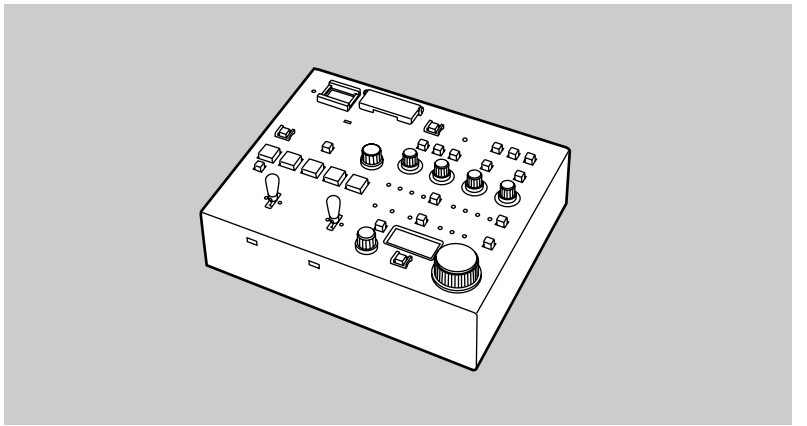
Operating Instructions

Camera Controller

Model AK-HRP900P



Panasonic®

Before attempting to connect, operate or adjust this product,
please read these instructions completely and save this manual for future use.

For Your Safety

CAUTION
RISK OF ELECTRIC SHOCK DO NOT OPEN

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

The lightning 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.

For CANADA

This class A digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

12 Volt Class Ⅱ Power Supply Only.
(For Example: AW-PS505P)

FCC Note:
This device complies with Part 15 of the FCC Rules. To assure continued compliance follow the attached installation instructions and do not make any unauthorized modifications.

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.

WARNING:
TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

CAUTION:
TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD AND ANNOYING INTERFERENCE, USE THE RECOMMENDED ACCESSORIES ONLY.

The serial number of this product may be found on the bottom of the unit.

▭ is the safety information.

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Outline

- This unit is a camera controller for multi-purpose camera (AK-HC900P). This unit is connected to a multi-purpose camera with one multi-cable, and capable of transmitting and receiving various camera and lens control signals, analog picture signals of cameras, and generator lock signals (3-value SYNC).
- The extension distance between this unit and the camera is 33 ft (10m) max.
- It is possible to control the swivel stand from the pan-tilt control panel AW-RP301 by using the swivel stand control input connector.

Check the Accessories

Coupling . . . . . .1 pc
Multi-cable . . . . . .1 pc
Seal . . . . . .1 pc
Setscrews . . . . . .8 pcs
M4 x 8 mm . . . . . .4 pcs
M5 x 8 mm . . . . . .4 pcs

Precautions for Use

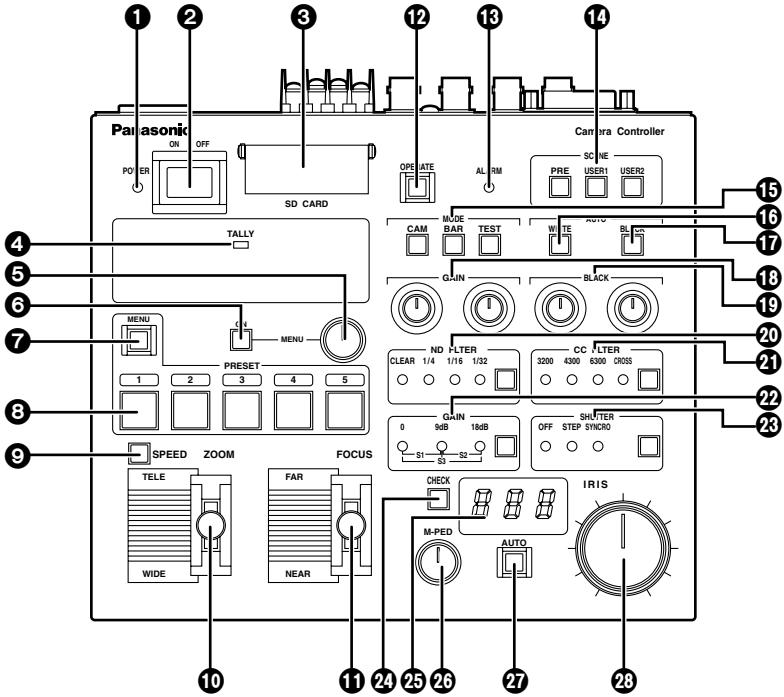
- We recommend that the AC adapter AW-PS505P is used for power supply.
- Handle the unit with care.
  If dropped or given a strong shock, it may cause a trouble or accident.
- Use the unit in a temperature range of 32°F to 104°F (0°C to + 40°C).
  If used at a temperature below 32°F or higher than 104°F, it may cause bad influences to the component parts.
- Turn off the power before connecting or disconnecting the cable.
  When connecting or disconnecting the cable, be sure to turn off the power switch of the unit beforehand.
- Avoid using the unit outdoors.
- Install the unit 3.3 ft (1 m) away from the monitor.
- Maintenance
  Pull out the power cord plug and clean the unit with dry cloth. If it is hard to clean, moisten the cloth with a diluted neutral detergent solution and squeeze it well and lightly wipe the unit.

