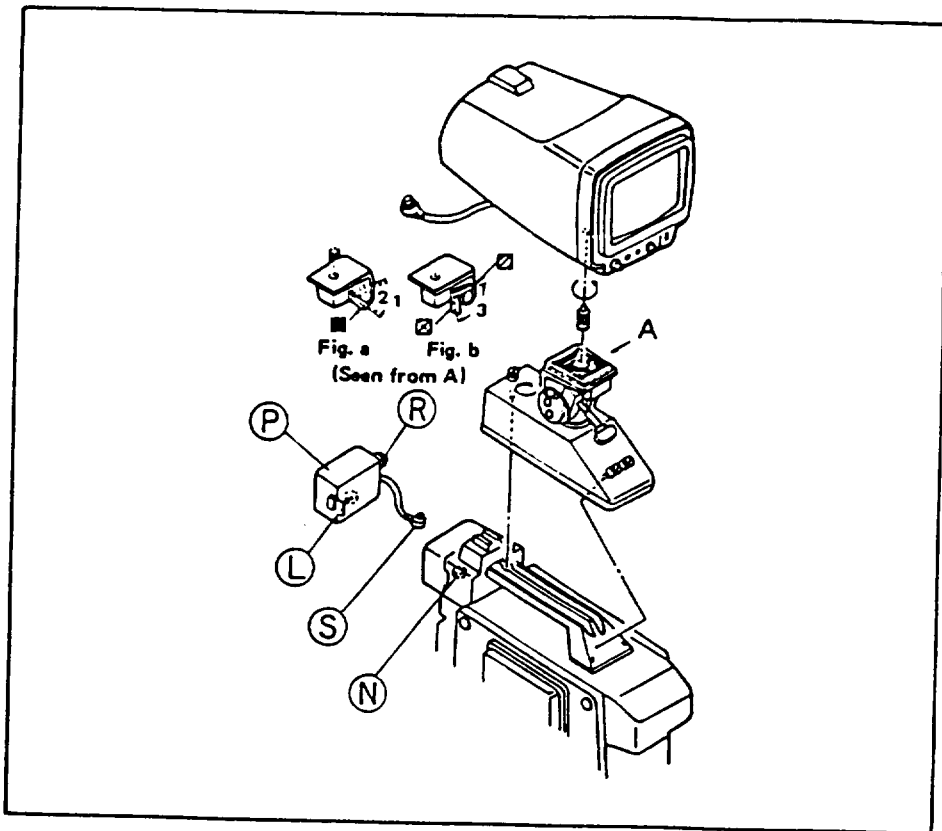


Fig. 7-5

7.2. Prevention of burning of the pickup tube

- (1) **During operation of the PC-K9000**
 Avoid shooting the sun, electric lamp and strong reflected light so as not to cause permanent burning on the faceplate of pickup tube.
- (2) **When turning off the POWER switch**
 In case power supply is cut while light enters onto the faceplate of pickup tube, permanent burning can occur on the faceplate.
 When power supply is cut while using the lens in the auto iris mode, the iris is automatically closed. However, if the iris is opened manually after automatically closing, burning can occur. After the lens is adjusted manually, close the iris before cutting the power supply. Take the following procedures to cutoff power supply at connecting with VTR.
 - 1) Set the lens iris to "A".
 - 2) Set the POWER switch (16) to "OFF".
 - 3) Set the POWER supply input select switch (11) to "CAM".
- (3) **When not in use**
 Cap the lens or close the lens iris.

7.3 Operational checks and initial adjustments

After the connections of the equipment have been completed and the lighting equipment has been performed the operational checks in the order described below.

Follow the same procedures when the camera has been stored for a long period of time.

(1) Preheating

Set the power unit to ON, and set the power select switch (11) to VTR, CAM or POWER in accordance with the selected operation mode.

Allow the camera to warm up with the POWER ON/OFF switch (16) set to OFF for several dozen minutes to protect the pickup tube of the camera and prolong its service life. Sure to warm up the camera when it has been stored or not used for a long period of time.

(2) Color bar check

Color bar signals are obtained from the video output connector when the POWER ON/OFF switch (16) is set to ON and the BAR/CAM select switch (18) is set to BAR. Check the black balance, white balance, and color bar vectors in the color bar signals. Adjust the color monitor with the color bar signals.

(3) Video signal check

A color picture is obtained from the video output connector when the BAR/CAM select switch (18) is set to CAM.

