JVC
PROFESSIONAL

1/2" C-MOUNT 3-CCD DIGITAL CAMERA

KY-F70BU

High Resolution SXGA Digital Image Capture with SCSI Output and Live Colour Preview

3-CCD SXGA Digital Imaging

Shown with optional lens

- 4.35 million Effective Square Pixels
- SXGA Native Picture Resolution
- 1360 x 1024 Square Pixels per CCD with Progressive Scanning
- 3-CCD Colour Accuracy (Prism-separated R, G and B)
- C-mount
- Live Colour Preview on VGA Monitor
- Direct Digital Interface to PC via SCSI-2
- Designed to accommodate IR Applications
- Long integration periods (Slow Shutter)
- High Signal to Noise Ratio
- IEC601-1 and UL-2601 Medical Approval
- JVC Proprietary 'KY-SCSI' Bundled

JVC's KY-F70BU: the answer to digital photogr

Whether used on a scope or with a lens attached, the KY-F70BU delivers still images with a level of resolution and a quality of colour which greatly surpass conventional 3-CCD video technology. The KY-F70BU Digital Imaging System interfaces directly to a PC via SCSI-2 and so can capture SXGA resolution images directly without an image capture board, while still offering motion live colour preview in real-time. Furthermore, when interfaced with a PC capture board, it can deliver SXGA resolution into an even wider range of applications. For example, the SCSI interface can be switched simply from Slave to Master for connection directly to the SCSI port of a printer or Zip drive, thus directly providing high resolution SXGA images without the need of a PC.*

Digital Image Capture: KY-F70BU via SCSI output

'Zip' drive is a registered trademark of Iomega.

The KY-F70BU is an ultra-compact, multi-purpose 1360 x 1024 pixel resolution device for digital image capturing of three dimensional objects seen through scopes and lenses. Its C-mount attachment provides ready attachment to a very wide range of industrial and medical scopes, as well as lenses and other imaging apparatus. It has the convenience of internal frame memory which means that the image transfer to PC, printer or storage device can be either direct or selected from the frame memory.

Key Features

- SXGA output available in both digital and analogue forms for future-proofed flexibility.
- 3-CCD prism system for separate processing of R, G and B for perfect colour rendition.
- Square-pixel on-chip progressive scan CCDs, each with 1.45 million pixels, totalling 4.35 million.
- 1360 x 1024 pixel resolution equates to 1,000 TVL in horizontal and vertical.
- C-mount, half inch size fits a wide variety of scopes and lenses.
- For applications using Infra Red there is external access to IR cut filter for replacement by special JVC quartz filter.
- Extended integration up to 4 seconds. (Slow Shutter Mode)
- Pixel masking algorithm for optimised image quality.
- Special algorithm for improved S/N ratio.
- User-selectable Syncs: *either* Separate Syncs *or* Sync on Green.
- WYSIWYG live preview mode. (Live Colour Preview on VGA Monitor)
- External trigger function for Sensor or Flash Synchronisation.
- Internal Frame Memory holds up to four images in uncompressed data format to avoid degradation.
- IEC601-1 and UL-2601 Approval, using AA-P700, for use in certain medical applications.
- Shot & Print, Shot & Save capability through SCSI master mode.

JVC Proprietary Software Supplied as Standard

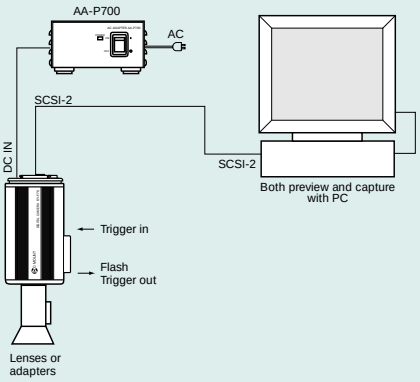
- 'KY-SCSI' software package provides camera control and image capturing direct to PC via SCSI-2.
- TWAIN 32 driver for importation of images.
- RS-232C camera control software

aphic requirements in industry and medicine.

Designed to Accommodate IR Applications

The IR cut filter for use with the KY-F70BU is easily detachable if required. The JVC-supplied special quartz filter used in place of the IR cut filter permits black-and-white photography in the IR (Infra Red) region. This is JVC's answer for applications requiring ultra low illumination photography.

