

JVC[®]
PROFESSIONAL

3-CCD COLOR VIDEO
CAMERAS

KY-17 BU FITU

New High-Performance 1/2" CCDs for
Even Higher Picture Quality



The lens, viewfinder and camera adapter shown above are optional accessories.

KY-17 BU FITU



Enhanced performance for video professionals

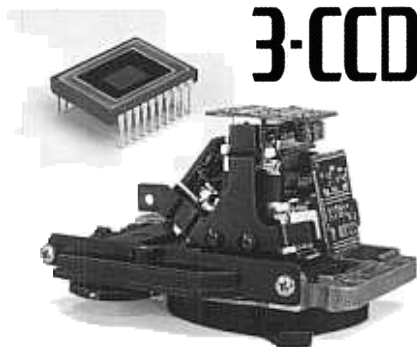
JVC's new KY-17BU and KY-17FITU cameras for video professionals feature the latest innovations in CCD design. The new IT and FIT 1/2" CCDs deliver outstanding resolution. And new photo-diodes within the CCDs generate far less dark current for enhanced S/N ratio and negligible fixed pattern noise. The IT CCD incorporates an amplifying micro-lens over each pixel for incredibly high sensitivity and reduced smear. And the FIT CCD delivers negligible smear and high resolution. All these features are incorporated in a compact, portable package that sets new standards for convenience and performance.



ADVANCED FEATURES PROVIDE OUTSTANDING IMAGE QUALITY

■ New 1/2 inch CCDs

JVC's KY-17 series of cameras feature new, high-sensitivity 1/2" CCDs with excellent horizontal resolution. The 640-line KY-17BU is equipped with IT (Interline Transfer) CCDs and the 700-line KY-17FITU has FIT (Frame Interline Transfer) CCDs.



New technology IT CCD for KY-17BU, New FIT CCD for KY-17FITU

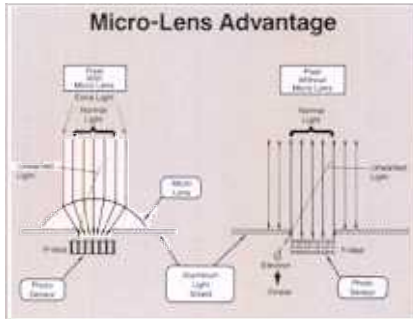
The KY-17BU is equipped with MICRO-LENS technology. As shown in the right figure, MICRO-LENS technology collects light that would normally fall onto the shielded area and forces it into the photo sensor for increased sensitivity. The light shield therefore can be made much larger, reducing unwanted light entering the vertical shift register, and resulting in reduced smear.

Previously installed only in broadcast cameras, low-smear FIT CCD sensors are now incorporated in the KY-17FITU. The result is almost no vertical smear when shooting extremely bright objects, such as lamps and reflecting surfaces.

Electronic sophistication is matched by assembly precision. JVC's unique ultra-high precision adhesion technology is applied to precisely align the three 1/2 inch CCD sensors to the F1.4 prism. This maximizes

the benefit of spatial offset so that maximum resolution and suppression of alias components can be realized.

Performance is further enhanced by a CDS (Correlated Double Sampling) circuit for the highest possible S/N ratio. This clever innovation produces a S/N ratio of 60 dB for each version with a minimum subject illumination of only 10 lux for KY-17BU and 20 lux for KY-17FITU. These features make the KY-17BU/KY-17FITU the class-leader for picture quality and performance.



■ Microprocessor-controlled setup function

Inside the KY-17BU/FITU cameras is a microprocessor with preprogrammed white and black balance adjustments. Just push the Auto Setup button for one second to set both white and black balance. To adjust only the white balance, hold the button down for less than one second.

■ Four-position filter turret

A built-in filter turret offers 3200K, 5600K, 5600K + 25% ND, and closed positions. As a result, you can achieve excellent pictures under a wide range of light conditions.

■ "Zebra pattern" video signal

The operator can quickly check the iris level

through the viewfinder by observing the "Zebra pattern," which indicates those portions of the picture which are at the 90% level.

