

JVC[®]

PROFESSIONAL

1/3" CCD DSP COLOR VIDEO CAMERA

TK-C1460U

(24V AC/12V DC)

High-sensitivity Color/B&W Camera with Auto Infrared Switching for 24-hour Surveillance

0.4 Super LoLux™
lux



Shown with optional lens

- Day and Night surveillance with auto switching (Color/B&W shooting)
- 480 lines of horizontal resolution
- DSP with Extended Dynamic Range
- Automatic Motion detection with Alarm signal output
- 10X digital zoom function
- Minimum illumination of 0.0125 lux (32X slow shutter)
- RS-422A/RS-485 remote control capability for camera setting
- ATW/AWC white balance
- Auto/Manual image correction with backlight compensation

Auto-Switching Color/B&W — Day/Night Shooting — with Extended Dynamic Range

JVC's TK-C1460U is the 24-hour surveillance camera with a truly IR shooting capability. It captures perfect color pictures in all lighting conditions—when brilliant sunlight lights up subjects and casts dark shadows that cannot be penetrated by a conventional camera, or when the lights fades to a mere 0.025 lux and subjects are barely visible to the naked eye. Then, in total darkness, the rugged and reliable TK-C1460U automatically switches over to B&W shooting mode and snaps on, to provide around-the-clock surveillance capability. Zoom lens and motion detector complete the ideal security package, which can be configured for individual applications or integrated into a multi-camera system.



■ 1/3-inch Interline Transfer (IT) CCD with Super LoLux 0.4 lux at color (High Quality)

JVC's new-generation 1/3-inch IT CCD (768 (H) x 494 (V)), supported by JVC's exclusive Super LoLux technology, the TK-C1460U can shoot in low ambient light to 0.4 lux (F1.2, 25%, AGC 20dB) and at 0.0125 lux (32X slow shutter) minimum illumination.

■ Infrared Shooting

The TK-C1460U has an IR shooting capability. When it is switched to B&W on the camera can shoot in complete darkness and gather crisp black and white images. The infrared illumination mode can be set either through the camera's menu or remotely.

Caution: Attach a lens with an IR capability when using the IR lamp.

■ Auto/Manual Color/B&W Switching

When darkness falls, the TK-C1460U automatically switches from color to B&W shooting modes. So users can capture clear images 24 hours a day. Switching can be selected by three different signal levels for Auto or Manual by external trigger.

■ Extended Dynamic Range

The camera's innovative Digital Signal Processor (DSP) features Extended Dynamic Range (ExDR), which lets users capture images at a location with both dark and bright areas. Bright portions in the shooting area are shot with a high-speed shutter exposure, while dark portions are shot with normal exposure. Both images are read and synthesized to create a single image that includes distinguishable bright and dark portions. So no detail is lost.

■ RS-422A/RS-485 Terminals

RS-422A/RS-485 Terminals ensure multi-system remote control compatibility.

■ Motion Detector

A built-in programmable motion detector can detect movement inside the area covered by the camera and send out an alarm signal.

■ Full Genlock

INT/EXT (Full Genlock) expands possible applications using BB or VBS (BNC) sync input connectors.

■ White Balance

White balance modes—ATW and AWC (manual with paint)—ensure optimum white balance under a wide range of color temperatures.

--- MENU ---	
> SYNC ADJUST..	
ALC SETTINGS..	
VIDEO ADJUST..	
MODE SELECT..	
MOTION DETECT..	
COMMUNICATION..	
FACTORY SETTINGS..	

--- VIDEO ADJUST ---	
> WHITE BALANCE	ATW
COLOR LEVEL	NORMAL
ENHANCE LEVEL	NORMAL
PEDESTAL LEVEL	NORMAL
AUTO BLACK CTL	OFF

--- MOTION DETECT ---	
> MODE	OFF
LEVEL	NORMAL
AREA EDIT..	
ALARM TIME	10s
DEMONSTRATION..	

