Panasonic

ideas for life

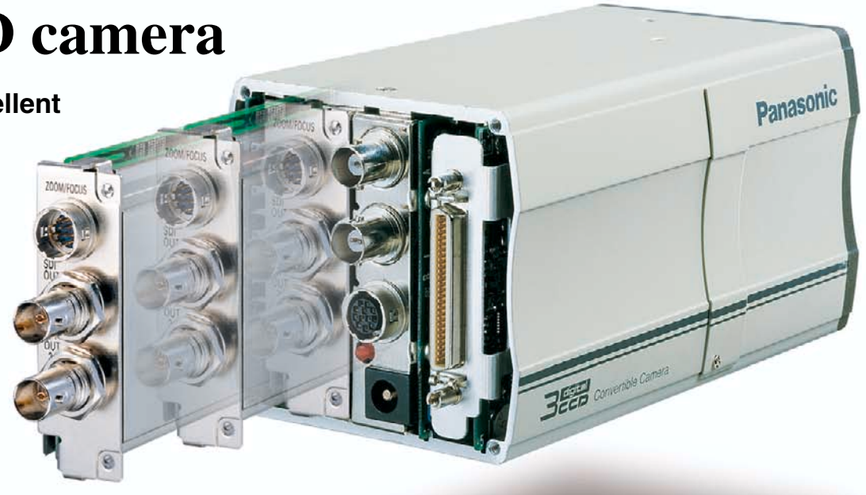
3CCD Convertible Cameras
Pan-tilt Systems
Compact Live Switcher
Signal Converter

3CCD Convertible Camera systems

Super high sensitivity and excellent picture quality 3-CCD camera

Panasonic's high-quality 3-CCD convertible cameras offer excellent system expandability for various camera shootings.

- ■Panasonic's exclusive clean DNR (Digital Noise Reduction) technology produces super crisp images.
- ■Newly developed 12 bit A/D DSP creates excellent image quality.
- ■12 vector color matrix masking for fine color adjustment
- ■Chroma detail and dark detail correction
- ■Feature cards make the camera compatible for a wide range of use. Two feature cards can be installed in the camera by using the optional additional card adaptor (AW-EX100).



Feature Cards

Studio camera system card
- Output: RGB, Y/Pr/Pb, Y/C, VBS
- 5-inch EVF (Zebra, safety zone, and center marker included), and intercom input and output, and tally output compatible

Connecting card for contact closure type pan-tilt head
- With a fixed-type camera, zooming and focusing are possible.

Note: The lens control is not servo type control.

Digital connecting card for video equipment with SDI input jack
- Output: Serial digital interface (SMPTE259M [4:2:2 SDI])
- Zoom/focus of MD lens can be controlled by the contact closure type or the controller without pan-tilt head.

Note: The lens control is not servo type control.

Studio and SDI Cards integrated into one.
- SDI Output: SMPTE259M compatible
- Viewfinder connector mounted
- Intercom jack and intercom audio volume mounted on the EVF interface bracket
- EVF interface bracket included

Note:
*Option cards AW-PB304/306/307/309/310 can not be used for AW-E860/E750/E655/E650/E350.
*Option cards AW-PB301/302/303 are not required for AW-E860/E750/E655/E650/E350, because functions of these cards are included in AW-E860/E750/E655/E650/E350.

Additional Card Adapter

- Maximum two feature cards can be inserted in the camera by using optional feature card box AW-EX100 with AW-E860/E750/E655/E650/E350.

2/3-INCH BAYONET MOUNT

16:9/4:3 switchable

AW-E860

- ■2/3" 3-CCD high image quality
- ■Switchable 16:9/4:3 aspect ratios
- ■Horizontal resolution: 850 lines
- ■Signal to noise ratio: 65dB (DNR on) NTSC, 63 dB (DNR on) PAL
- ■High sensitivity: 2000lx, F11
- ■Minimum illumination: 0.4 lx, (F1.7, Night Eye H)
- ■Wide dynamic range: 600%
- ■Compact size, light weight and low power consumption

1/2-INCH BAYONET MOUNT

Motor-driven optical filter

AW-E655

- ■1/2" 3-CCD high sensitivity
- ■Horizontal resolution: 850 lines
- ■Signal to noise ratio: 67dB (DNR on) NTSC, 65 dB (DNR on) PAL
- ■High sensitivity: 2000lx, F14
- ■Minimum illumination: 0.005 lx, 0.00005 lx (2 seconds CCD charge accumulation)
- ■Motor-driven optical filter (3200 K, 1/16ND, 1/64ND, IR through) The AW-E655' s optical filter rotates for facilitating its use as an infrared camera capable of completely dark scenes from a distance.

1/3-INCH C-MOUNT

AW-E350

- ■1/3" 3-CCD C-mount lens camera
- ■Horizontal resolution: 850lines
- ■Signal to noise ratio: 66dB (DNR on) NTSC, 63dB (DNR on) PAL
- ■High sensitivity: 2000lx, F9.5
- ■Minimum illumination: 0.015 lx, 0.00015 lx (2 seconds CCD charge accumulation)
- ■Compact size, light weight and low power consumption

2/3-INCH BAYONET MOUNT

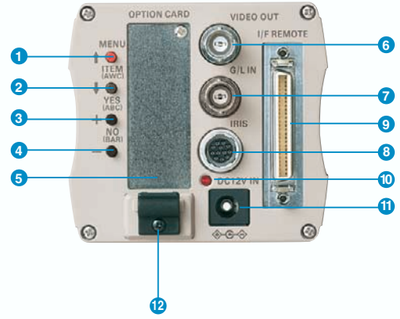
AW-E750

- ■2/3" 3-CCD high image quality
- ■Horizontal resolution: 850 lines
- ■Signal to noise ratio: 67dB (DNR on) NTSC, 65 dB (DNR on) PAL
- ■High sensitivity: 2000lx, F14
- ■Minimum illumination: 0.005 lx, 0.00005 lx (2 seconds CCD charge accumulation)
- ■Wide dynamic range: 600%
- ■Compact size, light weight and low power consumption

1/2-INCH BAYONET MOUNT

AW-E650

- ■1/2" 3-CCD high image quality
- ■Horizontal resolution: 850lines
- ■Signal to noise ratio: 67dB (DNR on) NTSC, 65dB (DNR on)PAL
- ■High sensitivity: 2000lx, F14
- ■Minimum illumination: 0.005 lx, 0.00005 lx (2 seconds CCD charge accumulation)
- ■Compact size, light weight and low power consumption



1. MENU Button
2. ITEM/AWC Button
3. YES/ABC Button
4. NO/BAR Button
5. Option Card Slot
6. Video Output Connector
7. Genlock Input Connector
8. Iris Connector
9. Interface/Remote Connector
10. Power Indication LED
11. DC 12V Input Connector
12. Power Cable Clamp

A wide choice of camera/pan-tilt head for various application and installation

Four types of pan-tilt head are available for flexible camera operation in indoor and outdoor use.
All pan-tilt heads are capable of quiet, high-speed operation and can be simultaneously controlled from both a controller and PC.

Indoor pan-tilt head

A compact pan-tilt head with a wide pan-tilt range and high speed control

Indoor Pan-tilt Head
AW-PH360

- Pan angle:300° Tilt angle:190°
- High performance: Quiet (Under NC30)
  Pan speed:(30° /sec) / Tilt speed:(25° /sec)
  Accuracy(+-3minutes) (0.05 degrees)
- Smooth starts and stops with soft landing function
- 50 preset memories
- Maximum load:8.8lbs(4kg)
- Maximum control distance: 1,640ft(500m)(from AW-RP501/505/301/400)
  3,280ft(1,000m)(from AW-RP605A)
- RS232C interface

*AW-PH360 requires AC adapter, AW-PS300A.

