Ikegami

INSTRUCTION MANUAL

MODEL ICD-803P

COLOR CCD CAMERA

Thank you very much for purchasing the Ikegami Color Video Camera.
Please carefully read this Instruction Manual to keep your camera at full capacity.

Contents

OUTDOOR USE WARNING

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

IMPORTANT: Power plug handling (for U.K.)

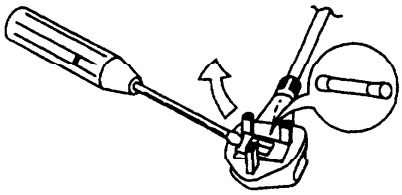
For your safety please read the following text carefully.

CAUTIONS:

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.
A 13 amp fuse is fitted in this plug.
Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 13 amp and that it is approved by ASTA or BSI to BS1362.

Check for the ASTA mark or the BSI mark on the body of the fuse.

How to replace the fuse
Open the fuse compartment with a screwdriver and replace the fuse and fuse cover.



If the plug contains a removable fuse cover you must ensure that if is refitted when the fuse is replaced.
If you lose the fuse cover of the plug must not be used until a replacement cover is obtained.
A replacement fuse cover can be purchased from your local **Ikegami** Dealer.

WARNING:

This apparatus must be earthed.
If the fitted moulded plug is unsuitable for the socket outlet in your home, please consult a qualified electrician.

1. General

The ICD-803P is a single CCD color CCTV camera that employs a 1/2-inch CCD (Charge Coupled Device) with about 440,000 picture elements. The unit features high resolution, high sensitivity and high picture quality, and is equipped with many functions: back-light compensation, automatic electronic shutter control, automatic iris control and others. The camera is best suited for general-purpose monitoring.

2. Features

(1) Digital processing
An internal RGB digital signal processor (DSP) is introduced for video signal processing and gives stable, clear picture.

(2) High picture quality and resolution
Higher signal-to-noise-ratio, sharper images are guaranteed by the new designs: smear level at −120 dB, low on-screen noise, and optimum detail correction. The camera's horizontal resolution is 480 lines.

(3) High sensitivity
By adopting the high-sensitivity CCD with on-chip micro-lens as well as the low-noise high-quality image processor, the camera can shoot under the minimum illumination of 0.5 lux/F1.4.

(4) Back-light compensation
Effective back-light compensation is readily made through the auto iris lens or the automatic electronic shutter control.

(5) Two-way auto iris function
The camera is readily switchable either for a video type auto iris lens or a DC type auto iris lens. Virtually all types of CCTV auto iris lenses may be used on this camera.

(6) Auto white balance
The automatic tracking white balance control (ATW) system automatically corrects the white balance as an object's color temperature is changing. The camera is also provided with the one-push preset white balance control (AWC) system and the manual adjustment mechanism.

(7) Automatic electronic shutter control (AES)
The AES function provides for a sensitivity ratio of 1:1600. The variable stepwise control is used for smooth sensitivity control. An iris lens, even if fixed, gives stable video output that is equivalent to the F1.4-F50 auto iris. (This function does not work in regions where the power frequency and the camera's vertical sync frequency are different from each other.)

(8) Flange focal distance adjustment
With the adjustment mechanism, the focus tracking can be easily adjusted when the zoom lens is used.

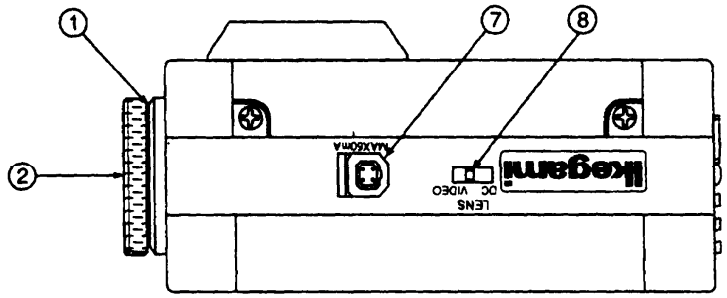
3. Handling precautions

- Do not install the unit where it is exposed to rain or in a highly humid place. The ambient temperature is recommended to be from −10° to +50 °C.
- Never disassemble the camera.
  Never open and touch the inside of the camera. A trouble or accident may result.
- Keep the camera free from any foreign matters.
  Do not allow any metallic and flammable pieces into the camera. A trouble or accident may result.
- Gently handle the camera.
  Be very careful not to drop or shock the camera. A trouble or accident may result.
- Never direct the camera toward the sun.
  Be careful not to expose the lens to the sun whether the camera is in use or not.
- Do not catch any intense light.
  If there is too bright an object (giving intense light) in a scene on the screen, the object may cause streaking in the vertical or horizontal direction. This is called the smear phenomenon peculiar to solid-state imaging devices, and does not mean the camera's trouble.

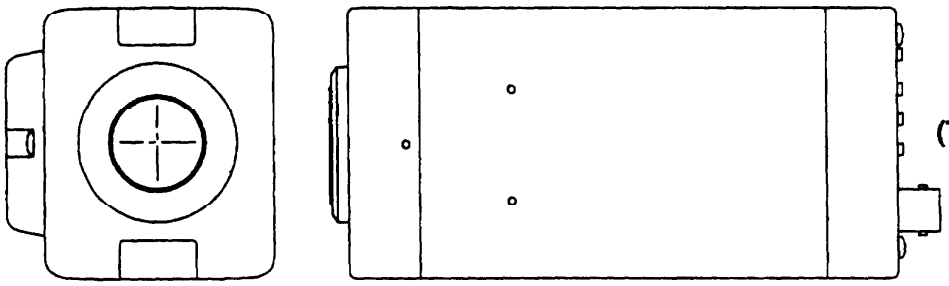
■ In case of trouble or malfunction
If you encounter anything unusual (unusual noise, smell, smoke) with the camera or a trouble (sudden picture cut-off from the screen), immediately switch off the power. Contact your dealer or sales representative.

Camera cares
Turn off the power. Wipe the camera's exterior clean with soft, dry cloth. If a stain or spot is tough to remove, gently wipe it off with cloth dampened with water-diluted furniture cleaning agent and then well squeezed.
To clean up the lens and other delicate parts, use a camera lens blower or lens cleaning paper (available in camera shops).

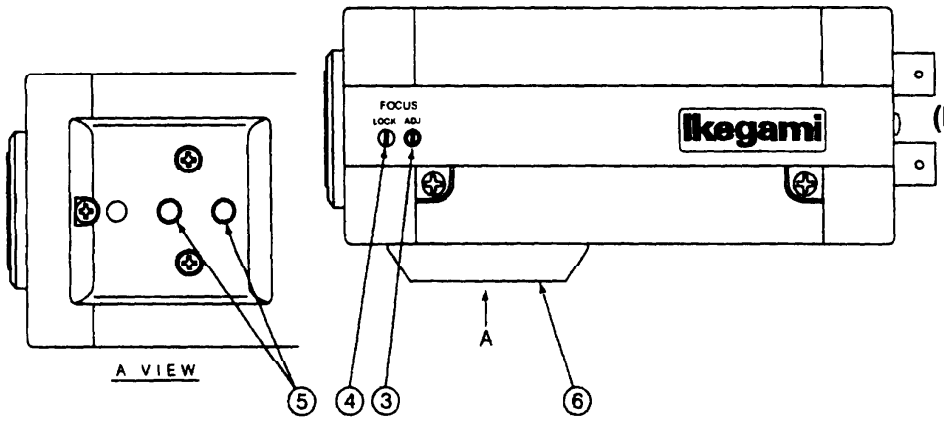
4. Names of Parts and their functions



(Left side view)

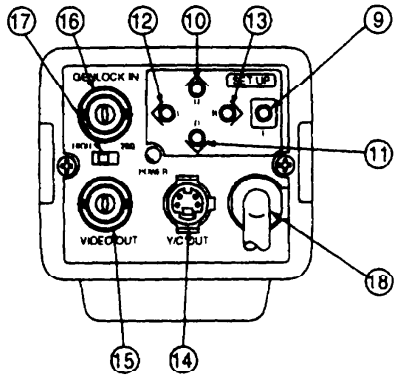


(Top view)

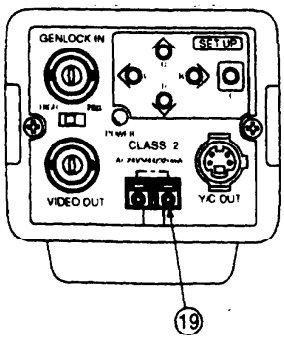


(Right side view)

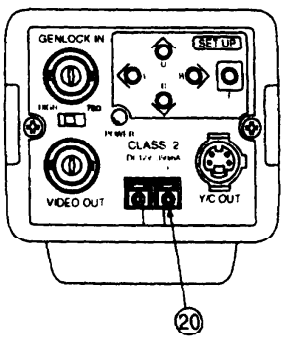
(Right view)



(ICD-803P AC230V)



(ICD-803P AC24V)



(ICD-803P DC12V)

① **Lens mount (CS mount)**
Used to install the lens. Accepts many types of CS mount lenses.

② **C mount adaptor (accessory)**
Attached on the lens mount to accept many types of C mount lenses.

③ **Flange focal distance adjuster**
Used to adjust the flange focal distance depending on the lens used. Helpful if the lens' focus ring fails to put into focus.

④ **Flange focus lock screw**
Used to mechanically fix the camera's flange focal distance adjuster after its fine adjustment.

⑤ **Holder screw hole**
Used to mount the camera onto the camera holder. Effective for general camera tripods.

⑥ **Camera mount**
Can be placed on top of the camera, too, in order to set the camera holder atop. Useful for unusual mounting place or method.

⑦ **Auto iris lens connector**
Specifically used to connect the auto iris lens.

⑧ **Lens selector switch**
Used to choose between the video iris and the DC iris depending on the auto iris lens in use.

⑨-⑬ **Camera setting function switches**
Used to make settings of the camera's picture quality, sync, identification, etc. For the setting procedure, refer to Item 7 "User setting".

⑭ **Y/C OUT terminal**
Used to give out the Y/C separation video signal. Commercially available S video output cables can be employed.

⑮ **Video output terminal**
Used to give out the video signal. Connected to the video input terminal of a monitor, switcher, etc. (To be terminated with 75-ohm impedance)

⑯ **External sync signal input terminal**
Used to receive the GENLOCK (generator lock) signal. VBS or BBS input signal should be fed in.

⑰ **External sync signal 75-ohm termination switch**
Set to HIGH position when the GENLOCK signal is looped with a T-shaped connector. Usually set at 75-OHM position.

⑱ **AC 230V power cable**
Used to supply AC 230V power. AC 195-265V power is acceptable.

⑲ **AC 24V power input terminal**
Used to receive AC 24V power. AC 21.6-26.4V power is acceptable.

⑳ **DC 12V power input terminal**
Used to receive DC 12V power. DC 10.5-15V power is acceptable.

* Applicable wires for terminals ⑲ and ⑳:

Solid wires:	AWG26-18
Flexible stranded wires:	AWG22-20

5. Connection

5-1. Auto iris lens connector

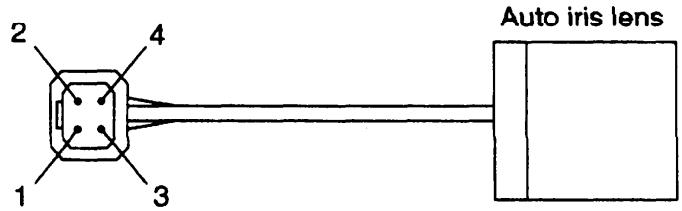
Use the auto iris lens control connector plug (E4-191J-100 or equivalent).

- **For the video type auto iris lens**

  Set the lens selector switch to VIDEO position.

