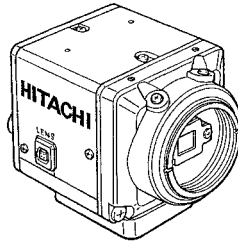# KP-D20A
KP-D20B

OPERATION MANUAL

Thank you for procuring this fine Hitachi Kokusai Electric color CCD camera.
Before using the camera, please read this operation manual carefully and keep this manual on file for ready reference in the future.

Hitachi Kokusai Electric Inc.

MGA2502

Section names and function

Tripod adaptor holes
See camera installation

Lens mount screws

Lens connector
Connect lens cable when using an auto iris lens.

Lens mount ring

Tripod adaptor hols
See camera installation

General

KP-D20A/B color camera uses a single integration type CCD complemented by a digital signal processing system to provide both high quality images and a host of important compensation functions.

The high density CCD features 380,000 effective picture elements (440,000 PAL) that deliver clear images even under low light conditions. Digital control enables fully exhibiting the outstanding sensitivity and resolution capabilities.

Features

Small, Compact, Self-contained color camera
● The camera requires a small space for installation, allowing use for various purpose and conditions.

High sensitivity, high resolution
KP-D20A
● The high density interline type CCD sensor with on-chip microlenses enables low-light pickup down to 1.5 lx (with F1.2 lens, AGC maximum) and Horizontal resolution of 480 TV lines (NTSC), 470 TV lines (PAL).

KP-D20B
● The high density interline type CCD sensor with on-chip microlenses enables low-light pickup down to 1.0 lx (with F1.2 lens, AGC maximum) and Horizontal resolution of 480 TV lines (NTSC), 470 TV lines (PAL).

High picture quality
● Digital signal processing LSI.
● Contour compensation by digital technology and 2H vertical enhancer.

Various functions
● Backlight correction (BLC)
● Auto tracking white balance (ATW)
● Auto electronic shutter control (AES)
● Text display (character generator)
● Digital zoom
● Y/C output
● RS-232C remote controll

Set up buttons
Use when setting up and adjusting the camera with reference to the on-screen menu.

DC in connector
See connections

Video output connector
See connections

Y/C output connector

Lens select switch (DC/VIDEO)
Set according to the type of lens.
DC : Select when using a lens having a DC control voltage input.
VIDEO : Set to position when using a lens controlled by a video signal input.

Remote connector
Use for remote menu operations.

Operating considerations

Power supply
Be sure to use the power source specified in the Major Specifications.
● Before plugging or unplugging a connector, be sure to turn off power.
To plug or unplug a connector, be sure to hold the connector section.
● Note that it will take several seconds until a picture is displayed on the monitor after power on.

Handling
● Do not attempt to remove cover.
● When installing or removing a lens, be sure to use care that water or dust does not enter the inside of the camera.

Installing and storage
Avoid installing or storing the camera in the following environments.
● Environments exposed to direct sunlight, rain or snow
● Environments where combustible or corrosive gas exists
● Excessively warm or cold environment (Operating ambient temperature: -10 to 50°C)
● Humid or dusty environment
● Place subjected to excessive vibration or shock
● Environment exposed to strong electric or magnetic field

● Do not aim the camera lens at the sun.
● Do not shoot strong light or a scene including strong light. When such a scene is shot, vertical trailings will appear. However, this is not due to failure.
In case strong light enters the camera through the lens, partial deterioration in picture quality will result.

To obtain stable performance for long time
When the camera is used continuously for long time under high ambient temperature, the inside electrical parts become deteriorated, resulting in shortening its life.
To use the camera continuously for long time, the highest temperature must be below 40°C.

Cleaning
● Use a blower or a lens brush to remove dusts on the lens or the optical filter.
● Wipe dirts on the case off with dry soft cloth. If dirts are hardened, wipe them off with cloth moistened with neutral detergent liquid; wipe the cover with dry cloth.
● Do not use benzine, thinner, alcohol, liquid cleaner or spray-type cleaner.

