3CCD
PROGRESSIVE SCAN
VGA COLOR CAMERA

Toshiba IK-TF5C Instruction Manual

3 ccd camera

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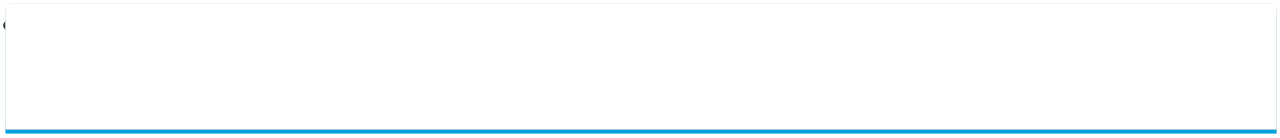

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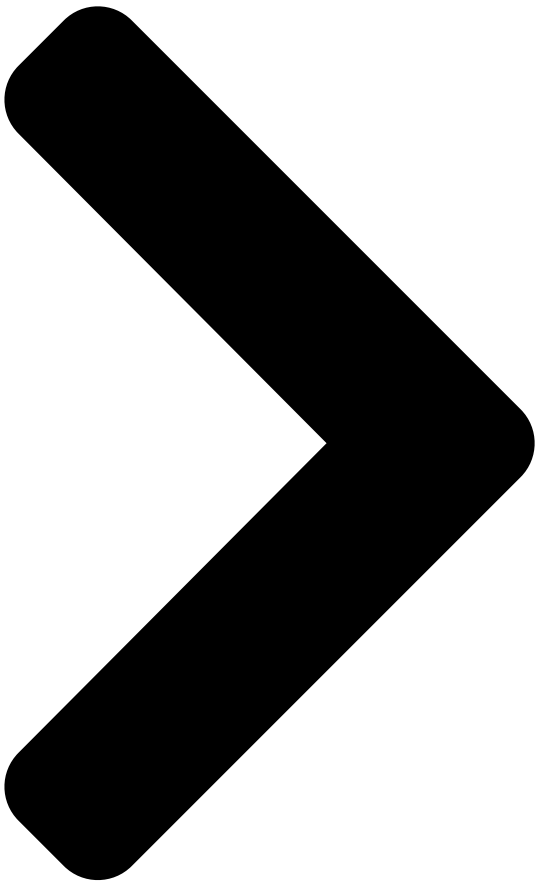

3 CCD CAMERA

IK-TF5C

TOSHIBA

FCC NOTICE

This equipment has been tested and found to comply with the limits for a Class A digital device, pursu-
ant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against
harmful interference when the equipment is operated in a commercial environment. This

equipment
generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance
with the instruction manual, may cause harmful interference to radio communications. Operation of this
equipment in a residential area is likely to cause harmful interference in which case the user will be
required to correct the interference at his own expense.

USER-INSTALLER CAUTION: Your authority to operate this FCC verified equipment could be voided if
you make changes or modifications not expressly approved by the party responsible for compliance to
Part 15 of the FCC Rules.

This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe A est comforme à la norme NMB-003 du Canada.

Following information is only for EU-member states:

The use of the symbol indicates that this product may not be treated as household waste. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. For more detailed information about the take-back and recycling of this product, please contact your supplier where you purchased the product or consult.

INSTRUCTION MANUAL

For Customer Use

Enter below the Serial No. which is located on the bottom of the cabinet. Retain this information for future reference.

Model No.: IK-TF5C

Serial No.:

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Related Manuals for Toshiba IK-TF5C

Security Camera Toshiba IK-TF7C Instruction Manual

3 ccd camera (36 pages)

Security Camera Toshiba IK-TF9C Instruction Manual

3 ccd camera (32 pages)

Security Camera Toshiba IK-TF9C Specifications

3-mega pixel 3 ccd color camera (2 pages)

Security Camera Toshiba IK-TU40A Instruction Manual

Toshiba 3 ccd color camera instruction manual (31 pages)

Security Camera Toshiba IK-TU40A Instruction Manual

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Security Camera Toshiba IK-TF7 Instruction Manual

