

INSTRUCTION MANUAL

4 in 1 Hybrid Camera

MODEL

ICD-879S

OUTDOOR USE WARNING

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

The apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.



Ikegami

Ikegami Electronics (U.S.A), Inc.

Thank you for choosing this Ikegami 1/2" 4 in 1 Hybrid Camera.

Please read this Instruction Manual carefully to keep your Ikegami camera at peak performance for longer service period.

This unit is a cube-type 1 CMOS color camera and making use of a 1/2" sensor.

This Ikegami product is made of ECO friendly components based upon the Company policy and corporate social responsibility to contribute towards the Global Environmental Solution for energy conservation and environmental sustainability, all the components used in this product are Non-hazardous, Toxic Free, Non-Lead and conform with Japan's Green Product regulation, EU's RoHS directive and other Environmental and hazardous chemical substances related regulations and laws.

Contents

	Page
1. Handling Precautions	E-1
2. General	E-1
3. Features	E-2
4. Name of each section and its function	E-3
5. Operating Procedure	E-6
5-1. User Setup	E-6
5-2. Names and functions of the setup buttons.....	E-6
5-3. Setup mode Procedures.....	E-6
6. Warranty and after-sale service	E-13
7. Specifications	E-14
8. External Appearance	
9. Setup Flow Chart	



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.

NOTE:

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

CAUTION;

ANY CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THE PART RESPONSIBLE FOR COMPLIANCE COULD VOID THE USERS AUTHORITY TO OPERATE THE EQUIPMENT.

Instructions for Disposal of Electrical and Electronic Equipment in Private Households



**Disposal of used Electric and Electronic Equipment
(Applicable in the European Union and other European countries with
separated waste disposal and collection methods)**

This symbol on the product, or in the related documents in the package, indicates that this product shall not be treated as normal household waste. Instead, it should be taken to a proper applicable collection point or depot for the recycling of electric and electronic equipment.

By ensuring this product is disposed of correctly, you will help prevent possible negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources.

For more detailed information about recycling of this product, please contact your local city authority, your household waste disposal service or the place where you purchased the product.

IMPORTANT SAFETY INSTRUCTIONS

- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Do not use this apparatus near water.
- 6) Clean only with a dry cloth.
- 7) Do not block any of the ventilation openings. Install in accordance with the manufacturer's instructions.
- 8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9) Do not defeat the safety purpose of the polarized or grounding type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. When the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- 10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- 11) Only use the attachments/accessories specified by the manufacturer.
- 12) Use only with a cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.



- 13) Unplug this apparatus during lightning storms or when unused for long periods of time.

- 14) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
- 15) CAUTION - These servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

1. *Handling Precautions*

- Do not expose the internal mechanism of the camera in a water-splashed or highly humid environment.
- Do not use the camera where the ambient temperature drops below -10°C or rises above +50°C. The images and component parts may be adversely affected or the camera may not function correctly.
- Do not open the case of the camera, unless it is absolutely necessary for setup or installation because there are precision electrical and electronic components inside and accident may result.
- Be sure to turn off the power before installing or making connections.
- Be careful not to drop or give a strong shock to the camera while transporting it.
- Do not touch the image sensor
- Do not orientate the camera directly towards the sun.
- Because of the digital image device characteristics, images may look unnatural at high temperatures, this does not mean the camera is faulty.

2. *General*

This color camera is provided with a 1/2-inch CMOS sensor. The CCTV camera features wide dynamic range, ultra high sensitivity and high resolution, and is equipped with the color/black-and-white switching, back-light compensation, automatic iris control, line lock and other functions. The unit is best suited for general surveillance.

3. *Features*

(1) Ultra Low Light (Ultra High Sensitivity)

The use of 1/2" image sensor makes it easy to watch in dark environments.

(2) Wide Dynamic Range

The WDR function provides for very effective compensation of high light and dark areas in screen. This situation may occur generally outside or viewing from indoor to outdoor scenes. Even in large light fluctuations, bright-and-dark subjects can be captured and viewed clearly with a natural appearance.

(3) Small-size cube shape

The small-size cube shape of the camera allows it to be most suitable to be installed into various devices such as ATM units.

(4) High-quality picture and high resolution

The camera is designed for smear-free imaging and low noise. The well-designed DSP, Digital Signal Processor, effectively enhances details, which achieves crisp and sharp images with a high signal-to-noise ratio.