---WHITE BALANCE CONTROL---	
> AWC SET..	
R :	B
Mg:	G

--- ALC SETTINGS ---	
> IRIS LEVEL	NORMAL
AVERAGE PEAK	8.2
SHUTTER (ExDR)	NORMAL
AGC MODE	20dB
SENSE UP	OFF
PRIORITY	MOTION
BLC	EDIT 1
B&W/COLOR MODE	

--- SHUTTER (ExDR) ---	
> SHUTTER SPEED	1/120
FAST LIMIT	---
EXDR LEVEL	---
M.ExDR SPEED	---

Switching Color ↔ B&W [Auto/Manual Selectable]

TK-C1460U is provided with three switching modes (two-automatic and one-manual mode) between color and B&W for 24-hour unattended surveillance. Three switching modes are available for various installation conditions such as different lighting conditions.



Switching Color ↔ B&W [MANUAL MODE]

- Control the switching timing via AUX terminal (to set the IR ON/OFF mode in the menu)
- OPEN: COLOR mode, CLOSE: B&W mode

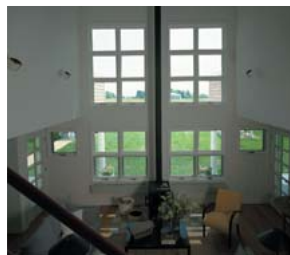


Auto Mode (Color⇒B&W, B&W⇒Color)

- Notes:**
- It is recommended to adjust the backfocus setting for proper operation, when an infrared compatible lens is used in darkness with infrared illumination.
 - It is recommended to use manual switching from B&W infrared to color shooting when there is a sudden change in lighting conditions; for example, momentary direct exposure to a car's headlamps. It is also recommended to use an external trigger when using the B&W mode.
 - Due to optical hysteresis, the conditions from color to B&W and from B&W to color are different.
 - For AUX terminal, B&W if AUX input is closed, color if open.

Extended Dynamic Range Mode (ExDR Mode)

- These images are sample images output in an extended dynamic range. So, actual images may vary according to various shooting conditions.



At high speed shutter



At normal speed shutter



ExDR mode

■ Camera ID

The TK-C1460U features a built-in camera ID system for use when building a multi-camera surveillance system.

■ Automatic Electronic Shutter (AES)

The powerful AES of the TK-C1460U increases possible applications with shutter speeds ranging from 1/60~1/10,000 second, ensuring correct exposure under any lighting conditions. In auto mode the camera adjusts shutter speed according to ambient light. Manual setting ensures blur-free shooting of fast-moving objects.

■ Video Out/Y/C Output Connectors

The TK-C1460U comes with connectors for composite video out signals, BB or VBS (BNC) sync input, VBS (BNC) output, as well as Y/C (S-terminal, 4-pin) output.

■ Simple Menu-driven Operation

A simple menu-driven operation lets users set parameters including IRIS level, ENHANCE level, AGC level, ATW/AWC, H.PHASE/SC phase, AGC ON/OFF, and L.L. phase.

■ Backlight Compensation

The Backlight Compensation function assures clear reproduction of foreground subjects with a sense of depth against strong back-light. Four fixed and two editable, metered areas are available.

■ Accepts C/CS Mount IR-Compatible Lenses

The TK-C1460U is C/CS-mount lens compatible, which allows a wide array of infrared-compatible lens to be mounted.

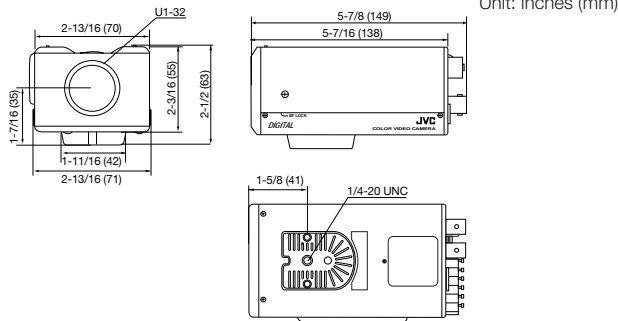
■ AC 24V/DC 12V Power Supply

The TK-C1460U can be powered by AC 24 V (50 Hz/60 Hz)/DC 12 V (550 mA) sources.