  — Connector cable leads —

  1. +9V
  2. Not used
  3. Video
  4. GND



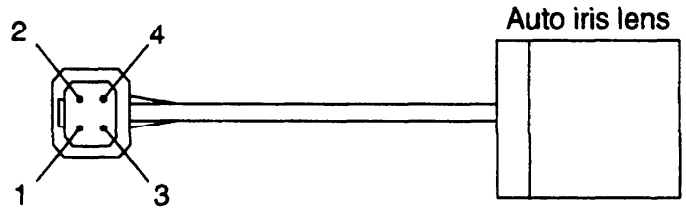
* For proper connection, refer to the instructions of the lens used.

- **For the DC type auto iris lens**

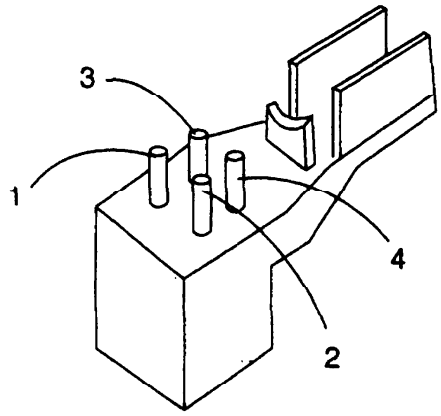
  Set the lens selector switch to DC position.

  — Connector cable leads —

  1. Damping coil (-)
  2. Damping coil (+)
  3. Driving coil (+)
  4. Driving coil (-)



* Connect the leads as shown above. Refer to the instructions of the lens.

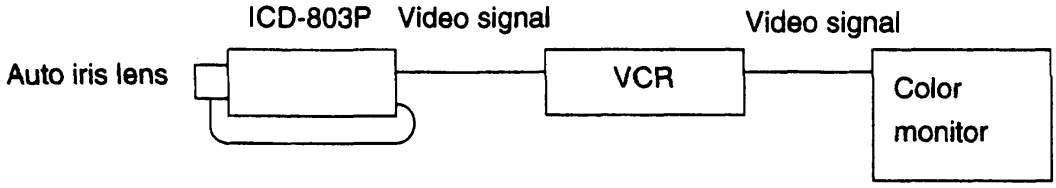


Numbers of connector pins

5-2. *Video output terminal (VIDEO OUT)*

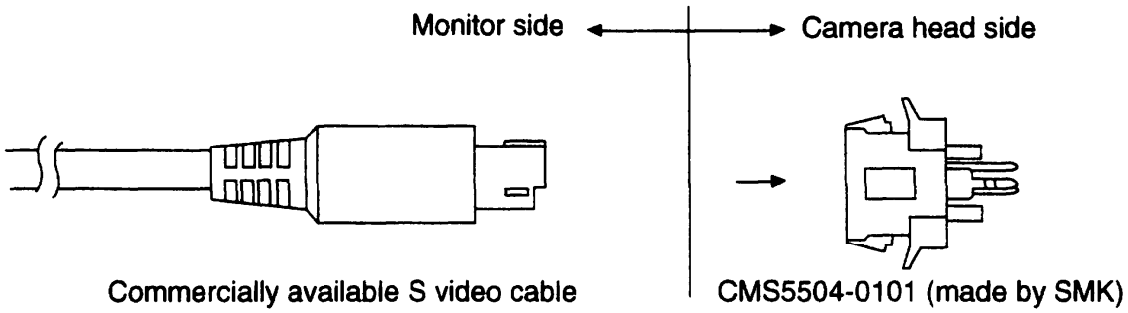
- This is the output terminal of video signal.
- The terminal is used to connect the video camera to the video input terminal of a monitor, switcher or the like. (To be terminated with 75-ohm impedance)
- Use a coaxial cable for connection.

(Typical connections)

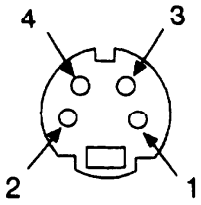


5-3. *Y/C separation video output terminal (S-OUT)*

This is the output terminal of the S video signal (Y/C separation video signal).



Pin locations (as viewed from the arrowed direction)



① GND (for C output)
② GND (for Y output)
③ Y OUT: Y (luminance) signal output
④ C OUT: C (chrominance) signal output

5-4. External sync signal input terminal (GENLCOK IN)

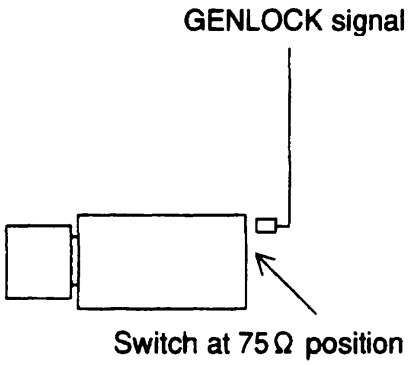
This input terminal (BNC socket) is used for the video signal (VBS or VS) and black burst signal (BBS), which serve as reference for the external sync.

Notes:

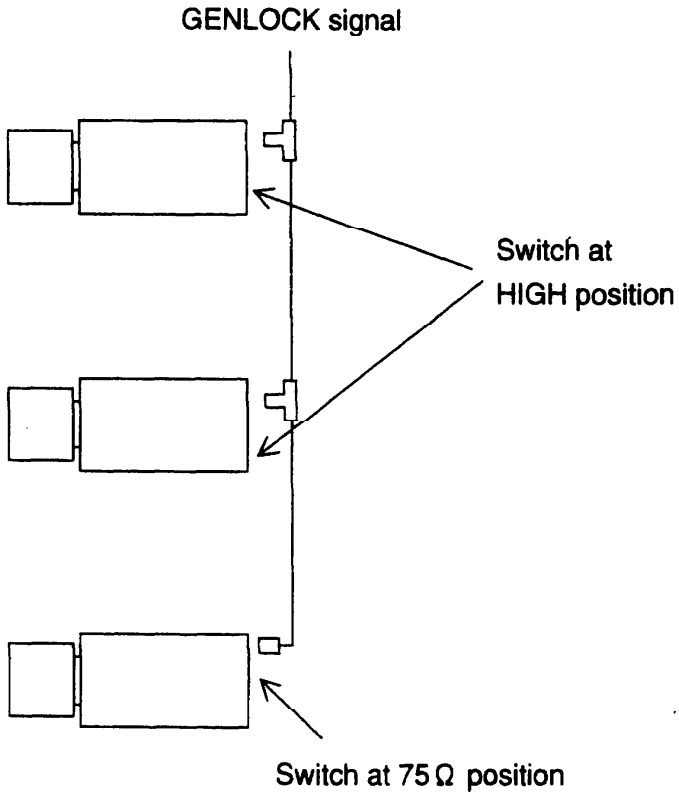
- The external sync signals to be inputted are as follows. (PAL standard signal)
  Composite video signal (VBS or VS): 1.0 Vp-p/75 ohms
  Black burst signal (BBS): 0.45 Vp-p/75 ohms
- Signals from a VCR or other equipment that cause much jittering (irregular vertical and horizontal shaking on the screen) may disturb synchronization.
- For generator lock, image condition adjustment (adjusting the horizontal phase and color phase) is required. (See page E-23.)
- When the external sync input signal is looped with the use of a T-shaped connector, set the switch above the terminal to HIGH position. Otherwise keep the switch at 75-OHM position.

(Typical connection)

1) For one camera



2) For two or more cameras



* Last camera's switch alone to be set at 75 Ω position.

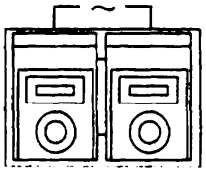
5-5. Power cord

- **AC 230V type**
  Plug the power cord of the camera to an AC 230V (±15%) outlet.

  Caution:
  To cut off the power, unplug the power cable from the wall outlet. The outlet should be near the unit and easily accessible.

• AC 24V type

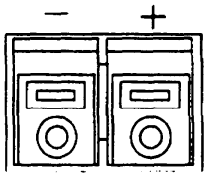
CLASS 2
AC24V 50Hz 320mA



AC 24V ± 10% supply power

• DC 12V type

CLASS 2
DC12V 350mA



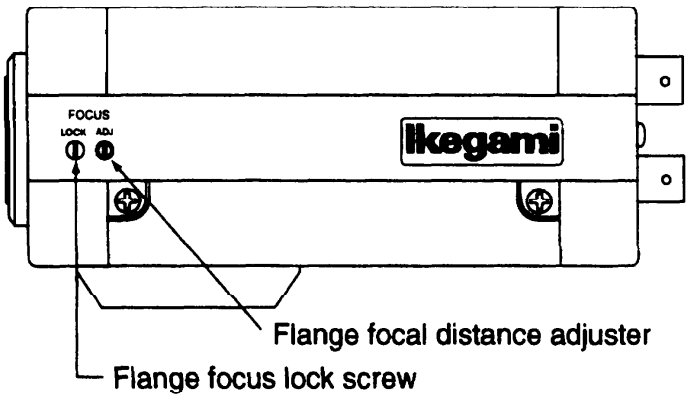
DC 10.5-15V supply power (Non-polarized)

There is no power switch on both types of cameras. Just plug in the power cord to switch on the camera. Supply the power after all the connections are complete. Turn on and off the power at the power supply.

6. Lens adjustment

6-1. Flange focal distance adjustment

The flange focal distance is the distance between the lens mounting surface and the focal point. In some cases, it is necessary to readjust this distance; that is to say, if the focus ring on the lens fails to give perfect focusing. Use the flange focal distance adjuster shown below.



Before starting the following adjustments, loosen the flange focus lock screw. Finally tighten up this screw again.

- **When using the fixed focus lens**

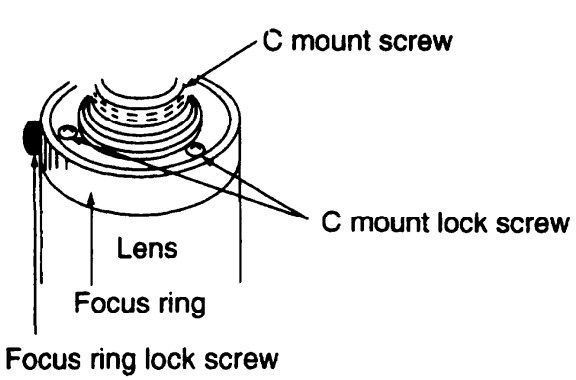
① Open the iris as much as possible. Set to a distant object and turn the focus ring to bring the object in focus.

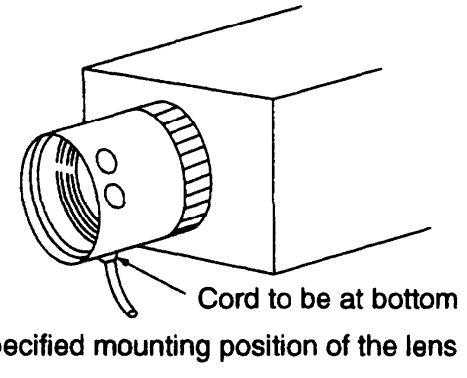
② Set to an object nearby and turn the focus ring to bring the object in focus.

③ If either of the distant and the nearby objects is not brought into focus, adjust the focus with the flange focal distance adjuster.

④ Repeat the above steps several times until the focus can be achieved only with the focus ring for both the distant and nearby objects.

⑤ When the auto iris lens is used, position the cord of the lens as shown below. If the lens positioning is specified in the lens instructions, follow it.





Note:
When adjusting the focus for a distant object, keep the distance more than 2,000 times longer than the focal distance of the lens mounted. (When the lens's focal distance is 7.5 mm, for example, the object should be 15 m or more away.)