Connections

● Video output connection
Connect the video output of the camera to the video input of a monitor or other equipment. When using a "loop through" connection of two or more monitors, set the 75 Ω switch of only the final monitor to ON.
Determine the type of cable according to the distance of the connected equipment. The maximum cable lengths indicated below are recommended for avoiding appreciable picture degradation.

3C-2V : 150 meters	7C-2V : 300m
5C-2V : 200m	10C-2V : 400m

Set the 75 Ω switch of only the final monitor to on. Set the 75 Ω switch of other monitors to off.

● External power supply connection
Use a stabilized 12 VDC (± 10%) power supply rated at 0.5 ampere or greater. Wire the accessory 3-pin DC plug as shown in the figure for connecting the power supply to the camera.

Caution: Be sure to confirm proper polarity before switching on power.

Phenomena inherent to CCD imaging device

Following are the phenomena inherent to a CCD imaging device, and not defects

1) Smear and blooming
When strong light (lamp, fluorescent lamp, reflected light, etc.) is shot, pale bands are displayed vertically above and below the light.
In this case, change the angle of the camera so that such strong light does not enter the camera through the lens.

2) Fixed pattern noise
When the camera is operated in a high temperature, fixed pattern noise may appear on the entire screen.
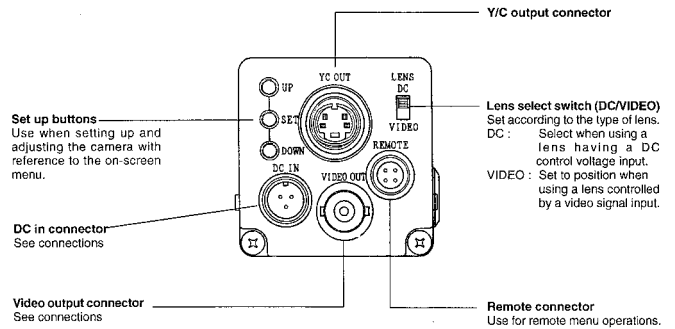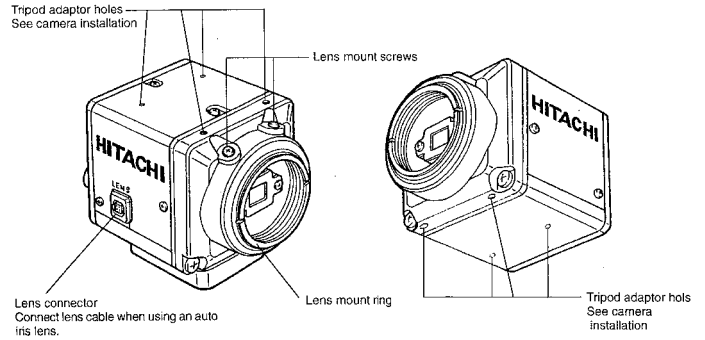
3) Moire
When fine patterns are shot, moire may be displayed.

4) Burning
When excessively intense light comes to the CCD for a long time, the spectral filter in the CCD pixel may be deteriorated, and the color of the corresponding portion may change. Avoid using the camera under such condition.
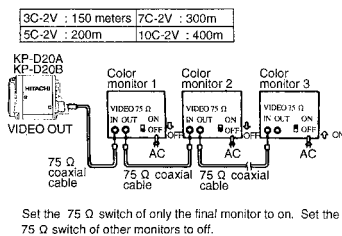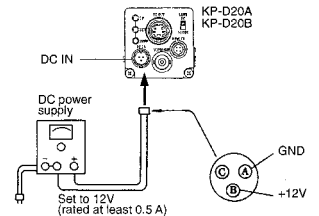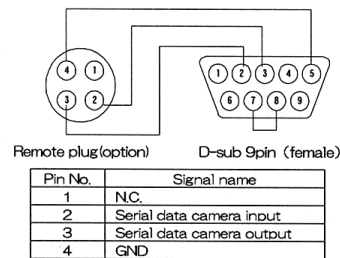
Remote connection

This camera can perform remote control of various setup of a camera with a personal computer.
Please perform wiring as shown in a figure to an optional remote plug, and connect with the remote connector on the back of a camera after checking wiring correctly.