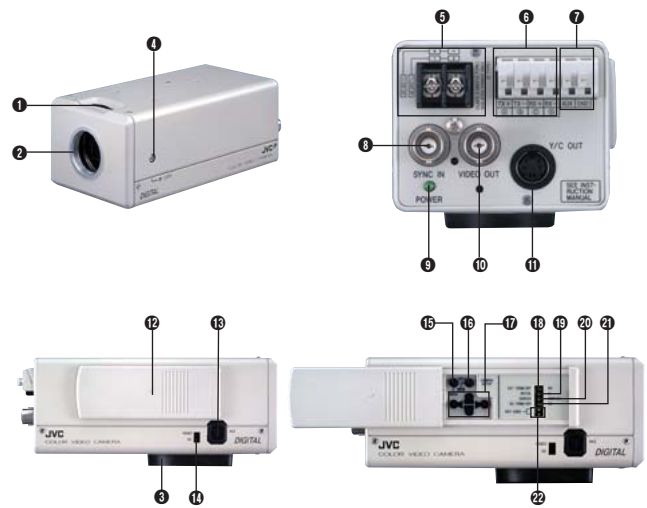
Specifications

Signal system	NTSC
Image device	1/3" IT CCD, 768 (H) x 494 (V)
Sync system	Internal, Line Lock, Full Genlock
Scanning frequency	15.734 kHz (H), 59.94 Hz (V)
Horizontal resolution	480 TV lines
Video output	Composite video signal, 1V(p-p), 75 ohms (BNC)
Y/C output	Y/C video signal (4-pin) Y: 0.714V(p-p), 75 ohms C: 0.286V(p-p), 75 ohms
Video S/N ratio	50 dB (AGC OFF)
Minimum required illumination	
at Color	0.8 lux (Typical) (F1.2, AGC 20dB, 50% video) 0.4 lux (Typical) (F1.2, AGC 20dB, 25% video) 0.2 lux (Typical) (F1.2, AGC 20dB, 25% video, 2X sense-up) 0.0125 lux (Typical) (F1.2, AGC 20dB, 25% video, 32X sense-up)
at B&W	0.02 lux (Typical) (F1.2, AGC 20dB, 50% video) 0.01 lux (Typical) (F1.2, AGC 20dB, 25% video) 0.005 lux (Typical) (F1.2, AGC 20dB, 25% video, 2X sense-up) 0.0003 lux (Typical) (F1.2, AGC 20dB, 25% video, 32X sense-up)
Communication	RS-422A or RS-485 (switchable) 9600 bit/s
Lens mount	C/CS mount
Power requirement	AC 24 V (60 Hz), DC 12 V
Power consumption	6.0 W
Operating temperature range	14°F to 122°F/-10°C to 50°C 32°F to 104°F/0°C to 40°C (recommended)
Weight	1.5 lbs. (640 g)
Accessories	4P plug x 1, Ferrite core x 1, Instructions x 2

Dimensions



Controls, Connectors and Indicators



- 1 BACK FOCUS adjustment
- 2 Lens mount (C or CS)
- 3 Camera mounting bracket
- 4 BACK FOCUS locking screw
- 5 [DC 12V, AC 24V] Power input terminals
- 6 [TX+ (A), TX- (B), RX+ (C), RX- (D)] Control signal connection terminals
- 7 [AUX, GND] Select (Motion detection output or B&W/Color switching)
- 8 [SYNC IN] Sync signal input connector
- 9 [POWER] Power indicator lamp
- 10 [VIDEO OUT] Video signal output connector
- 11 [Y/C OUT] Y/C output connector
- 12 Cover
- 13 [IRIS] Iris selector
- 14 [VIDEO/DC] Iris selector switch
- 15 [MENU] Menu button
- 16 [SET/AWC] Set. auto white control button
- 17 Up-and-down, left-and-right button
- 18 [EXT.TERM-ON/OFF] Terminal ON/OFF switch of external synchronization signal
- 19 [INT/GL, LL] Selector switch for synchronizing system
- 20 [DUPLEX, SIMPLEX] Selector switch for transmission system
- 21 [RX, TERM-ON/OFF] RX signal terminal ON/OFF switch
- 22 NOT USED

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