- **When using the zoom lens**

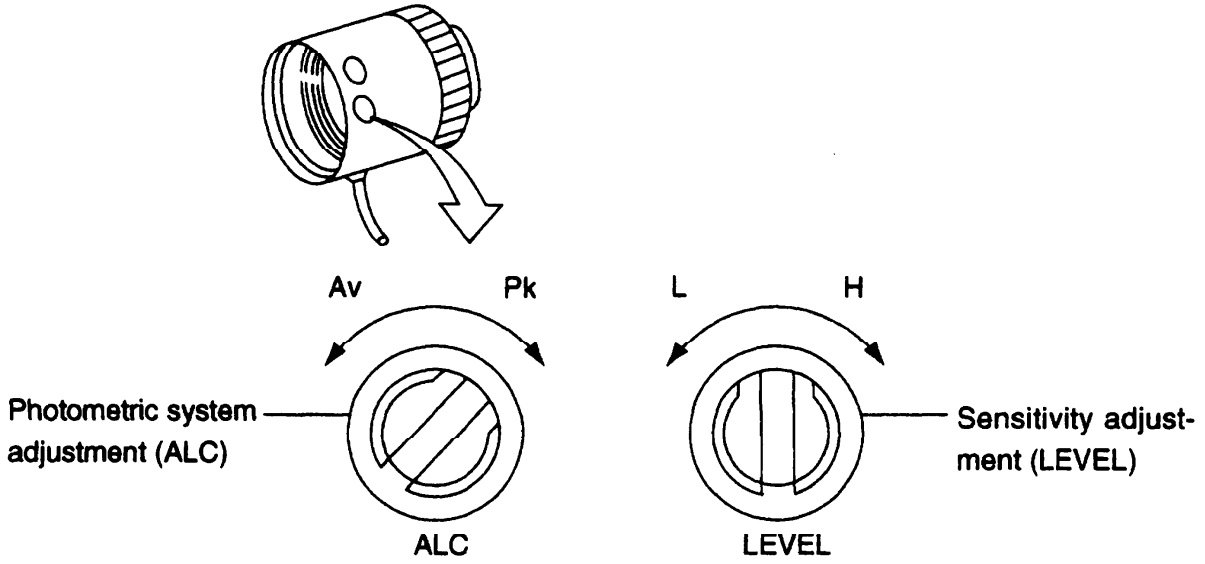
① Open the iris. Set the zoom lens all the way to the TELE position. Adjust the focus with the focus ring.

② Now set the zoom lens all the way to the WIDE position. If the image is out of focus, readjust the focus with the flange focal distance adjuster.

③ Repeat the above steps ① and ② several times in order to improve the focus in both the TELE and WIDE positions. Continue this until the best focus is obtained.

Note:
Keep the distance to the object more than 5 times longer than the minimum image forming distance of the lens mounted. (When the minimum image forming distance of the lens is 1 m, for example, the object should be 5 m or more away.)

6-2. Auto iris lens (video iris type) adjustment



- **Adjust the ALC and LEVEL controls of the auto iris lens in the following conditions.**
  ① Shutter speed OFF
  ② AGC control on
  ③ BLC (back-light compensation) to be basically made with AGC control off

- **Sensitivity adjustment (LEVEL)**

  Shoot an object, the contrast of which is relatively low, under sufficient illuminance (over 1000 lux).

  While watching the monitor screen, adjust the LEVEL control so that the image be appropriate in bright- ness and tone. For this adjustment, select an evenly lit place and keep the ALC control fully at the AV position.

  Turning to H direction:

  If the entire screen is rather dark or there is much noise, turn the LEVEL control in the H direction to make the screen brighter.

  Turning to L direction:

  If the entire screen is rather whitish and white spots are seen in colored areas, turn the LEVEL control in the L direction to make the screen darker.

- **Photometric system adjustment (ALC)**

  While watching the monitor screen, choose a photometric method that suits the object. Adjust the ALC control to obtain an optimum image.

  Turning in Av direction:

  Turn the ALC control in the Av direction for the average photometric method.

  At the end of the Av direction, the iris is automatically adjusted with the average video signal level of the object as the right photometric value.

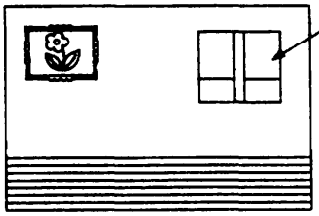
  Turning in Pk direction:

  Turn the ALC control in the Pk direction for the peak photometric method.

  At the end of the Pk direction, the iris is automatically adjusted with the high-luminance video signal level of the object as the right photometric value.

※ The DC type auto iris lens is not provided with these controls.

Notes:



- Let us imagine the scene shown at left. To show the picture hanging on the wall on the screen, turn the ALC control in the Av direction. In this case, the window and the outdoor will be saturated in white.
- Turn the ALC control in the Pk direction to show the window and the outdoor on the screen in the above situation. In this case, the picture and the area around it on the wall will be low in luminance and look dark on the screen.
- If the scene being shot is almost evenly lighted, the level will not change much whichever direction the control is turned in.

Notes:

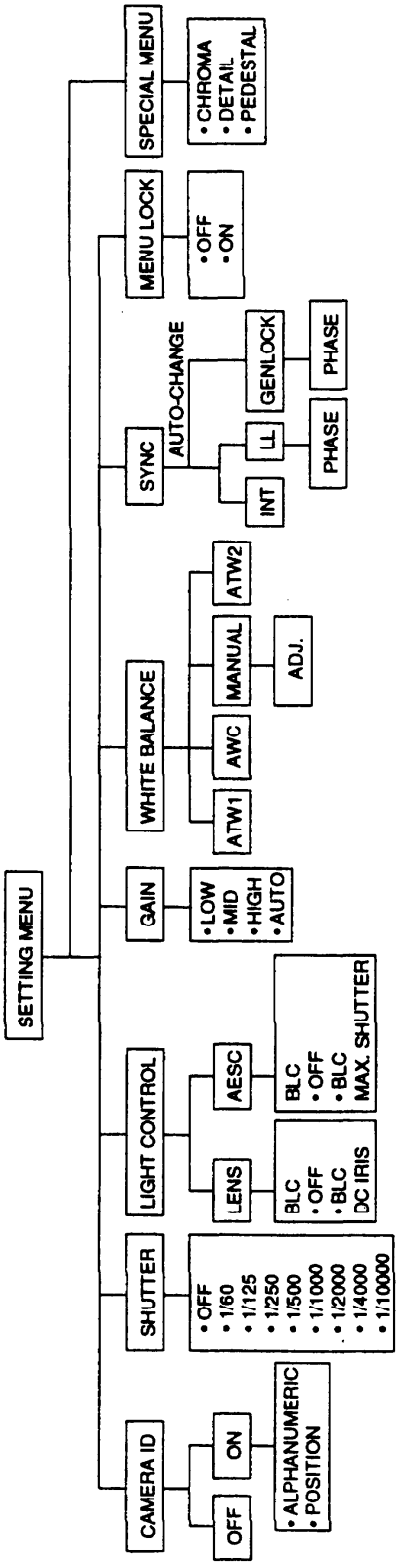
- Make the LEVEL adjustment first and then the ALC adjustment.
- The sensitivity adjustment (LEVEL) is referred to as the video signal level. Do not turn the LEVEL control after the adjustment. Otherwise, the lens' sensitivity may change, resulting in degraded picture quality or malfunction in the worst case.

7. User setting

7-1. Setting menus

On this camera, it is possible for the user to make settings of picture quality, sync, identification, etc.

The setting menus are of the hierarchy shown below and with on-screen character displays.



7-2. Setting switches and their functions

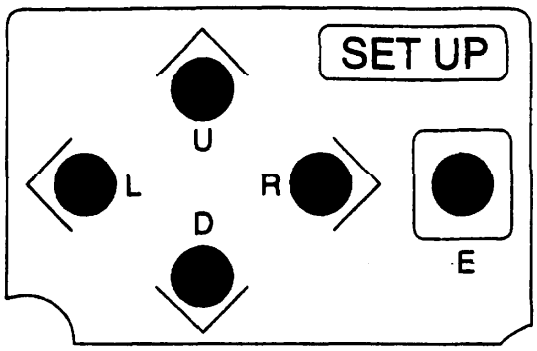


Fig. 7-1

On the back of the camera there are the pushbutton switches and display as shown at left.

Switch name Main function
UP switch (U): Setting item selection (up)
DOWN switch (D): Setting item selection (down)
RIGHT switch (R): Setting change and setting item selection (right)
LEFT switch (L): Setting change and setting item selection (left)
ENTER switch (E): Setting mode call on/off, setting entry

7-3. Setting mode call and basics

7-3-1. Setting menu (main menu)

Hold the E switch down and the menu shown at left will appear on the display.
The shaded setting area means an item selected and keeps blinking.

```
          SET UP MENU

CAMERA ID          OFF
SHUTTER            OFF
LIGHT CONT         LENS
GAIN               AUTO
WHITE BAL          ATW1
SYNC               LL
MENU LOCK          OFF

EXIT   CANCEL      RESET
```

Fig. 7-2

(1) CAMERA ID: Up to 16 characters acceptable and displayable.
(2) SHUTTER: Setting of high-speed electronic shutter speed (OFF to 1/10000 sec., 9 steps)
(3) LIGHT CONTROL: Selection of AES or auto iris lens.
Setting of back-light compensation (as sub-menu).
(4) GAIN: Selection of auto control or fixed (3-step) control.
(5) WHITE BALANCE: Selection and setting of white balance system (ATW, AWC, MANUAL).
(6) SYNC: Selection and setting of sync method (INT, LL).
GENLOCK automatically switched on.
Phase adjustment possible (as sub-menu).
(7) MENU LOCK: Setting procedure locked.

7-3-2. Special menu

Set the blinking area to the "EXIT" on the main menu and hold down the L and R switches at once for 2 seconds or longer. The menu shown at left will appear on the screen.

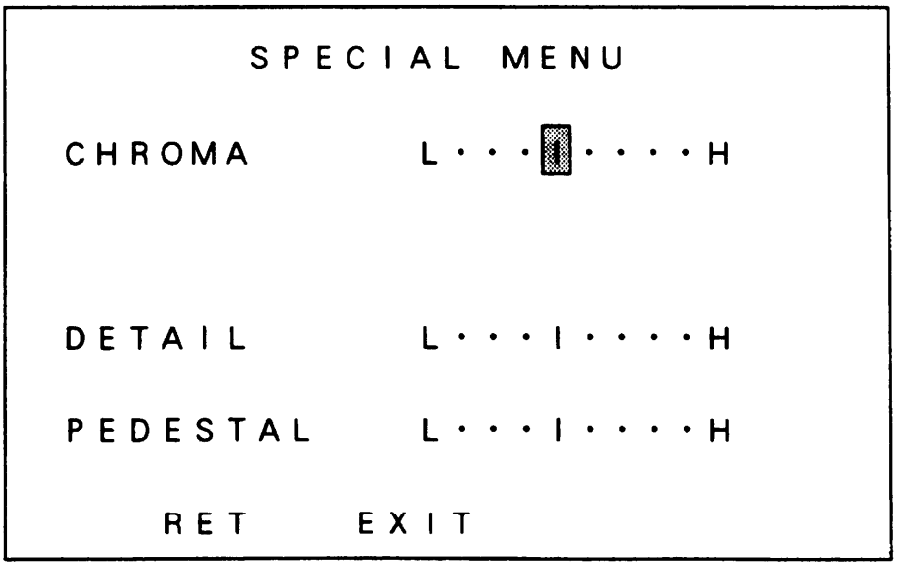


Fig. 7-3

(1) CHROMA: Chroma level adjustment.
(2) DETAIL: Detail level adjustment.
(3) PEDESTAL: Master pedestal level adjustment.

7-3-3. Instructions common on both menus and their meanings

(1) EXIT: Ending the setting mode (saving) and returning to the regular display.
(2) CANCEL: Recalling the previously saved settings.
(3) RESET: Recalling the factory-preset settings.
(4) RET: Returning to the other setting menu.

Select one of these instructions and press the E switch.

7-3-4. Auto save function

If no key is pressed within about 3 minutes in the setting mode, all the settings and modifications are automatically put in memory and the screen returns to the regular display.