Precautions

- Do not use volatile solvents such as benzene or thinner.
- When using a chemical mop, carefully read the instructions.

Controls and their Functions

■Operation panel



❶ Power indication LED [POWER]
It is lighted green when the power control switch ❷ is ON. It goes out when the power control switch ❷ is OFF.

❷ Power control switch [POWER ON/OFF]
With this switch turned ON, the unit and the camera connected are simultaneously turned on. With it turned OFF, both of the unit and the camera are turned off.

❸ SD card slot [SD CARD]
With an SD card inserted, the camera setting data can be recorded on the SD card.

❹ Tally LED [TALLY]
It is lighted red when tally signal is input to the tally signal input terminal ㉝.

❺ Menu operation switch [MENU]
Operation switch for camera menu.
Item selection or data change can be done by turning this switch. When this switch pushed, the item and data are settled.

❻ Menu ON switch [MENU ON]
Used to turn the camera menu ON/OFF.

❼ Preset memory switch [MEMO]
Preset memory can be done up to 5 points with respect to lens zoom, focus, and iris position (when iris select switch ㉗ is at [MANU]). When using the preset memory, first set the lens focus, zoom, and iris. Next, push this switch, then the switch is lighted. Subsequently, push the desired preset position select switch ❽. With the data stored in the memory, the switch is lighted.

❽ Preset position select switch [PRESET]
It calls the lens zoom, focus and iris settings previously stored in the memory, and brings the lens into preset operation.

❾ Speed change switch [SPEED]
High speed operation is obtained when the zoom operation lever ❿ and the focus adjust lever ⓫ are operated while pressing this switch. The switch is lighted while being pressed.

❿ Zoom operation lever [ZOOM TELE/WIDE]
Used for zoom operation of the lens. The zoom speed changes with the shifting angles of the lever. With the zoom operation lever direction change switch ㊱ set at [NOR], when the lever is shifted to [TELE], the zoom operates in a telescopic mode, and when shifted to [WIDE], it operates in a wide angle mode. With the zoom operation lever direction change switch ㊱ set to [REV], the zoom can be operated in the opposite direction.

⓫ Focus adjust lever [FOCUS FAR/NEAR]
Used to adjust the lens focus. The focus can be controlled in speed variable fashion by regulating the shifting angle of this lever.
With the focus adjust direction change switch ㊲ set at [NOR], when this lever is shifted to [FAR], the focus is adjusted to a far distance, and when shifted to [NEAR], the focus is adjusted to a near distance. With the focus adjust direction change switch ㊲ set to [REV], the focus can be adjusted in the opposite direction.

⓬ Operation panel active switch [OPERATE]
This is an active switch for panel function. It can be operated when the switch is lighted. It does not work when the switch is not lighted.

⑬ **Alarm indication LED [ALARM]**
It lights up when an alarm is generated (in case of fan stop, wrong communication speed, etc.).
Note:
In case of wrong communication speed, change the DIP SW position in the unit to match the camera and communication speed so that the alarm goes out.

⑭ **Scene file select switch [SCENE]**
Used to select the scene file previously set on the camera.
Note:
With [PRESET] selected, it results in the factory-adjusted setting.

⑮ **Mode select switch [MODE]**
Used to select the camera color bar signal, test signal and camera picture signal. With the switch set to [BAR], [TEST], the color bar signal and the test signal are output from the monitor signal output terminal of this unit. With it set to [CAM], the picture taken by the camera is output.

⑯ **Auto white start switch [AUTO WHITE]**
With this switch pressed, the white balance is automatically adjusted. During the operation, WHTE LED blinks, and it goes out when the adjustment is normally finished. In case of NG, it lights up for a while and then goes out.
Note:
It does not operate when the mode is [BAR].

⑰ **Auto black start switch [AUTO BLACK]**
With this switch pressed, the lens is automatically closed, and the black balance is adjusted. During the operation, BLACK LED blinks, and it goes out when the adjustment is normally finished. In case of NG, it lights up for a while and then goes out.

⑱ **R/B gain adjust volume [GAIN]**
Used to adjust the R/B signal gain of the camera.