Power supply	12V DC
Power consumption	Approx. 36W (Include camera power)
Dimensions	5-1/8"(W)X9-5/8"(H)X7-9/16"(D)(130(W)X244(H)X192(D)mm)
Weight	Approx. 7.7lbs(3.5kg)
Accessories	Pan-tilt cable, Tilt arm, Tilt arm mounting screw, Chain for dropping protection, Screws

AC Adapter **AW-PS300A**

Power	AC120V(P)/AC220V-240V(B/G)
Power Consumption	Approx.573W
Dimensions	8-1/4"(W)X2"(H)X10-13/16"(D) (210(W)X51(H)X275(D)mm)
Weight	Approx.4.8lbs(2.2kg)
Accessories	AC cable(Approx.2.5m)X1

This indoor pan-tilt head can be equipped with convertible camera with heavy lens or ENG camera/camcorder.

Indoor Pan-Tilt head
AW-PH500

- Pan angle:300° Tilt angle:180°
- High performance: Quiet (Under NC40)
  Pan speed(15° /sec)
  Tilt speed(10° /sec)
- 50 preset memories
- Maximum load:33.1lbs(15kg)
- Maximum control distance:
  1,640ft(500m) (from AW-RP501/505/301)
- RS-232C interface

*AW-PH500 requires AC adapter, AW-PS505A.

Power supply	12V DC
Power Consumption	Approx.54W(Include camera power)
Dimensions	9-15/16"(W)X25-1/16"(H)X12-1/2"(D)(252(W)X636(H)X317(D)mm)
Weight	Approx.34.8lbs(15.8kg)
Accessories	Tilt armX1, Arm mounting screwsX8, Camera fixing screws/washerX2

AC Adapter **AW-PS505A**

*Refer to page10 for detail information.

High Performance Pan-tilt Head

High Performance
Pan-tilt Head
AW-PH400

- Pan range:400° Tilt range:190°
- Maximum pan/tilt speed:90° /sec(variable speed)
- Stop accuracy:Maximum 30 seconds (Approx.0.008 degrees)
- Noise: Under NC30(at 30° /sec)
- Maximum load:17.6lbs (8 kg)
- 10 tracing memories(Maximum time:600 seconds)
- RS-232C controllable (Through AW-RP400)
- Tally light available
- Maximum control distance:1,640ft(500m)
- Memory of last position
- Diagonal motion possible
- Optional camera rolling unit(AW-RL400) available
- Tele-prompter output
- Both broadcast and industrial motor driven lenses are acceptable.
- AC adapter(standard accessory) can be installed in pan-tilt head.

Power	AC120 V 60 Hz (NTSC), AC230 V 50 Hz (PAL)
Power consumption	Approx.145 W
Maximum load	Approx.17.6lbs(8 kg)
Maximum speed	90 °/s (30 °/s w/Tele prompter)
Weight	Approx.22.4lbs(10.2 kg)
Dimensions	12-3/8"(W)X21"(H)X7-3/8"(D)(315(W)X534(H)X188(D)mm)

Camera Rolling Unit
AW-RL400

* AW-RL400 with AW-PH400

- Power is supplied from AW-PH400.
- Convertible cameras mountable
- Controlled by AW-RP400.

Power supply	DC24 V, Approx.24 W
Maximum load	8.8lbs(4 kg)
Rotation range	380 °(+-190 °)
Maximum speed	60 °/s
Weight	Approx.8.8lbs(3.9 kg)
Dimensions	8-1/16"(W)X7-13/16"(H)X10-1/4"(D) (205(W)X198(H)X260(D)mm)

Outdoor pan-tilt head

Outdoor pan-tilt head enables stable shooting despite the rain with a waterproof design.

Outdoor Pan-tilt Head
AW-PH600

Outdoor Camera Housing
AW-CH600

*AW-PH600 requires AC adapter AW-PS600.

- Pan angle:300° Tilt angle:85°
- High performance: Quiet (Under NC40)
  Pan speed(10° /sec)
  Tilt speed(8° /sec)
- In addition to zooming, panning and tilting functions, heater, wiper and defroster functions for the housing can also be controlled by the controller.
- 50 preset memories
- Maximum load:22lbs(10kg)
- Maximum control distance:1,640ft(500m)(from AW-RP501/505/301)
- RS-232C interface

AC Adapter
AW-PS600

Power	AC120V(P)/AC220V-240V(B/G)
Power Consumption	Approx.1.6A
Dimensions	10-1/4"(W)X13-3/8"(H)X5-7/8"(D) (260(W)X340(H)X150(D)mm)
Weight	Approx.13.2lbs(6kg)
Accessories	A set of mounting board

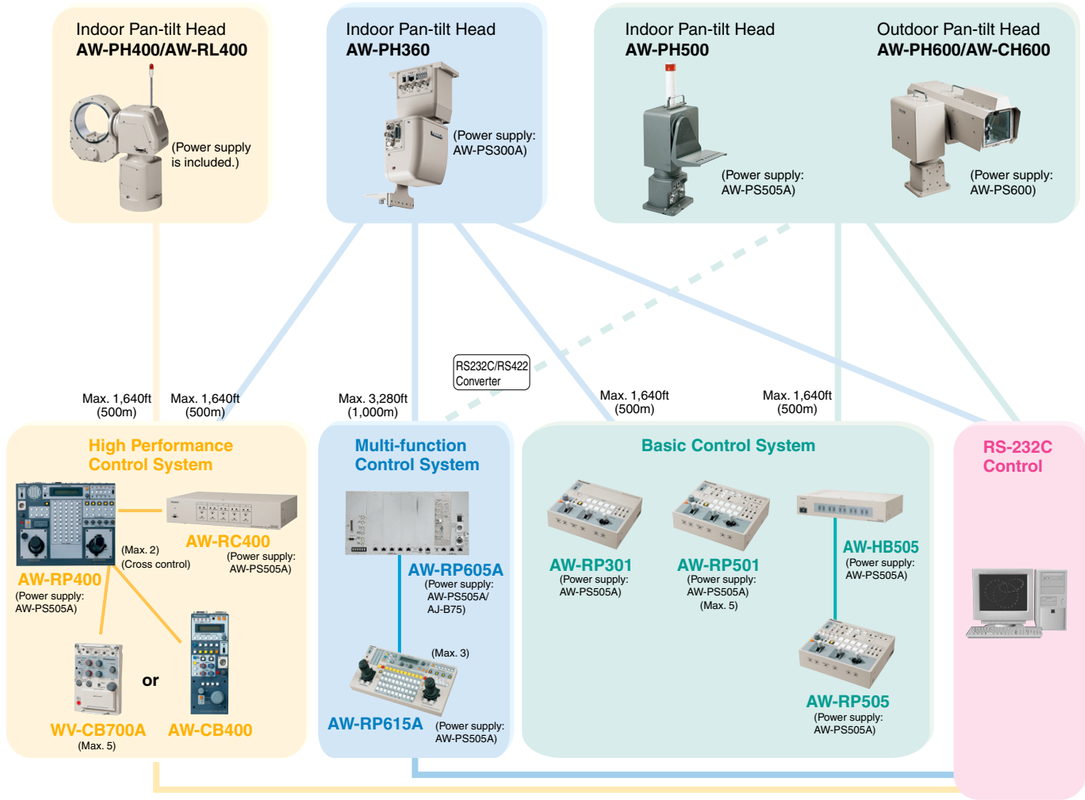
AW-PH600

Power	DC15V
Power Consumption	Approx.27W
Dimensions	15-3/16"(W)X19-3/8"(H)X8-1/4"(D)(386(W)X492(H)X210(D)mm)
Weight	Approx.30.8lbs(14kg)
Accessories	Rotating armX1, Arm fixing screwX8, Video relay boxX1

AW-CH600

Power	Supplied from AW-PH600
Dimensions	10-7/8"(W)X10"(H)X28-5/16"(D)(277(W)X253(H)X720(D)mm)
Weight	Approx.22lbs(10kg)
Accessories	Dedicated keyX1, Spacer/Camera mounting screw:for AW-E350,AW-E650/E655,AW-E750

