Panasonic
ideas for life

AK-HC3800
Studio Handy Camera
AK-HC3800G (Tajimi connector model)
AK-HC3800GS (LEMO connector model)
A Studio and EFP Camera System for Broadcast Use That Delivers High-End Image Quality and Enables Long-Distance Optical Fiber Transmission at Low Cost.

This cost-effective HD camera system with optical fiber transmission capability meets the high-end TV program production needs of broadcast studios. The newly developed AK-HC3800 Studio Handy Camera is equipped with a high-sensitivity, high-quality 2/3-type 2.2-megapixel 3CCD and a new high-precision 16 bit A/D image processing circuit. The advanced digital functions such as Chromatic Aberration Compensation (CAC), Digital Extender, Film Rec Gamma, Dynamic Range Stretch (DRS) and etc. realize high image quality and versatile operations. By using the AK-HC3800 together with the AK-HCU200 Camera Control Unit, AK-HRP200G Remote Operation Panel and AK-HVF70G 17.8 cm (7 inches) LCD Color Viewfinder, an optical fiber transmission studio camera system that achieves high image quality, uncompressed and long-distance transmission, can be configured at a low cost. The camera and camera control unit can be connected for long-distance transmission of video signals over approximately 1,200 m (1,312 yards) when power is supplied from the camera control unit. The camera control unit and remote operation panel are connected by a dedicated cable. A LAN cable can also be used in the future for an IP connection of these units.* Overall, the system is easy to use and operate, and offers excellent cost-performance.

* To be supported from the spring of 2013.

* The photo shows a system example of the AK-HC3800GS (LEMO connector model).
* For studio zoom lens use, the lens support devices recommended by each lens manufacturer are required. The AK-HBU3500 build-up unit is not supported.
High Quality Images Achieved by a Newly Developed DSP. Advanced Digital Technology Allows Compact, Lightweight Lenses to meet Studio Production Needs.

3CCD with High Sensitivity, Low Noise and Low Smear
The 2/3-type 2.2-megapixel 3CCD enables the standard sensitivity of F11 (2,000 lx/59.94 Hz) which is one of the highest sensitivity in this range of cameras. A high S/N ratio of 60 dB (at 59.94 Hz) produces high quality images with low noise and low smear. Panasonic’s single-channel transfer system and spatial-offset processing technologies also improve signal modulation depth and reduce moire.

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New High-Performance DSP Provides 16 bit A/D, 38 bit Processing
HD images are digitized with 74 MHz sampling and 16 bit A/D conversion. Full 38 bit processing within the DSP produces highly detailed, high quality images.

50 Hz/59.94 Hz Switchable HD recording is switchable between 1080/50i (50 Hz) and 1080/59.94i (59.94Hz) for worldwide production use.

Chromatic Aberration Compensation (CAC)
This exclusive technology sets up a conversation between lens and camera which allows for a highly sophisticated algorithm to be deployed that will automatically compensate the registration error that is caused mainly by lens chromatic aberration, and minimize the circumjacent blur.

Digital Extender (2x)
This function expands the image by 2x in the digital signal processing circuit, allowing powerful shooting even with a low-magnification lens. HD images retain their superior resolution even with zooming, and — unlike when a lens extender is used — brightness is not reduced.

Film Rec Gamma and Scan Reverse Functions
Selectable gamma curves are included in the DSP circuit. The Film Rec mode produces the kind of film tone that you get with Panasonic VARICAM models. The Scan Reverse function cancels the image inversion that happens when using a Canon or Angenieux HD lens adaptor, and the AK-HC3800 supports interchangeable lenses for film cameras.

Dynamic Range Stretch (DRS)
The DRS function automatically suppresses blocked shadows and blown highlights. A gamma curve and knee slope are estimated to match the contrast of each pixel, and applied in real time. When dark, bright, and intermediate shades are all contained in the same scene, this produces excellent gradation for each shade. The images that result are enhanced by a visually wide dynamic range.

Other Advanced Digital Functions
- Selectable EBU or NTSC preset matrix
- 12-axis color correction, linear matrix, and other color correction functions
- A skin tone detail function with two skin tone settings
- A lens file function (for up to 32 files) to save flare and shading values.
- Camera settings, such as VF settings, can be saved on an SD memory card. SD memory cards can also be used for firmware upgrades.
Allows a High-Quality, Uncompressed, Long-Distance Optical Fiber Transmission Camera System to Be Configured at Low Cost

High-Definition, Long-Distance, Optical Digital Transmission
By connecting the Camera Control Unit (CCU) and the AK-HC3800 Studio Handy Camera by optical fiber cable, uncompressed digital signals can be transmitted with high quality. The cable between the camera and the CCU can be extended up to approximately 1,200 m (1,312 yards).*1

HD Multi-Format Supported
HD multi-format*2 support includes 1080/59.94i, 1080/50i, 720/59.94p,*2 and 720/50p.*2

Prompter Supported
Two SDI channels and one VBS channel are provided for RET input, and prompter input (analog video signal input) is included as standard. Prompt signals input to the Camera Control Unit (CCU) can be output from the prompter terminal on the camera side.

