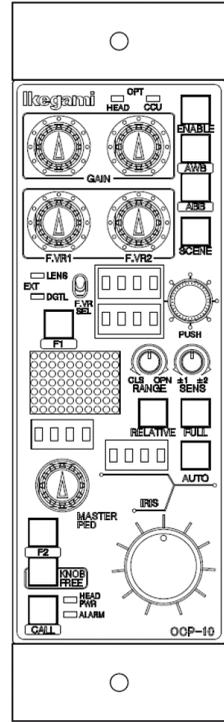


Products conforming to RoHS directive



OCP-10

Operation Control Panel

Operation Manual

Ikegami

English

Instructions for Disposal of Electric and Electronic Equipment in Private Household



Disposal of used Electric and Electronic Equipment (Applicable in the European Union and other European countries with separate collection systems)

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.

Deutsch

Vorschriften für die Entsorgung von elektrischen und elektronischen Geräten in Privathaushalten



Entsorgung von gebrauchten elektrischen und elektronischen Geräten (In der Europäischen Union und anderen europäischen Ländern mit separaten Sammelsystemen anwendbar.)

Das auf dem Produkt angebrachte Symbol, bzw. die Symbole in den in der Packung beiliegenden Dokumenten, weisen darauf hin, dass dieses Produkt nicht als normaler Haushaltsmüll behandelt werden darf. Es muss deshalb an einer dafür vorgesehenen Sammelstelle abgeliefert werden, in der das Recycling von elektrischen und elektronischen Geräten durchgeführt wird.

Durch die ordnungsgemäße Entsorgung dieses Produkts tragen Sie dazu bei, dass unsere Umwelt und unsere Gesundheit nicht durch unsachgemäße Entsorgung negativ beeinflusst wird. Mit dem Recycling von Materialien tragen wir zur Bewahrung der natürlichen Ressourcen bei. Für nähere Informationen hinsichtlich des Recyclings für dieses Produkt sprechen Sie bitte mit Ihrer zuständigen Behörde, Ihrer Hausmüll-Entsorgungsstelle oder dem Geschäft, wo Sie das Produkt gekauft haben.

Français

Consignes de mise au rebut des appareils électriques et électroniques dans les foyers privés



Mise au rebut des appareils électriques et électroniques (Applicable dans l'Union Européenne et autres pays d'Europe ayant un système de récupération séparé)

Ce symbole apposé sur le produit ou dans les documents liés se trouvant dans l'emballage indique que ce produit ne doit pas être traité comme un déchet ménager normal. Il doit être porté à un point de récupération correct ou à un dépôt pour le recyclage des appareils électriques et électroniques.

En vous assurant que ce produit est correctement mis au rebut, vous aiderez à empêcher les conséquences possibles pouvant affecter l'environnement et la santé humaine, pouvant être causées par une mauvaise manipulation des déchets de ce produit. Le recyclage des matériaux favorise la conservation des ressources naturelles.

Pour des informations plus détaillées concernant le recyclage de ce produit, veuillez contacter les autorités locales, votre service de mise au rebut des déchets ménagers ou le lieu d'achat de votre produit.

Español

Instrucciones para eliminar equipos eléctricos y electrónicos de una casa privada



Eliminación de equipos eléctricos y electrónicos usados (Normas aplicables en la Unión Europea y en otros países europeos con diferentes sistemas de recogida)

Este símbolo en el producto, o en los documentos relacionados, indica que este producto no deberá ser tratado como un residuo doméstico normal. En cambio, deberá ser llevado a un punto o lugar donde los equipos eléctricos y electrónicos sean recogidos para ser reciclados.

Asegurándose de que este producto sea eliminado correctamente, usted ayudará a impedir las posibles consecuencias negativas sobre el medio ambiente y la salud humana que podrían ser causadas por el manejo inapropiado de este producto como residuo doméstico. El reciclado de los materiales ayudará a conservar los recursos naturales.

Para conocer una información más detallada acerca del reciclado de este producto, póngase en contacto con las autoridades de su localidad, con su servicio de recogida de residuos domésticos o con el comercio donde adquirió el producto.

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PRODUCTS CONFORMING TO RoHS DIRECTIVE

Following products described in this manual are products conforming to RoHS directive.

- OCP-10 Operation Control Panel

Products conforming to RoHS directive include products that do not contain specified hazardous substances such as lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyl (PBB) and polybrominated diphenyl ether (PBDE) in electrical and electronic equipment excluding following exemption applications based on the EU directive (Directive 2002/95/EC).

* About RoHS Directive

The RoHS directive stands for “the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment” and is one of environmental directives in Europe. This directive restricts the use of specified hazardous substances in electrical and electronic equipment.

● Applications exempted from RoHS directive compliance

Followings applications are permitted as exemptions from RoHS directive compliance.

1. Mercury in compact fluorescent lamps not exceeding 5mg per lamp
2. Mercury in straight fluorescent lamps for general purposes not exceeding:
 - halophosphate 10mg
 - triphosphate with a normal lifetime 5mg
 - triphosphate with a long lifetime 8mg
3. Mercury in straight fluorescent lamps for special purposes
4. Mercury in other lamps not specifically mentioned in this Annex
5. Lead in the glass of cathode ray tubes, electronic components and fluorescent tubes
6. Lead as an alloying element in steel containing up to 0.35% lead by weight, aluminum containing up to 0.4% lead by weight and as a copper alloy containing up to 4% lead by weight
7. Lead in following items
 - Lead in high melting temperature type solders (i.e. tin-lead solder alloys containing more than 85% lead)
 - Lead in solders for servers, storage and storage array systems
 - Lead in solders for network infrastructure equipment for switching, signaling, transmission as well as network management for telecommunication
 - Lead in electronic ceramic parts (e.g. piezoelectronic devices)

PRODUCTS CONFORMING TO RoHS DIRECTIVE

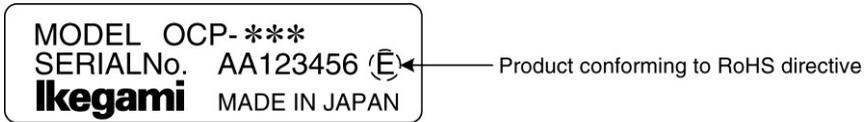
8. Cadmium plating except for applications banned under Directive 91/338/EEC amending Directive 76/769/EEC relating to restrictions on the marketing and use of certain dangerous substances and preparations
9. Hexavalent chromium as an anti-corrosion of the carbon steel cooling system in absorption refrigerators
10. Lead used in compliant pin connector systems
11. Lead as a coating material for the thermal conduction module C-ring
12. Lead and cadmium in optical and filter glass
13. Lead in solders consisting of more than two elements for the connection between the pins and the package of microprocessors with a lead content of more than 80% and less than 85% by weight
14. Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages
15. Decabrominated diphenyl ether (Deca-BDE) in polymeric applications

MAINTENANCE OF PRODUCTS CONFORMING TO RoHS DIRECTIVE

Work with care about followings for maintenance of products conforming to RoHS directive.

1. Identification

- For products conforming to RoHS directive, the letter “E” is appended at the end of the serial number on the label. For models that the letter cannot be appended to the serial number, the letter “E” will be described in a distinguishable position on the label. A description example on a main label is shown below.



Label

- Print-circuit board of the products conforming to RoHS directive is manufactured by following methods.
 - Blue resist ink is used for the print-circuit board. (The color of conventional print-circuit board is green.)
 - Either one of the following marks is indicated by a serigraph or label.



Phase 3A



Phase 3

2. Soldering

Since the melting point of lead-free solder used for the products conforming to RoHS directive is 20 to 45 degrees Celsius higher than that of conventional solder with lead (Sn-Pb eutectic solder), a high temperature needs to be set to a soldering iron.

Taking allowable temperature limit of the parts and stable work into consideration, use a soldering iron with excellent thermal recovery characteristics.

- Recommended solder composition is “Sn/3.0Ag/0.5Cu” or equivalent.
- Separate the soldering iron exclusively for RoHS products and the soldering iron for conventional use.
- Set the temperature of the soldering bit to 350 to 370 degrees Celsius.
The temperature may need to be adjusted according to the size of the copper foil land on the print-circuit board and the tip width of the soldering bit.
- Finish by a lead-free solder looks dull or whitish compared to conventional solder with lead.

3. Parts

Be sure to use parts conforming to RoHS directive.

INFORMATION TO THE USER

This equipment has been tested and found to comply with the limits for a Class A digital device, 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.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

The **CE** mark means that the following products will meet the Directives 2004/108/EC and standards EN55032, EN55103- 2 (for the Electromagnetic environment E4-E5).

Use shielded cable.

This equipment doesn't intend to use at residential areas, so that use in residential areas may cause interference.

Please attach a core to a cable to connect to a connector of command, Ethernet cable and EXT by all means. Please make an inquiry to us about the installation of the core, if necessary.

SAFETY PRECAUTIONS

This manual describes the precautions using various pictorial symbols for you to use the product safely. Please read these precautions thoroughly before use. The symbols and meanings are as follows:

The following hazard alert symbols are used to indicate the level of impact on the body or property when you do not follow the precautions.

 WARNING	Indicates that mishandling of the product by ignoring this label may lead to a danger resulting in a serious injury or death.
 CAUTION	Indicates that mishandling of the product by ignoring this label may lead to a danger resulting in an injury or property damage.

The following symbols are used to indicate the expected injury or hazards when you do not follow the precautions.

	Indicates general cautions on such matters as safe work, procedure, and installation location. Mishandling may not directly lead to death, injury, or property damage.
	Indicates that mishandling may cause an electric shock.
	Indicates that mishandling may cause a fire.
	Indicates that mishandling may cause injury.

The following symbol is used to indicate other precautions to prevent damage or hazard from occurring:

	Indicates prohibited action.
-------------------------------------------------------------------------------------	------------------------------

SAFETY PRECAUTIONS

■ Handling Precautions

WARNING

Regarding the Product



Do not disassemble or modify the product which is not described in this manual. Doing so may cause fire, electric shock, or injury.

Regarding the Power



When you disconnect the cable, be sure to hold the plug and pull. Failure to do so may cause a fire or electric shock due to a damaged cable.



To inspect or operate on the inside of the equipment, turn off the power and wait for one or two minutes before starting work. High voltage is present in some modules and connectors of this product.

CAUTION

Regarding the Product



Avoid use or storage in the following conditions:

- Extremely high/low temperature
- In direct sunlight for a long time, or near a heater
- High humidity or dusty
- Exposed to water or other liquid
- Strong vibration or shock
- Strong magnetic field or radio waves
- lightning
- In rain without the rain cover

Be sure to hold the plug and pull when you disconnect the cable.
Failure to do so may cause a fire or electric shock due to a broken cable.