Note
● Nothing should connect with NC pin.
● Please perform extraction and insertion of a remote plug after turning off a camera power supply.

Remote plug(option)   D-sub 9pin (female)

| Pin No.	Signal name
1	N.C.
2	Serial data camera input
3	Serial data camera output
4	GND

Lens

Note on lens selection

1) Observe the maximum size limit (A in the figure) when installing the lens. Internal damage can occur if a larger lens is used.
2) Avoid using a lens that is heavier than the camera. If unavoidable, be sure to fix the lens itself on a support.

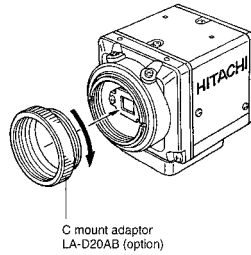**Caution:**
A heavy lens can disturb the balance with respect to the camera and possibly result in damage.

C-mount lens : Less than 8.0mm
CS-mount lens : Less than 4.5mm

Lens

Lens flange surface
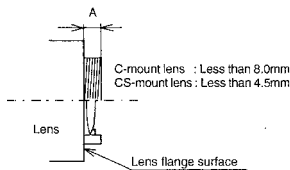
Installation of C-mount lens

This camera attaches CS mount lens.
As shown in a figure, when you use C mount lens, C mount lens adapter (option) is attached.

C mount adaptor
LA-D20AB (option)

Lens selector switch

Set the switch according to the type of auto-iris lens. The factory setting is DC.

LENS
DC

VIDEO

DC : Set to **DC** when using a lens having a DC control voltage input.

VIDEO : Set to **VIDEO** when using a lens having a video signal input.

Notes
1. To the extent possible, set the lens response to Average. Hunting can occur toward the Peak setting.
2. Set the switch to DC when using a manual iris lens with auto electronic shutter (AES) at the same time.
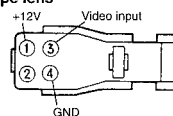
Lens connector

When using an auto iris lens, install the lens plug on the lens cable as indicated in the figures. Refer to the lens instructions regarding the signals and wire colors.

DC type lens

Damping coil ⊖   Drive coil ⊕

Damping coil ⊕   Drive coil ⊖

VIDEO type lens

+12V   Video input

GND
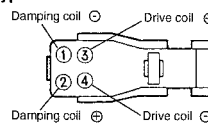
After installing the plug on the cable, connect it to the Lens connector on the rear of the camera.

Flangeback adjustment

Flangeback adjustment is needed in cases where focus cannot be obtained by normal lens focus operation or focus is lost at the maximum telephoto and wide angle settings of a zoom lens. In such cases, open the lens iris and adjust as follows.

1. Fixed focus lens

Set the lens focus ring to infinity and pickup a camera subject at least 20 meters distant. Loosen the lens mount setscrews (2 screws) and turn the lens and lens mount ring to adjust the focus. After adjusting, tighten the lens mount setscrews.

2. Zoom lens

1) Set the lens to maximum telephoto and pickup a camera subject at least 3 meters distant. Loosen the lens mount setscrews (2 screws) and turn the focus ring to adjust the focus while using care not to turn the lens and lens mount ring.
2) Set the lens to maximum wide angle and pickup the same camera subject. While using care not to turn the lens focus ring, turn the lens and lens mount ring to adjust the focus. Repeat these steps until focus is obtained at both telephoto and wide angle settings. After adjusting, tighten the lens mount setscrews.
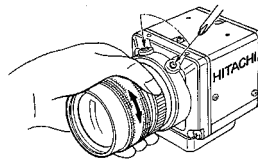
Camera mounting