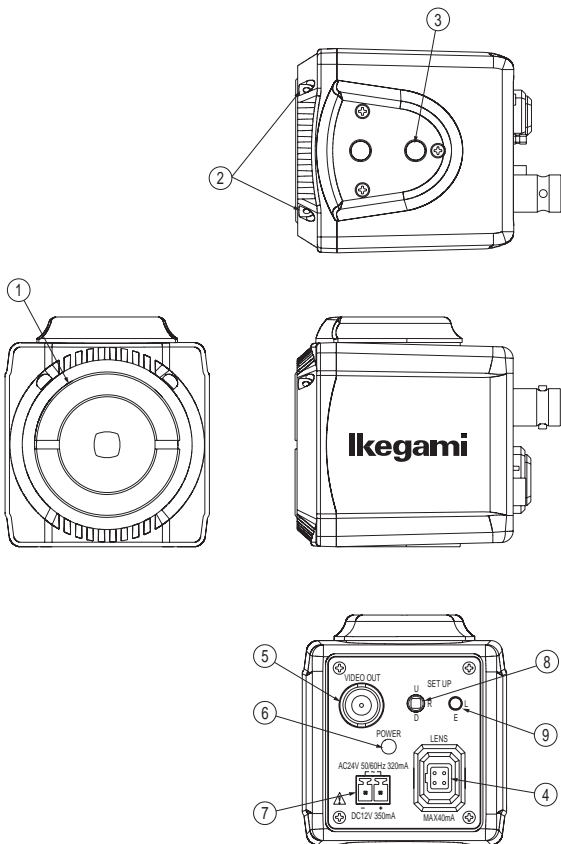
(5) Automatic white balance

Thanks to the automatic follow-up white balance control (ATW), the white balance adjusts itself no matter how great the subject's color temperature fluctuates.

(6) Automatic Sensitivity Control

In conjunction with the wide dynamic control by the multi-sampling system, the camera incorporates the automatic sensitivity control function that always provides adequate and bright images even through its fixed-iris lens.

4. Name of each section and its function



① Lens mount (CS mount)

This is used to mount the lens on the camera. Many types of CS mount lens can be attached.

② Back focus lock screw

After completing the flange back adjustment of the camera, use the supplied Allen wrench to tighten the screw until it is fully fixed.

③ Holder mounting screw holes

These holes are used to install and fix the camera on the camera mounting or bracket. They can be also applicable to general use tripods which have a quarter inch thread.

Note

To use these holes to attach the camera on a tripod or other mount, make sure you use suitable size mounting bolts as follows (1/4" -20UNC), they should not be longer than 5.5 mm to avoid an un-stable installation.

④ Auto iris lens connector

Specifically used to connect the auto iris lens.

Applicable connector: E4-191J-100 or equivalent

DC Iris System

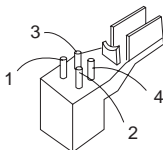
— Connector cable leads —

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



* Connect the leads as shown above.

Please refer also to the instructions of the lens to be used.



Connector pin assignment

⑤ Video output terminal (VIDEO OUT)

To be used to give out the video signal. Connect this to the video input terminal of a monitor, switcher etc. (To be terminated with 75-ohm impedance.)

⑥ Power indicator (POWER)

The LED indicator stays on in green while the camera power is on.

⑦ DC12V/AC24V power input terminal

Keep the input power at DC10.5-15.0 V or AC24V \pm 10%.

* This installation should be made by a qualified service person and should conform to all local codes.

⑧ - ⑨ Camera setup function switches

Please refer to the Operation Procedure chapter.

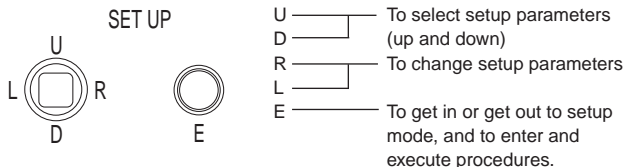
5. Operating Procedure

5-1. User Setup

This camera is provided with user setup function for picture quality, and camera ID. The setup menu is a tree type on-screen-display.

When installing the camera it is possible to set up the various functions.

5-2. Names and functions of the setup buttons



5-3. Setup mode Procedures

Hold down the E button and the setup menu screen at left appears on screen. A highlighted item is now selected.

Use the L/R buttons to change the selection items.

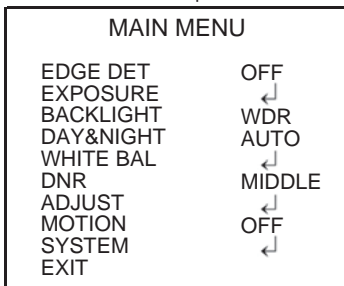
5-3-1. MAIN MENU

When the OSD menu is launched, you are presented with the adjacent opening screen.