Avoid moving the equipment suddenly from an extremely cold place to a warm place.
Condensation may occur in the Charged Couple Device (CCD) or other parts.

Do not drop or insert a metal object such as a pin or a foreign object into the equipment.

Do not spread or spill water or other liquid on the equipment.

Do not subject the equipment to a strong shock or vibration.
Doing so may cause damage or malfunction of the equipment.

HOW TO READ THE OPERATION MANUAL

This page explains general notes on reading the OCP-10 Operation Manual, and the symbols and notations used in the manual.

■ *Notes on the Manual*

- This manual is written for readers with a basic knowledge of handling a broadcast camera, CCU, etc.
- The contents of this manual are subject to change without notice in the future.

■ *Symbols*

The symbols used in this manual are as follows.

CAUTION:	Things you have to be careful during operation. Be sure to read.
Note:	Supplementary information or guidance
Reference:	Sections where related information is available

■ *Notations*

The following notations are used in this manual.

This product, OCP	Indicates OCP-10 Operation Control Panel.
Camera head	Indicates general broadcast cameras.
Camera	In this manual stands for both Camera Head and BS/CCU against Control Panel.

■ *Illustrations and Displays*

The illustrations and displays in the text are provided for explanation and may be slightly different from the actual equipment or image.

■ *Related Manuals*

Refer to the operation manuals and maintenance manuals accompanying the camera head, CCU, and each control panel to be used.

OCP-10

Operation Control Panel

OPERATION MANUAL

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1. Outline

1.1 Outline

The OCP-10 is an operation control panel that is used by connection to a BS (Base Station) or CCU (Camera Control Unit) or Camera Head.

1.2 Features

● Knob Free function is adopted

The OCP-10 adopts the knob free function which combines the advantages of absolute control of potentiometers with the advantages of relative control of rotary encoders.

By pressing and holding the Knob Free switch, the potentiometers (excluding iris control) are electronically disconnected from controlling the camera. So they can be re-indexed to mid-range for reference or turned to the opposite end when the mechanical range of the control hits the end, but the function itself has more control range.

● F.VR Control

One-touch operation is available for allocation of various functions to two user function F.VR (variable resistor) controls. In addition, the user can customize which pages of functions that the OCP has access to.

● F. Switch

Two F. switches (F1/F2) are provided, so the user can set the functions freely. Assigning functions necessary for each user is available, and so the operational flexibility expands.

Note: Switches of the OCP and control functions become inoperable if the connecting camera does not have the corresponding functions.

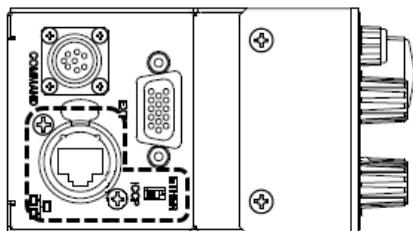
Reference: Refer to the instruction manual of the camera for functions that can be operated.

● Ethernet compatible (option)

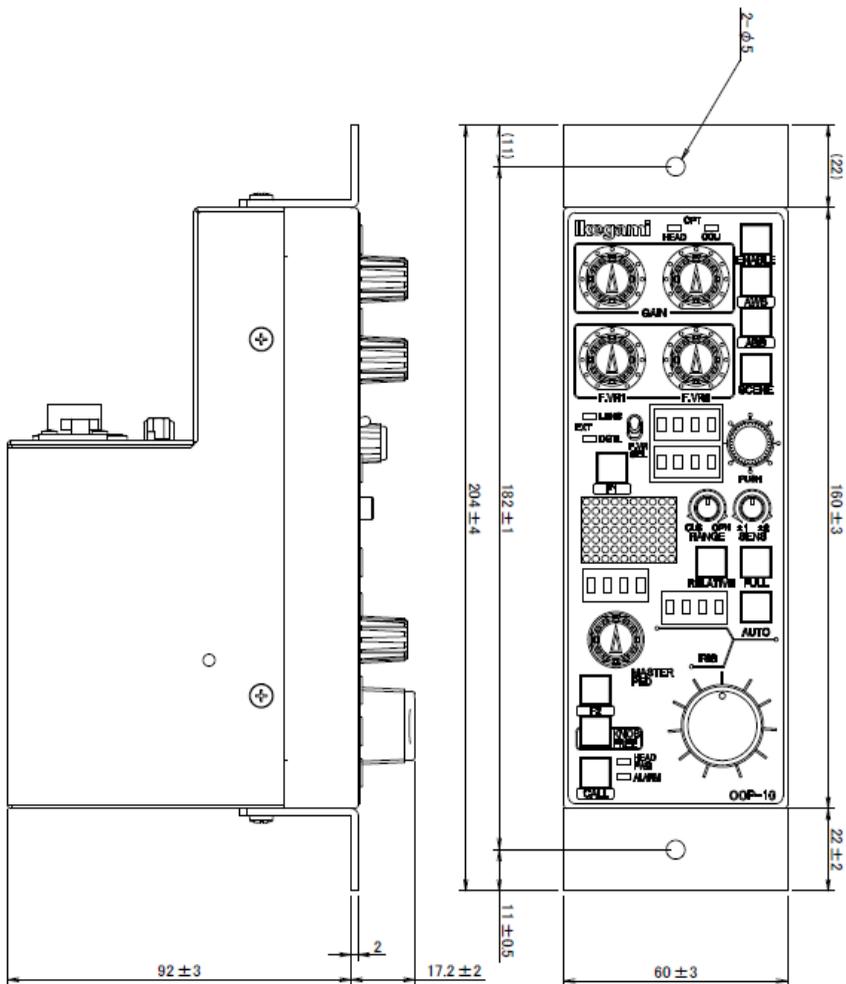
In addition to control by the conventional serial command, control by an Ethernet network connection is also available. The Operation by LAN cable connection is available. In addition, because the OCP-10 corresponds to PoE+ (Power over Ethernet), supplying power by the LAN cable is available.

1.3 External View

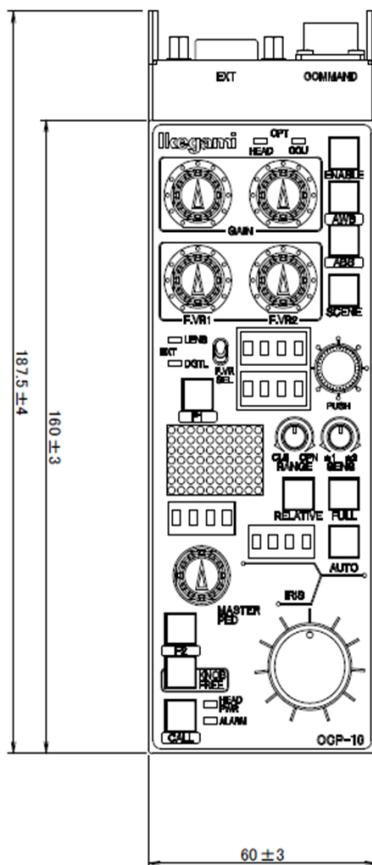
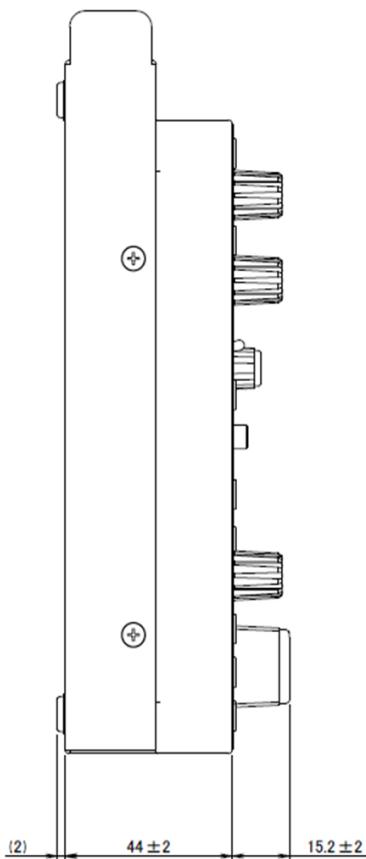
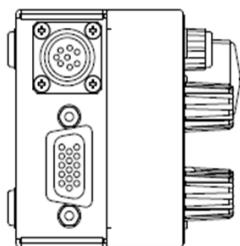
1) VR TYPE