As shown in a figure, when attaching in the case where hang on the ceiling etc., attach metallic ornaments and camera is hung, a tripod, etc., a tripod adaptor (option) is attached.
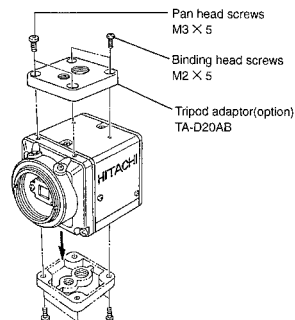
Caution : Use the following type of camera mounting screw.

Type : 1/4"-20UN
Length L : 3/8"-16UN
If longer than 7 mm, there is risk of internal damage to the camera. Conversely, if too short, the camera will not be firmly secured and there is risk of dropping.

Pan head screws
M3 × 5

Binding head screws
M2 × 5

Tripod adaptor(option)
TA-D20AB

Main specifications

1 Color system	NTSC/PAL		
2 Pickup element	Interline transfer type CCD		
Total pixels	NTSC 811(H)×508 (V)		
	PAL 795(H)×596(V)		
Effective pixels	NTSC 768(H)×494 (V)		
	PAL 752(H)×582 (V)		
Scanning area	KP-D20A		
	NTSC 4.88(H)×3.66(V)mm		
	PAL 4.89(H)×3.64(V)mm		
	(equivalent to 1/3-inch)		
	KP-D20B		
	NTSC 6.45(H)×4.84(V)mm		
	PAL 6.47(H)×4.83(V)mm		
	(equivalent to 1/2-inch)		
Unit cell size	KP-D20A		
	NTSC 6.35(H)×7.4(V)μm		
	PAL 6.5(H)×6.25(V)μm		
	KP-D20B		
	NTSC 8.4(H)×9.8(V)μm		
	PAL 8.6(H)×8.3(V)μm		
3 Scanning system	2:1 interlace		
4 Scanning frequency	Hor. NTSC : 15.743 kHz		
	PAL : 15.625 kHz		
	Ver. NTSC : 59.94 Hz		
	PAL : 50 Hz		

5 Sync system	Internal
6 Signal processing	Internal digital processing (input: 10 bits, output: 8 bits)
7 Video signal output	VBS 1.0 Vp-p/75 Ω Y/C output Y=1.0Vp-p/75 Ω C=0.3Vp-p/75 Ω
8 Resolution	Hor. NTSC 480 lines PAL 470 lines Ver. 350 lines
9 S/N (luminance signal)	More than 50 dB (AGC, enhancer and gamma OFF)
10 Minimum illumination	KP-D20A 1.5 lx (F1.2, 3200 K AGC 31dB) KP-D20B 1.0 lx (F1.2, 3200 K AGC 31dB)

11 Scene illumination range	KP-D20A 1.5 to 100,000 lux KP-D20B 1.0 to 100,000 lux (when using auto-iris lens)
12 Sensitivity setting	AGC ON/OFF selectable Max. gain at AGC ON settable
13 White balance	Selectable auto-tracking (ATW), preset (AWC), MANUAL

14 Electronic shutter lens outputs

Video signal input type lens	Luminance signal 1.0Vp-p/high impedance Power supply 12V DC 60mA
Iris control voltage input (galvanometer) type lens	Coupling coil impedance Damper : 115 Ω ± 10% Drive : 190 Ω ± 10%

15 Backlight compensation
ON/OFF switchable
Sensing area : selectable from 9 areas

16 Electronic shutter speeds
1/60 (1/50 PAL), 1/100 (1/120 PAL), 1/250,1/500,1/1000, 1/2000,1/4000, 1/10000, 1/20000, 1/30000, AES

17 Text display	24 alphanumeric characters
18 Electronic zoom	Up to 4×
19 Lens mount	CS mount
20 Ambient temperature	-10 to +50℃, 30 to 80 %RH

Note: If used continuously, be sure to operate at less than 40℃ for long term stable performance.

