ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

Expert team | Trust guarantee | 100% satisfaction

All trademarks, brand names, and brands appearing herein are the property of their respective owners.

Find the *JAI / Pulnix JAI-M1250K* at our website: ***Click HERE***

DSP Micro Head
CCD Colour Camera

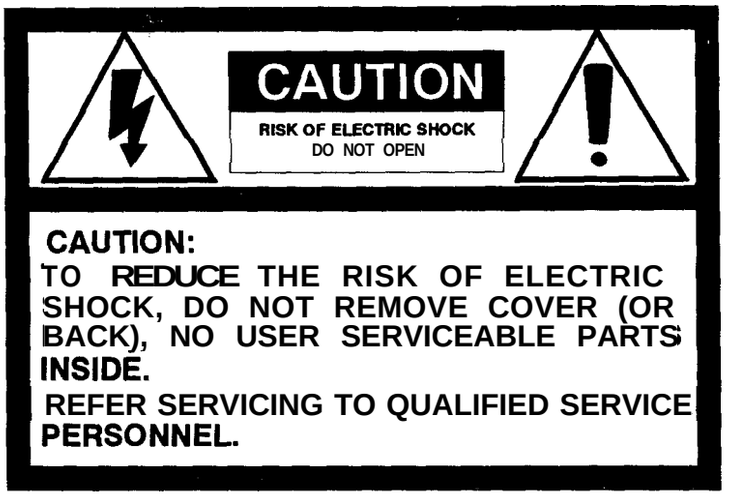
JAI-M1000K series

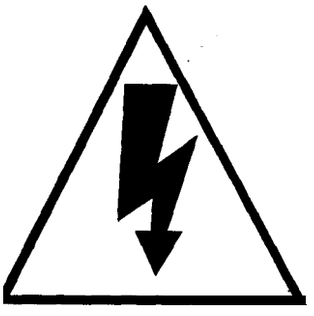
(JAI-M1000K / M1050K / M1200K / M1212K / M1250)

Operation Manual

CE

ENGLISH VERSION





The lighting flash with arrowhead symbol, within an equilateral triangle, 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.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING:

TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

Table of contents

Declaration of CE Conformity 2

Precautions 3

User' Record 3

1. General 4

2. Main Features 4

3. Standard Composition 5

4. External Appearance, Locations and Functions 6

5. Pin Assignment 9

6. Operation and Mode Setting

1) ON-SCREEN DIRECT CONTROL 11

2) ON-SCREEN REMOTE CONTROL 13

3) RS-232C SERIAL REMOTE CONTROL 13

7. Specifications 14

Declaration of Conformity

As defined by the Council Directive 89/336/EEC

EMC (Electromagnetic Compatibility),

we herewith declare that this product

complies with the following provisions applying to it.

EN-50081-l

EN-500824

Precautions

★ **Do not attempt to disassemble this camera.**

★ **To prevent electric shock, do not remove cover. There are no user-serviceable parts inside.Refer servicing to qualified service personel.**

★ **Do not expose this camera to rain or moisture.**

★ **Do not face this camera towards the sun-exterme bright light or light reflecting objects. Even when this camera is not in use, put the supplied shade-cap on the lens mount.**

★ **Handle this camera with the maximum care.**

★ **Operate this camera only from the type of power source indicated on the camera.**

★ **Power off the camera during any modification such as changes of jumper-line and jumper-register.**

USER'S RECORD

The Model name and the production serial number are shown on the bottom of the camera.

Model Name : **Serial No.** :

1. General

JAI-M1000K series CCD Color Camera is a new series of Digital Micro Head Cameras utilizing the most advanced DSP (Digital Signal Processing) technologies with Micro-Computer setup capability.

JAI-M1000K series gives you the maximum availability in your operation with the attractive features such as High Resolution, Y/C and RGB extra outputs, One-Push White Balance, Backlight Compensation, etc.

Please read this Operation Manual throughly, and retain with you.