Pan-tilt control system



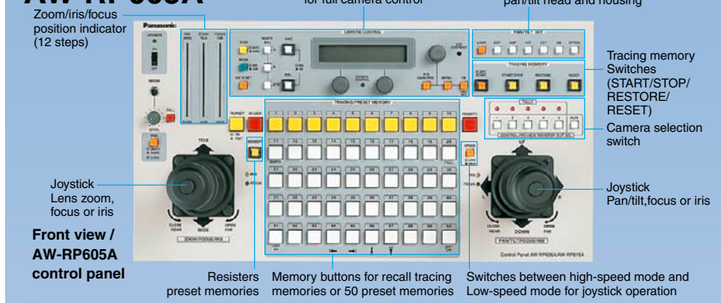
Multi-function control system with full camera control and smooth pan-tilt head control

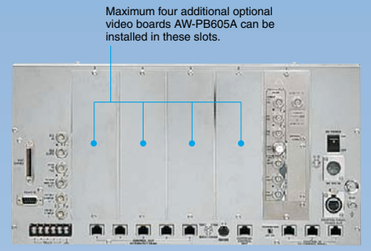
Five cameras/pan-tilt heads control with 50 pre-set memories

Five Pan-tilt Heads | Zoom, Focus, Iris | Three Control Panels | Five Cameras

Multi-function Controller

AW-RP605A





- Full camera control function
- 50 pre-set memories per camera
- 10 tracing memories (Memory time:max. 300seconds)
- Ergonomic Joystick Controller
- Five pan/tilt-camera control without hub unit
- Three controllers connection with integrated control hub
- Composite & component output
- Maximum distance from pan-tilt head to main unit of controller: 3,280ft(1,000m)
- Rack mount main connection panel unit with desk top controller
- Tally/intercom function
- Zoom/focus/iris position indicator
- RS-232C input for additional PC control

*AW-RP605A/AW-RP615A requires AC adapter,AW-PS505A. (AJ-B75 is required in more than two video boards)

Power supply	10.8-16V DC
Power Consumption	Approx.16.8W
Dimensions	Main Unit-16-9/16"(W)X8-11/16"(H)X5-15/16"(D)(420(W)X220(H)X150(D)mm) Panel-16-9/16"(W)X2-7/16"(H)X8-11/16"(D)(420(W)X52(H)X220(D)mm)
Accessories	Connecting Cable(10m)X1,Plug for intercom headsetX1 Plug for intercom systemX1, Rack mount bracketX4, Mounting screwX8

Full control of camera setting and picture quality

Full Camera Control

This control unit AW-RP605A can control full functions and picture quality of the camera in addition to lens and pan-tilt head motion. Maximum five cameras can be controlled by one AW-RP605A controller and it is relatively easy to match pictures of each camera and camera conditions.

Camera Control Switch	Setting by menu. Gain:AUTO/MANU Bar/Cam White Balance:ATW/A/B AWC start ABC start
Controls	R/B gain, R/B pedestal

Record/playback of pan-tilt head movement and camera condition

Tracing Memory

Tracing memory allows the operator to program his critical path moves into the system for easy and repeatable moves at a later time.
Up to 10 can be programmed per camera. A total of 300 secs. is allowed.

Memory operation	Recording time
10 operations	30 seconds
5 operations	60 seconds
2 operations	150 seconds
1 operations	300 seconds

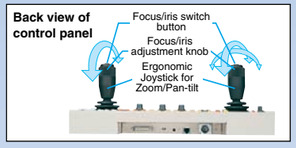
Recall of 50 preset camera positions and conditions

Preset Memory

By setting camera position in advance, the preset memory buttons allow you to recall any position instantly. The system is capable of memorizing a maximum 250 positions for five camera pan-tilt head systems, up to 50 positions per camera.And also, when moving between the two preset positions, pan-tilt head delivers natural and smooth camera operation with diagonal movement.The contents of preset memories are pan/tilt/zoom/focus/iris and white balance control.

Flexible speed control of camera/pan-tilt head motion

Joystick Control



This joystick controls camera/pan-tilt head from very delicate motion to high speed movements. The ergonomically designed grip and servo speed control, activated by tilting the joystick offers superb operability. This results in smooth motion of lens zoom/focus and pan-tilt head. In addition, this system is equipped with a button to switch between high speed and low speed, which offers more delicate movements for the camera/pan-tilt head.

Additional video board for AW-RP605A

AW-PB605A

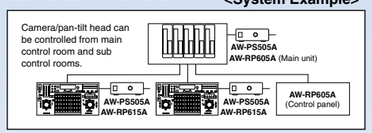
- Up to 4 video boards can be added to the AW-RP605A in addition to the standard accessory video board.
- Each camera requires one video board for video processing.

Power supply	10.8-16V DC
Power Consumption	Approx.4.8W
Dimensions	4-5/8"(W)X2-3/16"(H)X5-7/16"(D)(117(W)X56(H)X139(D)mm)
Weight	Approx.1.03lbs(0.47kg)

Additional control panel

AW-RP615A

<System Example>



- Up to 2 of these additional control panels can be connected to the AW-RP605A main unit.
- Maximum cable length from main unit to control panel: 3,280ft(1km)

Note:This max.length is total length of each control panel combined with 10BASE-T straight cable.

*AW-RP615A requires AC adapter, AW-PS505A.

Power supply	10.8-16V DC
Power Consumption	Approx.7.2W
Dimensions	16-9/16"(W)X2-7/16"(H)X8-11/16"(D)(420(W)X52(H)X220(D)mm)
Accessories	Plug for intercom headsetX1,Rack mount bracketX2, Mounting screwX4

Small size control panels for simple operation

Control Panels

Controls indoor and outdoor pan-tilt head, and camera operation.

Multi-hybrid Control Panel

AW-RP505

Front view

Rear view

- With 3 coaxial cables (Belden 8281) and a 10BASE-T (UTP Category 5) straight cable, all manner of camera and pan-tilt head operations can be accomplished, as well as transmission of video signals and genlock signals.
  * In addition to the pan-tilt positions of the camera, lens settings for zoom, focus, and iris, as well as ATW, A/B white balance can be preset for easy switchover (maximum of 10 patterns).
- Controls up to 5 sets of cameras and pan-tilt heads with Multi-port Hub Unit (AW-HB505).

*AW-RP505 requires AC adapter, AW-PS505A.

Power supply	12 DC
Power Consumption	Approx.0.5A
Dimensions	8-1/4"(W)X3-7/16"(H)X6-15/16"(D) (210(W)X88(H)X177(D)mm)
Weight	Approx.4.8lbs(2.2kg)
Accessories	StickerX1,Rack Mtg.BracketX2 Connecting BracketX1,ScrewX12

Controls up to 5 camera pan-tilt systems.

Multi-port Hub

AW-HB505

For AW-RP505

*AW-HB505 requires AC adapter, AW-PS505A.

Front view

Rear view

- In combination with AW-RP505, up to 5 camera pan-tilt systems can be controlled.
- A cable to connect this unit and a multi-hybrid control panel can be extended up to 10 m, and a cable between the main unit, and camera and pan-tilt head up to 1,640ft(500m).

Power supply	12V DC
Power consumption	Approx. 12V 2 A
Dimensions	16-1/2"(W)X3-7/16"(H)X9-13/16"(D) (420(W)X88(H)X250(D)mm)
Weight	Approx. 8.8lbs(4 kg)
Accessories	Rack mounting clamp x 2, Mounting screw x 4

Hybrid Control Panel

AW-RP501

Front view

Rear view

- Controls one camera and one pan-tilt head.

*AW-RP501 requires AC adapter, AW-PS505A.