----- Option

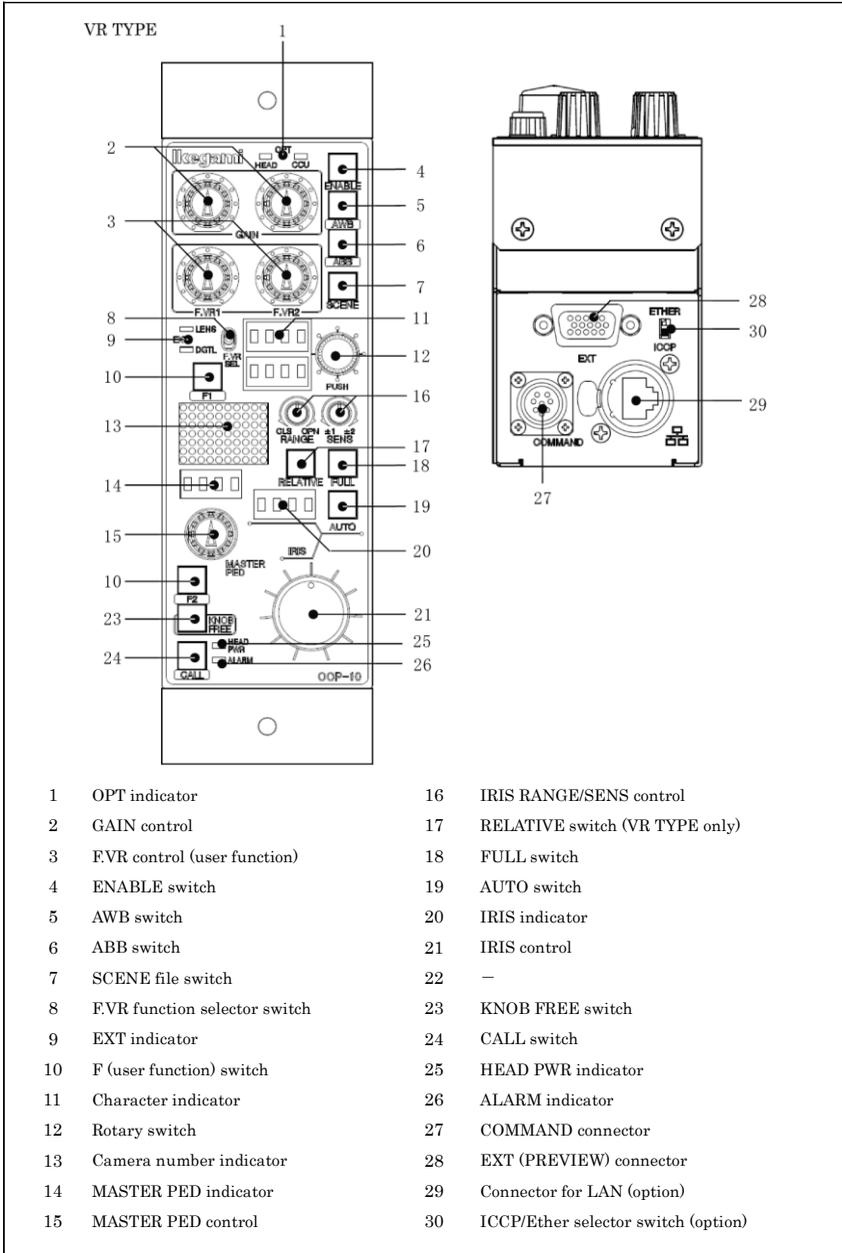


2) Slim TYPE

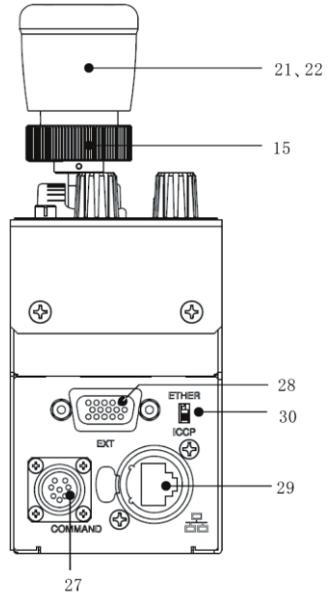
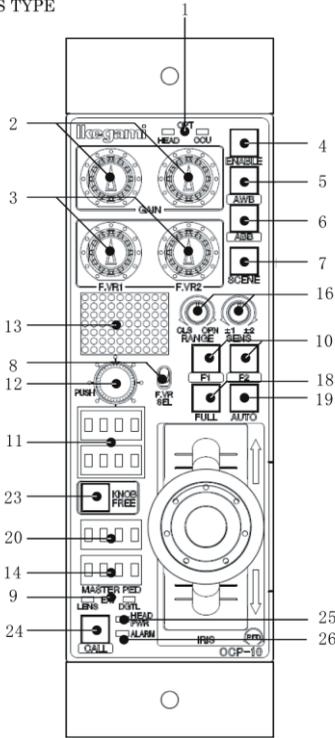


2. Name and Function of Each Part

This section describes the name and function of various parts.



JS TYPE



- | | | | |
|----|------------------------------|----|-------------------------------------|
| 1 | OPT indicator | 16 | IRIS RANGE/SENS control |
| 2 | GAIN control | 17 | — |
| 3 | FVR control (user function) | 18 | FULL switch |
| 4 | ENABLE switch | 19 | AUTO switch |
| 5 | AWB switch | 20 | IRIS indicator |
| 6 | ABB switch | 21 | IRIS control |
| 7 | SCENE file switch | 22 | PREVIEW switch (JS TYPE only) |
| 8 | FVR function selector switch | 23 | KNOB FREE switch |
| 9 | EXT indicator | 24 | CALL switch |
| 10 | F (user function) switch | 25 | HEAD PWR indicator |
| 11 | Character indicator | 26 | ALARM indicator |
| 12 | Rotary switch | 27 | COMMAND connector |
| 13 | Camera number indicator | 28 | EXT (PREVIEW) connector |
| 14 | MASTER PED indicator | 29 | Connector for LAN (option) |
| 15 | MASTER PED control | 30 | ICCP/Ether selector switch (option) |

2.1 OPT Indicator

It indicates the transmission level when optical fiber cable is used. The CCU indicator indicates the optical level from the camera head to the CCU. The HEAD indicator indicates the optical transmission level from the CCU to the camera head. Each indicator indicates the optical transmission level in five stages by lighting on/blinking/lighting off three indicators with colors of green, amber, or red.

Indication	Indicator		Content
OK	Green	Light on	Optical transmission level is good.
ATTENTION	Amber	Light on	Optical transmission level is degraded, but operation is okay.
WARNING	Amber	Blinking	Optical transmission level is even more degraded. Operation may be possible. Check the optical path as soon as possible.
NG	Red	Light on	Optical level is severely low. Clean the optical path.
NON CONNECTION	—	Light off	The optical fiber cable is disconnected.

Note: Degradation of the optical transmission level occurs normally when many connections are used or cable distance is very long. It can also be caused by dirty connectors, loose connectors, bad connector termination, tight cable bends, and other abnormal conditions. When the OPT indicator starts blinking or lighting on in amber or red, check the optical path for any of these issues.

2.2 GAIN Controls

They control the gain of the red and blue channels.

2.3 F. VR Controls

They control the functions which have been allocated to the two controls.

Reference: Refer to "3. F.VR Controls" for the method to switch between functions.

2.4 ENABLE Switch

It enables OCP operation.

When the switch is lit on, control from the OCP is available.

2.5 AWB Switch

It performs AWB (Auto White Balance).

When AWB is completed, the lamp lights off. When AWB fails, the lamp blinks.

After checking the failed state, press the blinking switch again to reset the failed state.

Holding down the AWB switch enables execution of Quick Auto Setup.

Caution: Depending on the camera, this function may not activate even when the switch is held down for a while.

2.6 ABB Switch

It performs ABB (Auto Black Balance).

When ABB is completed, the lamp lights off. When ABB fails, the lamp blinks.

After checking the failed state, press the blinking switch again to reset the failed state.

Holding down the ABB switch enables execution of Auto Black Shading.

Caution: Depending on the camera, this function may not activate even when the switch is held down for a while.

2.7 SCENE File Switch

It saves and loads the scene files 1 to 8.

When selecting the scene files, the character indicator and the rotary switch are used.

Reference: Refer to "5. Rotary Switch" for the method to save the scene files.

The scene file ON state is indicated when the switch is lit on. The scene file OFF state is indicated when the switch is lit off. In addition, holding down the switch saves the scene file.

Note: To set controls to the center after loading a scene file, use the knob free function.

2.8 F.VR Function Selector Switch

This switch allows allocating functions to F.VR1 and F.VR2.

Reference: Refer to "3. F.VR Controls" for the method for user setting.

In addition during camera head menu operation, switching the command that is sent to the camera head during the rotary switch rotation is available.

Reference: Refer to "4.2.2 Menu Operation from OCP" for the method to operate the camera head menu.

2.9 EXT Indicator

It indicates the extender state.

LENS : It lights up when the lens extender is "ON."

DGTL : It lights up when the digital process extender is "ON."

2.10 F1 & F2 Switches

The On/Off status of various functions can be controlled by these user function switches.

Reference: Refer to "4. F. Switch" for the method to allocate functions.

2.11 Character Indicator

It indicates the status of functions. There is an upper and lower section for two indications.

2.12 Rotary Switch

It is used for selecting and changing the functions indicated on the character indicator.

2.13 Camera Number Indicator

It indicates the program number of the camera.

2.14 MASTER PED Indicator

It indicates the adjusted value of the master pedestal.

2.15 MASTER PED Control

It controls the master pedestal.

2.16 IRIS RANGE/SENS Control

RANGE control

It sets the iris F stop at the center position of the IRIS Control.

SENS control

It sets the control range of the IRIS Control.

It can set the F stop range from ± 1 stop to ± 2 stop.

2.17 RELATIVE Switch

This switch lights to indicate the iris position of the lens does not match the iris position of the OCP iris control. Pressing the switch will match the lens to the OCP.

2.18 FULL Switch

It switches the control range of the IRIS Control to the between FULL and partial range. The Iris Range/Sens controls only operate in the partial control range mode.

2.19 AUTO Switch

It sets the iris control to the auto mode.

2.20 IRIS Indicator

It indicates the F stop of the lens.

In the range from F16 to CLOSE, the indication becomes "----" and does not indicate the F stop number.

2.21 IRIS Control

It controls the lens iris. During AUTO IRIS, it controls the iris by approximately +/- 1 stop.

2.22 PREVIEW Switch

It outputs a PREVIEW signal from the EXT (PREVIEW) connector and from the BS hub and BS/CCU connected to the network. Typically used to control a preview switcher.

2.23 KNOB FREE Switch

When pressed the VR controls (R/B Gain, F.VR1/F.VR2, and Master Ped) can be rotated without changing the control function. It allows controls to be centered after a scene file is loaded or after an auto process is run without changing the camera setup. It also allows a VR control which has reached one end of its range to be moved to the center or opposite end to gain further control range when available.

2.24 CALL Switch

It lights the R TALLY of the camera head and BS/CCU.

R TALLY also lights up when the camera head or BS/CCU CALL switch is pressed.

2.25 HEAD PWR Indicator

It lights when the camera head power is "ON."

2.26 ALARM Indicator

It blinks when NG is detected by the self-diagnosis function.

2.27 COMMAND Connector

It connects the OCP to the BS/CCU, camera, or hub via a CP cable.

2.28 EXT (PREVIEW) Connector

It is a connector for extension and for the preview function.

Reference: Refer to "9.2.2 EXT Connector" for the pin functions.

2.29 Connector for LAN (Option)

It connects to an Ethernet-compatible BS/CCU or hub via a LAN cable.

2.30 ICCP/Ether Selector Switch (Option)

It switches between Ikegami command connection and Ethernet connection.