7-4. Setting procedure

7-4-1. CAMERA ID (camera identification)

(1) Camera ID on/off
Move the cursor to the position shown in Fig. 7-4.
Using the R and L switches, turn on and off the CAMERA ID item.

(2) Entry of ID codes
On the setting menu, turn on the CAMERA ID item and press the E switch. The following screen appears.

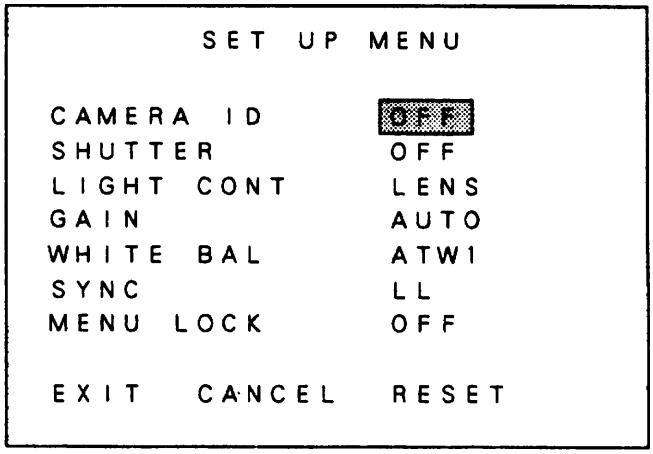


Fig. 7-4

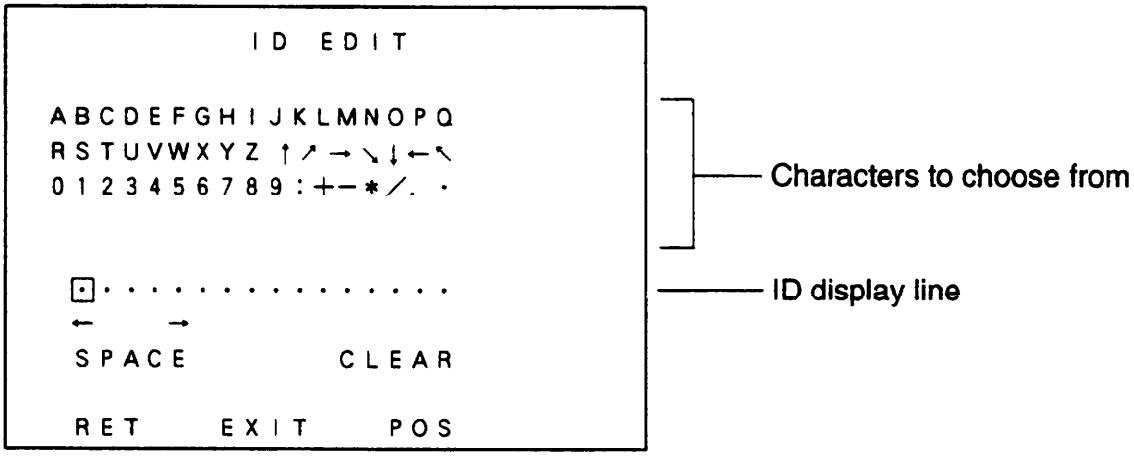


Fig. 7-5

Select characters for an ID code. Enter the characters one by one in the ID display line (marked with a circle in Fig. 7-5). Up to 16 characters are acceptable.

(a) Positioning the start point of the ID display line:
Select the ← → symbol and press the R or L switch.
The ⊡ mark (video reverse display) will move.

(b) Selecting characters:
Use the U, D, R and L switches.

(c) Entering the characters in the ID display line:
Press the E switch.

(d) Giving blanks:
Select the SPACE and press the E switch.The ⊡ mark will move.

(e) Clearing all the characters from the ID display line:
Select the CLEAR and press the E switch.

(3) Setting of display position
Select the POS and press the E switch. The ID code will appear on the regular screen. Using the U, D, R and L switches, move the ID code to any position. Press the E switch and the display position will be determined and the screen shown in Fig. 7-5 will appear again.

(4) Use the RET or EXIT to end the setting.

Notes:

- To display characters at the right end of the screen, enter the ID code at the rightmost end.
  Example : ICD-803P

7-4-2. SHUTTER

(1) This item is effective only when the LIGHT CONTROL item has the "LENS" entry, as shown in Fig. 7-6.
The SHUTTER setting is impossible in the AESC mode. ("- - -" will appear on the screen.

(2) Move the cursor to the position as shown in Fig. 7-6. Using the R and L switches, choose the shutter speed from the 9 steps OFF through 1/10000 sec.

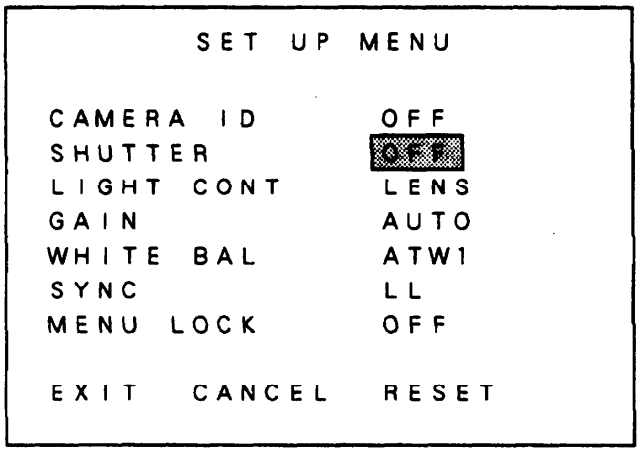


Fig. 7-6

→OFF → 1/60 → 1/125 → 1/250 → 1/500 → 1/1000 → 1/2000 → 1/4000 → 1/10000 →

(The above order is when the R switch is used. This order is reversed when the L switch is used.)

Notes:

- In the shutter mode, more light than usual is needed in shooting. Use this mode in a well-lit place.
- The relationship between the shutter speed and sensitity with respect to the OFF position is as follows.

Shutter speed	OFF	1/60	1/125	1/250	1/500	1/1000	1/2000	1/4000	1/10000
Sensitivity	100	83	40	20	10	5	2.5	1.25	0.5

- In the 60-Hz power frequency regions, flickers may be caused depending on the light (fluorescent light in particular) in the shutter mode with any other shutter speed than 1/60 sec.
- With higher shutter speed, smear effect (white vertical stripes at the top and bottom of the highlighted portion) may be more noticeable due to the property of CCD element.
- Periodic color misalignment may often be caused under a fluorescent light in the shutter mode with faster than 1/250 sec. Avoid fluorescent lamps. (This trouble does not happen in the case of line lock.)

7-4-3. LIGHT CONTROL

(1) Move the cursor to the position in Fig. 7-7. Using the R and L switches, enter the AES or LENS.

(2) Make an entry in the SHUTTER MAX item (in the AES mode). An upper limit of the shutter speed is preset here for the auto shutter control. Take the steps below.

(a) On the setting menu, enter AES in the LIGHT CONT item. Press the E switch and the screen shown in Fig. 7-8 will appear.

(b) Now move the cursor to the position shown in Fig. 7-8. Using the R and L switches, set the shutter speed to 1/10000, 1/30000 or 1/80000.

(c) Finally use the RET or EXIT to end the setting.

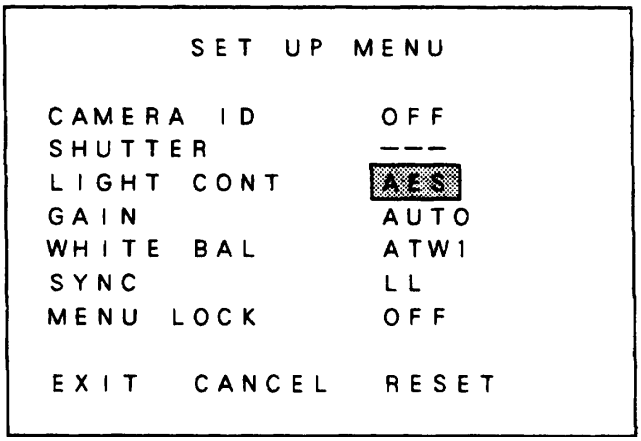


Fig. 7-7

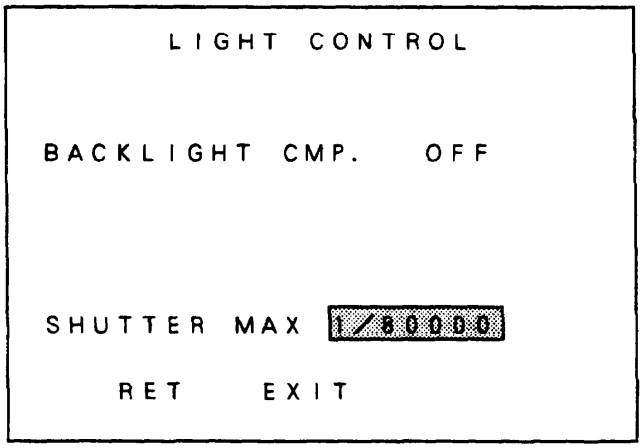


Fig. 7-8

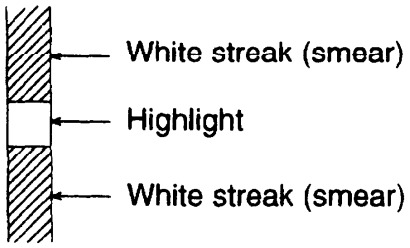
Notes:

- AES (Automatic Electronic Shutter)
  This function is to automatically control the sensitivity of a high-speed electronic shutter.

  Proper video output is guaranteed even with a fixed iris lens in use.

  ① In the AES mode, hunting may be caused if the lighting is of a power frequency different from the vertical scanning frequency (PAL Spec.: 50 Hz). In such a case, use the auto iris lens in stead.

  ② In the AES mode, such smear as shown at right may happen, which produces poor images on the screen.
  This is peculiar to CCD element, but not a trouble. Use the auto iris lens if desired to avoid such phenomenon.



- By connecting the auto iris lens, the AES mode will automatically change to the LENS mode.

7-4-4. *BACKLIGHT CMP. (back-light compensation)*

(1) On the SETUP menu, get the "AES" highlighted as shown in Fig. 7-7. Press the E switch, and the screen in Fig. 7-9 shows up instead.

(2) Get the "BLC" highlighted as shown in Fig. 7-9. Using the R or L switch, select OFF or BLC.

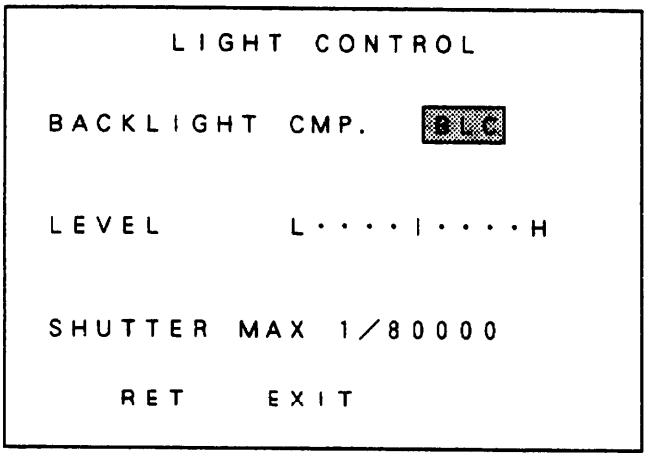


Fig. 7-9

(3) BLC (Backlight Compensation) level adjustment
Get the "I" marker highlighted as shown in Fig. 7-10. Using the R or L switch, move the "I" marker. (Shoot an actual backlighted scene, and adjust the level while watching the image on the screen.) Move the marker toward "H", and the backlight compensation effect is boosted.