2. Main Features

★ **Micro camera head**

- **ϕ 12mm 1/3" CCD Sensor**
  - **JAI-M1000K : 2m Camera Cable**
  - **JAI-M1050K : 5m Camera Cable**
- **ϕ 17mm 1/2" CCD Sensor**
  - **JAI-M1200K : 2m Camera Cable**
  - **JAI-M1212K : 2m Camera Cable**
  - **JAI-M1250K : 5m Camera Cable**

★ **DSP (Digital Signal Processing) circuits for high quality level of pictures**

★ (ON SCREEN) display for camera set-up

The following control-functions can be displayed on the monitor screen, and can be set into the desired condition through the front panel of the CCU (Camera control Unit), or the optional REMOTE CONTROL UNIT (RS-232C Serial Communication).

- White Balance
- Electronic Shutter
- AGC (Auto Gain Control)
- Backlight Compensation
- Negative Polarity

★ Y/C and RGB separate outputs provided as standard.

★ Backlight Compensation circuit for shooting in unusual lighting conditions.

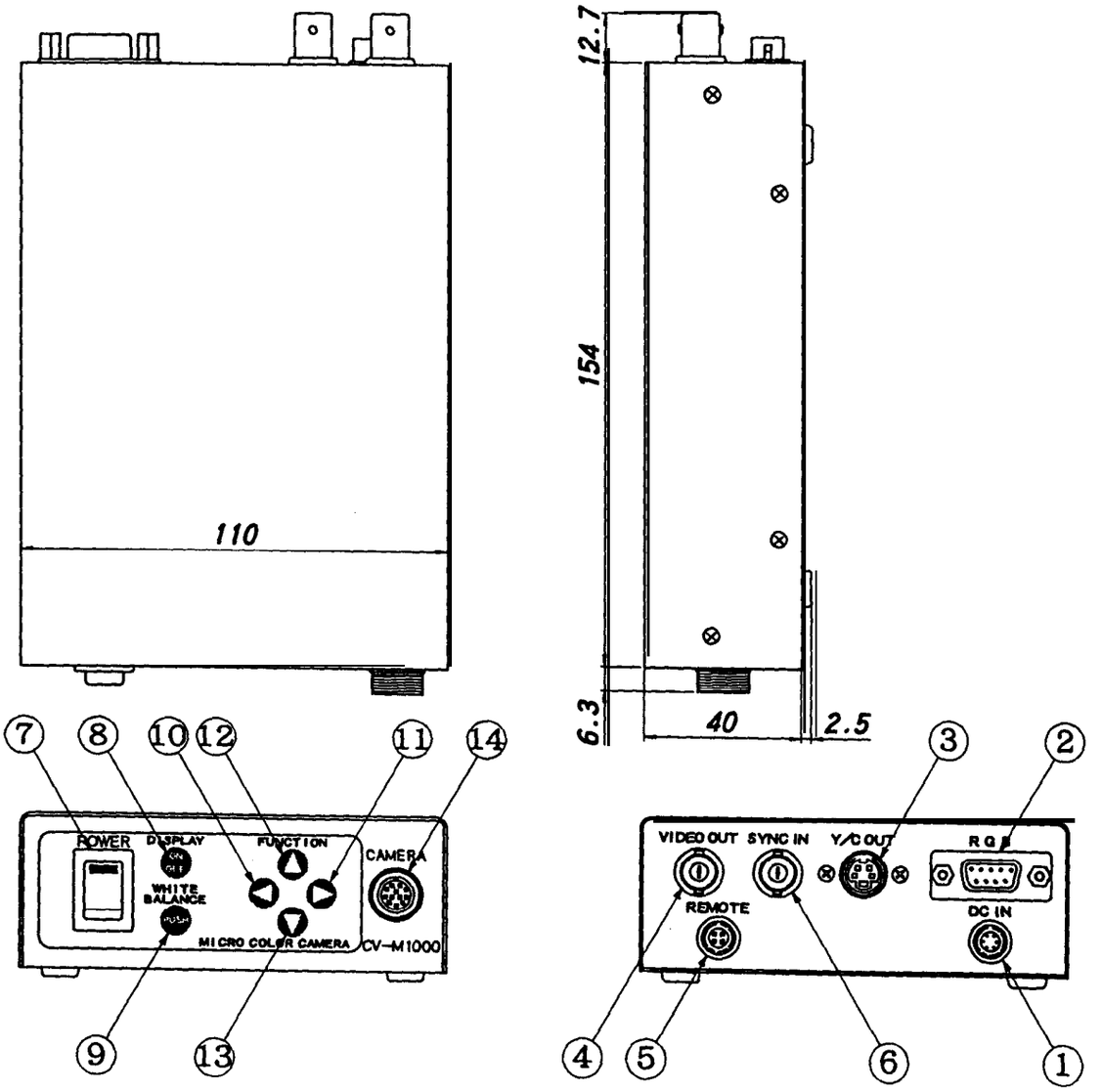
3. Standard Compositon

1) Camera Head	x 1
2) CCU (Camera Control Unit)	x 1
3) Camera Cable	x 1 ※
4) Power Plug (Hirose HR10A/7P/6S)	x 1
5) Y/C Plug	x 1

※ Camera cable for JAI-M1000K is directly mounted to the camera head. The cable connection for the other cameras is made by connector,

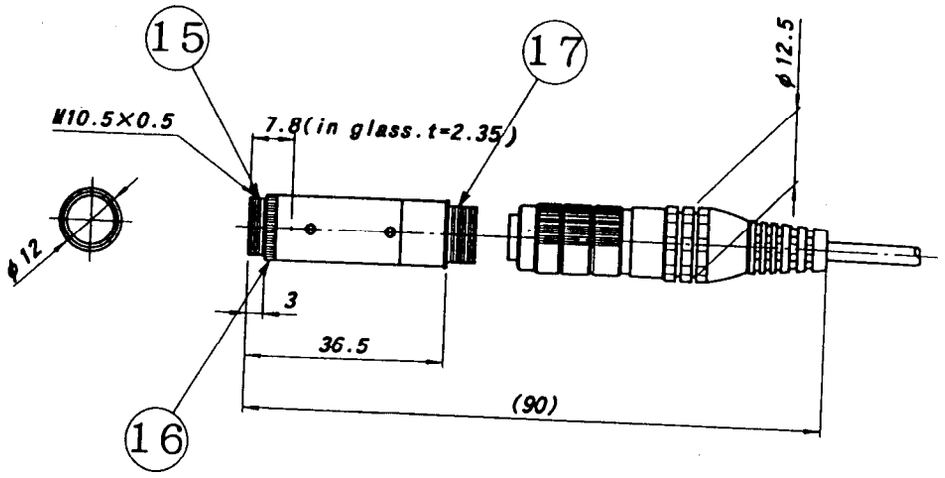
4. External Appearance, Locations and Functions

Camera Control Unit (CCU)