⑲ **R/B pedestal adjust volume [BLACK]**
Used to adjust the R/B signal pedestal level of the camera.

⑳ **ND filter select switch [ND FILTER]**
Used to select the optical filter (ND) of the camera.

㉑ **CC filter select switch [CC FILTER]**
Used to select the optical filter (CC) of the camera.

㉒ Gain select switch [GAIN]
Used to select the master gain of the camera. It changes in the order of 0dB→9dB →18dB→S1 (Super gain 1)→S2→3dB→0dB.
Note:
For super gain setting, check with the camera menu.

㉓ Shutter select switch [SHUTTER OFF/STEP/SYNCHRO]
Used to select the electronic shutter of STEP and SYNCHRO set on the camera.
Note:
For electronic shutter setting, check with the camera menu.

㉔ Indication change switch [CHECK]
Used to change the indication item.

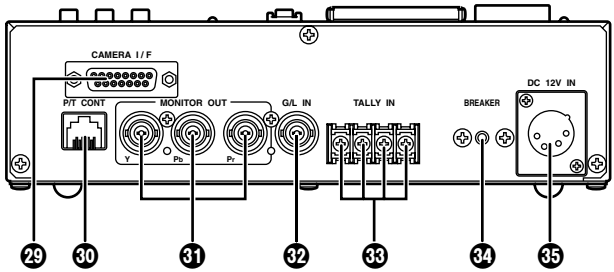
㉕ Indicator
It indicates the F value of iris.

㉖ Master pedestal adjust volume [M-PED]
Used to adjust the pedestal setting of Y (luminance) signal of the camera.

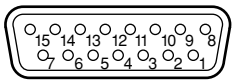
㉗ Lens iris auto/manual select switch [IRIS AUTO]
Used to select the lens iris adjusting method.
With the switch set to [AUTO], the lens is shifted to auto iris mode, and the iris is automatically adjusted according to the amount of light coming into the lens.
With the switch set to [MANU], the lens iris can be moved in the range from close to open by turning the lens iris adjust VR (volume) ㉘.
When storing the lens iris in the preset position select switch ❽ by using the preset memory switch ❼, set to [MANU] mode. It does not work in [AUTO] mode.

㉘ Iris adjust volume [IRIS]
When the lens iris auto/manual select switch ㉗ is set at [MANU], the lens iris can be moved in the range from close to open.
When the lens iris auto/manual select switch ㉗ is set at [MANU], press the preset position select switch ❽ to call the preset memory, then the lens iris position is set to the preset memory position irrespective of the VR (volume) position. After that, when the VR is turned, the lens iris returns to the value of VR.

■Rear panel



㉙ Camera connector [CAMERA I/F]
Connected to the camera (AK-HC900P) with the attached cable.



Pin No	Signal	Pin No	Signal
1	Y signal output	8	Y signal GND
2	Pb signal output	9	Pb signal GND
3	Pr signal output	10	Pr signal output
4	Sync signal input	11	Sync signal GND
5	DC 12V	12	DC GND
6	Frame GND	13	TXD (C)
7	TXD (H)	14	RXD (H)
		15	RXD (C)

TXD: Data from camera to remote controller.
RXD: Data from remote controller to camera.

㉚ Swivel stand control signal input connector [P/T CONT (RJ-45)]
Connects the swivel stand control signal output of the pan-tilt control panel (AW-RP301).

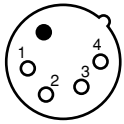
㉛ Monitor signal output connector [Y/G, Pb/B, Pr/R] (BNC×3)
Outputs the analog signal from the camera.
The output can be changed to R, G, B/Y, Pb, Pr by the camera menu setting.

㉜ Synch signal input connector [G/L IN] (BNC×1)
Inputs the sync signal to the camera. Input 3-value SYNC as the synch signal.

㉝ Tally signal input connector [TALLY IN] (2-pin connector block)
Connected to the tally connector from the system. When the HOT connector is at GND level, the tally LED is lighted.

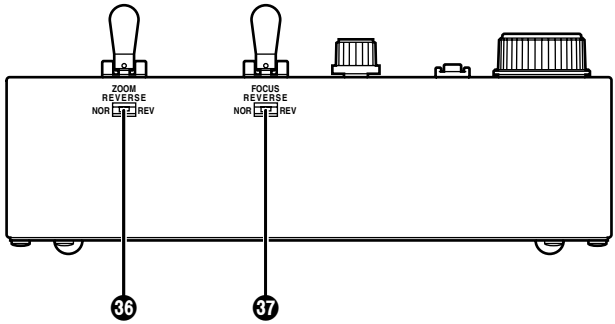
㉞ Breaker [BREAKER]
DC power breaker. The breaker operates to cut off the power in case of over-current.