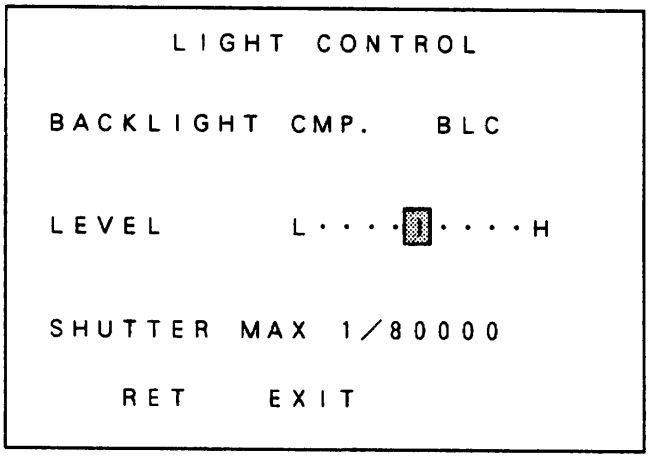


Fig. 7-10

(4) AES (Automatic Electronic Shutter) MAX setting
Get the "1/80000" highlighted as shown in Fig. 7-11. Set the maximum shutter speed.

(5) After making all the above settings, select RET or EXIT.

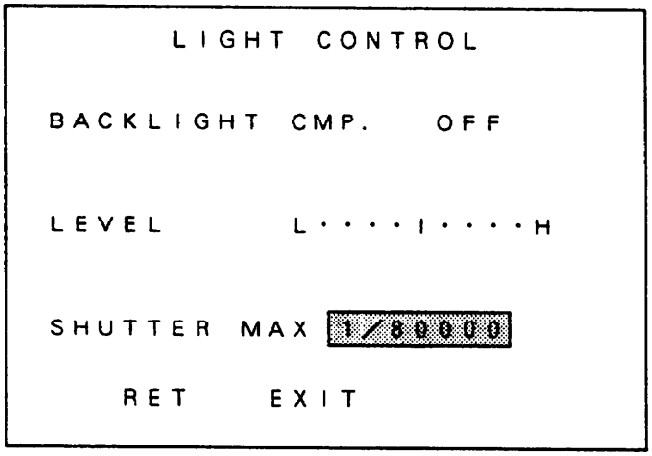


Fig. 7-11

Note:

Back-light compensation (BLC)

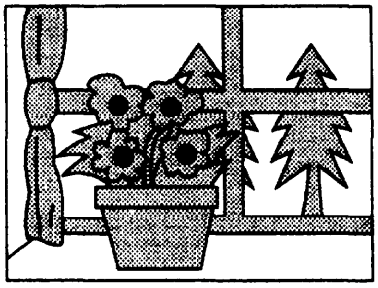
When fairly bright light (outside a window, for example) is behind an object, the object looks shadowy. In such a case, the back light effect should be compensated.

- Typical back light compensation

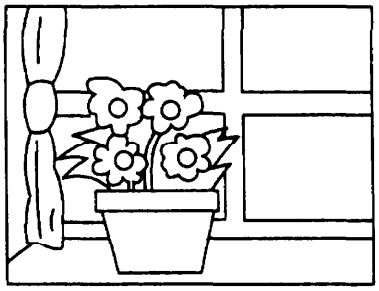
  Let us look at the sketch at right. When shooting the house plant with the BACKLIGHT CMP. off, the flowers will appear very dark because the background is very bright.

  To make the flowers look bright, set the BACKLIGHT CMP. to the BLC position. The entire screen is now corrected.

  * The BLC function does not make a big difference when the entire scene is dark with no back light.



BACKLIGHT CMP. at OFF



BACKLIGHT CMP. at BLC

(6) DC IRIS setting

Connect the DC iris lens. Hold down the U or D switch for 2 seconds or longer, and the screen in Fig. 7-12 shows up. Get the "I" marker highlighted as shown in Fig. 7-12. Using the R or L switch, move the "I" marker.

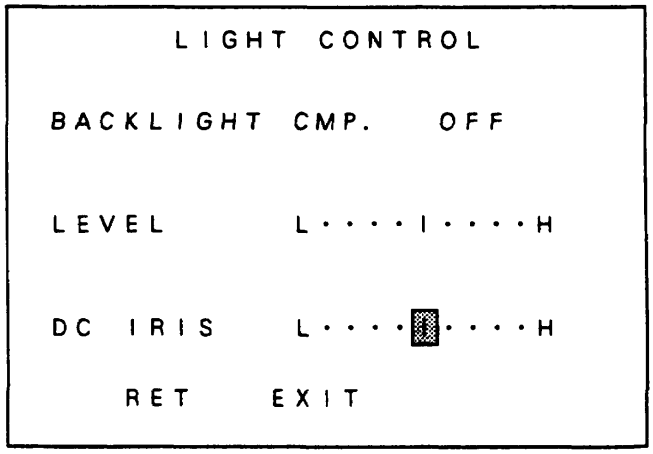


Fig. 7-12

Note:

When setting the DC IRIS level, shoot a subject that is bright enough to keep the lens iris from opening too wide. Make this setting with the backlight compensation off.

* Note that if the above setting is too low, the lens may get into hunting action.

If the light amount is insufficient or the setting level is too low, the "*" mark is displayed on the left of the indicator. See Fig. 7-13. If the "*" mark shows up from the beginning, it means that the light amount is not enough. Move yourself to a brighter spot and make the setting again. If the level is set too low, raise it up to a point where the "*" mark disappears.

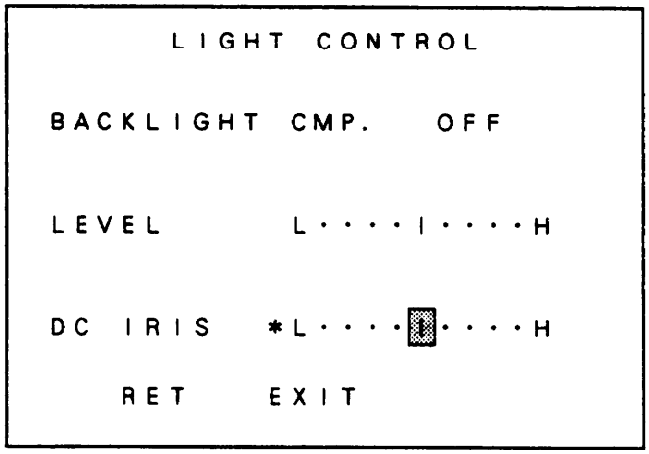


Fig. 7-13

When the DC iris lens is not connected, "NOT CONNECT" appears instead of the indicator, as shown in Fig. 7-14. In such case, check to see if the lens cable is tightly connected and the selector switch is at the correct position.

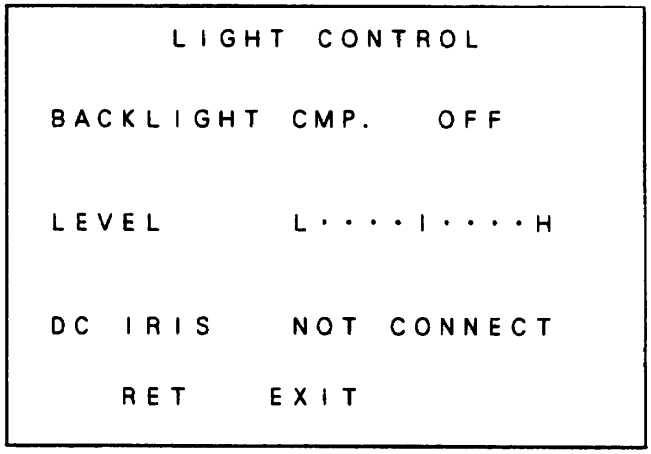


Fig. 7-14

7-4-5. GAIN

(1) Move the cursor to the position shown in Fig. 7-15. Using the R and L switches, enter AUTO, LOW, MID or HIGH in the GAIN item.

(2) The AUTO entry keeps on the AGC function. The LOW, MID and HIGH entries provide for fixed gains.

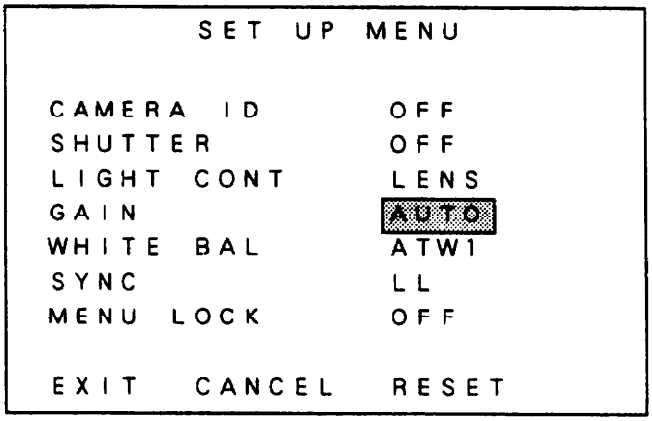


Fig. 7-15

7-4-6. WHITE BALANCE

(1) Move the cursor to the position shown in Fig. 7-16. Using the R and L switches, enter ATW1, AWC or MANUAL, ATW2 in the WHITE BAL item.

(2) ATW1 entry: The white balance is automatically followed up (with color temperatures of 2600-6000K). When no sodium lighting is used, keep the aoutomatic white balance in this mode.

(3) AWC entry: The characters "PUSH" start blinking in the position as shown in Fig. 7-17. Now shoot a white target and press the E switch. The white balance is now adjusted. (When the E switch is pressed, the PUSH characters change to "- - - " first and then "SET" and back to "PUSH" again. With the PUSH on screen, it is possible to make setting again.)

(4) MANUAL entry: Press the E switch and the manaul set mode is called up on the screen as shown in Fig. 7-18. Make the red adjustment of white balance with the U and D switches, and its blue adjustment with the R and L switches. Make sure the ✳ marker is at the central black dot.
By pushing the E switch again, the screen goes back to the setting menu.

(5) ATW2 entry: The white balance is automatically followed up in the range from sodium lighting and sunlight (with color temperatures of 2000-6000°K).When sodium lighting is used, keep the automatic white balance in this mode.
Note that in the ATW2 mode, reddish objects may look less brilliant.

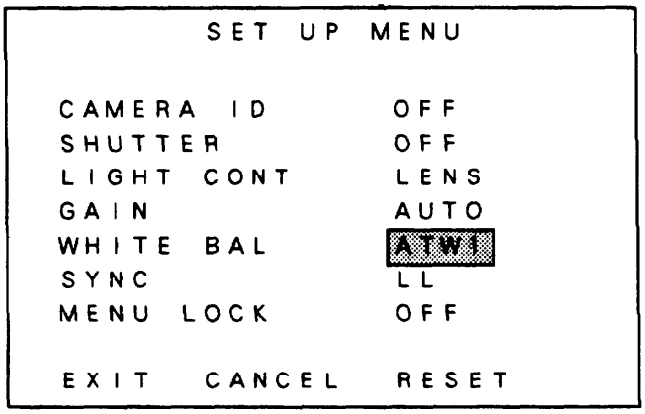


Fig. 7-16

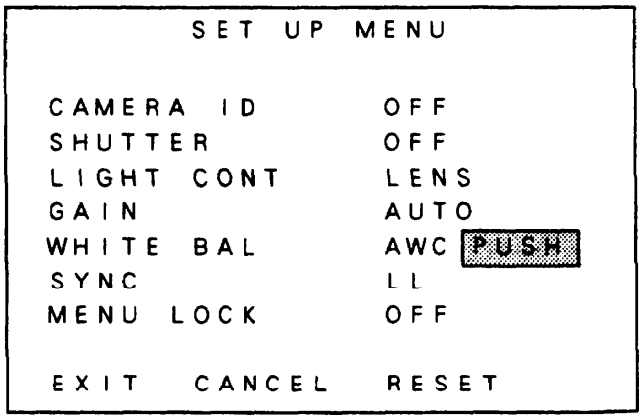


Fig. 7-17

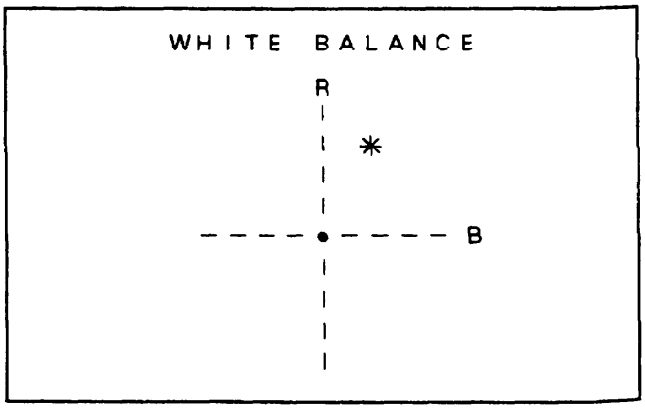


Fig. 7-18

Note 1:

The ✳ marker is a rough guide for white balance adjustment.