21 Storage ambient	-20 to +60℃, 30 to 90%RH
22 Power supply	12V ± 10 %,
23 Power consumption	Approx 220mA (including Auto Iris lens)
24 External dimensions	44 (W) × 44 (H) ×49 (D) mm
25 Mass	Approx. 130 g

Supplied accessories

Operation manual   1set

Option accessories

|		
C mount adaptor	:	LA-D20AB
Tripod adaptor	:	TA-D20AB
DC input plug	:	R03-P3F
Lens plug	:	E4-191J-100
Remote plug	:	HR10A-7P-4P (01)
Lenses	:	Refer to attached sheet

Setting menu description

The camera settings and adjustments can be changed to conform to conditions of use. Use the setting menu indicated on the monitor screen to check and change the settings and adjustments. The setting menu is comprised as follows.
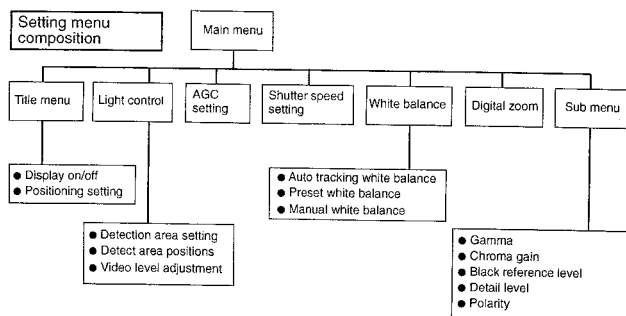
Menu operations

Three rear panel setup buttons are used to shift the cursor and select items from the menus.
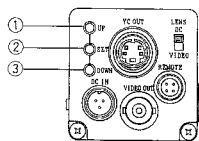
① **Up button:**
Shift the cursor in the upward direction or increase an adjustment value.

② **Set button:**
Press to display the main menu or to change a setting.

③ **Down button:**
Shift the cursor in the downward direction or decrease an adjustment value.

Main menu

1) Press the Set button for at least 2 seconds to display the main menu on the monitor screen.

Main menu

2) Check the present settings at the main menu.
3) Shift the cursor vertically by pressing the Up and Down buttons, then press the Set button to enable changing the setting of the selected item.
4) If changes are unnecessary, shift the cursor to End and press the Set button to return to the normal screen.
5) Changed settings are stored in the camera memory (EEPROM) and returned the next time the camera power is switched on.

When an item indicated by a ↲ mark is selected, pressing the Set button shifts to the next menu.

Note:
If no button is pressed, the menu display extinguishes automatically after about 5 minutes.

Title menu

One line of up to 24 alphanumeric characters can be displayed on the screen. The display on/off and position are selected at the Title menu.
1) Press the Set button for longer than 2 seconds to display the Main menu.
2) Use the Up and Down buttons to shift the cursor to Title, then press the Set button to display the Title menu.

Title menu (off mode selected)

3) While the cursor is at Mode, press the Set button to shift the mode in the sequence Off, Top, Bottom.
Off
Characters not displayed.
Top
Characters displayed at top of screen.
Bottom
Characters displayed at bottom of screen.
Display character input
1) When the mode is Top or Bottom, the characters indicated in the figure can be used.
2) Press the Down button, then use the Up and Down buttons to shift the flashing cursor sequentially among the usable characters. Shifting is speeded when the button is held depressed.

Title menu

3) When the Set button is pressed, the selected character is entered in sequence beginning with the left-most of 24 dots shown at the bottom of the screen. Afterwards, each newly selected character is entered sequentially toward the right.
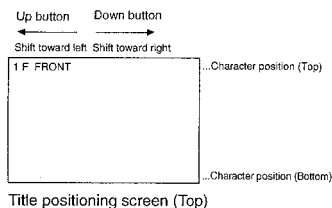**Note:**
At the end of character setting, remaining rightward dots are not shown on the monitor screen.