A menu option followed by a ↵ indicates the presence of a sub-menu.

Options set to OFF will not show a ↵ until set to ON.

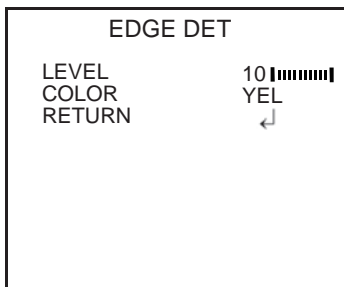
Use RETURN ↵ to the previous menu.



(1)EDGE DET

This function emphasizes the edges of the image.

- ① LEVEL - It adjusts edge level.
- ② COLOR - 8 color can be selected
(YEL,CYN,GRN,MAG,RED,BLU,BLK,WHT)



(2)EXPOSURE

It selects Lens Mode, Brightness, Shutter speed, Sens-up and AGC Gain.

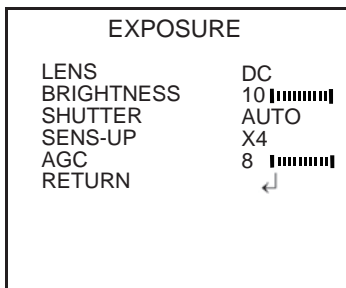
- ① LENS - DC or Manual selection.
- ② BRIGHTNESS - Sets the level of the overall.
- ③ SHUTTER - Auto, Manual, FLK selection, 1/30~1/30K.

Set this on to reduce the exposure time of each image.

This can be used to reduce blur in images with fast changing content.

FLK mode use this when flicker is observed in the image under fluorescent lighting.

- ④ SENS UP - Slows frame rate and increases low light sensitivity.
- ⑤ AGC - Level Control -Used to adjust overall gain.



(3)BACKLIGHT

Setting the backlight compensation and light source correction function are available.

- ① WDR - Used to improve contrast in bright/dark areas.
- ② BLC - Adjust the area to be enhanced and sets the level.
- ③ HLC - It is the ability to reverse bright points to black or gray, (areas such as headlights, any high luminance areas) this function will improve this function will improve the overall picture.

(4)DAY & NIGHT

Selecting Day or Night is available.

- ① AUTO - The image is automatically switched between high-quality color image for the day and highly-sensitive monochrome image for the night.
- ② COLOR - Fixes the camera in color mode.
- ③ B/W - Fixes the camera in monochrome mode.
- ④ EXTERN - This mode which forcibly switches the Day/Night mode using an external input.

(5)WHITE BALANCE

Setting a white balance is available.

① AUTO

The camera automatically samples the image for optimum white balance.

② AUTOext(default)

The camera automatically samples the image for optimum white balance in an exterior environment.

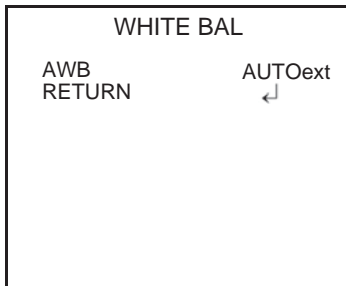
③ PRESET

Allows the white balance to be set automatically and locked. This option is normally used when no white reference is present in the image.

To set the white balance, hold a white object in front of the camera, with light from the source falling on it and press the joystick to set and lock the white balance.

④ MANUAL

This option allows a selection of color temperature, Red and Blue gain to be manually set in the image. Note, using this option requires care to ensure all cameras on one system have the same color response.



(6)DNR(Digital Noise Reduction)

This function is used to improve the picture quality by filtering the noise which is generated under low light conditions.

(7)ADJUST

Color gain, sharpness, gamma, mirror, flip, D-zoom, ace, defog, shading and privacy are available.

① COLOR GAIN - It adjusts the color intensity.

② SHARPNESS - It adjusts the edge intensity of the video.

③ GAMMA

This function is for compensating the saturation and brightness of the images shown on the display.

④ MIRROR - It flips the video vertically.

⑤ FLIP - It flips the video horizontally.

⑥ D-ZOOM

Set the zoom up magnify power for center of picture.

⑦ ACE(Adaptive contrast enhancer)

Preserves fine details, reduces artifacts and loss of local contrast in the image areas of bright/dark.