■ 2H vertical contour correction circuit

For improved picture sharpness, contour correction is derived from Green and Red channels.

■ Color matrix circuit

Both cameras feature color matrix circuits with six adjustments to assure accurate color reproduction.

■ Flare circuit

Flare caused by strong light sources is compensated by a flare correction circuit in each of the R, G, and B channels. This assures stable black levels regardless of how much light enters the camera.



■ Negative/positive image reversal

The KY-17 series models have a negative/positive image reversal function for special effects and film-to-tape transfers using telecine equipment, with negative film.

■ High-speed electronic shutter

To make sure you do not miss even the fastest action, KY-17BU/KY-17FITU incorporate a high-speed, electronic shutter with operating speeds of 1/100, 1/250, 1/500, 1/1000 and 1/2000 second.

■ Stereo audio circuit

The dual-channel preamplifiers of the cameras record full stereo sound. You can connect an optional stereo microphone to the camera's hot shoe for sharp sound delineation. Single-channel operation is also possible for monaural recording.



■ Wide range of lenses

JVC has developed a range of outstanding new lenses for the KY-17BU/FITU. You'll find exactly the lens for your application, whether you're looking for broadcast quality or are considering professional applications. All lenses can be fitted with either manual or servo controls.

■ Self-diagnostic system with character display

The KY-17BU/FITU has an advanced self-diagnostic system with built-in character generator. Displayed on the viewfinder screen, you'll find a comprehensive status display giving key data and warning indication for the camera as well as for some recorders.

■ RS-170A sync signal generator

A sync signal generator conforming to the RS-170A standard allows easy integration of KY-17BU/FITU cameras into all broadcasting systems.

■ External sync

An external sync circuit permits the cameras to be genlocked in the KA-20 camera adapter to other cameras and video equipment. You can adjust SC PHASE and H PHASE with the controls on the side panel of the KA-20 camera adapter.

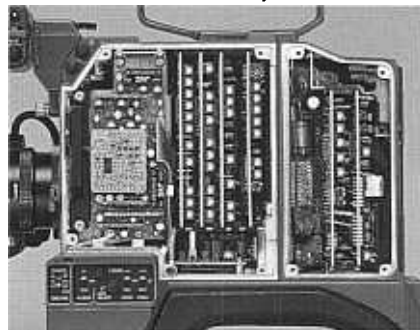
■ VTR selector switch

The three-position VTR trigger switch on the side of the KA-20 camera adapter assures compatibility with virtually any recorder.

■ Serviceability

The KY-17 series offers a construction quality rarely found in professional grade equipment, and usually only available in broadcast grade cameras. All major circuits are on vertical plug-in PC boards, with most adjustments on the edge of the boards. No annoying

dismantling of parts and getting out a service manual just to make a simple adjustment. Notice the high-reliability potentiometers that will not wear out even after many years of use. Compare this with any camera in its class and you'll see the difference. It costs more to build a camera this way, but at JVC we don't take chances with your investment.



■ Mobility and flexibility — Camcorder combination with JVC's S-VHS recorder

The KY-17BU/KY-17FITU are designed to dock directly with JVC's professional BR-S411U and BR-S420CU S-VHS Portable Recorders. Compact and light, these recorders offer the superior picture quality of S-VHS with a horizontal resolution of more than 400 lines, together with mobility and the flexibility which characterizes the VHS format. These recorders have a full array of professional recording functions including AEF (Automatic Editing Function), Long Pause mode, input switching, and audio level meters and controls.