The center point adjustment does not always mean that the white balance is best. Its depends on the patterns of target objects.

Note 2:

If the video level is not proper, the ✳ marker disappears from the screen and the "OUT OF RANGE" message is displayed on the screen as shown in Fig. 7-19. Readjust the video level and press any of the U, D, R, L and E switches. The "OUT OF RANGE" message disappears. Restart the white balance adjustment.

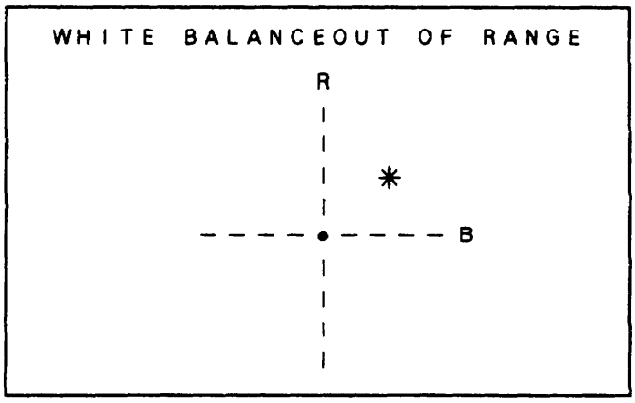


Fig. 7-19

Notes:

- The automatic color temperature follow-up function does not work if used with an unusual light source or with a light source which is not within the adjustable range. In addition, since this function uses the TTL system, a colored object may cause a color temperature difference from its surroundings and proper white balance may not be obtained.
  This is noticeable if the function is used in shooting an object having a large area of a single color. In such a case, use the camera with the white balance switch at the AWC or MANUAL position.
- In the ATW mode, panning or tilting the camera on a carrier or the like may cause the white balance
  to change depending on the object. This may result in blurry images.
- For color temperature and brightness guides, see the charts on page E-25,E-26.

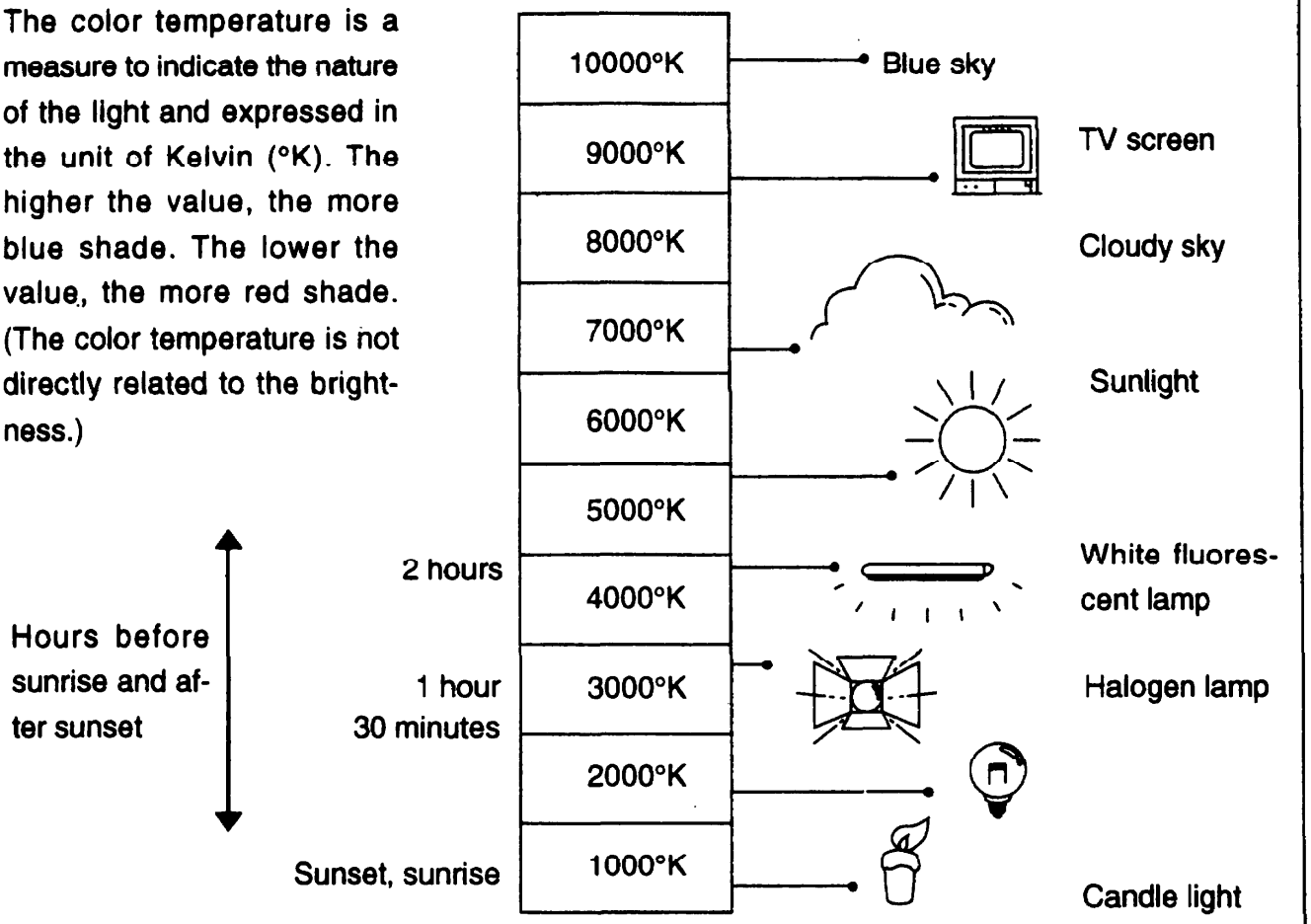
- Guide for numerical brightness expression

10		• Candle light (20 cm away) (10-15)
100	• Outdoor golf practice range (200-300) • Fluorescent lamp, 30W x 2 (300) • Desk under fluorescent lighting (400) • Office room under fluorescent lighting (400-500) • Bowling alley (500) • Department store floors (500-700)	• Flashlight (1 m away) (250) • Subway station platform (300) • Clothing shop (400-500) • Public library reading room (400-500) • Subway train (500) • Station ticket gate (650)
1,000	• Sunlight 1 hour before sunset on fine day (1,000) • Sunlight 1 hour after sunrise on cloudy day (2,000)	• Well-lit room (1,000) • Window side of office room under fluorescent lighting (1,000)
10,000	• Sunlight at 10 AM on cloudy day (250×10^2) • Sunlight at noon on cloudy day (320×10^2) • Sunlight at 3 PM on fine day (350×10^2) • Sunlight at 10 AM on fine day (650×10^2)	
100,000 lux	• Sunlight at noon on fine day ($1,000 \times 10^2$)	

- The above figures are approximate for your reference. Refer to this chart as a brightness reference guide.

- Guide for color temperatures of light sources

The color temperature is a measure to indicate the nature of the light and expressed in the unit of Kelvin (°K). The higher the value, the more blue shade. The lower the value, the more red shade. (The color temperature is not directly related to the brightness.)



7-4-7. SYNC

(1) Move the cursor to the position shown in Fig. 7-20. Using the R and L switches, enter INT or LL in the SYNC item.

(2) INT entry: The camera is put in the internal sync mode.

(3) LL entry: The camera is put in the line lock mode. Press the E switch and the screen will go to the phase adjustment mode as shown in Fig. 7-21.

(a) Adjust the COARSE and FINE levels with the R and L switches.

(b) Enter a coarse level from among 0 deg, 90 deg, 180 deg and 270 deg.

(c) Make fine adjustment in the FINE item.

(d) Use the RET or EXIT to end the setting.

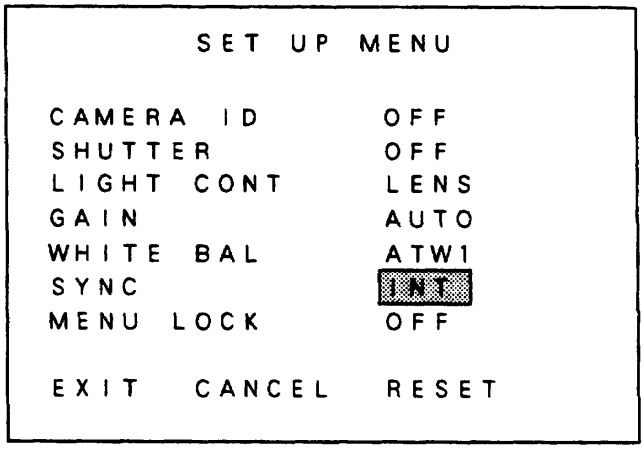


Fig. 7-20

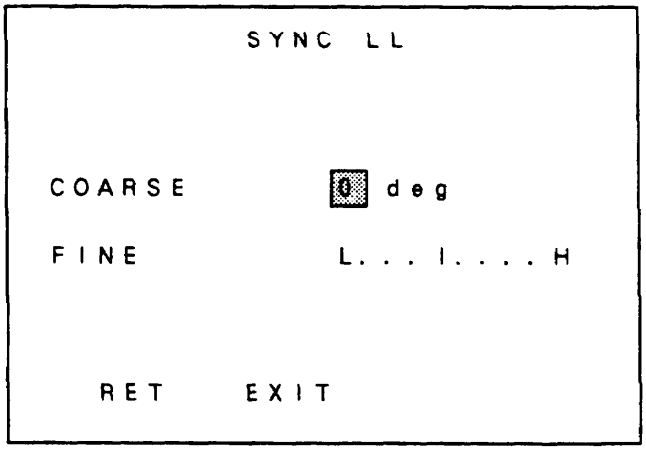


Fig. 7-21

Notes:

The LL setting cannot be made in the following cases.

- DC type camera (no line lock signal input).
- PAL system model with 60-Hz power frequency.

7-4-8. GENLOCK

(1) With the Genlock signal being fed in, the camera is automatically put in the external sync mode. When the VBS or BBS signal is inputted in this mode, "EXT VBS" is displayed as shown in Fig. 7-22. With the VS signal, "EXT VS" appears as shown in Fig. 7-23.