㉟ DC12V input connector [DC12V IN] (XLR4-pin)
Connects the AC adapter. We recommend that the AW-PS505P (option) is used.



Pin No	Signal
1	GND
2, 3	——
4	12V

■Front panel



㊱ Zoom operation lever direction change switch [ZOOM REVERSE]

Used to change the direction of the zoom operation lever.

With this switch set at [NOR], when the zoom operation lever ⑩ is shifted to [TELE], the zoom operates in a telescopic mode, and when shifted to [WIDE], zooming is made in a wide angle mode.

With this switch set to [REV], it can be operated in the opposite direction. Also, with this switch set to [REV], the operating direction does not match the indication on the panel. In that case, use the attached seal for proper indication.

㊲ Focus adjust direction change switch [FOCUS REVERSE]

Used to change the direction of the focus adjust lever.

With this switch at [NOR], when the focus adjust lever ⑪ is shifted to [FAR], the focus is adjusted to a far distance, and when shifted to [NEAR], the focus is adjusted to a near distance.

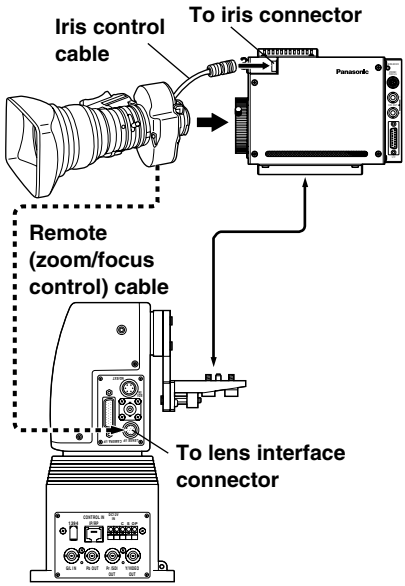
With this switch set to [REV], focusing can be made in the opposite direction. Also, with this switch set to [REV], the operating direction does not match the indication on the panel. In that case, use the attached seal for proper indication.

How to Connect

Make the connection with power supply to the unit turned off.

- Use AW-PS505P (option) as the AC adapter for control panel.
- Use a swivel stand, AW-PH300A, AW-PH500, AW-PH600, and an adapter suited for the swivel stand.
- When no swivel stand is used, connect both of the motor-driven zoom lens iris control cable and remote (zoom/focus) cable to the camera. (see page 13)
- When a swivel stand is used, connect the iris control cable to the camera, and the remote (zoom/focus) cable to the swivel stand. (see the illustration below)
- For the connection system of each unit, refer to pages 14 to 16.

- Connect the motor-driven zoom lens iris control cable to the camera, and the remote (zoom/focus control) cable to the swivel stand. If the motor-driven zoom lens remote (zoom/focus control) cable is connected to the camera, the lens cannot be controlled.



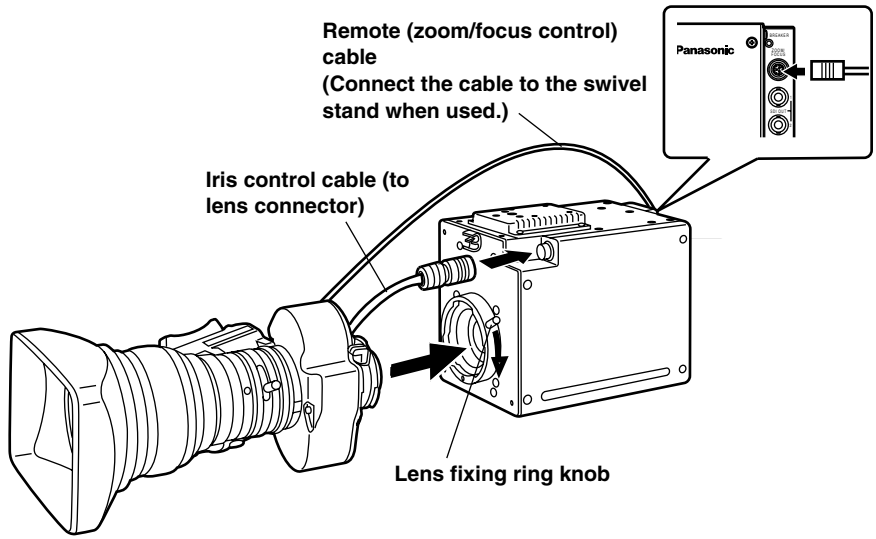
■Lens connection in the case of no swivel stand