ICCP : For Ikegami command connection via the command connector

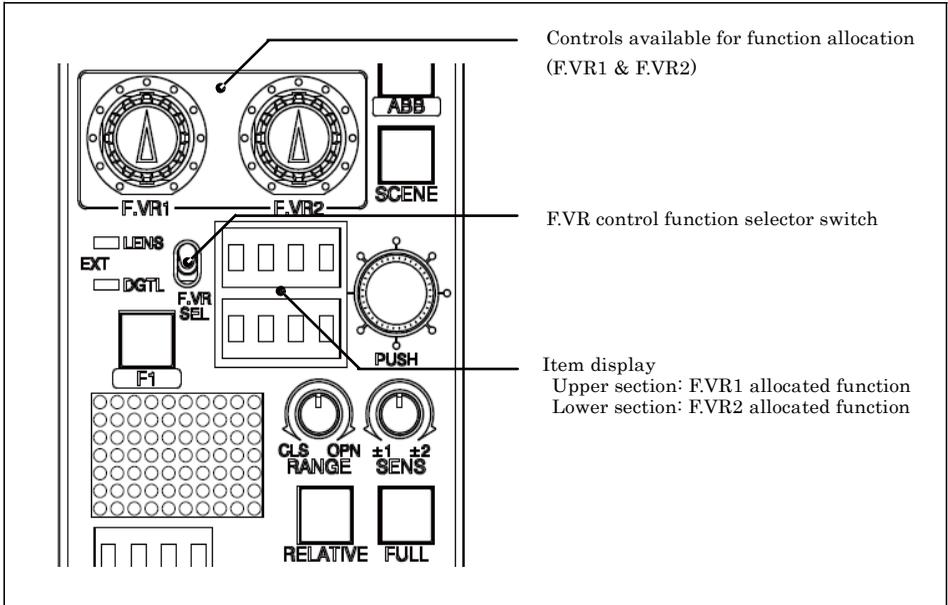
ETHER : For Ethernet connection via the LAN connector

3. F.VR Controls

The OCP-10 provides several pages of functions which can be allocated to the F.VR controls by operating the F.VR SEL function selector switch.

In addition, functions which are not needed can be removed by deleting pages from sequence available when operating the F.VR SEL switch.

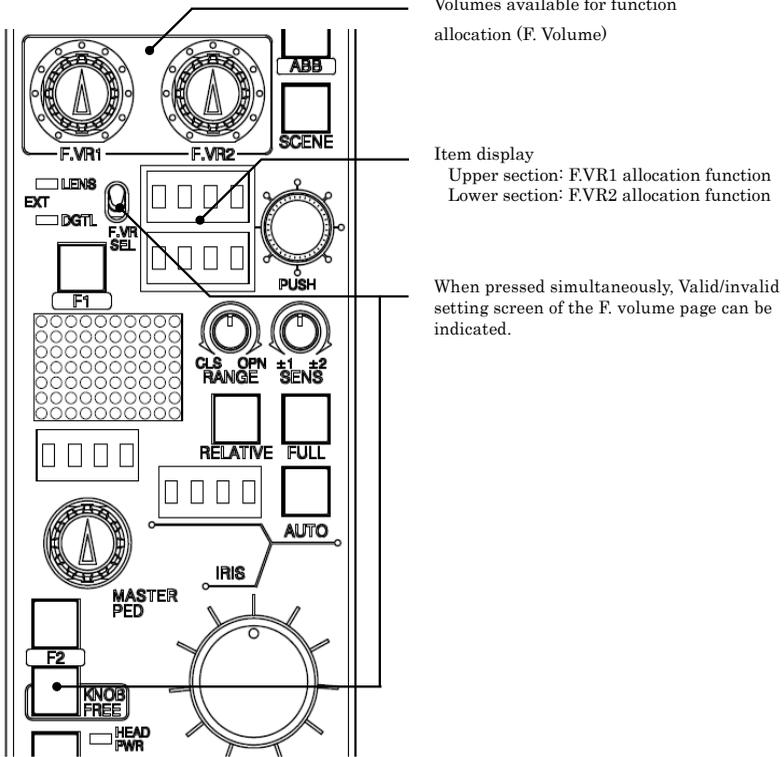
3.1 F.VR Function Selection



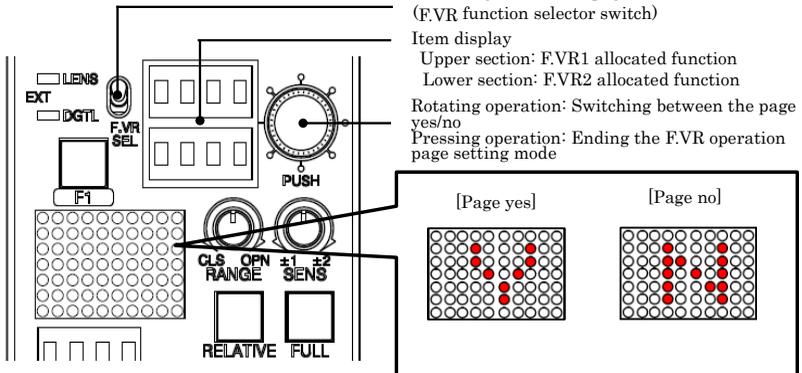
1. When the F.VR control function selector switch is pressed up or down, the control functions that are currently allocated are indicated (F.VR1 function at the upper section of the item indicator and F.VR2 function at the lower section of the item indicator).
2. After two seconds, indication of the controls that are currently allocated disappears.
3. When the F.VR control function selector switch pressed up or down again while the currently allocated control are displayed, the functions to be allocated to the F.VR control changes in a sequence of pages.
4. When no functions are allocated to the F.VR controls, "----" is indicated.

3.2 F.VR Control Page Setting

[Shifting to the setting mode on the operation page]



[Operation method for F.VR Page Setting]



1. When the F.VR control function selector switch is pressed up or down for approx. 2 seconds together with pressing Knob Free, the mode for including and deleting pages opens.
2. In this setting mode, when the F.VR control function selector switch is operated, the F.VR1 function is indicated at the upper section of the item indicator, and F.VR2 function is indicated at the lower section of the item indicator as a page information. Whether the corresponding page is included in the sequence of page is also indicated at the camera number indicator.
3. When the rotary switch is turned, selecting yes (Y) to include or no (N) to delete becomes available.
4. When the rotary switch is pressed, the selecting operation between yes (Y) and no (N) is ended.

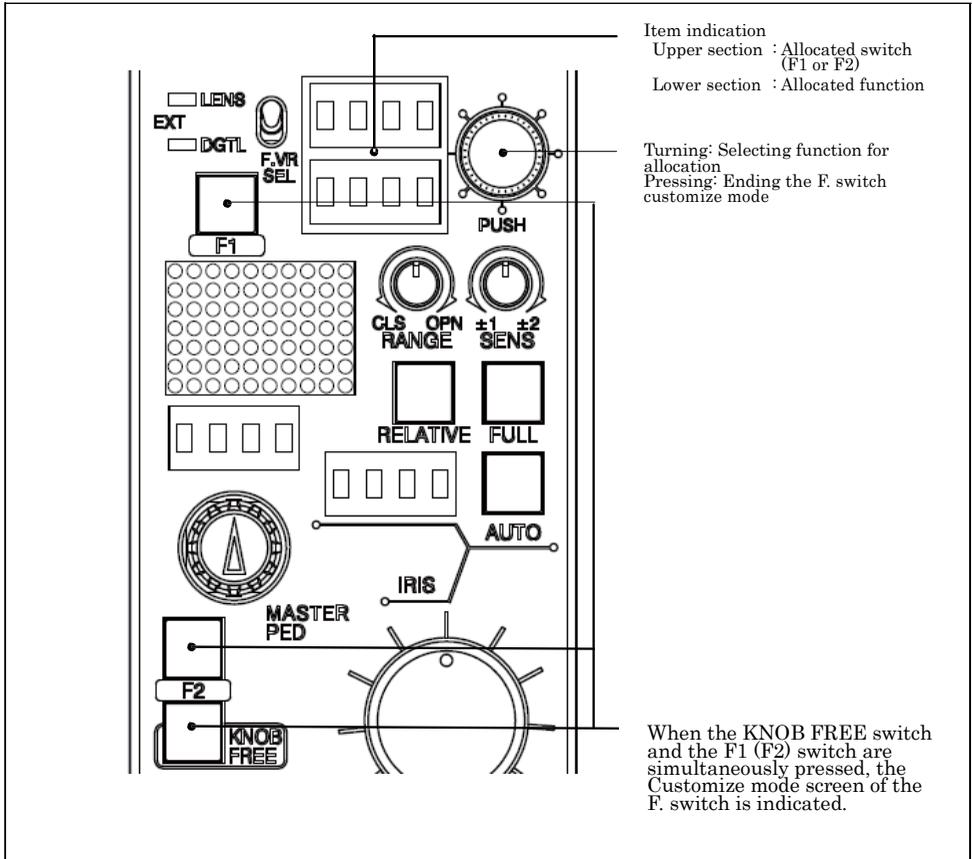
3.3 List of Pages for F.VR1 and F.VR2

Operation Page	Indicated Letters	Function
Page 1	RPED	F.VR 1: R Ped control
	BPED	F.VR 2: B Ped control
Page 2	VCT	F.VR 1: VAR C.Temp control
	MGAN	F.VR 2: Master Gain control
Page 3	MFLR	F.VR 1: Master Flare control
	MGAN	F.VR 2: Master Gain control
Page 4	RFLR	F.VR 1: R Flare control
	BFLR	F.VR 2: B Flare control
Page 5	GFLR	F.VR 1: G Flare control
	MGAN	F.VR 2: Master Gain control
Page 6	RGAM	F.VR 1: R Gamma control
	BGAM	F.VR 2: B Gamma control
Page 7	KNEP	F.VR 1: Knee Point Total control
	KNES	F.VR 2: Knee Slope Total control
Page 8	SKIN	F.VR 1: Skin DTL Gain control
	DTL	F.VR 2: DTL Gain control
Page 9	CSAT	F.VR 1: Color SAT. control
	MGAM	F.VR 2: Master Gamma control

4. F. Switch

The OCP-10 allows the user to assign the function of two switches, the F1 and F2 switches.

4.1 F. Switch Customize Function



1. When the F. switch (F1 or F2) is pressed for approximately 2 seconds while the KNOB FREE switch is also pressed, the F. switch customize mode starts.
2. As an initial state of the F. switch customize mode, the switch name to be customized is indicated at the upper section of the indicator and the function currently being allocated is indicated at the lower section of the indicator.

3. When turning the rotary switch, functions to be allocated to the F. switch can be selected.
* As soon as a function is allocated to the F switch, the state of the allocated function is reflected on the LED.
4. When the F. switch is pressed in the F. switch customize mode, turning the allocated function on and off is possible.
5. Pressing the rotary switch will allocate the function selected in Step 3, and it will end the F. switch customize mode.