Power supply	12 DC
Power Consumption	Approx.0.7A
Dimensions	8-1/4"(W)X3-7/16"(H)X6-15/16"(D) (210(W)X88(H)X177(D)mm)
Weight	Approx.4.8lbs(2.2kg)
Accessories	StickerX1,Rack Mtg.BracketX2 Connecting BracketX1,ScrewX12

Pan-tilt Control Panel

AW-RP301

Front view

Rear view

- Controls one pan-tilt head.

*Panasonic CCTV camera or the other company's camera is possible.
*AW-RP301 requires AC adapter, AW-PS505A.

Power supply	12V DC
Power Consumption	Approx.0.3A
Dimensions	8-1/4"(W)X3-7/16"(H)X6-15/16"(D) (210(W)X88(H)X177(D)mm)
Weight	Approx.4.6lbs(2.1kg)
Accessories	StickerX1,Rack Mtg.BracketX2 Connecting BracketX1,ScrewX12

High Performance Controller

Pan-tilt Controller

AW-RP400

Front view

- Changeable zoom/focus controller (joystick/seesaw)
- Joystick with camera roll control
- 50 preset positions
- 5 pan-tilt heads control
- Zoom/Focus/Pan/Tilt speed control
- Tally/Intercom function
- 10 minutes tracing memory(60 seconds x 10 positions)
- RS232C interface
- Maximum control distance:1,640ft(500m)
- Cross control by two controllers
- Camera control inputs(AW-CB400 or WV-CB700A)
- +DC12 V operation(AC adapter, AW-PS505A is required.)

Joystick controller can be changed for seesaw controller (standard accessory).

Seesaw controller

Rear view

Power	DC12 V
Power Consumption	Approx.13 W
Weight	Approx.8.4lbs(3.8kg)
Dimensions	8-1/4"(W)X3-7/16"(H)X6-15/16"(D) (210(W)X88(H)X177(D)mm)
Accessories	Rack mounting plate x 2 Mounting screws(M4X8) x 4 Seesaw controller

Remote control units control image quality of convertible cameras

4 models designed for camera control

Remote control units (RCUs) are specialized for image quality adjustment, control, and other camera settings. Equipped with a tally/intercom connector, an intercom can be used. Power supply to camera is also possible. Compact remote control boxes allow users to keep camera control handy.

Remote Control Units (RCUs)

Remote Control Unit

WV-RC700A

Front view

Rear view

- Component/Y/C and composite signals are available with this unit.
- Using a coaxial multiplex adapter (AW-ML600), control of camera/lens/pan-tilt head and receiving of sound/video signals are possible with one coaxial cable Belden8281.
- Can remotely control convertible camera settings, switching, and make precise adjustments.
- 26-pin studio cable (WV-CA26U15, WV-CA26U30, WV-CA26U100) can be extended up to 300 meters using the joint adapter WV-CA26T26.
- Connecting with an RCU cable (AW-CA50A26), camera settings, switching, and adjustment are remotely controlled. Power supply to camera is also available.
- Equipped with tally/intercom, AUX (for line view) inputs, contact-closure type camera mount control input terminal (15-pin D-sub)
- Built in WV-CB700A remote control unit can be detached and extended up to 164ft(50m).
- Maximum control distance :984ft(300m)

Camera control functions

Switch:RCB ON/OFF, gain up, color bar/camera, detail correction switch, cable compensation switch, white balance, auto white/auto black setting, shutter speed switch, scene files, lens iris select, user settings, user setting item restriction, gen-lock sub carrier phase coarse adjustment

Adjustment:RB gain, RB pedestal, total pedestal, lens iris adjustment, gen-lock horizontal phase, gen-lock sub carrier phase, cable compensation Y/chroma level, intercom audio level

Power supply	AC 120 V (P)/ AC 220-240 V(B/G)
Power consumption	Approx. 86 W
Dimensions	8-1/8"(W)X5-3/16"(H)X14-9/16"(D) (206.5(W)X132(H)X370(D)mm)
Weight	Approx. 15.62lbs(7.1 kg)
Accessories	4P connector (for tally/intercom) x 1, N-type connector x 1

Remote Control Unit

WV-RC550

Front view

Rear view

- Composite and Y/C signal are offered with this unit.
- Can remotely control a variety of convertible camera settings, switching, and make precise adjustments.
- 26-pin studio cable (WV-CA26U15, WV-CA26U30, WV-CA26U100) can be extended up to 100 meters using the joint Adapter WV-CA26T26.
- Connecting with an RCU cable (AW-CA50A26), camera settings, switching, and adjustment are remotely controlled. Power supply to camera is also available.
- Equipped with tally/intercom, AUX (for line view) inputs, contact-closure type camera mount control input terminal (15-pin D-sub).
- Maximum control distance: 328ft(100m).

Camera control functions:

Switch:gain up, gain selection, night eye, color bar/camera, detail correction switch, cable compensation switch, auto white/auto black setting, white balance, scene files, electronic shutter switch, lens iris select, gen-lock sub carrier phase coarse adjustment.

Adjustment:RB gain, RB pedestal, total pedestal, lens iris adjustment, gen-lock horizontal phase, gen-lock subcarrier phase fine adjustment, Y gain adjustment, cable compensation Y/chroma level, intercom audio level.

Power supply	AC 120V(P)/ AC 220-240V(B/G)
Power consumption	Approx. 56 W
Dimensions	16-1/2"(W)X3-7/16"(H)X9-13/16"(D)(420(W)X88(H)X250(D)mm)
Weight	Approx. 14.74lbs(6.7 kg)
Accessories	4P connector (for tally/intercom) x 1, Display panel, Rack mounting bracket x 1, Mounting screws x 4

Remote Control Box

WV-CB700A

- Light weight and compact size
- Extending from a remote control unit, this box allows users to remotely control a camera up to 164lbs(50m) away.
- Can be connected direct to a convertible camera with an RCB cable AW-CA50T10.

Camera control functions:

Switch:RCB ON/OFF, gain up, color bar/camera, detail correction switch,white balance,auto white/black settings,shutter speed selection, scene files,lens iris select, user settings,genlock sub-carrier phase

Adjustment:RB gain, RB pedestal, total pedestal, lens iris adjustment, genlock horizontal/sub carrier phase

Power supply	Supplied from camera
Dimensions	3-9/16"(W)X5-3/16"(H)X2"(D)(90(W)X131(H)X51.5(D)mm)
Weight	Approx. 0.81lbs(0.37 g)
Accessories	RCB cable (2 m) x 1, Display panel

Camera Remote Control Unit

AW-CB400

Rear view

Front view

- Five cameras control
- Full camera control
- +DC12V operation
- Tally/Intercom function

*Power is supplied from AW-RP400. Power supply, AW-PS505A is required for controlling camera directly(Maximum control distance :3,280ft(100m)).