⑧ DEFOG

Used to help improve the captured image in poor weather conditions such as smog, fog, or smoke. It automatically controls contrast ratio by spatially analyzing the histogram characteristics.

⑨ SHADING





It adjusts the lens shading corection.

⑩ PRIVACY

The maximum 16 privacy masks can be set.

Setting mask color, intensity, and size are available.

ADJUST

COLOR GAIN	15 
SHARPNESS	
GAMMA	0.5
MIRROR	OFF
FLIP	OFF
D-ZOOM	1.0 X
ACE	OFF
DEFOG	OFF
SHADING	OFF
PRIVACY	
RETURN	

(8)MOTION

This function detects and displays the object in motion.

① DET WINDOWS

Select and set up to 4 motion areas.

② SENSITIVITY

Level control.

③ TEXT ALARM

Display "Motion Alarm" on Screen.

④ SIGNAL OUT - N/A

MOTION

DET WINDOWS



SENSITIVITY

5

MOTION OSD

ON

TEXT ALARM

ON

SIGNAL OUT

OFF

RETURN



(9)SYSTEM

① COMM

Set com port and speed.

② OUTPUT

FRAME RATE, FREQ, CVBS_MODE, ANALOG MODE Selectable.

③ IMAGE RANGE

Used to adjust black level in dark scene.

④ COLOR BAR

Vertical flip of image.

⑤ LANGUAGE

Select from 5 languages.(ENG, CHN, CHN(s), JPN, KOR)

⑥ CAMERA TITLE

The screen can display 8 characters.

⑦ RESET

It returns to the factory default.

SYSTEM		OUTPUT	
COMM	↵	FRAME RATE	1080p 30
OUTPUT	↵	FREQ	60Hz
IMAGE RANGE	FULL	CVBS_MODE	CROP 4:3
COLOR BAR	OFF	ANALOG MODE	CVBS ↵
LANGUAGE	ENG	RETURN	↵
CAMERA TITLE	OFF		
RESET	ON ↵		
RETURN			

(10)OUTPUT

① FRAME RATE

Select from 1080P - 30P or 720P - 30P or 720 - 60P
or 1080P - 60P or 1080i - 60P

② FREQ

60Hz or 50Hz can be selected.

③ CVBS_MODE

CROP 4:3 or FULL 16:9 can be selected.

④ ANALOG MODE

CVBS(default), CVI, TVI, AHD Selectable.

6. 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.

- Please consult Ikegami Electronics (U.S.A.) Inc. or Ikegami Electronics (Europe) GmbH or your dealer for full warranty information. Your dealer will repair or replace free of charge within the warranty period according to the warranty coverage.
- For repairs after the expiration of the warranty period, consult your dealer or sales representative. It will first be judged whether the fault is repairable or not. Charged servicing will then be made upon request of the user.
- Before you ask for servicing, please ensure you read the Instruction Manual. If the unit still fails, take note of the model number, date of purchase, problem, etc. in detail, 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 as soon as possible.