4.2 List of Switch Functions

Item	Indicated Letters	Function	Remarks
Empty	EMPT	No function	
BARS	BARS	BARS ON/OFF	
CAP	CAP	CAP ON/OFF	
CAL	CAL	CAL 100%/200%/OFF	200% is blinking.
PM IND/PAGE	PIND	PM IND/PAGE switching	
SHUTTER	SHUT	SHUTTER ON/OFF	
C.Temp 5600K	CT56	C.Temp 5600K ON/OFF	
VAR C.Temp	VCT	VAR C.Temp ON/OFF	
Super V	SP.V	Super V ON/OFF	
AVC	AVC	AVC ON/OFF	
ATW	ATW	ATW ON/OFF	
Knee	KNEE	Knee ON/OFF	
Auto Knee	AKNE	Auto Knee ON/OFF	
Flare	FLR	Flare ON/OFF	
DTL	DTL	DTL ON/OFF	
Soft DTL	SOFT	Soft DTL ON/OFF	
Skin DTL	SKIN	Skin DTL ON/OFF	
Hi-Light DTL	HDTL	Hi-Light DTL ON/OFF	
White Clip	WCLP	White Clip ON/OFF	
Matrix	MTRX	Matrix ON/OFF	
Color SAT.	CSAT	Color SAT. ON/OFF	
Color CORR.	CCOR	Color CORR. ON/OFF	
VR Clear	VRCL	VR Clear execute	Long press
IRIS Clear	IRCL	IRIS Clear execute	* JS TYPE only
PREVIEW	PREV	PREVIEW ON/OFF	* VR TYPE only
Engineer File Load	ENGF	Loading the camera head engineer LOAD	Long press
MENU	MENU	MENU ON/OFF	Long press

4.2.1 VR Clear Operation

Allocating "VR Clear" to the F. switch will clear the data that the user adjusted.

Item	Clearing Action
R/B GAIN	Always cleared
F.VR1, F.VR2	Allocated function data is cleared.
MASTER PED	Always cleared
IRIS (including RANGE/SENSE)	Aligns the IRIS control position and the lens IRIS position

Caution : This operation does not clear functions which are turned off.

4.2.2 Menu Operation from OCP

When "MENU ON/OFF" is allocated to the F. switch, the camera head and the BS/CCU menu can be operated from the OCP.

[Menu Operation]

Menu select command switching (SEL/NEXT)
(F.VR function selector switch)

Rotating: Up/Down navigation
Pressing: Push Set to enter sub-menu /change setting

Item display
Upper section: MENU
Lower section: SEL/NEXT

Menu screen (HDK-79GX)

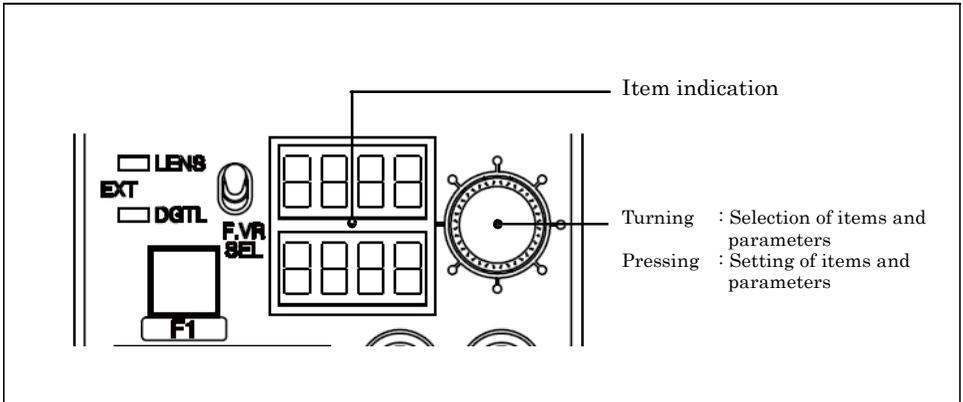
DPC sample area setting screen (HDK-79GX)

1. When the F. switch is pressed for approximately 2 seconds while the MENU ON/OFF function is allocated to the F. switch (F1 or F2), the menu operation mode starts, and the menu screen of the connected camera is displayed.
2. As the initial state of the menu operation mode, "MENU" is indicated at the upper section of the indicator, and "SEL" is indicated at the lower section of the indicator.
3. Navigate the menu by turning the rotary switch.
4. Enter a sub-menu and set a change by pressing the rotary switch.
5. When operating the cursor horizontally (SEL) and vertically (NEXT) as for the sample area setting of the DPC menu, use the F.VR SEL function selector switch to alternate between 'SEL' and 'NEXT' as indicated on the lower section of the indicator.
6. Pressing the F. switch again can ends the menu operation mode.

5. Rotary Switch

The rotary switch enables various functions to be selected and set.

5.1 Selection and Setting of Rotary Switch Functions



1. Turn the rotary switch to select the item to be controlled in the upper section of the item indicator.
2. When the rotary switch is pressed, the function setting at the lower section of the indicator starts blinking. Then changing the setting of the function becomes possible.
3. Turn the rotary switch again and set the function.
4. Press the rotary switch to exit the setting of the function.

5.2 List of Rotary Switch Functions

Item	Indicated Letters	Function	Remarks
ND	ND	Select	1 to 6
CC	CC	Select	A to F
EFF	EFF	Select	I to VI
Step Gain	Gain	Select	-6, -3, 0, +3, +6, +9, +12, +18, +24, +30, +36, +42, +48, +54
Step Gamma	Gamm	Select	OFF, 0.90, 0.80, 0.70, 0.60, 0.55, 0.50, 0.45, 0.40, 0.35, 0.30
Gamma Mode	GMod	Select	NOR, CINE1, 2, CSTM1 to 5
BLK S'TR/PRS	Bkst	Select	-11, -9, -7, -5, -3, OFF, +3, +5, +7, +9, +11
AWB ch	AWB	Select	B ch, A ch, OFF ("H" is at the beginning when of the HEAD has control.)
Shutter Mode	Shut	Select	OFF, PRE, VAR
Shutter Speed	Sped	Select	OFF, 4S, 2S, 1S, 2, 3, 4, 5, 6, 8, 10, 12, 15, 100, 120, 125, 250, 500, 1000, 2000
Var C.Temp	VCT	ON/OFF	
Digital Extender	DGTL	OFF/ magnification	x1.5, x2, x3, x4, x6, x8, x10, OFF
AVC	AVC	ON/OFF	
ATW	ATW	ON/OFF	
DTL	DTL	ON/OFF	
Flare	FLR	ON/OFF	
Matrix	MTRX	Select	OFF, 1 to 3
Knee	KNEE	ON/OFF	
Super Knee	SPKn	Select	OFF, LOW, MID, HIGH
Smooth Knee	SMKn	Select	OFF, 1 to 3
WhiteClip	WCLP	ON/OFF	
Color SAT.	CSAT	ON/OFF	
SCENE	SCEN	Select	1 to 8

* Note: functions that the camera head does not have are not indicated (items are indicated).

5.3 SCENE FILE Setting Method

With the rotary switch scene files 1 to 8 can be selected. Pressing the SCENE switch enables saving and loading of the scene file which has been selected.

[SCENE FILE saving method]

1. Turn the rotary switch to select "SCENE" at the upper section of the indicator.
2. Press the rotary switch and select the FILE number to be set, shown at the lower section of the indicator.
3. Hold down the SCENE switch for about 2 seconds.
4. The scene file selected in Step 2 is saved.

[SCENE FILE loading method]

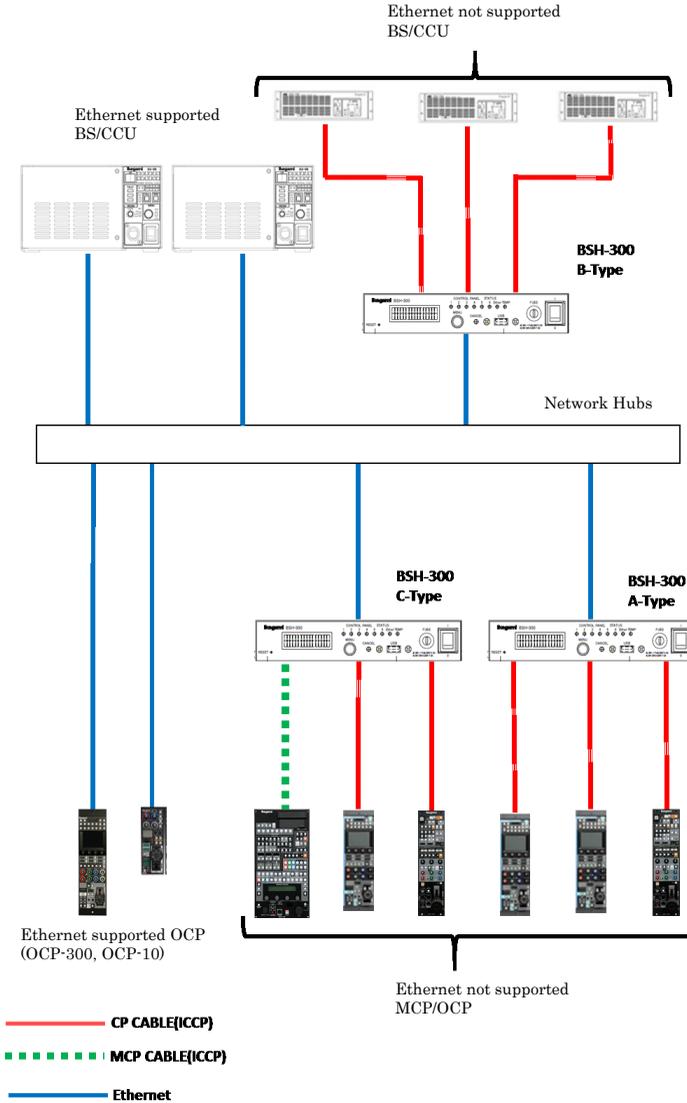
1. Turn the rotary switch to select "SCENE" at the upper section of the indicator.
2. Press the rotary switch and select the FILE number to be read, shown at the lower section of the indicator.
3. The FILE number selected in Step 2 is now allocated to the SCENE file switch and ON/OFF operation becomes available.

Note: When the FILE number is switched while a SCENE file is already ON, the switched scene file is loaded the next time the Scene switch is pressed.

6. Ethernet (Option)

As an optional function, the OCP-10 can be operated using an Ethernet connection. This section describes the concept of Ethernet operation and the connection method.

6.1 Conceptual Diagram of Network



6.2 Ethernet connection method

- Connect the OCP-10, Ethernet hub, and Ethernet-compatible BS/CCU using a straight LAN cable.