If a color picture is not obtained, set the iris select switch (36) to A.

Check the white balance:

- i) Set the NEG/NORM select switch (19) to NORM.
- ii) Set the high gain select switch (0 dB/ +6 dB/ +12 dB) (20) to 0 dB.
- iii) Set the color temperature correction filter (17) to the position corresponding to the color temperature of the lighting source.

Filter disc number	Display color inside viewfinder	Lighting source color temperature	Type of lighting source
1	Red	3200 K	Tungsten or iodine lamp
2	Amber	4500 K	Fluorescent lamp
3	Green	6500 K	For outdoor use

Table 7-1

- iv) Shoot a white object so that it fills the screen. (Take care not to shoot reflections from the light source or strong reflected light.)

Set the lens iris select switch (36) to A.

- v) Now set the auto white/preset select switch (21) to AUTO.

The LED "W" inside the viewfinder blinks while the auto white is setting, and lights on when the white balance is obtained. Set the auto white/preset select switch (21) to OFF after confirming that the LED lights on.

When the white balance is not obtained properly, the LED blinks with a long period. In this case, set the color temperature correction filter (17) again, and repeat the procedure from the beginning of the step V.

Since the white balance is memorized for approx. 8 hours after turning off the camera power, it is not necessary to set the balance when the camera is used intermittently.

In the following cases, set the white balance again:

1. When the LED "W" blinks (The blinking means that the white balance is not memorized.)
2. When the color temperature of the lighting source changes

Tracking adjustment

- i) Open the lens iris, and shoot the object at a distance of ten meters or more.
- ii) Set the lens zoom to the telescopic mode (maximum zooming), and adjust the lens focus optimally.
- iii) Set the lens zoom to the wide angle mode (minimum zooming), and check that the focus is still optimum. If not, unscrew the F.f Lock knob, and adjust the F.f Adj. ring to set the focus optimally.

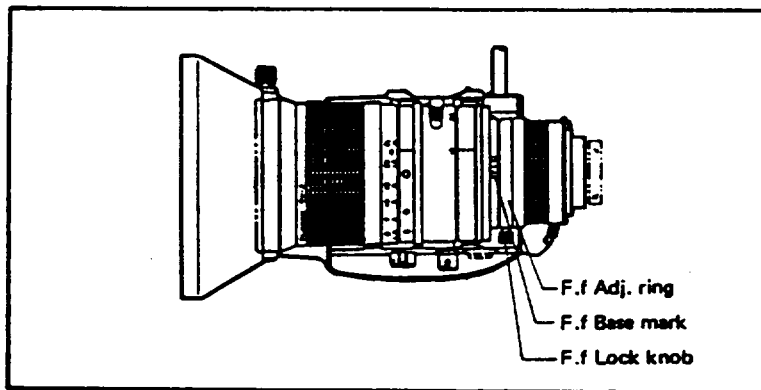


Fig. 7-6

- iv) Repeat the steps ii) and iii) until an optimum focus is obtained. After the adjustment, sure to screw the lens tracking lock screw firmly.

7.4 VTR interface

The K9000 is designed to be counted with various VTRs and the control methods from the camera change in accordance with the used VTR. Read carefully the following description for proper operation.

Combining switches are on the PWR and INCOM units.

Table 7- 2 , Fig. 7- 7 , 7- 8 , and Table 7- 3 show the switch functions, the switch position, and the switch setting example respectively.

Unit	Switch	Function	Switch position	Operation mode
PWR	SW3	Trigger output level switching (+9/+5)	Upper Lower	+9 +5
	SW4	Trigger mode setting (Level trigger/Pulse trigger)	Upper Lower	Level trigger Pulse trigger
	SW1-1	Tally polarity setting (+ : H/ - : L)	Right	+ (Operates when - the SW1-2 is set to TALLY.)
	SW1-2	$\overline{\text{REC 9}}$ / TALLY		$\overline{\text{REC 9}}$ (VHS VTR) TALLY (β VTR)
	SW2	Battery detection mode setting (UNREG/RET AUDIO)	Upper Lower	RET audio (Hitachi VHS VTR) UNREG (General VTR)
	J1	Power saving	Jumper is set. Jumper is not set.	Hitachi VHS VTR General VTR
INCOM	SW7	VHS/U-matic	Lower	VHS VTR U-matic VTR
	SW5	RET video switching (Single wire/Two-wire)	Upper	Two-wire system VTR or operation unit
			Lower	Single wire
	SW6	REC CHECK 1 (Hitachi VHS/Others)	Upper Lower	Hitachi VHS VTR Others
	SW3	REC CHECK 2 (Hitachi VHS/ β)	Upper Lower	Hitachi VHS VTR β VTR
	SW4	Audio level switching (-20 dBm/-60 dBm)	Upper Lower	-20 dBm -60 dBm
SW2	Trigger polarity setting (High/Low)	Left Right	High trigger output Low trigger output	