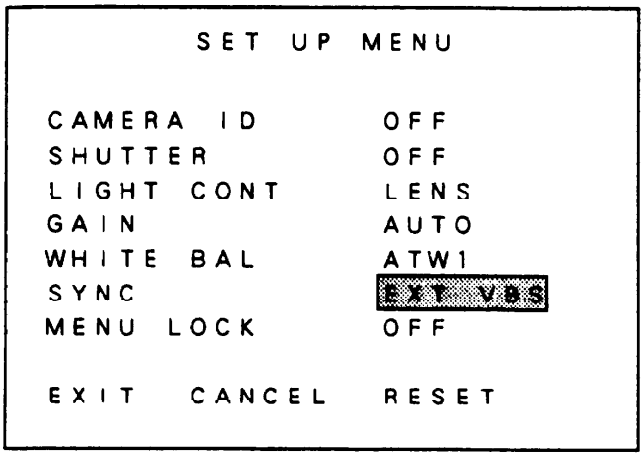


Fig. 7-22

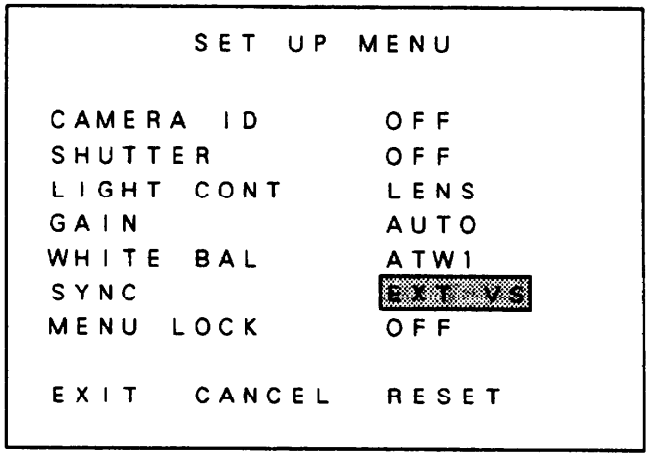


Fig. 7-23

(2) Move the cursor to the SYNC entry blank. Press the E switch to bring about the phase adjustment mode.
The display shown in Fig. 7-24 and that in Fig. 7-25 appear for the VBS and VS signals, respectively, on the screen. Make the phase adjustment with the R and L switches.
In the case of the VBS signal, the H.PHASE and SC.PHASE adjustments can be made. For the VS signal, the H.PHASE adjustment alone is possible.

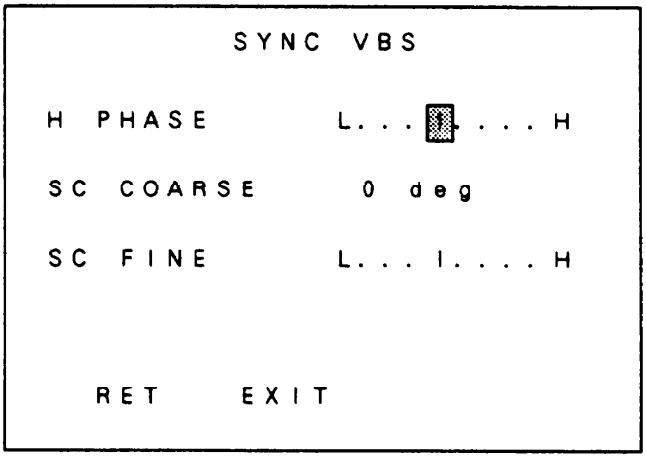


Fig. 7-24

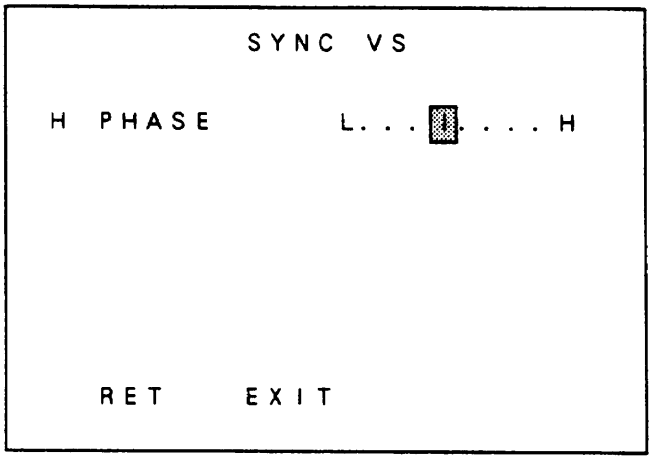


Fig. 7-25

(3) Use the RET or EXIT to end the setting.

7-4-9. MENU LOCK

The menu lock function is provided to protect the settings from unintentional changes.

(1) Locking

Move the cursor to the position shown in Fig. 7-26. Press the E switch. When the menu is locked, the "ON" in the MENU LOCK is video-reversed.

(2) Operation

Once the menu has been locked, only the EXIT instruction is effective. Any other instructions are not accepted. (See Fig. 7-27.)

(3) Unlocking

Press the following switches in this order:

U → R → D → L → U → D → E

If a wrong key has been pressed halfway, do it again from the beginning.

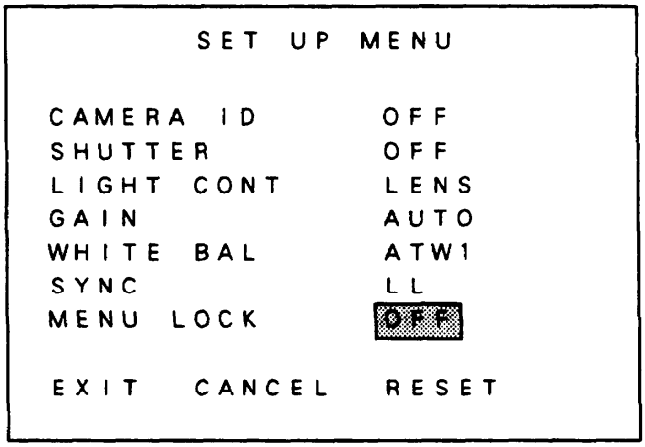


Fig. 7-26

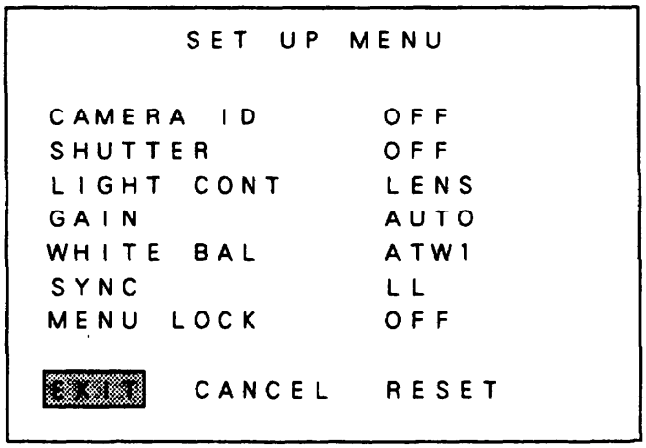


Fig. 7-27

7-4-10.SPECIAL MENU

Move the cursor to the EXIT position in the setting menu. Hold down the R and L switches at once until the screen s shown in Fig. 7-28 will show up.

(1) CHROMA
Used to adjust the chroma level. Shifting toward the H position increases the level.

(2) DETAIL
Used to adjust the detail correction level. Sharpness is boosted by shifting toward the H position, and softness by moving toward the L position.

(3) PEDESTAL
Used to adjust the pedestal level. Shifting toward the H position increases the level.

(4) Use the RET or EXIT to end the setting.

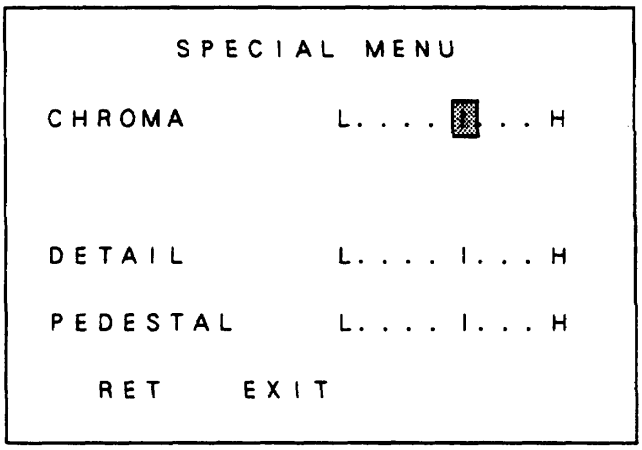


Fig. 7-28

8. Warranty and after-sale service

A warranty accompanies this product. Read and fill out the warranty card that you have received at your dealer. Keep this card in a safe place.

- The product is guaranteed for full one year after the date of purchase (consumable parts not covered by the warranty). Your dealer will repair or replace free of charge within the warranty period according to the warranty coverage. For details, refer to the warranty.
- For repairs after the expiration of the warranty period, consult your dealer or sales representative. It will first be judged whether the trouble is repairable or not. Charged servicing will then be made upon request of the user.
- Before you ask for servicing, take trouble of reading the Instruction Manual. If the unit still fails, take note of the model number, date of purchase, problem, etc. in details, and inform your dealer or sales representative.
- If you have questions about the after-sale service, contact your dealer or sales representative. We suggest you ask for preventive inspection earlier.

9. Specifications

(1)	Imaging device:	1/2" interline transfer type CCD Effective pixels;. 753(H) x 582(V), about 440,000 pixels Color filter; Color difference line sequential system
(2)	Scanning system:	2:1 interlace, as per PAL-B System
(3)	Vertical sync frequency:	50 Hz
(4)	Horizontal sync frequency:	15.625 kHz (corresponding to power frequency for line lock; SC out of sync)
(5)	Synchronizing system:	Internal sync; Crystal lock or line lock (on AC type only) External sync; GENLOCK (automatic selection)
(6)	GENLOCK input:	VBS or VS; 1.0 Vp-p/75 ohms (high-impedance selectable) BBS; 0.45 Vp-p/75 ohms (high-impedance selectable)
(7)	Video output:	① Composite output; VBS 1.0 Vp-p/75 ohms ② Y/C output; Y(VS) 1.0 Vp-p/75 ohms C 0.286 Vp-p/75 ohms
(8)	Horizontal resolution:	480 lines
(9)	S/N ratio:	52 dB (p-p/rms) (luminance signal, standard illumination, DETAIL correction off, weighting circuit on)
(10)	Minimum illumination:	0.5 lux/F1.4 (AGC on)
(11)	AGC:	ON/OFF seletable
(12)	White balance:	ATW1/ATW2/AWC/MAN selectable and adjustable
(13)	Detail correction:	Provided (Detail level adjustable)
(14)	Back-light compensation:	ON/OFF selectable
(15)	AES:	ON/OFF selectable AES range; about 1:1600 (not operative in regions where the power frequency and the camera's vertical sync frequency are different from each other)
(16)	Electronic shutter:	OFF, FL(flickerless), 1/125, 1/250, 1/500, 1/1000, 1/2000, 1/4000 and 1/10000 selectable. (FL: 1/60 Sec.)
(17)	Auto iris function:	Video iris/DC iris selectable
(18)	Camera ID function:	Provided (one line with 16 characters)
(19)	Local set-up functions:	Selectable and adjustable with on-screen display using 5 control buttons; Camera ID, INT/LL, AES/electronic shutter, BLC on/off, AGC on/off, ATW/AWC/MAN select/adjust, chroma level, detail level, pedestal level, menu lock selectable.
(20)	Remote set-up functions:	Multiplex video communication system with RCU-701. Same presettable items as with the local se-up functions

(21) Lens mount: CS mount (C mount adapter attachable)

(22) Flange focal distance adjustment mechanism: Provided

(23) Supply power:
① AC 230V ±15%, 50Hz
② AC 24V ±10%, 50Hz
③ DC 12V (10.5-15V)

(24) Power consumption: About 4.5W

(25) Ambient operating temperature and humidity: -10 to +50°C, 30-85%RH (no condensation)

(26) Camera mount: 1/4"-20UNC (mountable on top too)

(27) External dimensions (WxHxD): 70X60X140mm (no projections and accessories included)

(28) Weight:
① AC 230V type; about 1050g
② AC 24V type; about 800g
③ DC 12V type; about 800g

(29) Input/output connectors:
• VBS output ..... BNC
• Y/C output ..... 4-pin S connector
• GENLOCK output ..... BNC
• Lens ..... 4-pin (applicable plug E4-191J-100 option)
• AC 24V/DC 12V input .. 2-pin push-in terminal