Additional commands of the title input menu are as follows.
Space
To add a blank space, shift the flashing cursor to Space, then press the Set button.
←, →
The input characters can be edited by using the arrow symbols.
1) Set the flashing cursor to either of the arrow symbols and press Set. The flashing cursor shifts in the arrow direction. Press the Set button repeatedly to where the flashing cursor overlaps the character to be changed.
2) Select the character to be inserted with the Up and Down buttons, then press Set to change the character.

Title positioning screen (Top)

Reset
To delete all characters from the display, shift the flashing cursor to Reset, then press Set. After deleting, the flashing cursor returns to the start of the input character select table.
RET
Position the flashing cursor to RET and press Set to exit the title menu and return to the main menu.
End
Shift the cursor to End and press the Set button to close the menu and return to the normal screen.

Title positioning setting
Position:
Use when the display position on the screen has been determined.
1) Shift the flashing cursor to Position and press Set to open the title position screen indicated in the figure. Screen top and bottom positions are determined respectively by Mode settings Top and Bottom.
2) Press the Up and Down buttons to shift the characters horizontally. Afterwards, press Set to confirm the display position and return to the main menu.

Light control menu

Detection area setting
1) Press the Set button for longer than 2 seconds to display the Main menu.
2) Use the Up and Down buttons to shift the cursor to Light control; OFF/ON flashes. At ON, the presently set light detect area numbers are displayed. Press the Set button to then open the Light control menu.
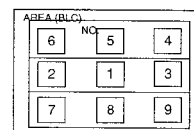

Light control menu

3) Shift the cursor to BLC and press the Set button to toggle between ON and OFF. When ON, Area Select is displayed.
4) Shift the cursor to Area Select and press the Set button to display the detection area select menu.

Detect area indication (no. 1)

Down button: 9 → 8 → 7 → 6 → 5 → 4 → 3 → 2 → 1
(descending order)

5) There are 9 light detect areas selected by the Up and Down buttons. Select the areas from nos. 1 to 9 that include the subject of main interest.
Up button : 1 → 2 → 3 → 4 → 5 → 6 → 7 → 8 → 9
(ascending order)

Down button: 9 → 8 → 7 → 6 → 5 → 4 → 3 → 2 → 1
(descending order)
6) After deciding the detection areas, press the Set button to return to the light control menu.

Back light compensation
The lens iris closes in response to strong light (such as from a spotlight or window) entering the scene background to darken the subject of interest.
When using a DC type lens, set BLC to ON to open the lens iris and avoid blacking out the subject of interest (set the detect areas to match the subject).
The factory setting is OFF.

Note:
When using a video signal type lens, the back light compensation is fixed, regardless of the setting.
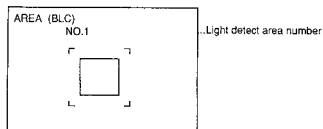

Detect area positions

When using a DC control voltage type lens, the detection area can be selected from 9 locations shown in the figure. If using a video signal type lens, three horizontally adjacent locations (indicated by dotted lines in the figure) can be selected (any number in a horizontal group can be chosen).

Video level adjustment
The optimum video level is set at the factory. If necessary, the level can be changed as follows.
1) Use the Up and Down buttons to shift the cursor to Level, then press the Set button. The adjustment scale at the right of Level flashes.
2) Change the video level by pressing the Up and Down buttons. Holding a button depressed speeds the cursor shift.
3) Press the Set button to confirm the setting.
4) Return the initial (central) setting by simultaneously pressing the Up and Down buttons for two seconds.

When using a video signal type lens, setting the lens switch to Video extinguishes the scale and fixes the level to the factory setting. To adjust the video level, refer to the lens instructions and adjust the lens sensitivity.