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Security Camera Toshiba IK-TF5 Instruction Manual

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Security Camera Toshiba IK-TF2 Instruction Manual

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Security Camera Toshiba IK - TF1 Instruction Manual

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Security Camera Toshiba IK-TF1 Instruction Manual

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Security Camera Toshiba IK - TF7H Instruction Manual

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Security Camera Toshiba ik-tf7p2 Instruction Manual

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Security Camera Toshiba IK-TF5P2 Instruction Manual

3 ccd color camera (40 pages)

Security Camera Toshiba IK-TF9P Service Manual

(56 pages)

Security Camera Toshiba IK-TF5P Service Manual

(56 pages)

Security Camera Toshiba IK-DP20A Instruction Manual

Toshiba security camera user manual (36 pages)

Summary of Contents for Toshiba IK-TF5C

Page 1: Instruction Manual

Enter below the Serial No. w h i c h i s l o c a t e d o n t h e bottom of the cabinet. Retain this information for future ref- erence. Model No.: IK-TF5C Serial No.:...

Page 2: Safety Precautions

SAFETY PRECAUTIONS Safety icons This manual contains safety instructions that must be observed in order to avoid potential hazards that could result in personal injuries, damage to your equipment, or loss of data. These safety cautions have been classified according to the seriousness of the risk, and the icons highlight these instructions as follows: Indicates a

potentially hazardous situation which, if not avoided, could result in death or serious injury.

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5. Repairs or modifications made by the user or caused to be made by the user and carried out by an unauthorized third party. 6. Notwithstanding the foregoing, Toshiba’s liabilities shall not, in any circumstances, exceed the purchase price of the product.

Page 4: Table Of Contents

TABLE OF CONTENTS 1. CAUTIONS ON USE AND INSTALLATION ... 5 2. COMPONENTS ... 5 3. ITEMS CONTROLLED BY USING ON SCREEN DISPLAY ... 6 4. NAMES AND FUNCTIONS ... 7 5. CONNECTION ... 8 5. 1 Standard Connection ... 8 5.

Page 5: Cautions On Use And Installation

1. CAUTIONS ON USE AND INSTALLATION • Carefully handle the units. Do not drop, or give a strong shock or vibration to the camera. This may cause problems. Treat the camera cables carefully to prevent cable prob- lems, such as cable breakdown and loosened con- nections.

Page 6: Items Controlled By Using On Screen Display

3. ITEMS CONTROLLED BY USING ON SCREEN DISPLAY Item MODE E. TRG MANU speed Syncro. Partial read OFF scan. Partial read 120fps Partial read 180fps Partial read Trigger (1P SNR/SR) Trigger (PW SNR/SR) exposure time MODE MANU MODE Color temperature MANUAL R GAIN MANUAL B GAIN Master pedestal...

Page 7: Names And Functions

4. NAMES AND FUNCTIONS Prism faceplate [Front] 1 Prism faceplate The protection cap is attached on the lens mount portion. After removing the cap, mount the lens. Be careful not to scratch or touch the optical area. 2 DISP button Used when switching the display.

Page 8: Connection

5. CONNECTION 5. 1 Standard Connection Lens IK-TF5C Less than 4 mm 5. 2 Cautions on Connection • When connecting the camera cables, unplug the power source of the camera and the other equipment connected. • We suggest using a C mount lens made for a 3CCD camera.

Page 9: Operation

6. OPERATION 1 Refer to the item " 5. CONNECTION", connect each equipment correctly. 2 Turn on the connected equipment and the power source of the camera. 3 Point the lens at the object, operate the lens iris adjustment, focus adjustment, etc.. 4 Refer to the item "6.1 White Balance", operate the adjustment.

Page 10: Gain

Result displayed AWB NG Automatic white balance adjustment cannot be performed because the NOT AVAILABLE shutter speed mode is E.TRG mode. AWB NG Automatic white balance adjustment cannot be performed for other reasons. Such as no white area is included in an object, etc. 2 MANU (Manual white balance) •...