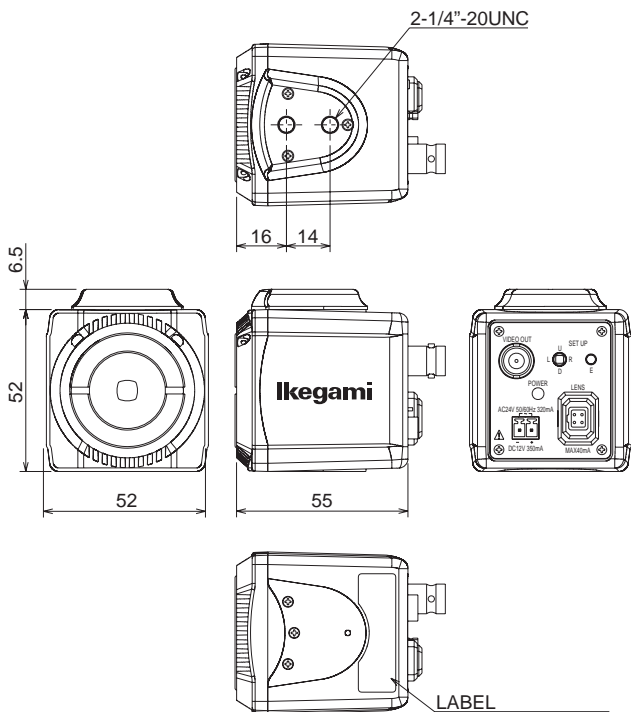
7. Specifications

(1) Image Sensor:	1/2" 2Mega Pixel Dol Image Sensor
(2) HD Resolution:	Full HD (1920 x 1080)
(3) Scanning system:	16:9 Progressive scan
(4) Sync system:	Internal
(5) Video output:	Analog Output-CVBS(default) HD Output-CVI,TVI,AHD(Full HD)
(6) Day/Night switching:	True Day/Night
(7) S/N ratio:	Over 52dB(p-p/rms)
(8) Minimum object illumination:	0.07Lx at Color, 0.0047Lx at B/W at Sens up<<off>>
(9) Wide Dynamic Range:	Support (1080p Full HD, 120dB)
(10) AGC:	ON/OFF(Variable)
(11) Eletronic shutter:	Auto, Manual, Flicker, 1/30,000 sec maxiam
(12) White Balance Control:	AUTOext/AUTO/PRESET/MANUAL
(13) Digital Noise Reduction:	Built-in, On or OFF, Selectable
(14) ACE:	Built-in, On or OFF, Selectable
(15) DEFOG:	Built-in, On or OFF, Selectable
(16) Private Mask Setting:	Built-in, Up to 16 areas
(17) Camera ID:	1 Line, up to 8 characters (alphanumeric)
(18) Motion Detection:	Built-in, On or OFF, Selectable
(19) D-ZOOM	Support
(20) LENS SHADING	Support
(21) Operating Temperature and Relative humidity:	-10 to + 50°C RH 30% to 90%(no condensation)
(22) Lens mount:	CS mount (C-mount adapter attachment possible)
(23) Auto iris function:	Compatible with DC iris
(24) Lens flange back adjustment:	Built-in

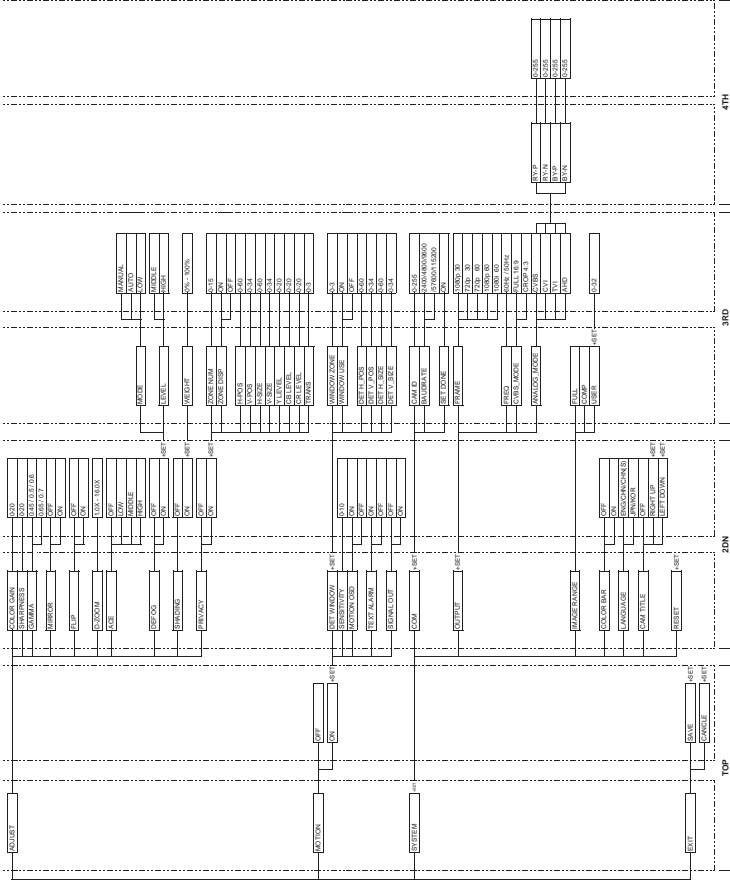
- (25) Power Requirement: AC 24 V \pm 10%(50/60Hz)
DC 12 V (+10.5V ~ +15V)
- (26) Power consumption: 4.0W
- (27) Outer dimensions: 52(W) \times 52(H) \times 55(D) mm
(no protrusion included)
- (28) Weight: Approx. 350g
- (29) Input/Output connectors:
- VIDEO OUT BNC
 - LENS 4P(E4-191J-100 or equivalent)
 - DC 12V/AC 24V input;2-pin terminal block
- (30) Supplied accessories:
- Instruction Manual
- Allen wrench (for flange back adjustment)
- Power input connector

* Specifications and design are subject to change for product improvements without notice.

8. External Appearance



[illegible]



Ikegami

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