Power supply	DC12 V, Approx.3.8 W
Weight	Approx.3.08lbs(1.4 kg)
Dimensions	3-5/16"(W)X3-3/8"(H)X10-7/16"(D) (100(W)X85(H)X266(D)mm)
Accessories	Pan-tilt controller connection cable

Cable Compensation Unit

AW-RC400

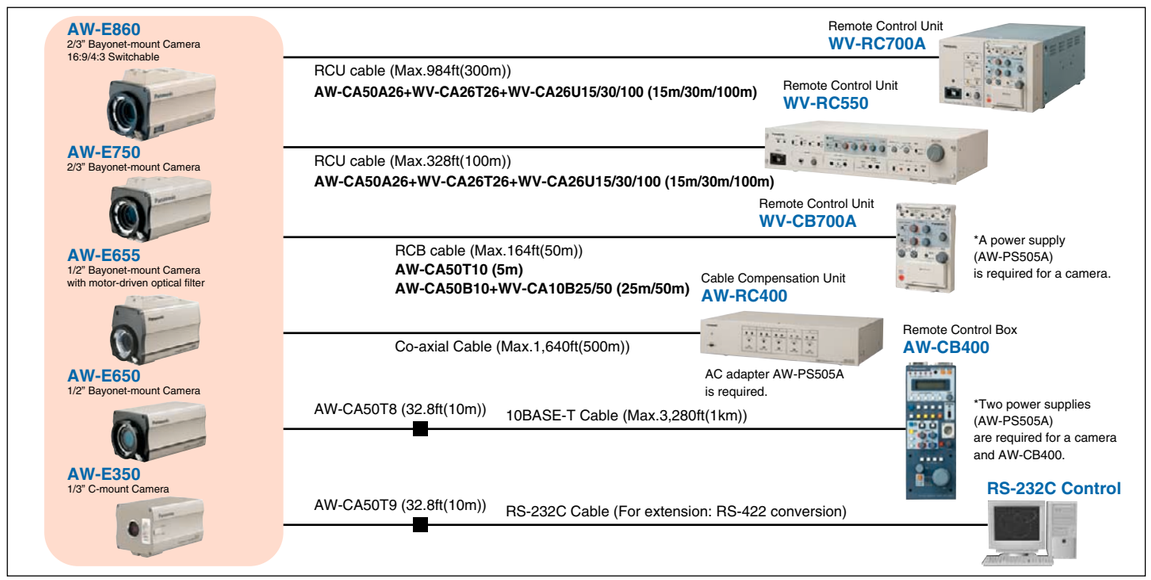
Front view

Rear view

- Five channels compensation
- Composite,Y/C,Y/Pb/Pr,R/G/B
- +DC12 V operation (AC adapter AW-PS505A is required.)

Power supply	DC12 V, Approx.9 W
Weight	Approx.8.14lbs(3.7 kg)
Dimensions	16-1/2"(W)X3-7/16"(H)X9-13/16"(D) (420(W)X88(H)X250(D)mm)
Accessories	Pan-tilt head connection cable, Screw(M4X8) x 3

Camera Control System



Switcher for live production of images

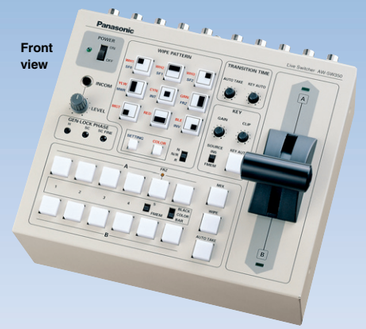
For live switching of video images

This switcher switches images transmitted from up to five cameras, using wipe effects, etc. Its compact design is very convenient for field use.

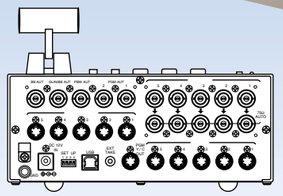
5 inputs compact live switcher with 5 frame synchronizers

AW-SW350

Front view



Rear view



- 5 inputs(composite and YC) in compact body (half rack size)
- Three program outputs and one preview output
- Selectable bus switching system
- 10 bit, 5-channel frame synchronizer/genlock system switchable
- Frame capture, soft wipe and linear key
- DC12V operation
- Tally and intercom function
- NTSC/PAL switchable
- AC adapter AW-PS505A is required.

Power supply	12V DC
Power consumption	Approx. 1.35 A (16 W)
Dimensions	8-1/4"(W)X3-3/8"(H)X6-15/16"(D)(210(W)X86(H)X176(D)mm)
Weight	Approx. 4.8lbs(2.2 kg)
Accessories	Tally/Intercom connector x 4, Rack mounting clamp x 2, Connection bracket x 1, Screw kit x 1

Other Peripherals

Signal Converter

AW-EX500

- 1 analog input (composite,Y/C, component) and SDI
- SDI output by option card
- An additional card adapter (AW-EX100) attachable
- Output:video(component,RGB,Y/C-D-sub connector)
  *An optional AC adapter(AW-PS505A)

Power supply	12V DC
Power consumption	Approx. 6.8 W
Dimensions	3-5/16"(W)X3-1/16"(H)X6-1/8"(D) (84(W)X77(H)X155(D)mm)
Weight	Approx. 1.5lbs(0.7 kg)
Accessories	Rubber feet x 4

Coaxial Multiplex Adapter

AW-ML600

Front view

Rear view

- Multiplexes and sends power, control, and video/genlock signal through a coaxial cable to convertible camera and pan-tilt head.
- Converts DC power to DC12V, and supplies it from a remote control unit (WV-RC700A). Connects RCU and AW-ML600 with a coaxial cable. (300 m for Belden 8281: N-type connector included.)

*Not available in some areas.

Power supply	85-110V DC (supplied from remote control unit)
Power consumption	Approx. 45W
Dimensions	8-1/8"(W)X2-1/8"(H)X9-13/16"(D) (206.5(W)X53.5(H)X250(D)mm)
Weight	Approx. 7.7lbs(3.52 kg) (incl. cable)
Accessories	N-type connector (NP101) x 1, Cable (for connection with pan-tilt head) x 1

AC Adapter

AW-PS505A

DC Cable included.
For AW-HB505,convertible cameras, live switcher, AW-PH500, AW-RP505, AW-DU600 and more.

Power	AC120V(P)/AC220V-240V(B/G)
Power consumption	Approx. 76W
Dimensions	5-3/16"(W)X2"(H)X10-13/16"(D) (132(W)X51(H)X275(D)mm)
Weight	Approx. 3.5lbs(1.6 kg)
Accessories	Power DC cables (X3)

Public Telephone Line Connecting Adapter / RS232C Distribution Adapter

AW-DU600

Enables remote control of camera and pan-tilt head

- AW-PS505A required.
- With use of a public telephone line, remote control of camera and pan-tilt head can be done through AW-RP501 series and PC.
- Up to 5 sets of camera and pan-tilt heads can be controlled with distribution function.
- Directly controllable pan-tilt and zoom/focus.
- ※ Not available in some areas.
- ※ Modem required.

5-inch Viewfinder

WV-VF65B

AW-VF80

- For AW-E860, 16:9/4:3 swichable

Power supply	12V DC (supplied from camera head)
Power consumption	Approx.13.2 W (12V DC, 1.1 A)
Dimensions	6-3/16"(W)X8-3/8"(H)X14-1/4"(D) (156(W)X213(H)X361.5(D)mm)
Weight	Approx. 6.27lbs(2.85 kg)
Accessories	Tally card x 2, mounting bracket x 1, electronic viewfinder mounting base x 1, hood x 1, tally lamp, base mounting screw (M4) x 2, hood mounting screw (M5) x 2

EVF Mounting Bracket

AW-Q40

- For WV-VF65B/AW-VF80

※ AW-Q40 is not required for SDI studio card (AW-PB506).

Lenses / Cables

Cables list

Name	Number	Connection apparatus		Length	Note
Power cable	AW-CA8U30	AW-PS600	AW-PH600	30m	
Camera control cable for video signal	AW-CA16U10 / 30	AW-PH600	VTR, AW-RP501, AW-HB505 etc.	10m, 30m	VBS output, Component output, Camera Control
Pan-tilt control cable	AW-CA24U10 / 30	AW-PH600	AW-RP501, AW-CA26U15 etc.	10m, 30m	
Cable joint adapter	WV-CA26T26	AW-E750 etc.	AW-CA26U15 etc.		Connects AW-CA50A26 to longer lengths
Studio cable (26P-26P)	WV-CA26U15 / 30 / 100	AW-E750 etc.	WV-RC550, WV-RC700A	15m, 30m, 100m	
RCB cable	AW-CA50T10	AW-E750 etc.	WV-CB700A	5m	Camera ~ RCB
For RCB cable extension	AW-CA50B10	AW-E750 etc.	AW-CA10B02 etc.	5m	Camera ~ RCB extension cable
RCB extension cable	WV-CA10B25 / 50	AW-CA50B10	WV-CB700A	25m, 50m	10P-10P
Lens extension cable	AW-CA12T12A		AW-E750 etc.	0.15m	12P-12P
RCU cable	AW-CA50A26	AW-E750 etc.	WV-RC550 etc.	15m	
RGB cable	AW-CA50T6	AW-E750 etc.	Moniotor, VTR etc.	5m	BNCx5 + S terminal
For RGB extension cable	WV-CA9T5	AW-EX500 etc.	Moniotor etc.	5m	D-Sub 9pin-BNCx5
Pan-tilt cable (for pan-tilt control panel)	AW-CA50C15 AW-CA50D15	AW-E750 etc.	AW-PH600	0.4m	Control panel, Component & Composite signal RS-232C(PC), Component & Composite signal
RS-232C pan-tilt cable	AW-CA28T9	AW-PH360	PC	5m	Pan-tilt head is controlled by PC
RS-232C camera control cable	AW-CA50T9	AW-E750 etc.	PC	10m	Camera is controlled by PC
Camera control cable	AW-CA50T8	AW-E750 etc.	AW-CB400	10m	