Page 11: Mode Setting By On Screen Display

7. MODE SETTING BY ON SCREEN DISPLAY Various settings can be controlled on the unit by using the on screen menu displayed on the monitor. The contents once set are memorized even if the power source is turned off, so it is unnecessary to set again when using the unit next time.

Page 12: Menus

7. 2 Menus • Select the menu to change the setting by referring the item "7.1 Using the Menus".) • When the [MENU UP], [MENU DOWN] buttons are pushed, the "→" on the screen moves up and down. Move the "→" to the item to change. Note: When performing the mode setting in the menu display while selecting ON in "PART"...

Page 13: (1. 2) Changing Each Setting In

(1. 2) Changing each setting in SS (synchro. scan) mode Move up down Set by pushing By pushing DATA UP, DOWN MENU UP, DOWN -- SHUTTER -- MODE PART <MODE = SS> (a) Changing the shutter speed setting 1 Set the "→" to SS by pushing [MENU UP], [MENU DOWN]

buttons. 2 Select the shutter speed by pushing [DATA UP], [DATA DOWN] buttons.

Page 14: (1. 3) Changing Each Setting In

(1. 3) Changing each setting in E.TRG mode The E.TRG has five modes; 1P SNR, 1P SR, PW SNR, PW SR, RR. First set the "→" to MODE and select E. TRG, then set the "→" to E.TRG and select the desired E.TRG mode. (1.

Page 15: (1. 3. 2) Changing Each Setting In 1P Sr Mode

(1. 3. 2) Changing each setting in 1P SR mode Move up down Set by pushing By pushing DATA UP, DOWN MENU UP, DOWN -- SHUTTER -- MODE E.TRG E.TRG 1P SR TRG.P EXP. 16ms PART <MODE = E.TRG E.TRG = 1P SR> (a) Changing the polarity of inputting trigger pulse setting 1 Set the "→"...

Page 16: (1. 3. 3) Changing Each Setting In

(1. 3. 3) Changing each setting in PW SNR mode Move up down Set by pushing By pushing DATA UP, DOWN MENU UP, DOWN -- SHUTTER -- MODE E.TRG TRG.P PART <MODE = E.TRG E.TRG = PW SNR> (a) Changing the polarity of inputting trigger pulse setting 1 Set the "→"...

Page 17: (1. 3. 4) Changing Each Setting In

(1. 3. 4) Changing each setting in PW SR mode Move up down Set by pushing By pushing DATA UP, DOWN MENU UP, DOWN -- SHUTTER -- MODE E.TRG E.TRG PW SR TRG.P PART <MODE = E.TRG E.TRG = PW SR> (a) Changing the polarity of inputting trigger pulse setting 1 Set the "→"...

Page 18: (1. 3. 5) Changing Each Setting In

(1. 3. 5) Changing each setting in RR mode Move up down Set by pushing By pushing DATA UP, DOWN MENU UP, DOWN -- SHUTTER -- MODE E.TRG PART <MODE = E.TRG E.TRG = RR> (a) Changing the partial scanning setting 1 Set the "→"...

Page 19: (3) Wht Bal (White Balance)

(3) WHT BAL (White balance) WHT BAL has two modes; AWB, MANU. Set the "→" to MODE, push the [DATA UP], [DATA DOWN], and select mode among AWB, MANU. (3. 1) Changing each setting in AWB (Automatic White Balance) mode Move up down Set by pushing By pushing...

Page 20: 4) Process

(4) PROCESS Move up down Set by pushing By pushing DATA UP, DOWN MENU UP, DOWN -- PROCESS -- M.PED R.PED B.PED SHAD. MANU (4. 1) Changing master pedestal 1 Set the "→" to M. PED by pushing [MENU UP], [MENU DOWN] buttons. 2 Set the master pedestal by pushing [DATA UP], [DATA DOWN] buttons.

Page 21: 5) Sync

(5) SYNC When an external sync signal is input, the display menu changes from INT (internal sync) to EXT (external sync) automatically. Move up down Set by pushing By pushing DATA UP, DOWN MENU UP, DOWN -- SYNC -- MODE H PHASE (5.