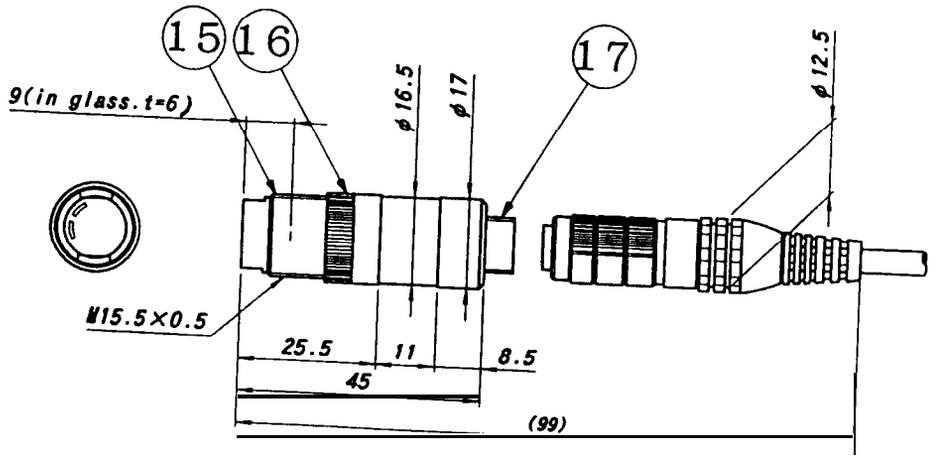


Camera Head

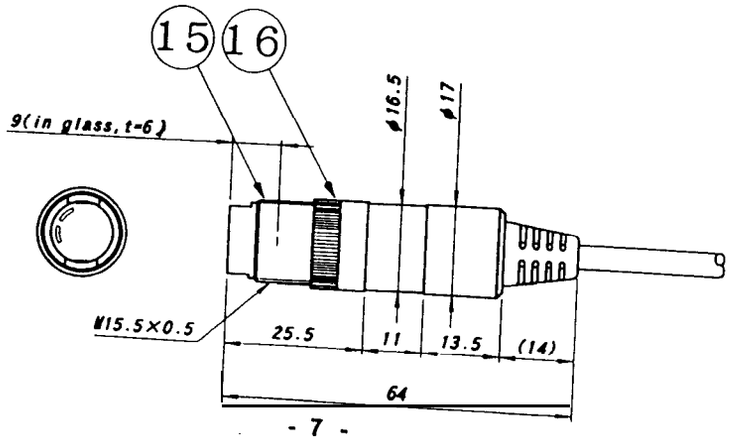
ø12mm:JAI-Ml000K, JAI-M1050K



φ17mm : JAI-M1250K, JAI-M1212K



ø17mm:JAI-M1200K



① DC 12V Power Input Connector

② RGB Output Connector

Since this connector has an output of Video signal at the pin no.6, do not use it together with the Video signal from Video Output Connector, in order to avoid the double-termination.

③ Y/C Output Connector

④ Video Output Connector

⑤ Remote Connector

Use optional Remote Control Unit for camera setup via RS-232C.
More functions than that of Remote Control Unit can be controlled via RS-232C from Personal Computer. Inquire for further instructions on type, software and etc. of the personal computer.

⑥ Ext. Sync Input Connector to supply Composite Sync or Video signal to lock the camera externally. (Note : Sub-carrier Phase can not be locked to the master sync.)

⑦ Power Switch

⑧ ON SCREEN Switch to display the menu on the monitor.

⑨ Switch for ONE-PUSH White Balance

Push this button once so that white balance can be adjusted quickly, picking up the white object in the image.

⑩ ～⑬ **Function Swtich**

For details, refer to the section of “Operation and Mode Setting”.

⑭ **Camera Cable Connector**

⑮ **Lens Mount**

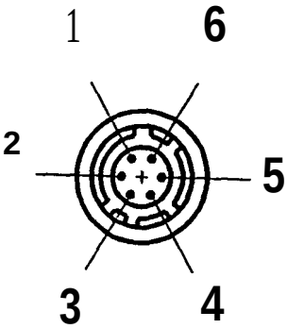
Use optional lenses available from us.

⑯ **Focus Lock Ring to fix the lens on the proper focusing position**

⑰ **Camera Cable Connector**

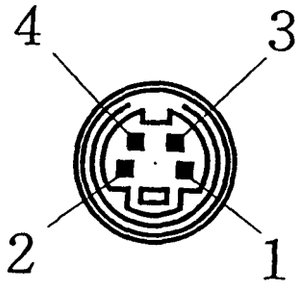
5. Pin Assignment (Connectors located on the rear panel of the ccu)