■How to mount the lens

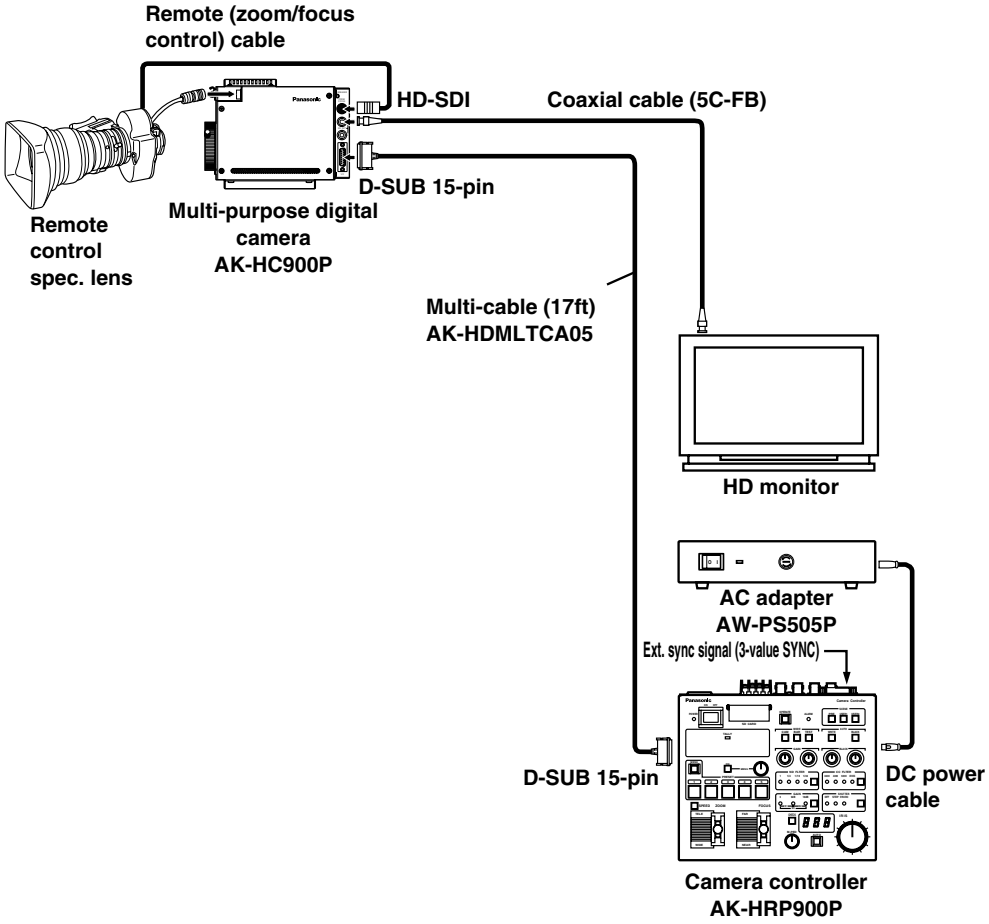
- A lens of any maker's can be used provided that it is a bayonet type (B4 mount) lens of 2/3 inch standard.*

① Turn the lens fixing ring knob counterclockwise and remove the lens mount cap.
② Mount the lens and completely secure it by turning the lens fixing ring knob clockwise.
③ Connect the iris control cable to the lens connector.
④ Connect the remote (zoom/focus control) cable to the zoom/focus connector on the rear panel.