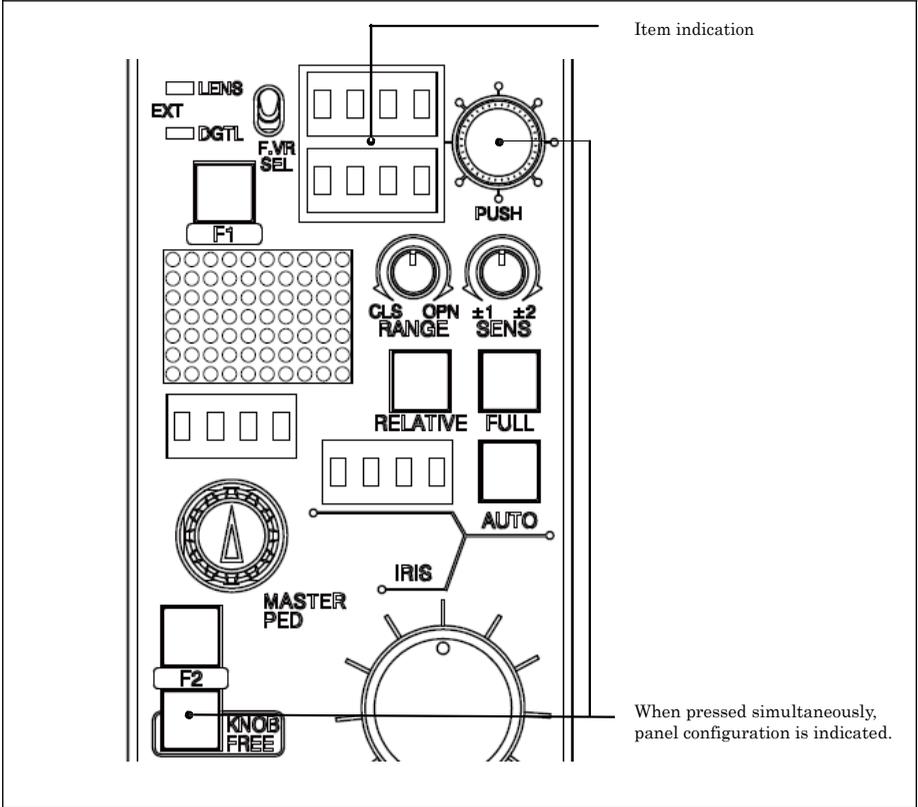
Note: When the Ethernet hub supports POE+ (Power Over Ethernet), powering the OCP-10 via the Ethernet cable becomes available.

- When the OCP-10 is used in Ethernet configuration, it is necessary to set the IP Address, Subnet Mask, and Default Gateway.
- The maximum cable length of the LAN cable is 100m. When connecting a cable longer than 100m, use an Ethernet hub. In this case, the LAN cable to be used must be a straight LAN cable.

7. Panel Configuration

The OCP-10 has many functions, and its operation and settings can be setup to meet the user's requirements.

7.1 Panel Configuration Menu



1. Press the rotary switch and the Knob Free switch simultaneously for approximately 2 seconds. After two seconds, the upper section of the item indication area indicates the STR number, and the lower section indicates the checksum of the software version.
2. After indication of the STR number, the panel configuration menu is indicated.
* Turning or pressing the rotary switch, will skip indication of the STR number and checksum.
3. After the menu indication, setting items can be selected by turning the rotary switch.

4. Press the rotary switch and the setting of the selected item starts blinking.
5. Next the setting can be changed by turning the rotary switch.
6. When the desired setting is displayed, push the rotary switch.
7. Exit the Panel Configuration menu by selecting Exit and pressing the rotary switch. Or press the Knob Free switch and rotary switch simultaneously.

7.2 List of Panel Configuration Settings

Item	Function	Set value	Remarks
IRIS CONT	Select	ABS (Absolute value control)*1	Controlled with the absolute value
		REL (Relative value control)	Controlled with the relative value
GAIN RANGE	Select	6 dB *1	The control range is ± 6 dB.
		3 dB	The control range is ± 3 dB.
FVR RANGE	Select	STD *1	The control range is the standard.
		1/2	The control range is a half of the standard.
		1/4	The control range is a quarter of the standard.
MPED RANGE	Select	STD *1	The control range is the standard.
		1/2	The control range is a half of the standard.
		1/4	The control range is a quarter of the standard.
VR DISP	VR value indication	ON *1	Indicates the volume control value on the character indicator.
		OFF	Does not indicate the volume control value on the character indicator.
BUZZER	Select	STD *1	The buzzer volume is the standard.
		ATT	The buzzer volume is a half of the standard.
		OFF	The buzzer volume is mute.
TLY GARD	Select	OFF *1	The tally guard is off.
		LIMT	The tally guard is set to the limited items.
		ALL	The tally guard is set to all items.
MPED VALUE	Select	% *1	Indicates the video level.
		CONT	Indicates the control data.
ADJUST MODE	IRIS position adjustment function	—	Adjusts the IRIS position. *2
PROGRAM MODE	Select	FIX *1	To be the FIX mode (OCP fixed) *3
		CAM	To be the CAM mode (CAMERA prioritized) *3
		OCP	To be the OCP mode (OCP prioritized) *3
PROGRAM No.	Select	OFF	Set a program number to be displayed on the camera number indicator.
PAU	Select	OFF *1	Not PAU operation
		ON	To be PAU operation
EXT SEL 5-pin	Select	GTLY *1	Set the EXT connector (5-pin) output to the G TALLY output.
		EXT	Set the EXT connector (5-pin) output to the EXTENDER output.
		ALRM	Set the EXT connector (5-pin) output to the ALARM output.
EXT SEL 6-pin	Select	YTLY *1	Set the EXT connector (6-pin) output to the Y TALLY output.
		EXT	Set the EXT connector (6-pin) output to the EXTENDER output.
		ALRM	Set the EXT connector (6-pin) output to the ALARM output.
USER MODE	Select	COMP *1	No limit to the rotary switch select function/F. switch assign function. *4
		BSC	With limit to the rotary switch select function/F. switch assign function. *4
Ethernet	Ethernet setting	—	Set the IP address and other items. *5
RAM CLR	Select	MENU *1	Set the initialization of the customize item (other than Ethernet setting)
		ALL	Set all initialization settings.
EXIT	End of the menu mode		

*1: Set the internal memory at the time of initialization.

*2: Refer to 7.4 IRIS Position Adjustment Function for details.

*3: Refer to 7.5 Program Number Indication for details.

*4: Refer to 7.6 Use Limit Function by User for details.

*5: Refer to 7.7 IP Address/Subnet Mask/Default Gateway Setting for details.

7.3 List of Tally Guard Functions

Switches can be prohibited when the ON-AIR by setting the ON-AIR tally guard function.

Function	Panel Configuration			Function	Panel Configuration		
	OFF	limited	ALL		OFF	limited	ALL
PANEL ENABLE	—	○	○	FSW			
AWB	—	○	○	BARS ON/OFF	—	○	○
ABB	—	○	○	CAP ON/OFF	—	○	○
SCENE FILE	—	—	○ *1	CAL ON/OFF	—	○	○
UP/DOWN	—	—	—	PM ID/PAGE	—	—	—
ND SELECT	—	—	○	SHUTTER ON/OFF	—	—	○
CC SELECT	—	—	○	C.Temp 5600K ON/OFF	—	—	○
EFFECT SELECT	—	—	○	Var C.Temp ON/OFF	—	—	○
GAIN SELECT	—	—	○	Super V ON/OFF	—	—	○
GAMMA SELECT	—	—	○	AVC ON/OFF	—	—	○
GAMMA MODE SELECT	—	—	○	ATW ON/OFF	—	—	○
EFFECT SELECT	—	—	○	Knee ON/OFF	—	—	○
BLK STR/PRS SELECT	—	—	○	AutoKnee ON/OFF	—	—	○
AWB MEMORY SELECT	—	—	○	Flare ON/OFF	—	—	○
SHUTTER SELECT	—	—	○	DTL ON/OFF	—	—	○
SHUTTER SPEED SELECT	—	—	○	Soft DTL ON/OFF	—	—	○
Var C.Temp ON/OFF	—	—	○	Skin DTL ON/OFF	—	—	○
Digital Extender SELECT	—	—	○	Hi-Light DTL ON/OFF	—	—	○
AVC SELECT	—	—	○	WhiteClip ON/OFF	—	—	○
ATW SELECT	—	—	○	Matrix ON/OFF	—	—	○
DTL ON/OFF	—	—	○	Color SAT. ON/OFF	—	—	○
Flare ON/OFF	—	—	○	Color CORR. ON/OFF	—	—	○
Matrix SELECT	—	—	○	VR Clear	—	—	○
Knee ON/OFF	—	—	○	IRIS Clear	—	—	○
Smooth Knee SELECT	—	—	○	PREVIEW SW	—	—	—
Super Knee SELECT	—	—	○	Engineer File Load	—	○	○
WhiteClip ON/OFF	—	—	○	HEAD MENU	—	—	○
Color SAT. ON/OFF	—	—	○	IRIS FULL ON/OFF	—	—	○
				IRIS RELATIVE ON/OFF	—	—	○
				AUTO IRIS ON/OFF	—	—	—
				CALL	—	—	—
				KNOB FREE	—	—	—

· The tally guard is off.

○ The tally guard is on.

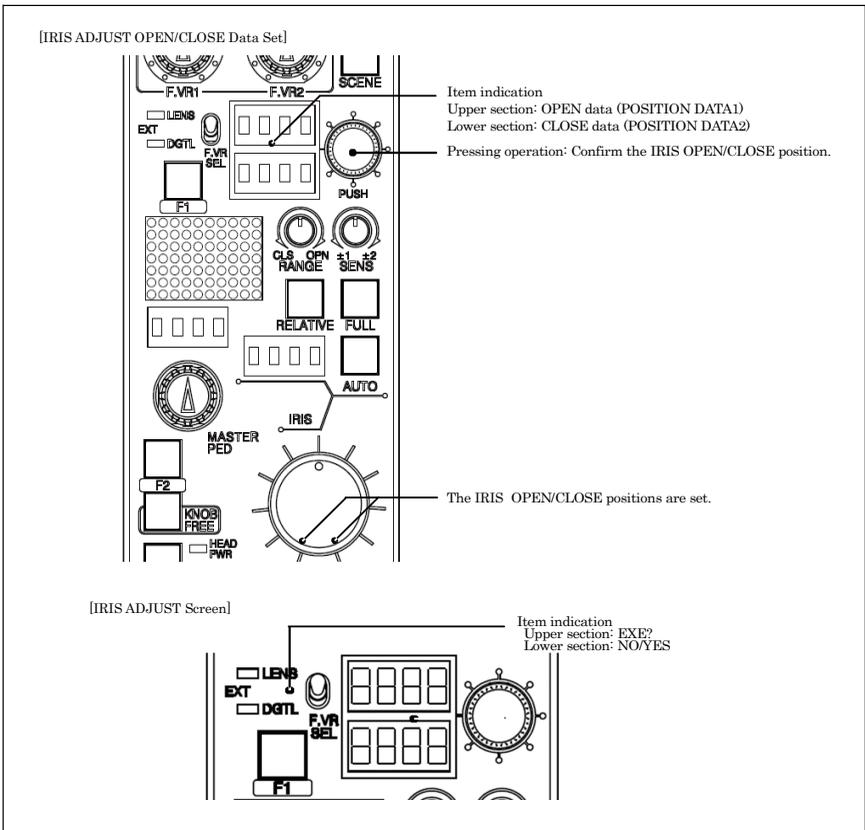
*1 Switching the SCENE number UP/DOWN is available.