1) DC Power Input Connector



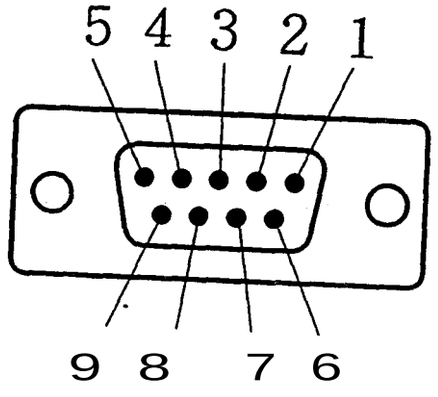
#1 NC
#2 External Sync
#3 Ground
#4 Ground
#5 NC
#6 +12V DC In

2) Y/C Output Connector



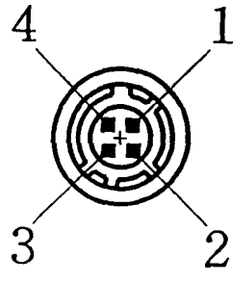
#1 Ground
#2 Ground
#3 Y output
#4 c output

3) **RGB Output Connector**



#1 Ground
#2 Ground
#3 R Output
#4 G Output
#5 B output
#6 Video Output
#7 Sync Output
#8 Ground
#9 Ground

4) Remote Connector



#1 SD
#2 RD
#3 Ground
#4 + 3.3V

6. Operation and Mode Setting

1) ON-SCREEN DIRECT CONTROL

Set DISPLAY ON/OFF switch provided on the front panel of CCU to ON position so that the functions described below can be seen on the monitor screen, and the requested conditions of each function can be selected.

★ **Adjustable Functions**

FUNCTION	MODE
White Balance	1. AUTO (TTL system) 2. Select 3200 K, 4600 K, 6600 K 3. One Push 4. Manual
Electronic Shutter	1. Off 2. Select 1/2000, 1/4000, 1/10000, 3. CCD Iris (Auto Shutter up to 1/100000 sec.) 4. Flicker-less
AGC GAIN	1. OFF (Normal Mode) 2. ON (+12dB) 3. Manual (-3dB ~ +15dB
Back-Light Compensation	1. OFF (Normal Mode) 2. Pattern 1 (Priority at Center) 3. Pattern 2 (Priority at Corners)
Negative Polarity	1. OFF (Normal mode : Positive) 2. ON (Reversed Y/C signal polarity : Negative)

Note : Auto White Balance

Due to the TTL system employed for Auto White Balance, it detects the highest video level in the image as a white color.

Therefore, it is necessary to place the camera to a proper position where the camera does not pick up the high luminace light such as spot light and fluorescent lamp.

★ **Screen Display (example)**

Functions	Mode
White balance	Auto
Shutter	Off
AGC	On
Back-light	Ptm. 1
NEGA	Off

(I) To start adjustment, push "DISPLAY" button so that Function and Mode menu will appear on the monitor screen.

(2) Use A or ▼ key to select FUNCTlON. The selected function will be flashing.

(3) While FUNCTlON you desired is flashing, press > key to select MODE. The selected MODE will be flashing.

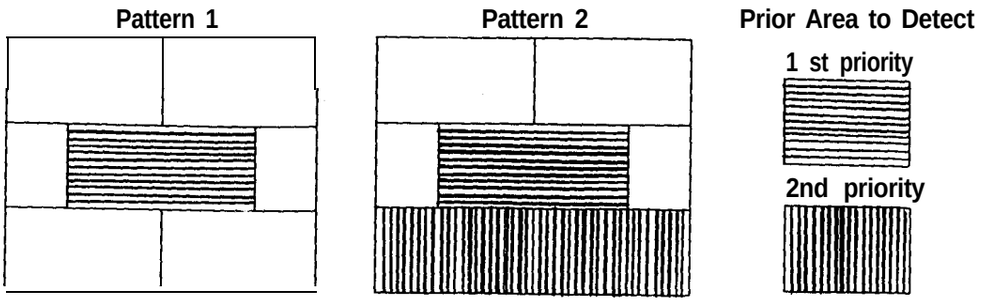
(4) Press A or ▼ key to change MODE.