Table 7-2 VTR interface switch function

• PWR unit

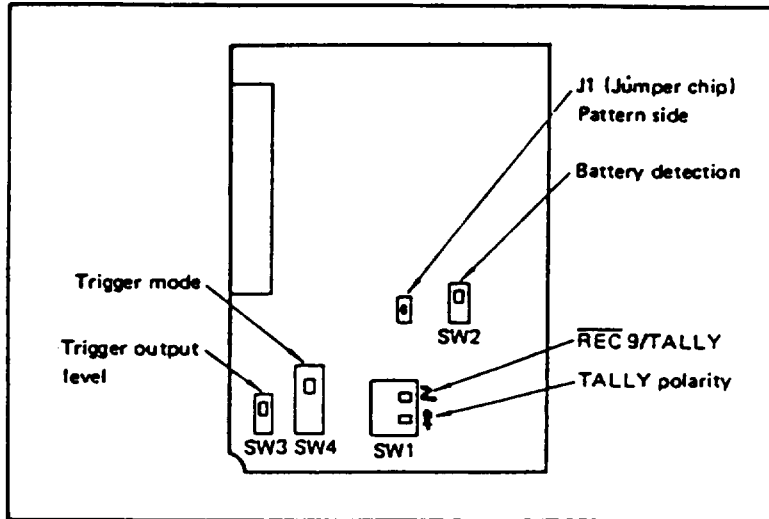


Fig. 7-7

• INCOM unit

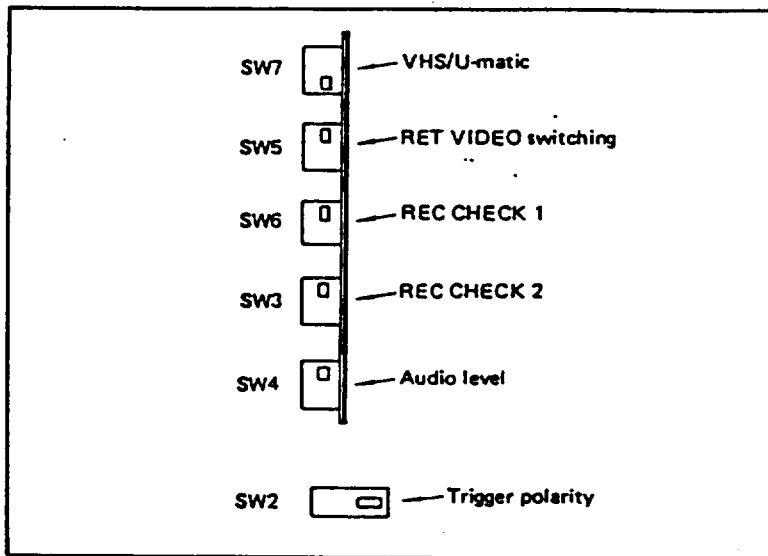


Fig. 7-8 Switch position example: Interface with PENTAX VHS VTR (e.g. PV-R020)

Unit	Switch	Switch mode								
		HR4100 U-matic	CR4400 U-matic	CR4400 LS U-matic	VO3900 U-matic	SV650 Hitachi Denshi U-matic	PV-R020A PENTAX VT6800 Hitachi VHS	PV-R1000A PENTAX VT-7 Hitachi VHS	SV-690 Hitachi Denshi VHS	NV-8420 Panasonic VHS
PWR	SW3	↑	↑	↓	↑	↑	↑	↑	↑	↑
	SW4	↑	↑	↑	↑	↑	↑	↑	↑	↑
	SW1-1	-	-	-	-	-	-	-	-	-
	SW1-2	→	→	→	→	→	→	→	→	→
	SW2	↓	↓	↓	↓	↓	↓	↓	↓	↓
INCOM	J1	Not set	Not set	Not set	Not set	Not set	Not set	Set	Set	Not set
	SW7	↓	↓	↓	↓	↓	↓	↓	↓	↑
	SW5	↓	↓	↓	↓	↓	↓	↓	↓	↓
	SW6	↓	↓	↓	↓	↓	↓	↓	↓	↓
	SW3	-	-	-	-	-	-	-	-	-
	SW4	↑	↑	↑	↓	↑	↑	↑	↑	↑
	SW2	↑	↑	↓	↓	↑	↑	↑	↑	↑
		↑	↑	↓	↓	↑	↑	↑	↑	↓