■ Other features

- Intercom headset connector with output level control
- Audio output level selector switch
- Earphone jack
- AUX video selector switch

NOMENCLATURE AND FUNCTIONS OF MAJOR PARTS



- ① Top tally
- ② Auto setup button (AUTO SETUP)
- ③ Video recorder start switch (VTR)
- ④ Viewfinder (VF-P10)
- ⑤ Tally ON/OFF (TALLY)
- ⑥ Contrast control (CONT)
- ⑦ Brightness control (BRIGHT)
- ⑧ Carrying handle (KA-231)
- ⑨ 13 to 1 zoom lens (HZ-713)
- ⑩ Shutter speed select button and indicator lamp (SHUTTER)
- ⑪ Filter turret (3200K, 5600K, 5600K + 1/4ND, CLOSED)
- ⑫ Operation switch (OPERATE) (CAMERA/VTR)
- ⑬ Sensitivity select switch (HI-SENS) (0, +9 dB, +18 dB)

- ⑭ "ZEBRA PATTERN" ON/OFF switch
- ⑮ Display select button (DISP SELECT)
- ⑯ Camera/color bar select switch (MODE) (CAMERA, BARS, NEGA)
- ⑰ White balance mode switch (W. BAL) (AUTO 1, AUTO 2, PRESET)
- ⑱ Shoulder pad (KA-220)
- ⑲ Battery Guide
- ⑳ Earphone jack (EARPHONE)
- ㉑ DC 12V IN connector
- ㉒ Camera cable connector (RM/VTR)
- ㉓ Phase adjustment control (PHASE) (SC, H)
- ㉔ Mic output level select switch (AUDIO LEVEL)
- ㉕ VTR triggering mode select switch (VTR)

- ㉖ Operation mode select switch (MODE) (VTR, Y/C 358, RM)
- ㉗ Power select switch (POWER)
- ㉘ Intercom level (INTERCOM LEVEL)
- ㉙ Y/C 358 output connector
- ㉚ Intercom jack (INTERCOM)
- ㉛ Genlock signal input connector (GENLOCK IN)
- ㉜ Test output connector (TEST OUTPUT)
- ㉝ Mic input (XLR-3) (MIC INPUT)
- ㉞ Exclusive microphone mounting shoe
- ㉟ Exclusive microphone input socket
- ㊱ Mic mode select switch (STEREO/MONO)
- ㊲ VF AUX video select switch (RET)
- ㊳ Gear for chest rest (KA-111)



OPTIONS AND ACCESSORIES



HZ-714B
14 to 1
zoom lens



HZ-713MD
13 to 1
motorized
zoom lens



RM-713MD
Remote
control
unit for
HZ-713MD



HZ-ZS13U
Zoom servo control
unit for HZ-713U,
S16X7BRMU,
S12X6.6BERMU,
PH15X7BKRSIIU,
and PH15X7BIRSU



HZ-FM13U
Focus manual
control for HZ-713U,
S16X7BRMU and
S12X6.6BERMU



HZ-FM15U
Focus manual
control for
PH15X7BKRSIIU
and PH15X7BIRSU



VC-P110U series
Remote cables
VC-P110U (5 m)
VC-P112U (20 m)
VC-P113U (50 m)
VC-P114U (100 m)



KA-280U
Remote cable
coupler



VF-P400U
4-inch viewfinder



AA-P250U
AC power adapter/
charger



NB-G1U
Ni-Cd battery
(2.2 Ah)



BH-P20U
Battery holder for
NB-G1U (for stand-
alone type)



BH-P40U
Battery holder for
NB-G1U (for
camcorder operation)