(5) Go to the next FUNCTlON if needed, and repeat (2) ～ (4).

In case you select MODE "R, B Gain" for White Balance or MODE "Manual" for AGC, the level of Gain can be adjusted by the cursor using A (upper level) or ▼ (lower level).

Note : One push white balance can be functioned only when the MODE "One-Push" for White Balance is selected.

Pattern for Backlight CompeInsation



2) ON-SCREEN REMOTE CONTROL

With the optional hand-held Remote Control Unit, all functions as shown in the above 6-1) ON SCREEN DIRECT CONTROL can be set in the same manner as described in (1) ～ (5).

3) RS-232C SERIAL REMOTE CONTROL

In addition to the adjustable functions by "ON SCREEN DIRECT (and REMOTE) CONTROL", there are 4 more control functions as follows.

- **Negative polarity : OFF for Positive, ON for Negative**
  (It is the same as "on screen control", however, separated control of Y and C signal in Negative mode is possible.)
- **Enhancer : H. and V. Aperture correction**
- **Gamma : 0.45, 0.60, 1.0 selectable**
- **Colour Gain : G, R-Y, R-GIG, R-Y, B-G/G,R-Y, B-G (-)/ G, B-Y, B-G/G, B-Y, R-G/G, B-Y, R-G (-)**

7. Specifications

		JAI-M1000K	JAI-M100K	JAI-MI200K	JAI-M1000K	JAI-M1000K
Pick-up Device		Interline CCD				
Picture Element		NTSC : 768 (H) x 494 (V) PAL : 752 (H) x 582 (V)				
Scanning Area		4.9mmx3.7mm (1/3")		6.5mmx4.8mm (1/2")		
Scanning System		NTSC : 525 lines 2 : 1 interlace PAL : 625 lines 2 : 1 Interlace				
sync. system		International/External (by VS or Sync, 1.0Vp-p 75 Ω)				
Scanning Frequency		NTSC : 15.734Khz (H) 69.94 Hz (V) PAL : 15.625KHz (H) 50 Hz (V)				
H. Resolution		NTSC/PAL 450 TV lines				
Sensitivity		1000 Lux F8.0				
Min. Object Illumination		4 Lux Fl.4				
S/N Ratio		NTSC : 49dB or more (AGC Off, Ganuna Off) PAL : 46dB or more (AGC Off, Gamma Off)				
Viieo output		VBS 1.0Vp-p 75 Ω , Y/C, RGB				
White Balance		3200K, 4600K, 5600K, Auto, Manual, One-Push				
Electronic Shutter Speed		Off, 1/250,1/500,1/1000, 112000, 114000, 1/10000, Auto, Flicker-less				
AGC		Off, On, Manual				
Backlight Compensation		Off, Pattern 1, Pattern 2				
Negative Polarity		Provided				
Camera Setup Function		On-Screen Control or Remote Control via RS-232C				
Lens Mount		Special Mount (M10.5x0.5)		Special Mount (M16.5x0.5)		
Operating Temperature		- IO ℃～+50 ℃ (14 ° F ～ 122 ° F)				
Operating Humidii		20 %～ 60 %				
Power		, DC +12V ± 10%				
Power Consumption		4.5 w				
Size, Weight & Cable length	Head	ϕ 12x36.5mm/5.7g		ϕ 17x50/15g	4 17x45/15g	
	CCU	110mm(W) x 40mm (H) x 154mm (D)/550g				
	Cable	2m ϕ 3.3	5m ϕ 4.6	2m ϕ 4.6 Directly mounted	2m ϕ 3.3	5m ϕ 4.6

Above specifications are subject to change without previous notice.

Memo :

Printed in Japan

PJM1K1296A

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisantg.com | artisantg.com

ARTISAN® TECHNOLOGY GROUP