Table 7-3 Switch setting example

7.5 Genlock use

The camera can be used in genlock mode with other cameras by feeding the black burst signal or the color composite signal to the genlock input connector (9).

Adjust the subcarrier phase by the subcarrier coarse switch (1) or (2) (V) in the GL unit, and then adjust it by the subcarrier fine control RV4 (W) in the GL unit.

Adjust the horizontal sync by phase control RV2 (X) in the GL unit.

Supply the genlock signal of which jitter is minimum. (H jitter should be 50 ns or less.)

The genlock signal with exceeding jitter may cause the color flicker or the colorless picture.

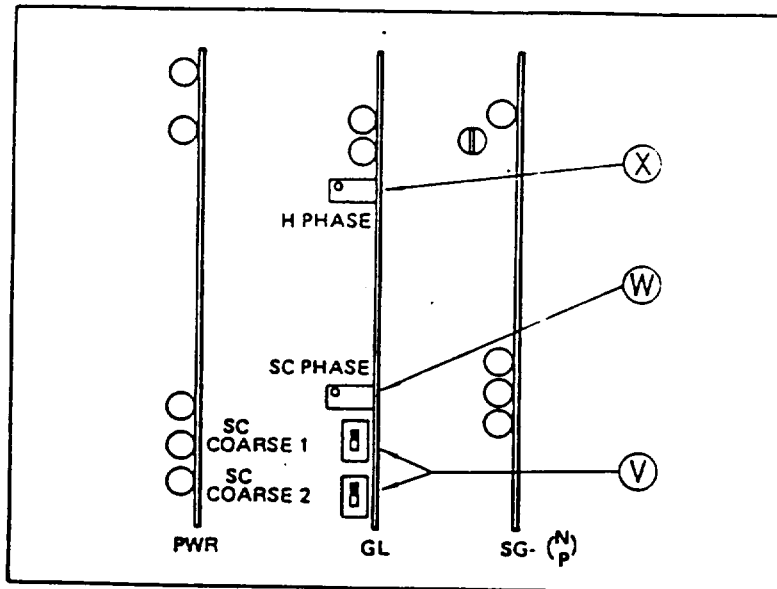


Fig. 7-9

7.6 Color bar generator circuit controls

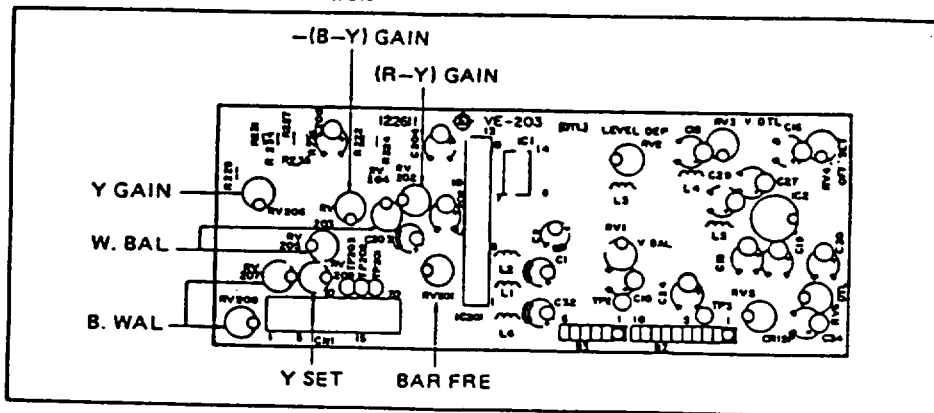


Fig. 7-10

Note: Do not adjust the controls when the vector scope and oscilloscope are not available.

PENTAX

PENTAX CORPORATION. 35 Inverness Drive East Englewood, CO 80112
Service Information : (303) 799-8000

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

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

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