KA-20U
Camera adapter



KA-M20U
Mil VTR adapter



KA-P20U
Betacam PRO/
Hi8 adapter



KA-B20U
Betacam adapter



MV-P602U
Stereo microphone



M-K50U
Super-directional
microphone



KA-M50U
Handgrip for
M-K50U



KA-231U *
Camera handle



KA-232U *
Camera handle



KA-220U *
Shoulder pad



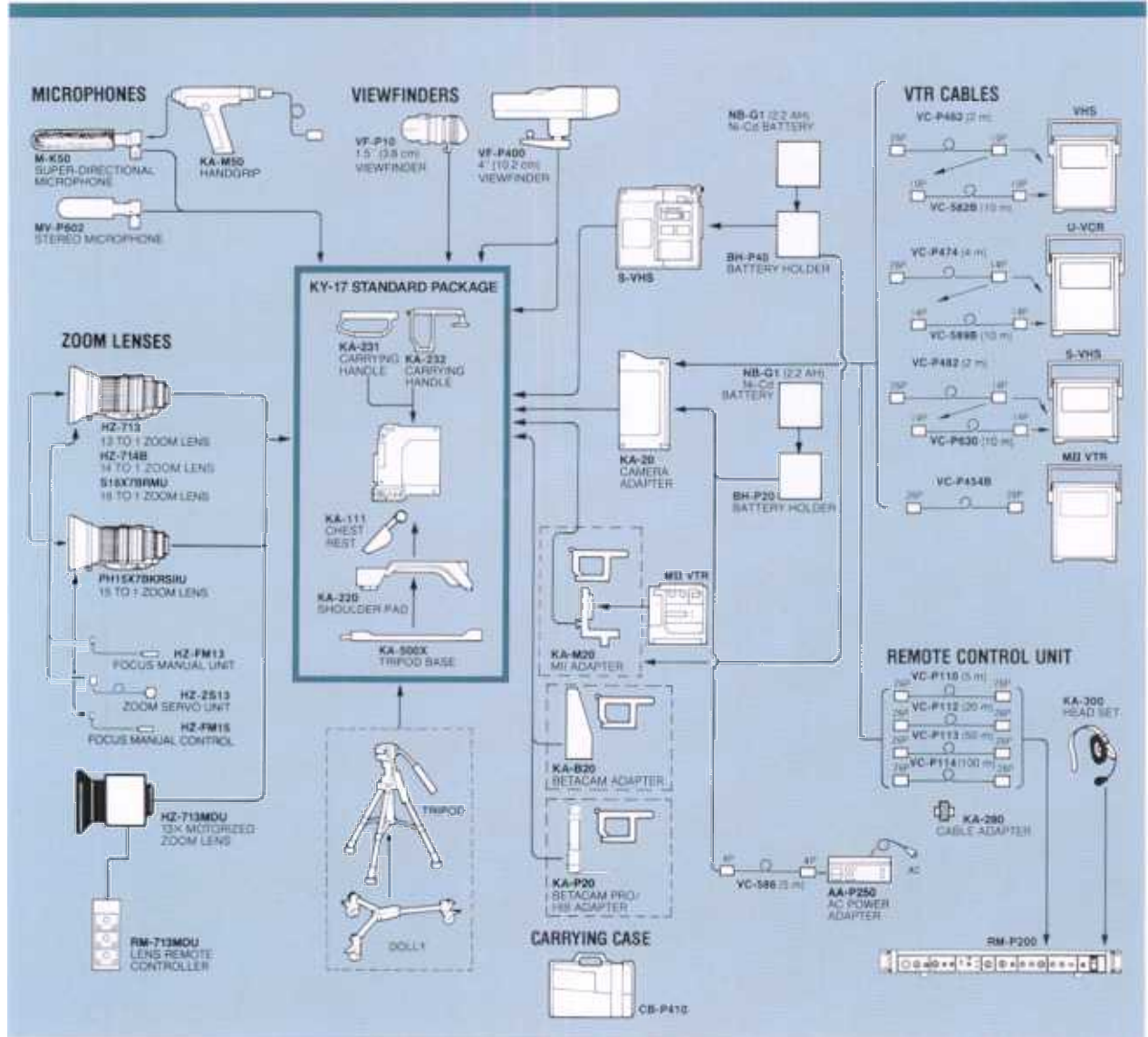
KA-500XU *
Tripod base



KA-111U *
Chest rest

* Provided accessories as a "standard package."