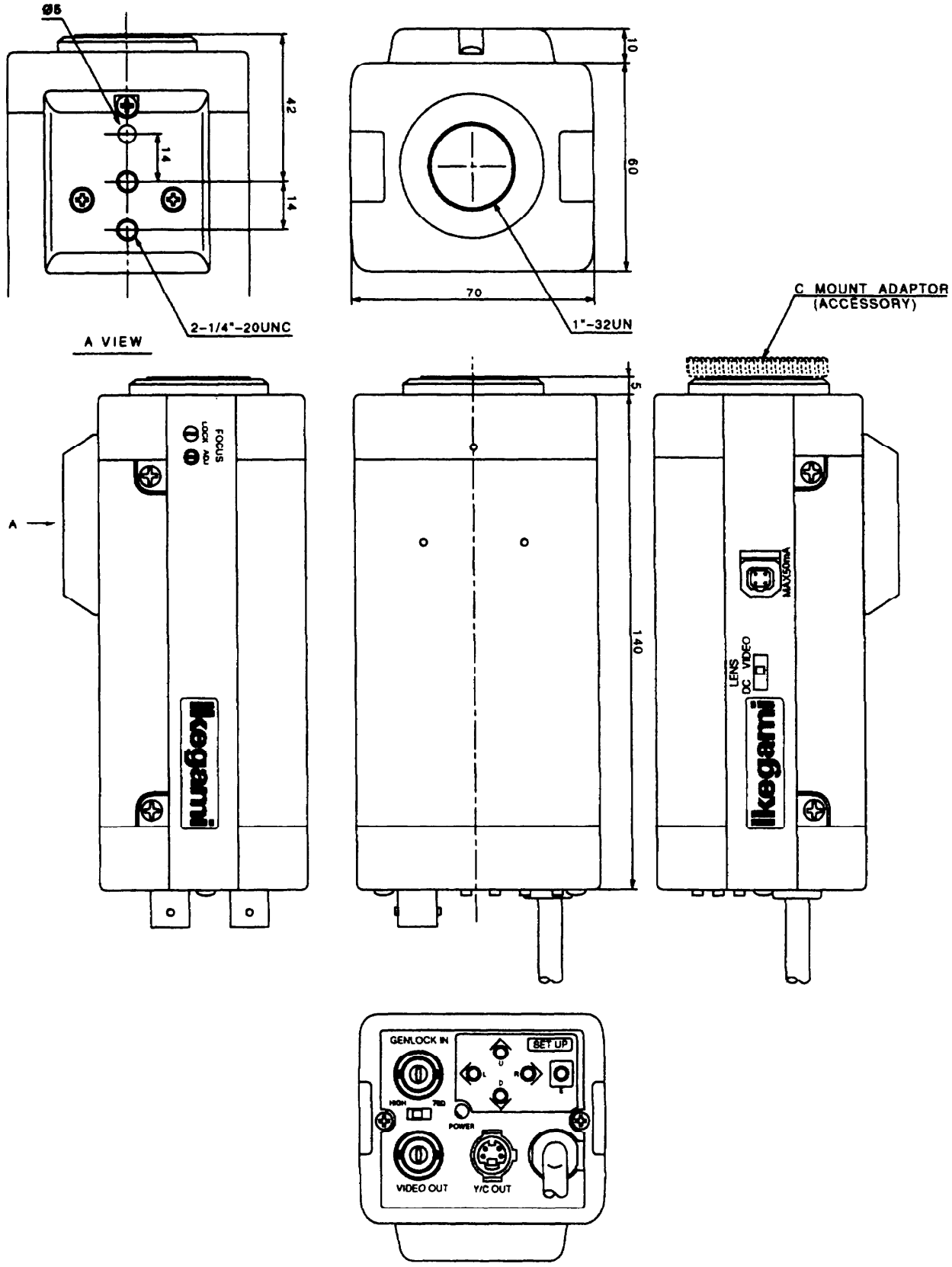
(30) Accessories:
① C mount adaptor (C-AD2): 1 pc.
② LENS connector plug: 1 pc.
(E4-191J-100 or equivalent)
③ Instruction manual: 1 copy

※ The specifications and appearance are subject to change without notice.

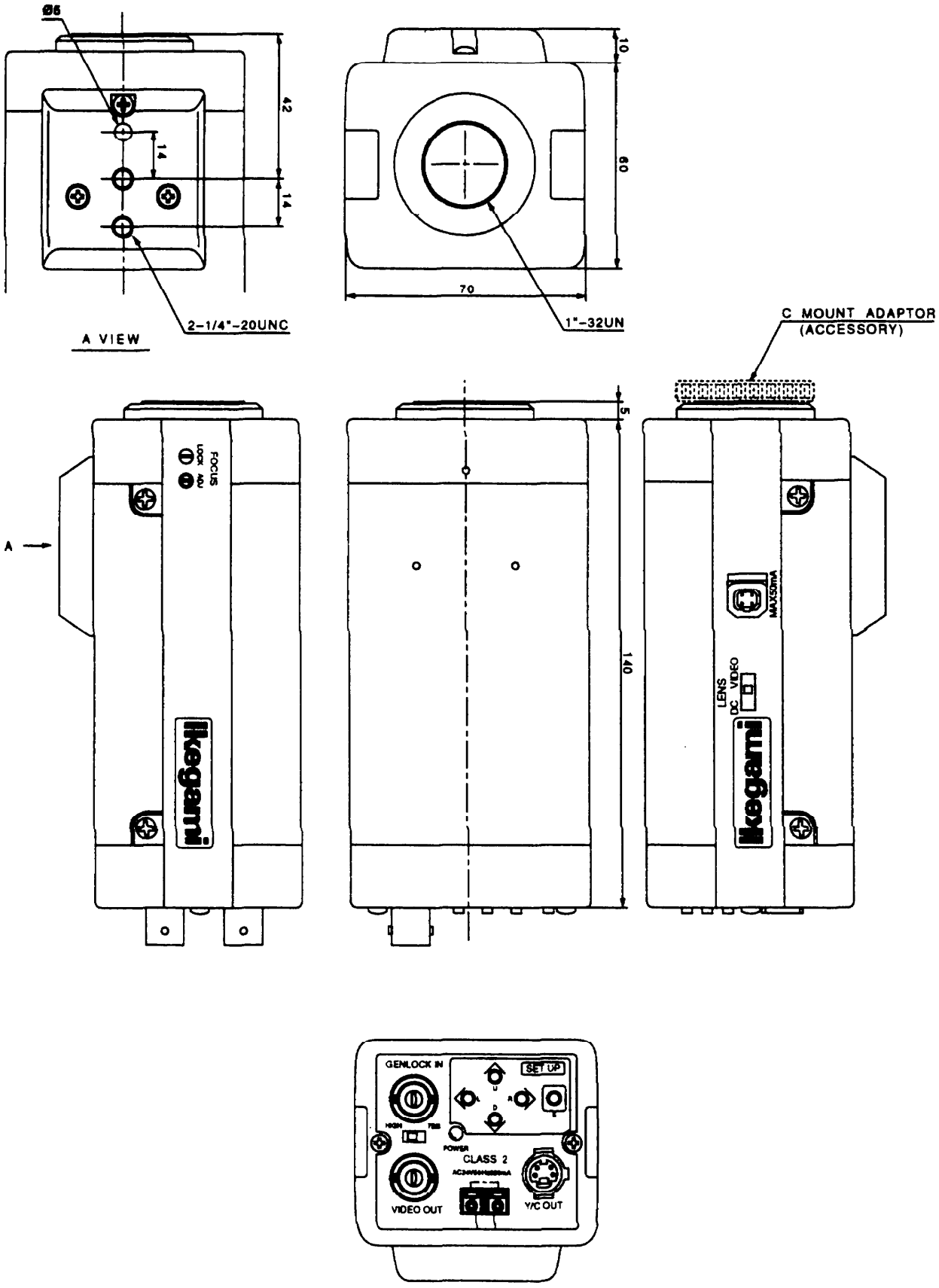
※ The camera is designed to give the video output signals that conform to the PAL-B system. It cannot therefore be used for VCR's and monitors that use any other systems.

10. Appearance view

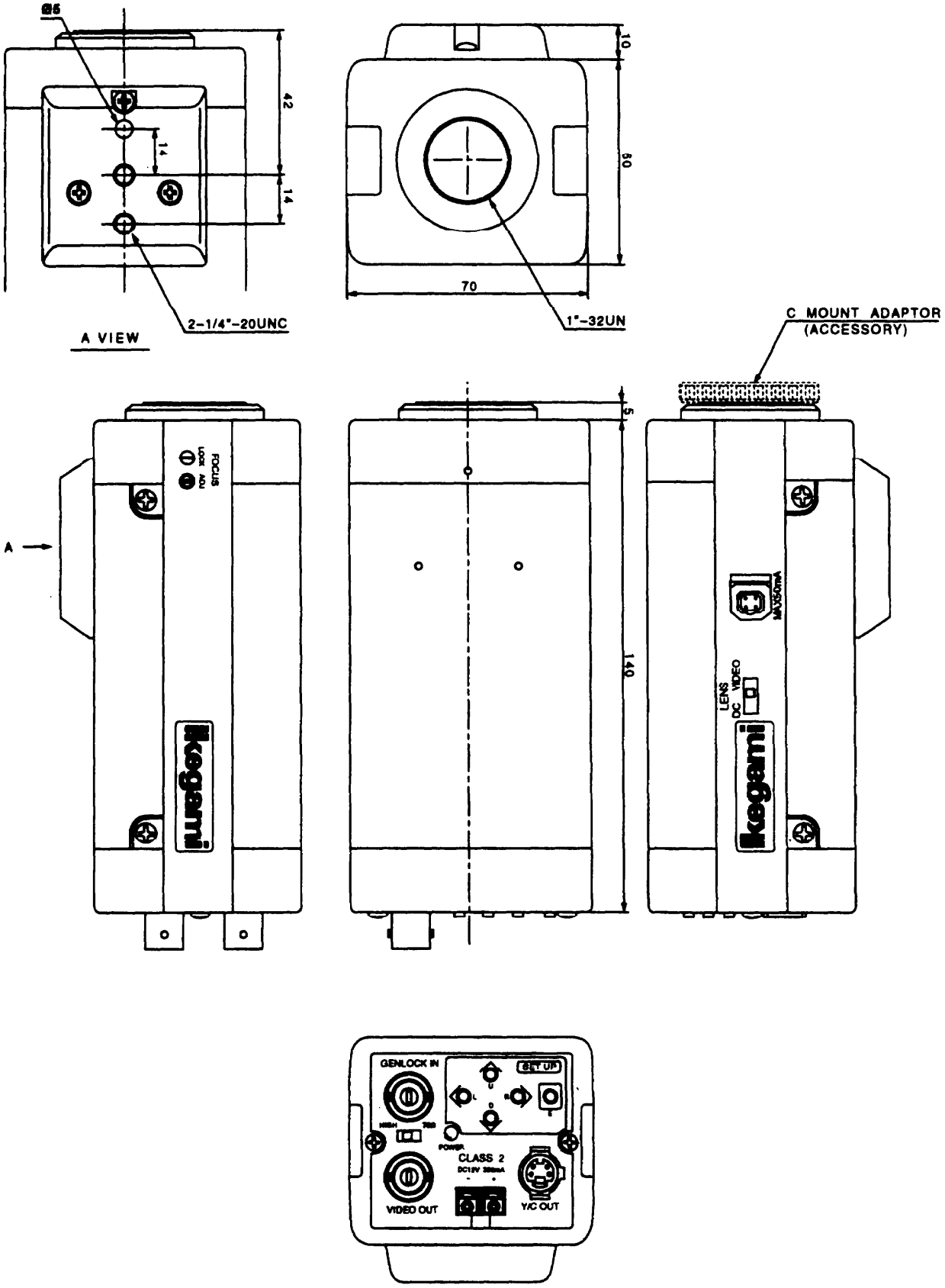
· ICD-803P AC (230V)



· ICD-803P AC (24V)



· ICD-803P DC (12V)



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