Lenses

Camera	Lens	Description	Focal length (Max. aperture)	Picture
AW-E350	**AW-LZ10MD6**	10X MD Zoom Lens	6-60mm (F1.6)	(AW-LZ10MD6)
	AW-LZ16MD55	16X MD Zoom Lens	5.5-88mm (F1.4)	(AW-LZ16MD55)
	AW-LZ16ST55	16X Studio Zoom Lens	5.5-88mm (F1.4-1.8)	
AW-E650 AW-E655	**AW-LZ16AF7**	16X Auto Focus MD Lens	7-122mm (F1.9-2.0)	(AW-LZ16AF7)
	• Work saving by automatic focusing from wide angle to zoom up image (Application example: Parking lot, Dam/river watching, Airport watching, Race track, Harbor surveillance, etc.) • Work saving for camera operators in operation of several cameras by one man operator (Application example: Parliament, Distance learning, Religious production, Shopping mall surveillance, etc.) <The Image of Auto Focus operation> 			(AW-LZ16MD73)
	AW-LZ16MD73	16X MD Zoom Lens	7.3-117mm (F1.9-2.3)	
	AW-LZ17ST66	17X Studio Zoom Lens	6.6-114mm (F1.5-1.9)	
AW-E750 AW-E860	**AW-LZ17MD9A**	17X MD Zoom Lens	9-153mm (F1.9-2.6)	(AW-LZ17MD9A)
	AW-LZ17ST9A	17X Studio Zoom Lens	9-153mm (F1.9-2.6)	

Control Kits

Control Kit

AW-LK30

For MD (Motor Drive) Lenses
Cable Length : 190 cm

Zoom Control Kit

WV-LK36

For Studio Zoom Lens AW-LZ17ST9A AW-LZ17ST66

Lens Control Kit

WV-LK35

For Canon Zoom Lens

Lens Control Kit

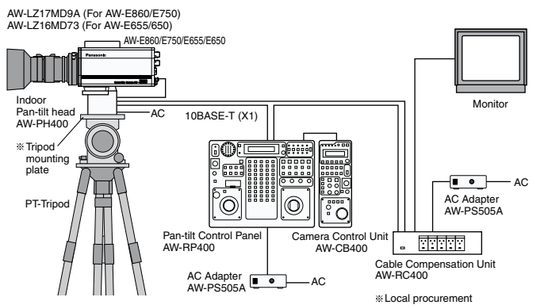
AW-LK50

For Studio Zoom Lens AW-LZ16ST55

Excellent system expandability accommodates a variety of shooting purposes

High Performance Camera/Pan-tilt Control

System example



Key Products

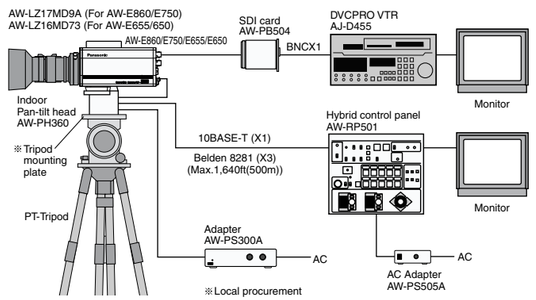
- AW-E860/E750/E655/E650
- AW-PH400
- AW-RP400
- AW-CB400/AW-RC400

Key Points

- High quality camera
- High performance camera/pan-tilt head/controller
- Max. control distance : 1,640ft(500m)

Simple Camera/Pan-tilt Control

System example



Key Products

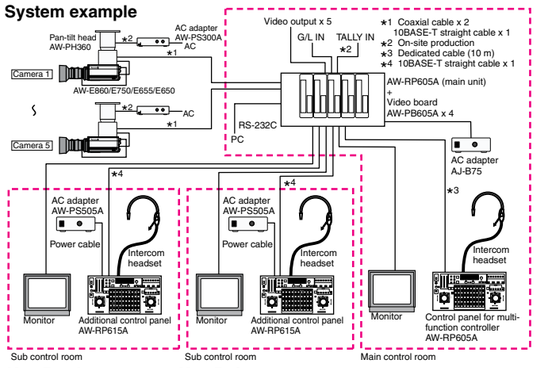
- AW-E860/E750/E655/E650
- AW-PH360
- AW-RP501

Key Points

- High quality camera
- Compact size, quiet pan-tilt head
- Compact size controller
- Max. control distance : 1,640ft(500m)

Multi-Function Camera/Pan-tilt Control System

System example



Key Products

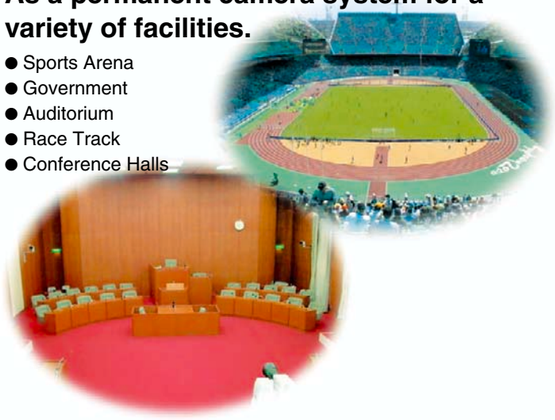
- AW-E860/E750/E655/E650
- AW-PH360
- AW-RP605A

Key Points

- High quality camera
- Quiet/accurate camera/pan-tilt head
- Multi-Function Control
- Max. control distance : 3,280ft(1,000m)

As a permanent camera system for a variety of facilities.

- Sports Arena
- Government
- Auditorium
- Race Track
- Conference Halls

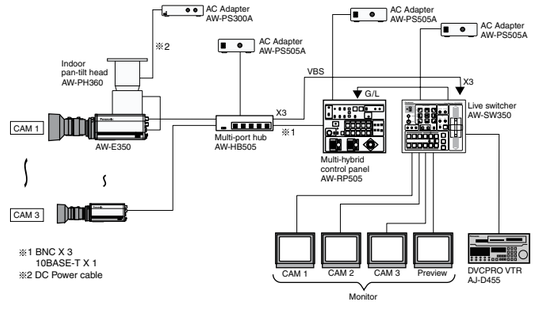


For video recording studio and field production

- News Studio
- CATV Studio
- Internet Video Studio
- Virtual Studio
- Field Production
- Wedding Production

Compact Camera/Pan-tilt Controller System

System example



Key Products

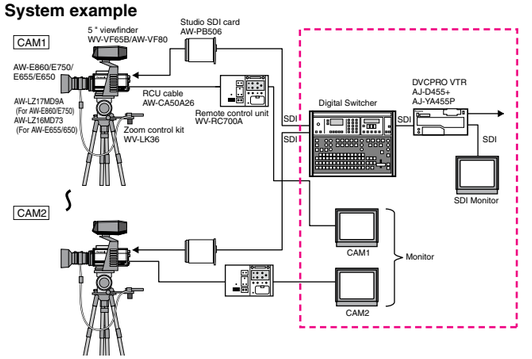
- AW-E350
- AW-PH360
- AW-RP505
- AW-SW350