SYSTEM CONFIGURATION



REMOTE CONTROL UNIT

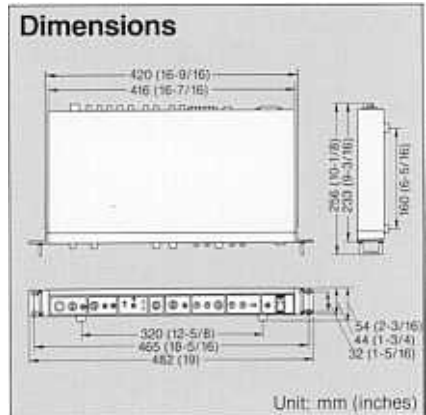
RM-P200U

CONTROLS, CONNECTORS AND INDICATORS

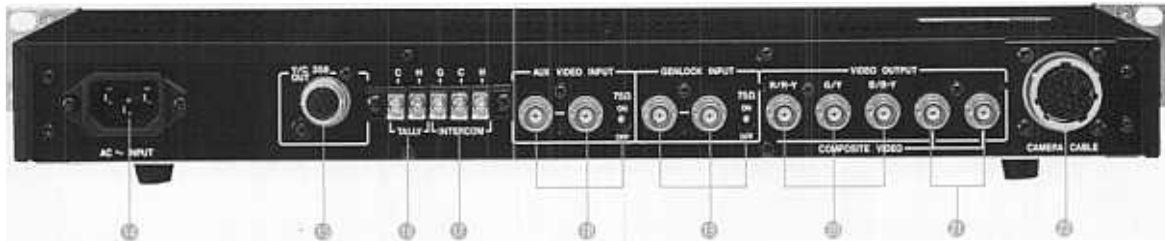
Front Panel



- ① INTERCOM level control and jack
- ② TALLY lamp
- ③ SHUTTER switch
- ④ Output MODE select switch
- ⑤ HI-SENS switch (0 dB/+9 dB/+18 dB)
- ⑥ WHITE BALANCE select switch
- ⑦ AUTO SET switch, indicator and manual controls
- ⑧ MASTER BLACK control
- ⑨ IRIS control mode switch and adjustment control
- ⑩ CABLE COMPENSATION controls
- ⑪ H PHASE control
- ⑫ SC PHASE controls
- ⑬ POWER switch and indicator
- ⑭ AC INPUT connector
- ⑮ Y/C 358 OUT connector (7-pin female)
- ⑯ TALLY terminals
- ⑰ INTERCOM terminals
- ⑱ AUX VIDEO INPUT connectors (BNC)
- ⑲ GENLOCK connectors (BNC)
- ⑳ R/G/B, Y/R-Y/B-Y connectors (BNC)
- ㉑ COMPOSITE VIDEO signal output terminals (BNC)
- ㉒ CAMERA CABLE connector (26-pin female)



Rear Panel



FEATURES

● Can be extended up to 100 m (325 ft)

The distance between the camera and remote control unit can be extended up to 100 m (325 ft) using the optional VC-P110 series camera cables. Even in this case the camera power is supplied from the RM-P200; therefore, it is not necessary to prepare a separate power supply for the camera.

● Built-in genlock function

Genlock operation is possible with a composite video signal (VBS) or black burst (B.B.) signal. In addition, SC phase and H phase can be adjusted on the front panel.

● Camera control by serial data communication

A serial data transmission method is employed for camera control signals. The camera and remote control unit are connected with two data lines; CPUs built in the camera and the remote control unit perform mutual communications when controlling the camera so that accurate and reliable control becomes possible.

● Multiple outputs

The unit is equipped with two output connectors for the composite video signal. Moreover, any of the following can be selectively output according to purpose and use: R/G/B component signals, Y/R-Y/B-Y component signals or separate Y/C signals compatible with S-VHS VTRs.

SPECIFICATIONS

■ KY-17BU/KY-17FITU Color Video Cameras

Optical system: 1/2" F1.4 RGB prism system

Pickup device:

KY-17BU: 1/2" IT CCD, 3-chip

KY-17FITU: 1/2" FIT CCD, 3-chip

Picture elements:

KY-17BU: 330,000 (effective); Total picture elements, 360,000

KY-17FITU: 360,000 (effective); Total picture elements, 380,000

Encoder: NTSC (Wide-band R-Y/B-Y system)

Synchronizing system:

Internal: Built-in SSG, conforming to RS-170A

External: VBS or BB

Optical filter: Closed, 3200K, 5600K, 5600K+25% ND

Lens mount: 1/2" bayonet

Sensitivity:

KY-17BU: F7.0 at 2000 lux (186fc)

KY-17FITU: F5.0 at 2000 lux (186fc)

Minimum illumination:

KY-17BU: 10 lux at F1.4 with +18dB switch ON

KY-17FITU: 20 lux at F1.4 with +18dB switch ON

S/N: 60dB typical (Contour correction OFF, Gamma 1,

Bandwidth 4.2 MHz, Matrix OFF)

Horizontal resolution:

KY-17BU: 640 TV lines (Y ch)

KY-17FITU: 700 TV lines (Y ch)

Registration: 0.05% (without lens distortion) in all areas

Contour correction:

Horizontal: Dual-edged

Vertical: 2H

Color bar generator: Provided (full-field)

Gain boost: +9dB, +18dB

Output signals:

Video signal:

1. Composite video signal: 1.0Vp-p, 75Ω (BNC, 26P)

2. Separate Y/C signal: Y: 1.0Vp-p
C: 0.286Vp-p, 75Ω (7P, 26P)

3. Component video signal: Y: 1.0Vp-p,
R-Y/B-Y: 0.486Vp-p, 75Ω (26P)

4. R/G/B signal: R/G/B: 0.7Vp-p, 75Ω (26P)
(2, 3 or 4 is selectively output from the same 26-pin connector)

Test signal: Composite R/G/B selectable (BNC)

Audio signal: -52/-20dBm selectable
(Stereo/Monaural applicable)

Audio monitor signal: 8Ω (From VTR)

Input signals:

Return video signal: 1.0Vp-p, 75Ω (BNC)

Genlock signal: VBS: 1.0Vp-p, 75Ω or

BB: 0.43Vp-p, 75Ω (BNC)

Microphone signal: -52dBm (Stereo/Monaural applicable)

Electronic shutter: 1/100, 1/250, 1/500, 1/1000, 1/2000 sec.

Power requirement: +12V DC

Power consumption:

KY-17BU: 1.5A (with 1.5" viewfinder VF-P10U)

KY-17FITU: 1.6A (with 1.5" viewfinder VF-P10U)

Ambient temperature: -5°C to +45°C (23°F to 113°F)

Dimensions: 113.5(W) × 278(H) × 276.5(D) mm

(4-1/2" × 11" × 10-15/16") with camera head, camera adapter, carrying handle and shoulder pad

Weight: 2.7kg (6.0 lbs) with camera adapter

■ RM-P200U Remote Control Unit

Output signals:

Composite video signal: 1Vp-p, 75Ω × 2

R/G/B signals: 0.7Vp-p, 75Ω × 1 each (without SYNC)

Y/R-Y/B-Y signals: Y: 1Vp-p

R-Y: 0.486Vp-p

B-Y: 0.486Vp-p, 75Ω each

Y/C 358 signals: Y: 1Vp-p, 75Ω

C: 0.286Vp-p, 75Ω (burst level)

Intercom signal: Two-wire system, -10dB, 600Ω

balanced (R/G/B, Y/R-Y/B-Y, Y/C 358

should be selected at camera head.

The primary output is R/G/B.)

Input signals:

Genlock signal: Composite video signal 1Vp-p, 75Ω or high

Black burst signal 0.43Vp-p, 75Ω or high

AUX signal: Composite video signal 1Vp-p, 75Ω or high

Intercom signal: Two-wire system, -10dB, 600Ω balanced

Tally signal: Make-contact or power (5-24V DC or 6V AC) supply

Power supply: 120V AC, 60Hz

Ambient temperature: -10°C to +45°C (14°F to 113°F)

Power consumption: 11W, 65W (with camera and 4" viewfinder)

Weight: 5.0kg (11.1 lbs)

■ AA-P250U AC Power Adapter/Charger

Output:

CAMERA mode: 12.5V DC 3.5A

CHARGE mode: 12 to 17V DC 2.2A

Power source: 90-130V AC, 50/60Hz

Power consumption: 60W

Usable battery pack: JVC Battery Pack—Ni-Cd type, DC-C11, NB-G1 or DC-C50

Operational temperature: CAMERA mode: -20°C to +50°C (-4°F to +120°F)

CHARGE mode: 10°C to +35°C (50°F to 95°F)

Weight: 1.7kg (3.7 lbs)

Charging indicator: QUICK/TRICKLE

Charging time:

DC-C11: approx. 60 min.