7.4 IRIS Position Adjustment Function

It is possible that the lens iris is not at the OPEN/CLOSE end when the OCP iris is at the OPEN/CLOSE end, even under full range operation. The OCP-10 has a function to recognize the OPEN/CLOSE end positions of the iris in the panel configuration menu, and correct the difference with the camera head lens iris value.

Caution: With the camera head LENS ADJUST function, check that the iris F stop control is correct at the camera head. Please note, the open/close end positions are already adjusted for the OCP-10 at the factory prior to shipment.

Reference: For the LENS ADJUST function, refer to the operation manual of the connected camera head. Some cameras do not have the LENS ADJUST function.



1. Select "ADJUST MODE" under the panel configuration menu.
2. On the character indicator, "POS1" is indicated at the upper section and "POS2" at the lower section.
3. Align the IRIS position to the OPEN end and press the rotary switch. ("POS1" indicated at the upper section of the character indicator changes to "OK.")
4. Align the IRIS position to the CLOSE end and press the rotary switch. ("POS2" indicated at the lower section of the character indicator changes to "OK.")
5. Two seconds after both upper and lower sections of the character indicator indicate "OK," the upper section changes to "EXE?" and the lower section changes to "NO" on the indicator.
6. When the rotary switch is rotated and operated, Yes and No can be switched. To finalize the setting, select "Yes." To cancel, select "No." Then, press the rotary switch.
7. When "YES" is selected, execute the IRIS ADJUST setting. The panel restarts. When "No" is selected, the panel returns to the top page of the panel configuration.

7.5 Program Number Indication

Select "PROGRAM No.," under the panel configuration menu. This sets the program number to be displayed on the camera number indicator. Settings are OFF (to hide) and to 1 to 99.

In addition by using the panel configuration "PROGRAM MODE," the program number indication mode can be set.

- **FIX mode (OCP fixed)**

The OCP sets the program number indication regardless of the camera head and BS/CCU.

- **CAM Mode (CAMERA prioritized)**

The number memorized in the camera head is prioritized for the program number indication. At the time of power supply start-up or at the indication mode setting, the indication of the camera number indicator of OCP is changed according to the answer from the camera head and BS/CCU. When there is no answer, the number memorized in OCP is indicated.

To enable the BS/CCU program number function, set to the CAM mode.

- **OCP mode (OCP prioritized)**

The number memorized in the OCP is prioritized for the program number indication. At the time of power supply start-up and at the indication mode setting, the number memorized in the OCP is indicated on the camera number indicator. In addition, the number is sent to the camera head.

7.6 Limit Functions (Control Depth)

By selecting the operation from two modes, [COMPLETE or BASIC] under "USER MODE" of the panel configuration menu, the selection for the F1 and F2 switches, as well as, the selection for the rotary switch can be limited. All functions are available in the COMPLETE(indication: COMP) mode, and limited functions are available in the BASIC(indication: BSIC) mode as indicated in the lists "7.6.1 and 7.6.2".

7.6.1 List of Limited Functions for F. Switch Selection

Item	Function	Mode
Empty	No function	BASIC
BARS	BARS ON/OFF	BASIC
CAP	CAP ON/OFF	BASIC
CAL	CAL 100%/200%/OFF	BASIC
PM IND/PAGE	PM IND/PAGE switching	BASIC
SHUTTER	SHUTTER ON/OFF	
C.Temp 5600K	C.Temp 5600K ON/OFF	BASIC
VAR C.Temp	VAR C.Temp ON/OFF	
Super V	Super V ON/OFF	
AVC	AVC ON/OFF	BASIC
ATW	ATW ON/OFF	BASIC
Knee	Knee ON/OFF	
Auto Knee	Auto Knee ON/OFF	BASIC
Flare	Flare ON/OFF	
DTL	DTL ON/OFF	
Soft DTL	Soft DTL ON/OFF	
Skin DTL	Skin DTL ON/OFF	
Hi-Light DTL	Hi-Light DTL ON/OFF	
White Clip	White Clip ON/OFF	
Matrix	Matrix ON/OFF	
Color SAT.	Color SAT. ON/OFF	
Color CORR.	Color CORR. ON/OFF	
VR Clear	VR Clear execute	BASIC
IRIS Clear	IRIS Clear execute	BASIC
PREVIEW	PREVIEW ON/OFF	BASIC
Engineer File Load	LOAD the camera head engineer	
MENU	MENU ON/OFF	BASIC

7.6.2 List of Limited Functions for Rotary Switch

Item	Function	Mode
ND	Select	BASIC
CC	Select	BASIC
EFF	Select	BASIC
Step Gain	Select	BASIC
Step Gamma	Select	
Gamma Mode	Select	
BLK STR/PRS	Select	BASIC
AWB ch	Select	
Shutter Mode	Select	BASIC
Shutter Speed	Select	BASIC
Var C.Temp	ON/OFF	
Digital Extender	OFF/magnification	BASIC
AVC	ON/OFF	
ATW	ON/OFF	
DTL	ON/OFF	
Flare	ON/OFF	
Matrix	Select	
Knee	ON/OFF	
Super Knee	Select	
Smooth Knee	Select	
WhiteClip	ON/OFF	
Color SAT.	ON/OFF	
SCENE	Select	BASIC

7.7 Setting IP Address/Subnet Mask/Default Gateway

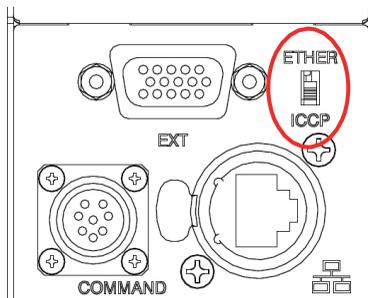
[Ethernet setting menu]

When operating the OCP-10 by Ethernet connection, it is necessary to set the IP Address/Subnet Mask/Default Gateway of OCP itself and the IP Address of the BS/CCU to be controlled.

Set each item under "Ethernet" of the panel configuration menu.

Subject	Item	Content
OCP	IP	It sets the IP Address of OCP-10. * Set to "192.168.1.150" by default.
	SUB	It sets the Subnet Mask of OCP-10. * Set to "255.255.255.0" by default.
	DEF	It sets the Default Gateway of OCP-10. * Set to "0.0.0.0" by default.
	back	It returns to the switching state of the menu.
BS	IP	It sets the IP Address of connecting BS/CCU. * Set to "192.168.1.100" by default.
	back	It returns to the switching state of the menu.
back		It returns to the Panel Configuration TOP menu.

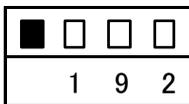
1. Set the ICCP/ETHER selector switch of OCP-10 to ETHER.



2. Select "Ethernet" in the panel configuration menu.
3. By turning the rotary switch, selection and setting of the OCP and BS is available.
* Selecting "back" returns to the Panel Configuration TOP menu.
4. When the rotary switch is pressed while the selected item is indicated, the item shifts to the setting condition (at this time, the set item starts blinking). Turn the rotary SW again and indicate the item to be set.
5. Pressing the rotary switch enables to shift to the setting mode of that item.
* Selecting "back" returns to the switching (OCP/BS) operation of the Ethernet setting menu.

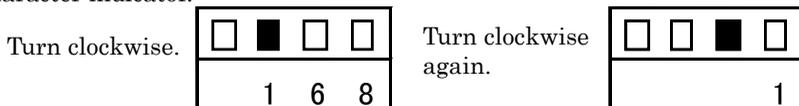
[Item setting mode]

It sets each of OCP and BS. When a setting item is selected from the Ethernet setting menu, the indication becomes as shown in the following drawing.



The boxes in the upper section indicate the image of IP address in four digits.
(Ex.: 192/168/1/100)

1. Turning the rotary switch moves the black box in the upper section of the character indicator.



2. Select a digit to set (■ state) and press the rotary switch. The numeric value in the lower section starts blinking. When the switch is turned in a blinking state, the numeric value can be changed.
3. After setting, press the rotary switch again. Turning operation of the rotary switch returns to the box operation in the upper section.
4. After setting all items, turn the rotary switch clockwise to the end while in the upper section box operation state. The indication becomes as shown in the following drawing.



5. When the rotary switch is pressed while the screen in Step 4 is indicated, the lower section starts blinking, and the indication changes between "SET"/"CANC." When selecting SET, press the rotary switch with "SET." The setting is saved.
* When "CANC" is selected, the screen returns to Ethernet setting menu TOP.

When the OCP is set, the OCP restarts.

When the BS/CCU for connection is set, a change in connection will occur.

8. Troubleshooting

8.1 Blinking ALARM Indicator

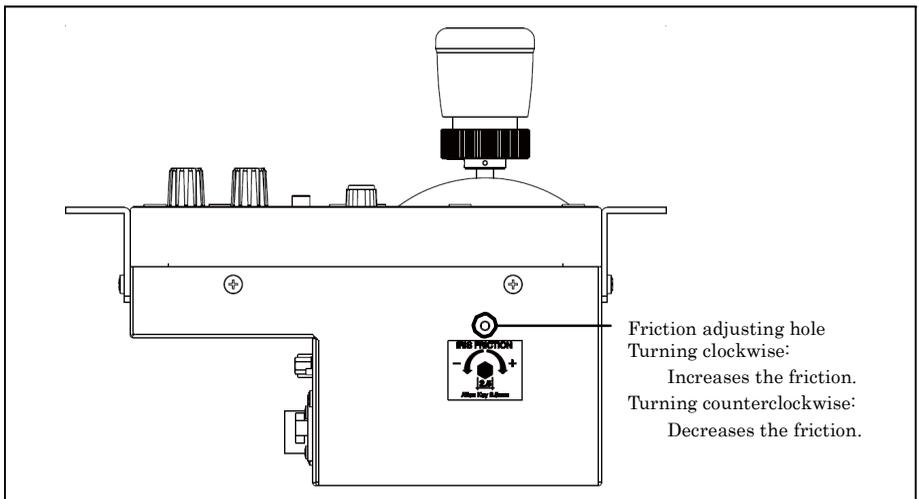
The BS/CCU has a self-diagnosis function that can monitor abnormal condition in the BS/CCU itself and in the camera. This function starts working at the same time the BS/CCU MAIN POWER switch is turned on. It continues working all the time during operation. When any abnormal condition occurs in the BS/CCU or the camera, the function immediately detects the condition and starts blinking the ALARM indicator on the OCP. In addition, the function indicates the self-diagnosis information indication screen on the PM to specify the troubled section.