Key Points

- Compact size camera
- Compact size, quiet pan-tilt head
- Compact size controller (Max.five camera / Pan-tilt Control)
- Max. control distance : 1,640ft(500m)
- Compact live switcher

High Performance Studio Camera

System example



Key Products

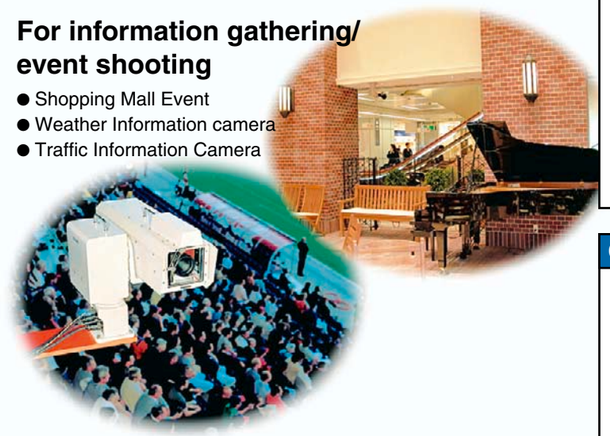
- AW-E860/E750/E655/E650
- WV-VF65B/AW-VF80
- WV-RC700A

Key Points

- High quality camera
- 4.5" B/W Viewfinder
- Full function RCU
- Max. control distance : 984ft(300m)

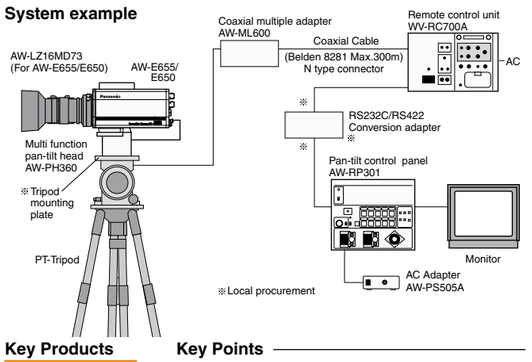
For information gathering/ event shooting

- Shopping Mall Event
- Weather Information camera
- Traffic Information Camera



Single Coaxial Camera/Pan-tilt Control System

System example



Key Products

- AW-E655/E650
- AW-PH360
- AW-ML600
- WV-RC700A/AW-RP301

Key Points

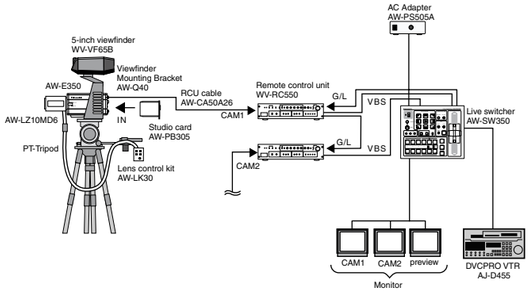
- High quality camera
- Camera/pan-tilt control by single coaxial cable
- Camera/pan-tilt power from RCU
- Full function RCU
- Max. control distance : 984ft(300m)

For education video shooting

- School Studio
- Distance Learning

Cost Effective Studio Camera

System example



Key Products

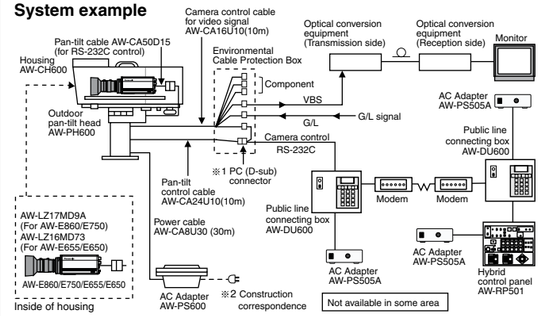
- AW-E350
- WV-VF65B
- WV-RC550
- AW-SW350

Key Points

- C Mount lens camera
- 4.5" B/W Viewfinder
- Simple function RCU
- Max. control distance : 328ft(100m)
- Compact live switcher

Outdoor Camera Pan-tilt Control Camera System

System example



Key Products

- AW-E860/E750/E655/E650
- AW-PH600/AW-CH600
- AW-DU600
- AW-RP501

Key Points

- High quality camera
- Remote control optical filter (AW-E655)
- All weather type camera housing
- Camera/pan-tilt control through public telephone line

For medical/research shooting

- Medical Operation Room
- Microphotography
- Graphic Camera

Product configuration diagram

Lens

17X Motor Drive Zoom Lens
AW-LZ17MD9A

17X Studio Zoom Lens
AW-LZ17ST9A

16X Motor Drive Zoom Lens
AW-LZ16MD73

16X Auto Focus MD Zoom Lens
AW-LZ16AF7

17X Studio Zoom Lens
AW-LZ17ST66

Canon ENG/Studio Zoom Lens For 1/2" & 2.3" Lens
- Lens Extension Cable AW-CA12T12A is required,

16X Studio Zoom Lens
AW-LZ16ST55

16X Motor Drive Zoom Lens
AW-LZ16MD55

10X Motor Drive Zoom Lens
AW-LZ10MD6

6X Zoom Lens
J6X11Macro

C-Mount Manual Lens
C-Mount Microscope

Lens Controller

Lens Control Kit
WV-LK36

Lens Control Kit
WV-LK35

Lens Control Kit
AW-LK50

Lens Control Kit
AW-LK30

Camera

2/3" 3CCD Convertible Camera
AW-E860
(16:9/4:3 switchable)

AW-E750

1/2" 3CCD Convertible Camera
AW-E655

AW-E650

1/3" 3CCD Convertible Camera
AW-E350

Additional Card box
AW-EX100

AC adapter
AW-PS505A
- Power Cables are included.

Card/ Cable

Studio Card
AW-PB305

SDI Studio Card
AW-PB506
- SDI Studio Card includes a Viewfinder Mounting Bracket.

Intercom Headset
- Local Procurement

Pan/Tilt Cable
AW-CA50C15
- Camera Control by Control Panel

AW-CA50D15
- Camera Control by RS232C

SDI card
AW-PB504

Lens Interface Card
AW-PB308

Pan/Tilt Head

5" Electronic Viewfinder
WV-VF65B

AW-VF80
(16:9/4:3 switchable)

Viewfinder Mounting Bracket
AW-Q40
- SDI Studio card includes a viewfinder mounting bracket.

Indoor Pan/Tilt Head
AW-PH500
- AC adapter AW-PS505A is required.

Outdoor Pan/Tilt Head
AW-PH600
Outdoor Housing
AW-CH600
- AC adapter AW-PS600 and Power Cable AW-CA8U30 is required.

Indoor Pan/Tilt Head
AW-PH360
- Pan/tilt cable is included.
- AC adapter AW-PS300A is required.

Indoor Pan/Tilt Head
AW-PH400
- AC Adapter is included.

Camera Rolling Unit
AW-RL400
- AW-RL400 with AW-PH400.

Control Cable

RCU Cable
AW-CA50A26 (15m)
RCU Cable Joint Adapter
WV-CA26T26
Studio Extension Cable
WV-CA26U15 (15m)
WV-CA26U30 (30m)
WV-CA26U100 (100m)

Pan/Tilt Control Cable
Ethernet Cable
Camera Control Cable
Coaxial Cable

Pan/Tilt Control Cable
AW-CA24U10 (10m)
AW-CA24U30 (30m)
Camera Control Cable
AW-CA16U10 (10m)
AW-CA16U30 (30m)
Coaxial cable will be required to connect with controller.