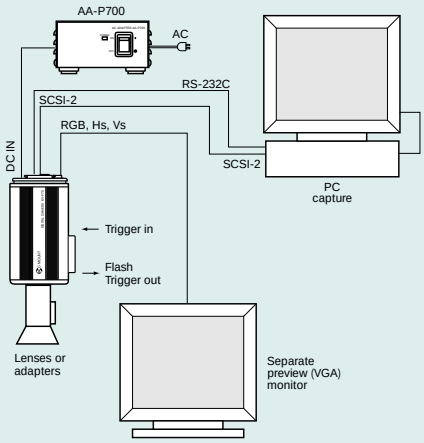
SYSTEM CONFIGURATIONS



Direct PC 'KY-SCSI' Capturing System

Via the SCSI terminal, high resolution SXGA images can be captured directly to a PC.

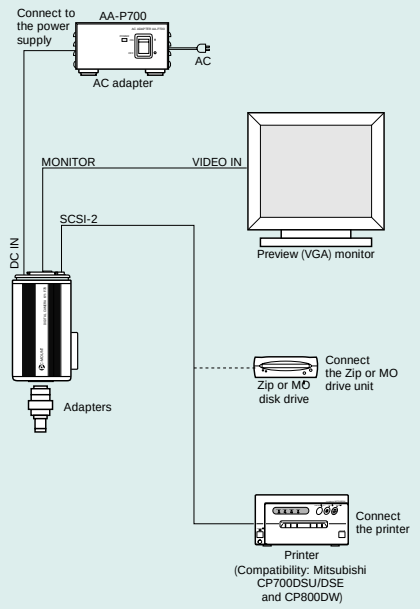
- The camera can be controlled via the PC. In this system the PC is the SCSI host and the camera is the SCSI peripheral.
- Images captured to a PC may be processed and manipulated in application software JVC 'KY-SCSI' (bundled).
- JVC 'KY-SCSI' provides all control for KY-F70BU.
- The Preview Mode is live colour but without full motion.



Direct PC 'TWAIN32' Capturing System

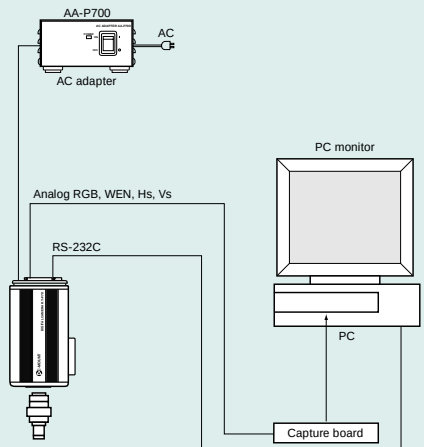
Via the SCSI terminal, high resolution SXGA images can be captured directly to a PC. Separate VGA monitor preview allows selection of the images.

- The camera can be controlled via the PC. In this system the PC is the SCSI host and the camera is the SCSI peripheral.
- Images captured to a PC may be processed and manipulated in application software such as Photoshop®.
- To run this system, the JVC camera remote control software and the TWAIN 32 capture software need to be installed in the PC.
- Live preview available in full motion colour via VGA screen.



Direct Digital Connection for Printing or Storage

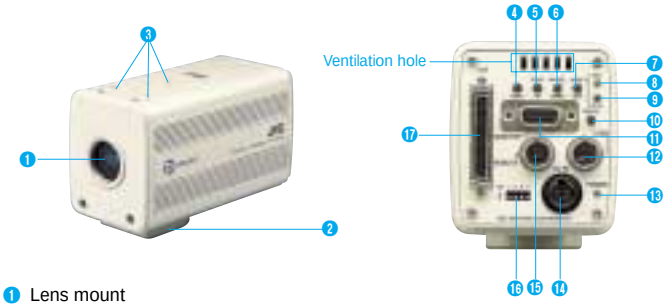
This system does not require a PC. Live colour preview on the monitor allows selection of the images to be captured to Printer or Zip drive (or MO).



PC System Using Capture Board

Via the 15-pin RGB port, SXGA resolution images may be captured with an appropriate Image Digitising Board. Live colour preview is available on the PC screen and captured images can be verified at their full resolution.