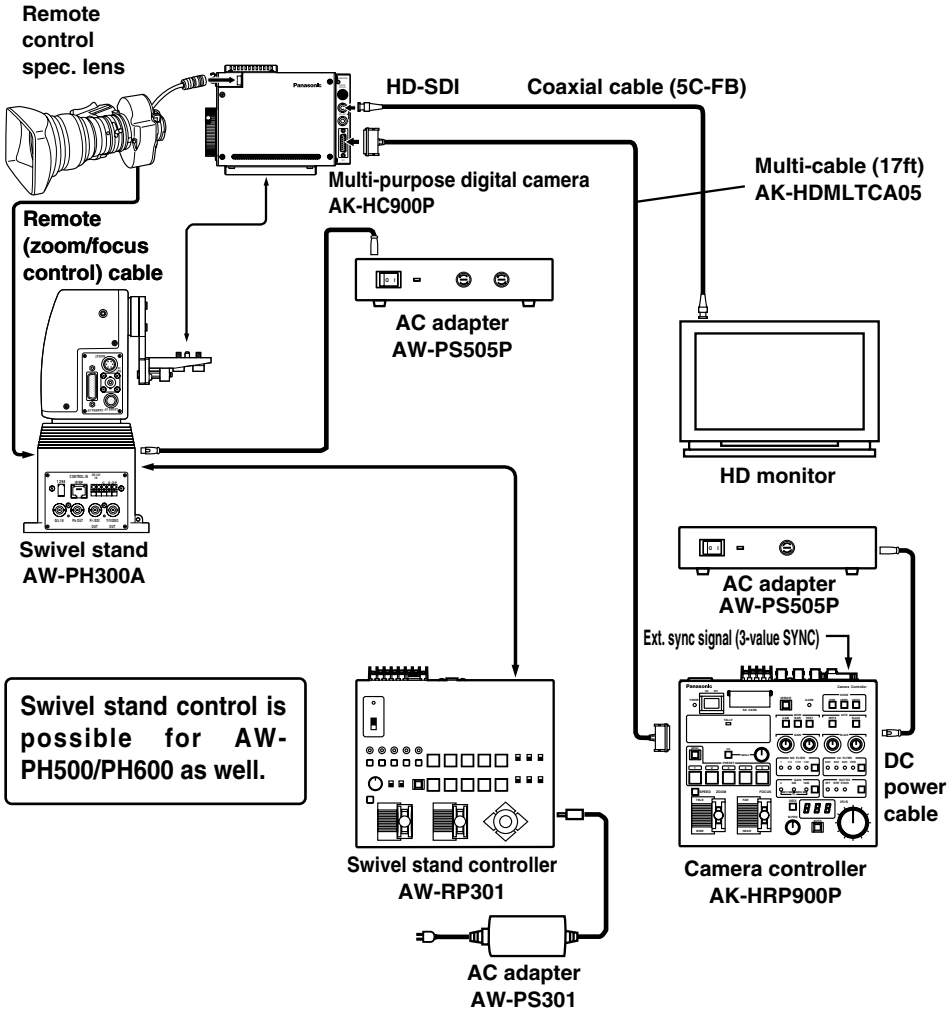
***Note that some lenses are uncontrollable with respect to zoom and focus function.**



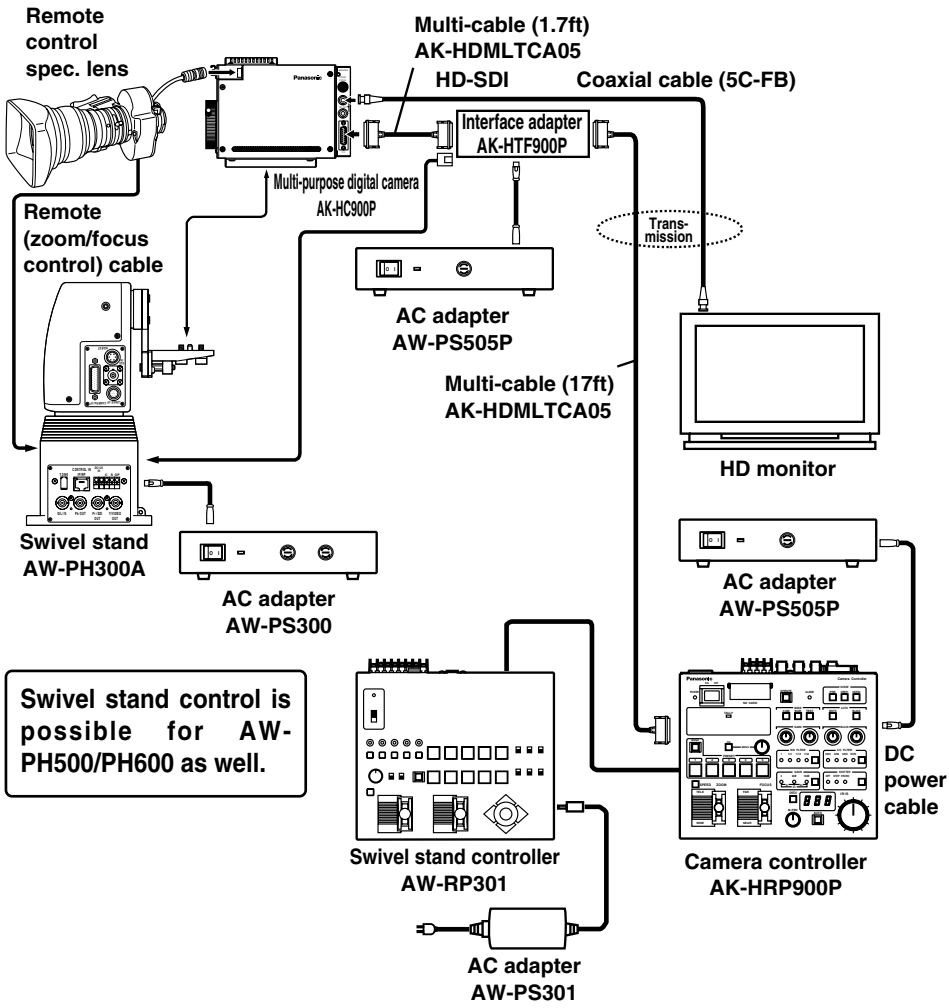
Multi-purpose digital camera control system configuration 1