Camera,Pan/Tilt Control, Video and Power Cable
Single Coaxial Cable

Coaxial Multiplex Adapter
AW-ML600
- Pan/Tilt Cable and Power Supply for Camera and Pan/Tilt Head are not required.
- This cannot be used for AW-E860/E750.

Camera & Pan/Tilt Control Cable
Ethernet Cable

RS232C Control Cable
AW-CA28T9

Pan/Tilt Camera Control Cable
Ethernet Cable

Video Cable
Coaxial Cable

Control Unit

Studio System

Remote Control Unit
WV-RC700A

Remote Control Unit
WV-RC550

Intercom Headset
- Local Procurement

Simple Function Pan/Tilt Control System

Pan/Tilt Control Panel
AW-RP301
- For one pan/tilt head
- AC adapter AW-PS505A is required.

Hybrid Control Panel
AW-RP501
- For one camera and pan/tilt head
- AC adapter AW-PS505A is required.

(AW-RP501 only)

Multi-Control Hub Unit
AW-HB505
- For max. five cameras and pan/tilt heads.
- AC adapter AW-PS505A is required.

Multi-Hybrid Control Panel
AW-RP505
- For five cameras and pan/tilt heads
- AC adapter AW-PS505A is required.

Single Coaxial Multiplex Control System

Remote Control Unit
WV-RC700A

RS422/232C Converter
(Local Procurement)

Pan/Tilt Control Panel
AW-RP301
- For one pan/tilt head
- AC adapter AW-PS505A is required (For AW-PH300A only)

Multi- Function Pan/Tilt Control System

RS422/232C Converter
(Local Procurement)

Multi-Function Control Panel
AW-RP605A
- AC adapter AJ-B75 or AW-PS505A is required.
Note:Confirm power capacity in AW-RP505.

Additional Video Card
AW-PB605A

Additional Control Panel
AW-RP615A
- AC adapter AW-PS505A is required.

(AW-RP501 only)

Dial-up Adapter Control System

Dial-up Adapter
AW-DU600
(Public Telephone Line Connecting Box/RS232C Distribution Box)
- AC adapter AW-PS505A is required.

Modem
- Use an approved modem by factory.

(Telephone Line)

Modem
- Use an approved modem by factory.

Dial-up Adapter
AW-DU600
(Public Telephone Line Connecting Box/RS232C Distribution Box)
- AC adapter AW-PS505A is required.

Pan/Tilt Control Panel
AW-RP301
- For one pan/tilt head
- AC adapter AW-PS505A is required.

Multi-Hybrid Control Panel
AW-RP505
- For five cameras and pan/tilt heads
- AC adapter AW-PS505A is required.

Hybrid Control Panel
AW-RP501
- For one camera and pan/tilt head
- AC adapter AW-PS505A is required.

RCB Cable
AW-CA50T10

Remote Control Box
WV-CB700A

High Performance Pan/ Tilt Control System

Pan/Tilt Control Panel
AW-RP400
- AC adapter AW-PS505A is required.

Camera Control Unit
AW-CB400

Cable Compensation Unit
AW-RC400
- AC adapter AW-PS505A is required.

Camera Control System

PC Control Cable
AW-CA50T9
(D-Sub 9Pin 10m)

Personal Computer

RCB Cable
AW-CA50T10 (5m)
RCB Extension Cable
AW-CA50B10
RCB Extension Cable for AW-CA50B10
WV-CA10B25 (25m)
WV-CA10B50 (50m)

Camera Control Box
WV-CB700A
- AC adapter AW-PS505A is required for camera.

Camera control cable
AW-CA50T8 (10m)

Camera Control Unit
AW-CB400
- AC adapter AW-PS505A is required.

Switcher/ Converter

Live Switcher
AW-SW350
- AC adapter:AW-PS505A

Signal Converter
AW-EX500
- AC adapter:AW-PS505A

Additional Card box
AW-EX100

SDI Card
AW-PB504

■Ratings (NTSC <PAL>)

	AW-E860	AW-E750	AW-E655	AW-E650	AW-E350
Image elements	2/3" IT type 3-CCD		1/2" IT type 3-CCD		1/3" IT type 3-CCD
Pixels Total elements	Approx. 510,000 <595,728>	Approx.410,000<470,000>			
Pixels Effective elements	Approx. 460,000 <538,200>	Approx.380,000<440,000>			
Imaging area	8.8HX6.6V(mm) (2/3" 4:3) 9.6HX5.4V(mm) (2/3" 16:9)	9.6HX5.4V(mm) (equivalent to 2/3")	6.4HX4.8V(mm) (equivalent to 1/2")		4.8HX3.6V(mm) (equivalent to 1/3")
Scanning System	2:1 interlaced NTSC system<2:1 interlaced PAL system>				
Scanning Frequency	Horizontal=15.734kHz,Vertical=59.94Hz<Horizontal=15.625kHz,Vertical=50Hz>				
Lens mount	2/3" Bayonet Mount		1/2" Bayonet Mount		1/3"C Mount
Optical Filter	None		1/16ND,1/64ND,3200K, IR Through	None	
Synchronize system	Internal/external synchronization				
Standard Illumination	2000lx, F11	2000lx, F14			2000lx, F9.5
Minimum Illumination	0.4 lx(F1.7, Night Eye H)	0.005lx (F1.4) 0.00005lx (F1.4) (2sec. CCD accumulation)			0.015lx (F1.4) 0.00015lx (F1.4) *2
Signal-to-noise Ratio	65dB (DNR on) <63dB (DNR on)>	67dB (DNR on) <65dB (DNR on)>			65dB (DNR on) <63dB (DNR on)>
Horizontal Resolution	850lines				
Registration	0.05%				
Image Enhancer	Horizontal/vertical				
White Balance	A/B 2 memory AWC,ATW				
Black Balance	Self-adjusting				
Color Bar	SMPTE color bar(setup 0/7.5IRE)<EBU colour bar>				
Shutter Speed	OFF,1/100<1/120>,1/250,1/500,1/1000,1/2000,1/4000,1/10000 Synchro-scan ELC				
Gain	Manual: max. 42dB (0~30dB in steps, Night Eye H/L) Auto: max. 42dB (AGC 0~30dB, Night Eye/H)	Manual: max. 72dB (0~30dB in steps, Night Eye/H, Digital Gain 0~30dB in 6dB steps) Auto: max. 42dB (AGC 0~30dB, Night Eye/H)			
Iris	Auto (Manual by RCU control)				
Video Output	Composite:1 Vp-p/75Ω (BNC, 50P connector) YC:Y 1 Vp-p,C 0.286Vp-p<0.3Vp-p>(50P connector) Component:Y 1.0Vp-p,Pr/Pb 0.7Vp-p, RGB 0.7Vp-p/75Ω (50P connector)				
Power	DC 12V				
Power Consumption	Approx.15.4W	Approx.12.6W	Approx.12W	Approx.11.8W	Approx.11.3W
Operating Temperature	14°F~113°F(-10°C~+45°C)				
Weight	Approx.2.5lbs (1.15kg)	Approx.2.4lbs (1.1kg)	Approx.2.6lbs (1.2kg)	Approx.2.02lbs (0.92kg)	Approx.1.5lbs (0.7kg)
Dimensions	3-5/16" X 3-3/4" X 7-9/16" (84W X 95H X 192D mm)	3-5/16" X 3-3/4" X 7-9/16" (84W X 95H X 192D mm)	3-5/16" X 4-1/2" X 7-3/16" (84W X 114H X 182D mm)	3-5/16" X 3-1/32" X 6-15/16" (84W X 77H X177D mm)	3-5/16" X 3-1/32" X 6-1/8" (84W X 77H X 156D mm)

∗Note 1 = The lens should be within 4.3mm from the lens mount face. Otherwise, there is a risk of damaging the camera unit.
∗Note 2 = 2 sec.CCD charge accumulation.
∗Weight and dimensions shown are approximate.
∗Features and Specifications are subject to change without notice.
∗These products may be subjects to export regulations.

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