MAIN PARTS AND FUNCTIONS



1. Lens mount
2. Camera mounting bracket
3. Locking screws for the camera mounting bracket (M2.6 x 6mm, 3 units)
4. MENU button
5. SEND/UP button
6. AW/SEL/DOWN button
7. MODE/SET button
8. REC mode lamp
9. PLAY mode lamp
10. FREEZE button
11. MONITOR output terminal (D-sub 15-pin, female)
12. LENS connection terminal
13. POWER display lamp
14. DC IN power input terminal (Mini DIN 8-pin, female)
15. REMOTE terminal (Metal 10-pin, female)
16. Dip switches
17. SCSI terminal (Half-pitch 50-pin)

AVAILABLE SOFTWARE

JVC Proprietary software:
- SCSI Direct Control & Capture Software 'KY-SCSI' (Bundled)
- TWAIN 32 Capture Software (Bundled)
- RS-232C Camera Control Software (Free software)

SYSTEM REQUIREMENTS FOR PC

- CPU: Pentium® 166 MHz or faster
- At least 20 MB of RAM
- At least 10 MB of available hard-disk space
- Serial port (RS-232C)
- SCSI-2 board (Adaptec AHA-2940AU recommended)
- VDU with 16,7 m colours
- Floppy disk drive
- Windows®95, Windows®98, Windows®NT 4.0
- TWAIN graphic software such as Adobe® Photoshop® installed

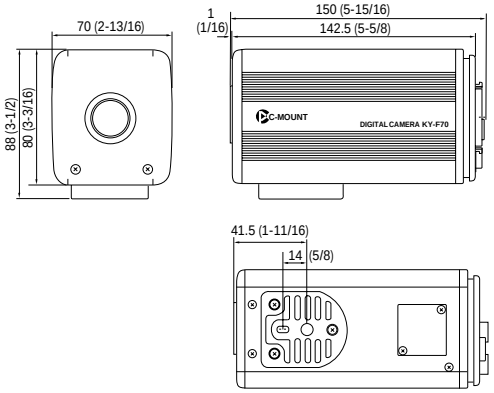
*Windows®95, Windows®98, Windows®NT 4.0, Adobe® Photoshop® and Pentium® are registered trademarks.

SPECIFICATIONS

Image device	1/2-inch Interline Transfer CCD x 3 in co-site array
Scanning	Progressive
Total pixels	4.35 million (3 x 1.45 million) pixels
Effective pixels for CCD	1.45 million pixels (H: 1,392 x V: 1,040)
Output pixels	1360 x 1024 square pixels
Aspect ratio	4:3
Lens mount	1/2-inch C mount
Output signal (Analogue and SCSI)	SXGA 1360 x 1024 pixels 7.5 frames/sec.
Preview Modes (Analogue)	VGA: 640 x 480 pixels 60 frames/sec. (Image refresh rate 7.5 frames/sec.) VGA: 640 x 480 pixels 60 frames/sec. (Image refresh rate 30 frames/sec., vertical resolution: 240 lines)
Digital interface	SCSI-2 50P half-pitch SCSI connector
Analogue output	R/G/B 0.7 V(p-p) 75 ohms each
Sync output	Hs/Vs 3 V(p-p) (low active)
Image memory	5 frames (4 frames in SXGA analogue mode)
Sensitivity	ISO100
Quantisation	10 bit in 8 bit out
White balance	Auto and manual
White paint	Manual, flare compensation, dynamic shading
Gain	ISO100, 200, 400 (0 dB, +6 dB, +12 dB)
Electronic shutter	4 secs to 1/2000th sec (in 16 steps), V.SCAN and EEI
Operating temperature	0 — 40°C
Input voltage	DC12V
Power consumption	Approx. 15W
Weight	Approx. 850g (1.9 lbs.)
Dimensions (W x H x D)	70 x 80 x 150mm 2-13/16 x 3-3/16 x 5-15/16 inches
Medical approval	IEC601-1 Conformed with AA-P700EK/EG UL-2601 Approved with AA-P700MDU

DIMENSIONS

Unit: mm (inches)



OPTIONS

AA-P700
AC Power Adapter
AA-P700EK (IEC601-1 Conformed)
AA-P700EG (IEC601-1 Conformed)
AA-P700MDU (UL-2601 Approved)
AA-P700U (General use)

KM-F700U
SXGA Scan Rate Converter

RECOMMENDED ACCESSORIES

Printers:
- **Mitsubishi CP800DW**
- **Mitsubishi CP700DSU/DSE**
- **Mitsubishi CP770DW**

Photo: CP800DW

S14x7.3DA-D24
14:1 Power Zoom Lens
(Fujinon lens)

JVC
VICTOR COMPANY OF JAPAN, LIMITED

DISTRIBUTED BY

Design and specifications subject to change without notice.

Certificate No. EC96J1049

ISO9001/No. FM26586

■ The Hachioji Plant of Victor Company of Japan, Ltd., has received ISO14001 Certification under the global standard for environmental management.

Printed in Japan
KCN-1788
CEKYF70BNK0101