Color Temperature and white balance adjustment

Color temperature is one of the properties of light. The unit is Kelvin (K), with 0 K equivalent to -273°C.

The color temperature of a light source is related to the type of illumination and sky conditions. It is not directly related to brightness. A high color temperature is bluish, while a low color temperature is reddish.

Since the response of the human eye is adaptive, changes in color are not sensed even with changes in ambient illumination. However, a camera reproduces color temperature differences to result in different color appearance compared to direct viewing by eye. White balance adjustment serves to compensate for these differences in color temperature.

This camera is provided with automatic tracking white balance (ATW ON) mode. The factory setting is ATW ON.

Color temperature, illumination and sky conditions

Color temperature (K)	Sky conditions	Illumination
10,000	Clear blue sky	
8,000	Twilight	
7,000	Cloudy sky	Xenon arc
	Bright rain	
	Daylight	
5,000	Midday sunlight	
	2 hours after sunrise	Fluorescent lamp
4,000		
3,500	1 hour after sunrise	Halogen lamp, Iodine lamp
3,000		100 W to 500 W gas filled bulb
		100 W tungsten lamp
2,500		60 W tungsten lamp
2,000	Around sunrise	
		Candle

Lens

Recommended lenses
Select a lens from the following table

Type		Lens model	Specification			DC/VIDEO switch
Manual iris	1/2	HS316	3.7	mm	f1.6	DC
		H614B	6	mm	f1.4	
		HS1214D	12	mm	f1.4	
Auto iris (with iris amp)	1/2	HS316TE	3.7	mm	f1.4 ~ 90	VIDEO
		HS614TE	6	mm	f1.4 ~ 90	
		HS1214TE	12	mm	f1.4 ~ 90	
		HS316E	3.7	mm	f1.6 ~ 300	
		HS614E	6	mm	f1.4 ~ 300	
		HS1214E	12	mm	f1.4 ~ 300	
	1/3	TG2616AFCS-3	2.6	mm	f1.6 ~ 64	
Auto iris (without iris amp)	1/3	TS212E(MI)	2.8	mm	f1.2 ~ 200	DC
		TS412E(MI)	4	mm	f1.2 ~ 200	
		TS812E(MI)	8	mm	f1.2 ~ 200	
		TS2V214E(MI)	2.8 ~ 6	mm	f1.4 ~ 200	
		TS2V314E(MI)	3.5 ~ 8	mm	f1.4 ~ 200	
		TS2V616E(MI)	6 ~ 12	mm	f1.6 ~ 200	
		TS6ZME-3(MI)(6 ✕)	6.3 ~ 38	mm	f1.2 ~ 360	
		TS10ZME-3(MI) (10 ✕)	5.8 ~ 58	mm	f1.2 ~ 360	
		TS15ZME-3(MI) (15 ✕)	6 ~ 90	mm	f1.2 ~ 720	
		T21Z5816DC-CS-H12 (21 ✕)	5.8 ~ 121.8 mm		f1.6 ~ 560	

Notes: 1. Lenses other than the above may not provide full performance or not fit to install.
2. Please appoint wiring of plug as EIAJ (Electronic Industries Association of Japan) when a lens is ordered.

MGA2504

Digital zoom

1) Press the Set button for longer than 2 seconds to display the Main menu.
2) Shift the cursor to Digital Zoom and press the Set button to open the digital zoom menu.

```
◁◁◁  MAIN MENU  ▷▷▷
TITLE            : OFF ◂┘
LIGHT CONTROL    : OFF ◂┘
AGC              : ON (21dB)
SHUTTER SPEED    : OFF
WHITE BALANCE    : ATW ◂┘
▷DIGITAL ZOOM    : OFF ◂┘
SUB MENU ◂┘
END
```
Main menu

```
◁◁  DIGITAL ZOOM MENU  ▷▷
▷MODE       : ON          ...Digital zoom mode on/off
ZOOM ADJ    : WIDE TELE    ...Zoom magnification


RET                       ...Return
END                       ...End
```
Digital zoom menu