NB-G1: approx. 60 min.

DC-C50: 95 min. (after normal discharge)

■ VF-P400U Viewfinder

CRT: 94 mm (4") diagonal

Resolution: More than 500 lines

Tally lamps:

Top: filament lamp (12V)

Screen side: LED

Power consumption: 12V DC, 75 mA (provided from video camera)

Ambient temperature: -20°C to +50°C (-4°F to +122°F)

Weight: 1.8kg (4.0 lbs)

■ VF-P10U Viewfinder

CRT: 38 mm (1.5") diagonal

Resolution: 400 lines

Provided circuits: Top tally lamp (ON-OFF switchable)

LOW-L (Low light)/BATT (battery) warning (Red)

REC (tally)/ALARM (VTR) lamp (Green)

Power consumption: 12V DC, 250 mA (provided from video camera)

Ambient temperature: -20°C to +50°C (-4°F to +122°F)

Weight: 650g (1.5 lbs)

■ S16X7BRMU 16X Zoom Lens

Zoom ratio: 16 to 1, 7 to 112 mm

Max. aperture ratio: f/1.4 (7 to 92 mm) or f/1.7 (122 mm)

Min. object distance: 0.95 m (3.12 ft)

Macro: Provided (70 mm/2.75")

Mount: 1/2" Bayonet

Filter diameter: 77 mm (3-1/32"), P=0.75

Weight: 1.48kg (3.3 lbs) without hood

■ HZ-714B 14X Zoom Lens

Focal length: 7 to 98mm

Max. aperture ratio: 1:1.4 (f=7 to 81mm) — 1.69 (f=98mm)

Zoom ratio: 14:1

Min. object distance: 1.0m (3ft)

Macro distance: 30mm

Mount: 1/2" Bayonet (FB 35.74mm)

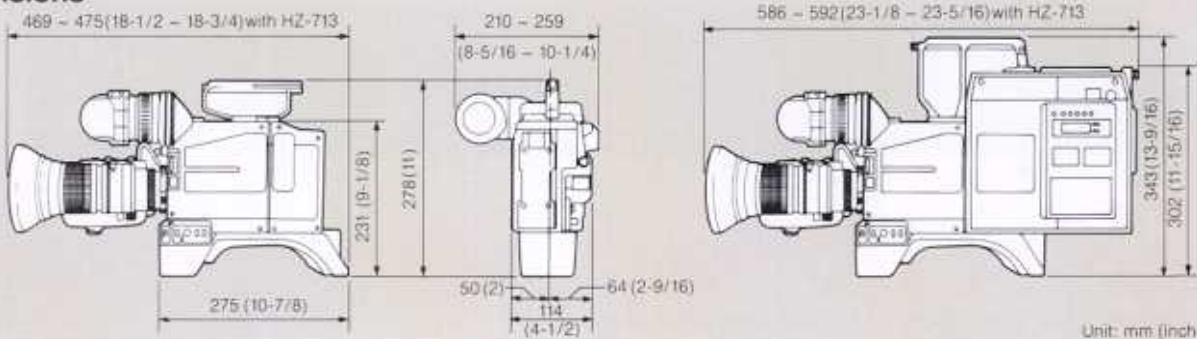
Front thread diameter: 72mm, P=0.75

Iris operation: Motor drive/manual

Zoom operation: DC servo drive/manual

Focusing: Manual (mechanical internal focus)

Dimensions



E. & O.E. Design and specifications subject to change without notice.

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Printed in Japan
KCN-6166