When the PM IND/PAGE switch of the OCP is pressed even when the ALARM indicator is not blinking, the self-diagnosis information screen is indicated on PM for checking the status.

Reference: The PM IND/PAGE switch becomes operable by allocating the function to the F. switch. Refer to "4. F. Switch" for the allocation method.

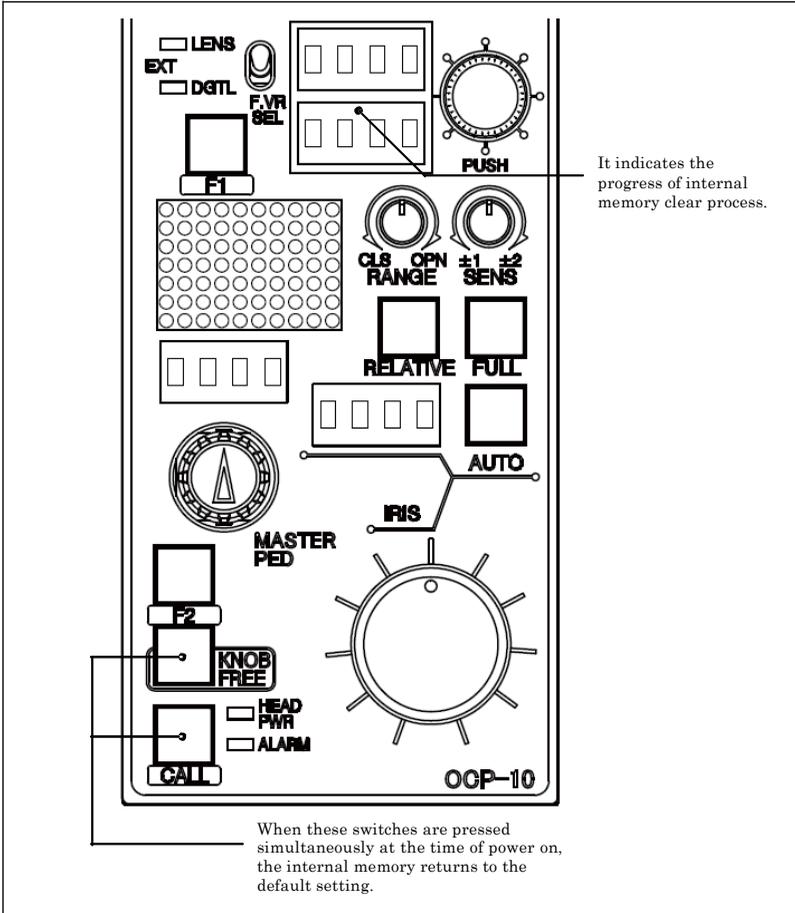
8.2 Adjustment of IRIS Friction

The OCP-10 has an adjustment for joystick iris friction. Friction can be adjusted by inserting a hexagon wrench through the side plate and turning clockwise/counterclockwise (effective only with JS TYPE). Turning clockwise will increase the friction, and turning counterclockwise will decrease the friction.



8.3 Initialization

The OCP-10 can return the panel configuration settings, F. VR operation page setting, and F. switch customize setting to the default setting (state at the time of shipping from the factory).



1. Turn on the power while the KNOB FREE switch and the CALL switch are pressed simultaneously.
2. When the initialization of the internal memory starts, "RAM CLR" is indicated on the character indicator. After the completion of initialization, the initialization status is indicated with "RAM COMP."
3. After completion of the internal memory initialization, the OCP restarts.

Caution: This operation cannot be canceled in the middle of the operation.

9. Specification

9.1 Rating

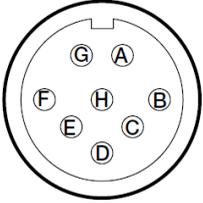
Power supply	+12V (+9V to 18V)
Consumed power	3W
Max. cable length	300m (CP cable) 100m(LAN cable)
Operation temperature	0°C to +45°C
Storage temperature	-25°C to +60°C
Operation humidity range	30% to 90% (no condensation)

9.2 Pin Function of External Connector

9.2.1 COMMAND Connector

— SEAT —

Connector to input/output various signals between BS/CCU and CP HUB.



Main body side: PRC05-R8M

Cable side: PRC05-199P9-8F (8-pin female plug) or equivalent

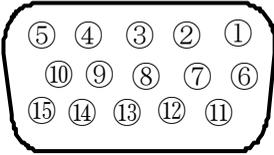
Insert side

Pin No.	Name	Function	Direction	External Interface
A	HED (+)	Serial command from BS/CCU to OCP Data input (+)	IN	
	A	Network command between CP HUB and OCP Data input/output (A)	IN/OUT	
B	HED (-)	Serial command from BS/CCU to OCP Data input (-)	IN	
	B	Network command between CP HUB and OCP Data input/output (B)	IN/OUT	
C	HEC (+)	Serial command from OCP to BS/CCU Data output (+)	OUT	
D	HEC (-)	Serial command from OCP to BS/CCU Data output (-)	OUT	
E	+12V IN	DC+12V power supply input	IN	
F	+12V RET	Grounding DC+12V power supply input	OUT	
G	NC	-----		
H	NC	-----		

9.2.2 EXT Connector

———— SEAT ————

It is a connector for extension.



Insert side

Main body side : D-sub 15-pin (socket)

Cable side : D-sub 15-pin (pin), Inch screw

Pin No.	Name	Function	Direction	External Interface
1	PV (+)	Preview output +	OUT	
2	PV (-)	Preview output -	OUT	
3	COM	Preview output common	OUT	
4	I/O 1	Input/output 1	IN/OUT	
5	I/O 2	Input/output 2	IN/OUT	
6	I/O 3	Input/output 3	IN/OUT	
7	I/O 4	Input/output 4	IN/OUT	
8	GND	Grounding		
9	DATA (+)	Serial output DATA (+)	OUT	RS-485
10	DATA (-)	Serial output DATA (-)	OUT	RS-485
11	CLK (+)	Serial output CLK (+)	OUT	RS-485
12	CLK (-)	Serial output CLK (-)	OUT	RS-485
13	WR (+)	Serial output WP (+)	OUT	RS-485
14	WR (-)	Serial output WP (-)	OUT	RS-485
15	+12V	Power supply output		

1 Preview output

When the PREVIEW switch is pressed, PV (-) short-circuits with COM.

When the PREVIEW switch is not pressed, PV (+) short-circuits with COM.

2 External input/output

The external input/output function is provided. It has the pin configuration that can be used for both input and output; therefore, either input or output can be set. Usually, output is set.

Allocation of functions to terminals 5 and 6 terminal can be changed by the panel configuration menu.

Reference: For details, refer to "7. Panel Configuration".

External Output

Pin No.	Name	Function	External Interface	
4	$\overline{\text{R TALLY}}$	R tally output	<p>100mA(max)</p>	
5	$\overline{\text{G TALLY}}$	G tally output		
	$\overline{\text{EXTENDER}}$	Extender output		
	$\overline{\text{ALARM}}$	Alarm output		
6	$\overline{\text{Y TALLY}}$	Y tally output		
	$\overline{\text{EXTENDER}}$	Extender output		
	$\overline{\text{ALARM}}$	Alarm output		
7	$\overline{\text{ENABLE}}$	Enable Input		(OPEN)
15	+12V	Power output		

When the OCP is connected to a camera head without tally input, tally can be input from the OCP. When using as the tally input, connect the enable input terminal (No. 7 terminal of the connector) to GND. When connected to BS/CCU, the enable input terminal is ignored, and output is set.

External Input

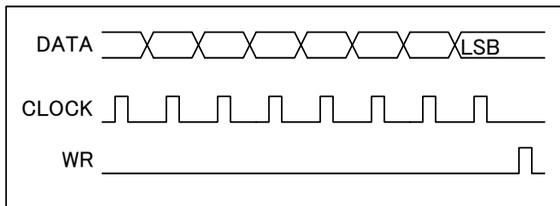
Pin No.	Name	Function	External Interface
4	$\overline{\text{R TALLY}}$	R tally Input	
5	$\overline{\text{G TALLY}}$	G tally Input	
6	$\overline{\text{Y TALLY}}$	Y tally Input	
7	$\overline{\text{ENABLE}}$	Enable Input	
8	GND	Signal	

Caution: The input circuit has a simple configuration. When the cable connected to the system is long or when there is a potential difference, the operation might fail. If that happens, do not connect the cable directly to the control panel. Place the cable near the control panel, prepare an interface using a photo coupler, etc. and connect from the interface.

3 Program Number Output

Output the camera program number by a three-wire type serial signal (RS-485). By using this output, the program number can be indicated on a tally panel, etc. The data is sent from MSB.

Three-wire type serial data format



Camera number data format

		MSB								LSB			
		11	10	9	8	7	6	5	4	3	2	1	0
Chip select	Fixed									0	0	0	0
Unit digit	No display									1	1	1	1
	0									0	0	0	0
	1									0	0	0	1
	2									0	0	1	0
	7									0	1	1	1
	8									1	0	0	0
	9									1	0	0	1
Tens digit	No display	1	1	1	1								
	0	0	0	0	0								
	1	0	0	0	1								
	2	0	0	1	0								
	7	0	1	1	1								
	8	1	0	0	0								
	9	1	0	0	1								

Data sample

		MSB								LSB			
		11	10	9	8	7	6	5	4	3	2	1	0
Camera number	No display	1	1	1	1	1	1	1	1	0	0	0	0
	5	1	1	1	1	0	1	0	1	0	0	0	0
	13	0	0	0	1	0	0	1	1	0	0	0	0
	46	0	1	0	0	0	1	1	0	0	0	0	0

10. Changing Information

OCP-10

OPERATION CONTROL PANEL

Operation Manual

2nd Edition: Issued in JAN. 2015

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