3) Shift the cursor to Mode and press the Set button to toggle between on and off. At OFF (factory setting), the zoom magnification is fixed at 1. In the ON mode, Zoom Adj is displayed and indicates the previously set zoom magnification.
4) To change the zoom magnification, set the mode to ON. Shift the cursor with the Up and Down buttons to Zoom Adj and press the Set button.
5) Wide and Tele flash. Change the zoom magnification with the Up and Down buttons. Maximum setting is 4 ✕.
6) Press the Set button to confirm the setting and stop the flashing.

Note:
The digital zoom function uses the internal memory to enlarge the image without utilizing a zoom lens. The picture quality deteriorates as the magnification increases. There may also be a change in video level. The function is not suitable for a video signal type auto iris lens. Use the digital zoom with a fixed or DC voltage type lens.

Sub menu

The sub menu is used for changing the picture quality (video response) of the camera output image.
1) Press the Set button for longer than 2 seconds to display the Main menu.
2) Shift the cursor to Sub Menu and press the Set button to open the sub menu.

```
◁◁  SUB MENU  ▷▷
▷GAMMA        : ON         ...Gamma on/off
CHROMA GAIN   :  0 0 0     ...Color level setting
PEDESTAL      :  0 0 0     ...Pedestal level setting
DETAIL        :  0 0 0     ...Detail level setting
POLARITY      : POSITIVE   ...Negative/positive


RET                        ...Return
END                        ...End
```
Sub menu

Gamma
Shift the cursor with the Up and Down buttons to Gamma, then press the Set button to toggle on/off.

Chroma gain
The optimum color level has been set at the factory. If necessary, this can be changed as follows.
1) Shift the cursor to Chroma Gain with the Up and Down buttons and press the Set button; the numerals flash.
2) Press the Up and Down buttons to change the level (-120 to 000 to +127). Press continuously to speed change. Press the Up and Down buttons simultaneously for 2 seconds to return the initial (000) setting.
3) Press the Set button to confirm the setting and stop the flashing.

Pedestal (black reference level) setting
The optimum black reference level has been set at the factory. If necessary, this can be changed as follows.
1) Shift the cursor to Pedestal with the Up and Down buttons and press the Set button; the numerals flash.
2) Press the Up and Down buttons to change the level (-120 to 000 to +127). Press continuously to speed change.

Press the Up and Down buttons simultaneously for 2 seconds to return the initial (000) setting.
3) Press the Set button to confirm the setting and stop the flashing.

Detail level
The optimum detail level has been set at the factory. If necessary, this can be changed as follows.
1) Shift the cursor to Detail with the Up and Down buttons and press the Set button; the numerals flash.
2) Press the Up and Down buttons to change the level (-120 to 000 to +127). Press continuously to speed change. Press the Up and Down buttons simultaneously for 2 seconds to return the initial (000) setting.
3) Press the Set button to confirm the setting and stop the flashing.

Polarity
The factory setting is positive. Shift the cursor to Polarity and press the Set button to toggle between positive and negative. The negative polarity is convenient when using negative material, such as negative film.

CAUTION FOR SAFE OPERATION

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

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

AVERTISSEMENT
Afin d'éviter tout risque d'incendie ou d'électrocution, ne pas exposer l'appareil à la pluie ou à l'humidité. Afin d'écarter tout risque d'électrocution, garder le coffret fermé. Ne confier l'entretien de l'appareil qu'à un personnel qualifié.

VORSICHT
Um Feuergefahr und die Gefahr eines elektrischen Schlages zu vermeiden, darf das Gerät weder Regen noch Feuchtigkeit ausgesetzt werden. Um einen elektrischen Schlag zu vermeiden, darf das Gehäuse nicht geöffnet werden. Überlassen Sie Wartungsarbeiten stets nur einem Fachmann.

IMPORTANT NOTICE

MGA2503