HD/SD Simultaneous Operation
Two SDI OUT and two SDI OUT (PM) lines are provided. In addition to HD video signal output, SD downconverted video signal output (SDI, analog composite) comes as standard. SD monitoring is also possible.

Bar ID Display Output
Text can be superimposed onto the color bar output signal. Displaying the video source and other information in this way is convenient during system set-up and standby.

SD Memory Cards Supported
The SD memory card slot allows CCU setting data to be saved on an SD memory card. Firmware updates can also be handled by SD memory card.

2U Rack Mounting Size
The 2U height of this compact, lightweight unit allows 2U rack mounting.

Setting Up CCU with a PC
When connecting CCU and PC via Ethernet, the CCU set up menu can be displayed and changed on web browser of the PC.

IP Connection (Ethernet) Supported*2
A LAN terminal enables IP connection via Ethernet (RJ45 LAN cable).*2

*1: When power is supplied from the camera control unit.
*2: To be supported from the spring of 2013.
Remote Operation of a Studio Handy Camera
The camera can be remotely operated via serial control or IP control.*1 In addition to the AK-HC3800*2 Studio Handy Camera, remote operation is also possible for Panasonic multipurpose cameras, HD compatible cameras, and HD integrated cameras.*1

Compact 6U Size
The unit is compact, with a width of 92 mm and a 6U height for easy rack mounting.

ROP Menu Setting
The menu can be displayed on a monitor connected to the Camera Control Unit, so detailed camera settings can be made by operating the Remote Operation Panel.

Joystick Control Lever
The joystick control lever enables fine manual iris/pedestal operation.

SD Memory Card Slot
Scene files and user files can be saved with the SD memory card slot. SD memory cards can also be used for firmware upgrades.

IP Connection (Ethernet) Supported*3
A LAN terminal enables IP connection via Ethernet (RJ45 LAN cable).*1*3

*1: To be supported from the spring of 2013.
*2: When power is supplied from the camera control unit.  
*3: External power supply (DC 12 V) required when LAN cable is used.

System Configuration and Interface
Dimensions Unit: mm (inches)

AK-HC3800 Studio Handy Camera

AK-HCU200 Camera Control Unit (CCU)

AK-HRP200G Remote Operation Panel (ROP)

AK-HVF70G 17.8 cm (7 inch) LCD Color Viewfinder
AK-HC3800 Studio Handy Camera

Power Supply: 12 V DC (during external power supply operation)
Power Consumption: 25 W (during external power supply operation, camera only)
Operating Temperature: –10 °C to 45 °C (14 °F to 113 °F)
Storage Temperature: –20 °C to 60 °C (−4 °F to 140 °F)
Weight: Approx. 3.7 kg (8.16 lb)
Dimensions (W x H x D): 135 mm x 260 mm x 367.5 mm (5-5/16 inches x 10-1/4 inches x 14-7/16 inches) excluding protrusions

AK-HRC200 Camera Control Unit (CCU)

Power Supply: 100 V to 240 V AC, 50/60 Hz
Power Consumption: 170 W (Without CAMERA connected: 32 W)
Capacity for Supplying Power to a Camera: 190 V DC, 0.6 A
Operating Temperature: 0 °C to 40 °C (32 °F to 104 °F)
Operating Humidity: 10 % to 90 % (no condensation)
Dimensions (W x H x D): 424 mm x 88 mm x 400 mm (16-11/16 inches x 3-7/16 inches x 15-3/4 inches) Excluding protrusions
Weight: Approx. 6.6 kg (14.6 lb)

AK-HVF70G 17.8 cm (7 inch) LCD Color Viewfinder

Power Supply: DC 12 V (supplied by the camera)
Power Consumption: 10 W
Operating Temperature: 0 °C to 45 °C (32 °F to 113 °F)
Storage Temperature: –20 °C to 60 °C (−4 °F to 140 °F)
Operating Humidity: 10% to 85% (no condensation)
Dimensions (W x H x D): 243.5 mm x 212 mm x 172 mm (9-19/32 inches x 8-11/32 inches x 6-19/32 inches) excluding protrusions
Weight: Approx. 1.3 kg (2.87 lb)

AK-HRP200G Remote Operation Panel (ROP)

Power Supply: 12 V DC
Power Consumption: 4.2 W
Operating Temperature: 0 °C to 40 °C (32 °F to 104 °F)
Storage Temperature: –20 °C to 60 °C (−4 °F to 140 °F)
Operating Humidity: 90 % or less
Dimensions (W x H x D): 92 mm x 308 mm x 55 mm (3-5/8 inches x 12-1/8 inches x 2-3/16 inches) excluding protrusions
Weight: Approx. 1.3 kg (2.87 lb)

Specifications are subject to change without notice.
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[Option]
AJ-HVF21KG
50.8 mm (2 inches) HD EVF
AJ-CVF100G
25.4 mm (1 inch) HD Color EVF
AJ-MC700
Microphone Kit
SHAN-TM700
Tripod Adapter

AJ-C10050G
Remote Control Cable
(50 meters / 164 feet)