Multi-purpose digital camera control system configuration 2



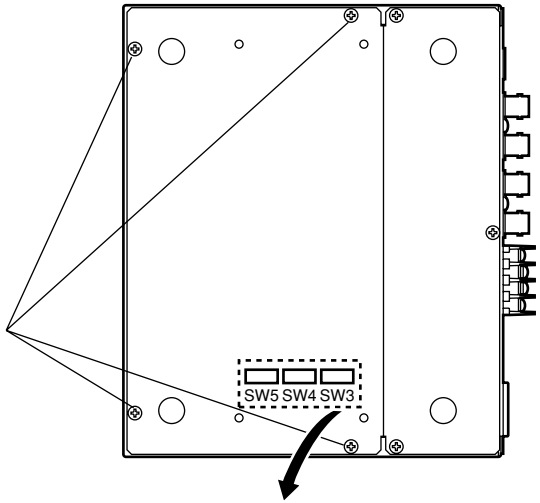
Multi-purpose digital camera control system configuration 3

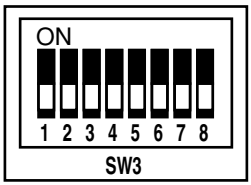


Communication Speed Setting

The communication speed is factory-adjusted to 38.4Kpbs.
In case it does not match the communication speed of multi-purpose camera AK-HC900P, the alarm LED is lighted. Remove the rear panel and change the DIP SW on the board and adjust it to the communication speed of the camera.

Remove the screw and open the bottom plate, then DIP SW can be seen in there.





Change the communication report by the combination of SW3 No.1 and No.2 on ROP CPU board.

125Kbit/Sec

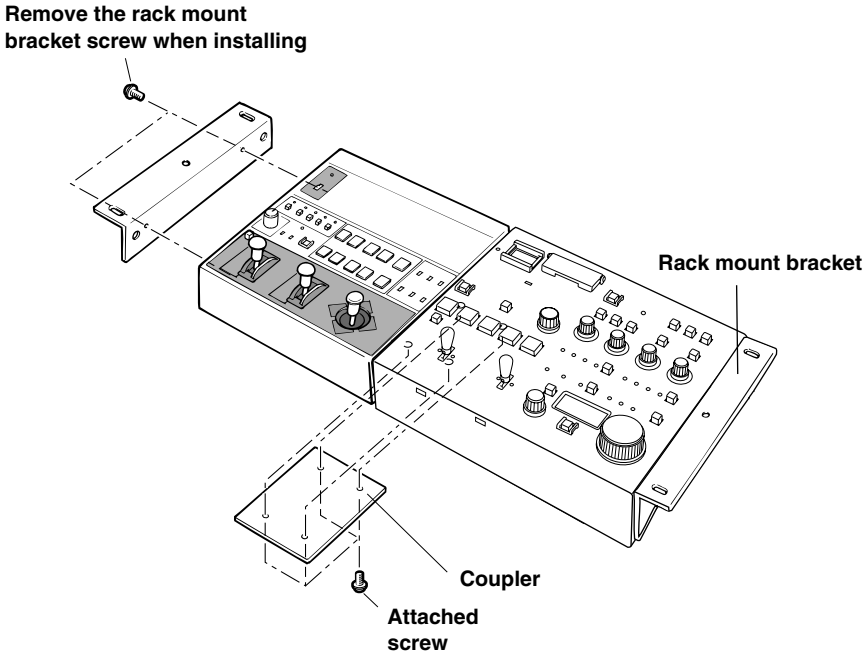
38.4Kbit/Sec

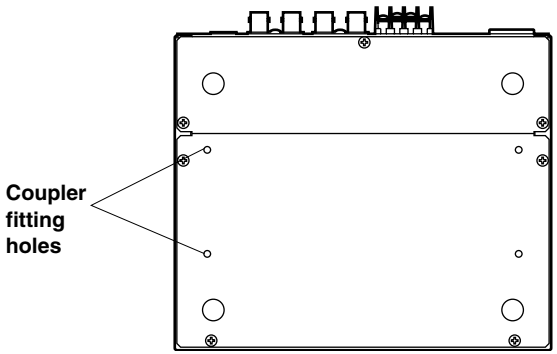
9600Kbit/Sec

Example of Rack Mount

■How to rack-mount

Install the main body on the rack as shown below.

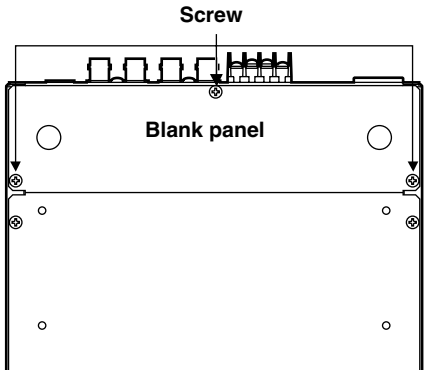




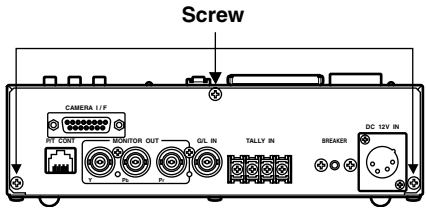
Example of Rack Mount

■How to change the rear panel position

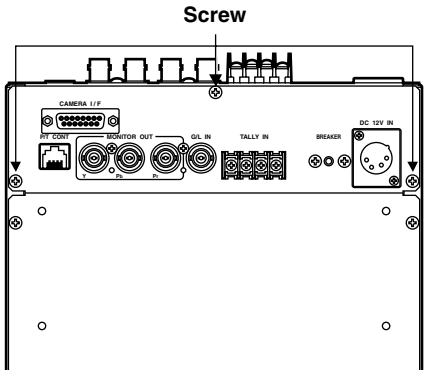
① Remove the three screws on the bottom to remove the blank panel.



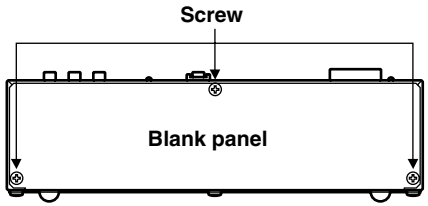
② Remove the three screws on the rear panel to remove the rear panel.



③ Install the rear panel on the bottom with the three screws.



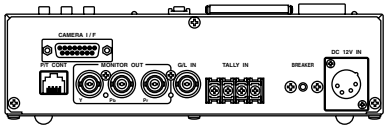
④ Install the blank panel on the rear side with the three screws.

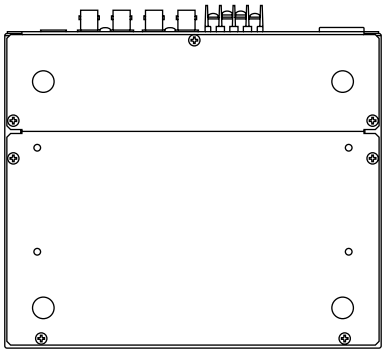


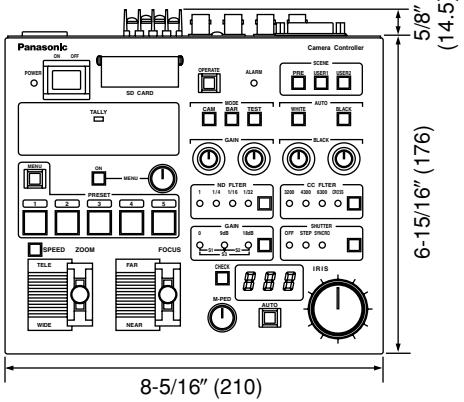
* When installing, take care so that the internal wires are not caught by the panel.

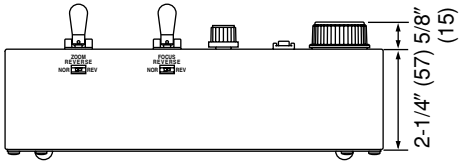
Appearance and Dimensions

( ): mm









Specifications

Power supply:	DC +12V (XLR 4-pin connector)
Power consumption:	5 W (camera controller only)

is the safety information.

Swivel stand control input:	Control signal (RJ-45 8P modular jack)
System tally input:	Tally signal (2P connector block)
Switch function:	Power control, preset memory, preset position select, speed polarity change, menu ON/OFF, menu operation, operation panel active, scene file select, mode select, auto white start, auto black start, ND filter select, CC filter select, gain select, shutter select, lens iris auto/manual select, indication change, zoom operation lever direction change, focus adjust direction change.
Adjusting function:	Iris (lens iris), zoom, focus, R/B gain, master pedestal, R/B pedestal
Connection cable:	Multi-cable 1 pc
Cable max. extension distance:	33 ft (10m)
Operating temperature range:	32°F to 104°F (0°C to +40°C)
Dimensions:	8-5/16(W)×3-1/2(H)×6-15/16(D) inch (210×88×176 mm)
Weight:	Approx. 3.3 lbs (1.5kg)
Finish:	AV ivory coating (Munsell 7.9Y 6.8/0.8 approx. color)

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

Memo

Memo

Panasonic

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UNIT COMPANY OF MATSUSHITA ELECTRIC CORPORATION OF AMERICA

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