Page 22: 7) Setting To Factory Setting Status

(7) Setting to factory setting status All the settings can be returned to the factory default status (preset status). (1) If characters are displayed on the screen, press the [DISP] button to disable the character display. (2) Push [MENU DOWN] and [DATA DOWN] buttons simultaneously for approx. 1 second. (3) The preset operation starts.

Page 23: 3) Using The Unit With External Sync Signal

(3) Using the unit with external sync signal When adjusting H (horizontal) phase refer to the item "7.2 (5) (5.1) Adjusting horizontal phase". (3. 1) H (horizontal) phase adjustment Observe the external sync signal and the LVAL signal output waveform of the unit with a dual trace oscilloscope, and ad- just H phase so that the H phases match.

Page 24: Ext Trig (External Trigger)

7. 5 EXT TRIG (External trigger) Charge begins to accumulate after the trigger input to CC1 of the DIGITAL terminal, and 1 frame images are output. There are five modes: 1P SNR, 1P SR, PW

SNR, PW SR, RR. (1) 1P SNR (1 Pulse Trigger Sync Non Reset) Charge begins to accumulate after the trigger input to CC1 of the DIGITAL terminal, and 1 frame images are output.

Page 25: (1. 2) 1 Pulse Trigger Sync-Non Reset

(1. 2) 1 Pulse Trigger SYNC-NON RESET Picture Output Timing (at Time of Internal Sync) Trigger* (Internal VD)* RGB data (video interval image) FVAL LVAL, DVAL 20H (Partial scanning OFF) 18H (Partial scanning 120fps) 23H (Partial scanning 180fps) *1: Externally input signal *2: Exposure time is determined by the setting of "7.

Page 26: (2) 1P Sr (1 Pulse Sync Reset)

(2) 1P SR (1 Pulse Trigger Sync Reset) Charge begins to accumulate after the trigger input to CC1 of the DIGITAL terminal, the vertical sync signal is reset and frame images are output. (2. 1) 1 Pulse Trigger SYNC-RESET Picture Output Timing Trigger* (Internal VD) RGB data...

Page 27: (3) Pw Snr (Pulse Width Trigger Sync-Non Reset)

(3) PW SNR (Pulse width trigger SYNC-NON RESET) The trigger input to CC1 of the DIGITAL terminal develops 1 frame images. (3. 1) Pulse Width Trigger SYNC-NON RESET Picture Output Timing (At Time of One-shot or Continuous External VD/Continuous External HD Input) Trigger* About 1 µs Exposure period*...

Page 28: (3. 2) Pulse Width Trigger Sync-Non Reset

(3. 2) Pulse Width Trigger SYNC-NON RESET Picture Output Timing (at Time of Internal Sync) Trigger* About 1 µs Exposure period* (Internal VD)* RGB data (video interval image) FVAL LVAL, DVAL 20H (Partial scanning OFF) 18H (Partial scanning 120fps) 23H (Partial scanning 180fps) *1: Externally input signal *2: Exposure time = Trigger pulse width + 6 µs (Valid trigger pulse width is 2 µs or greater for external trigger shutter operation.)

Page 29: (4) Pw Sr (Pulse Width Trigger Sync-Reset)

(4) PW SR (Pulse width trigger SYNC-RESET) The trigger input to the CC1 of the DIGITAL terminal develops 1 frame images. (4. 1) 1 Pulse Width Trigger SYNC-RESET Picture Output Timing Trigger* About 1 µs Exposure completion (Internal VD)* RGB data (video interval image) FVAL...

Page 30: (5) Rr (Reset Restart)

(5) RR (Reset restart) Input of an external reset-restart signal (CC4 of the DIGITAL terminal: External VD input) permits one screen of information to be output at an arbitrary timing. (5. 1) Long Term Exposure When a sufficient sensitivity is not obtained with the normal operating conditions or capturing the trail of a moving subject is desired, the reset-restart function allows high-sensitivity images by extending the exposure time.

Page 31: Partial Read

7. 6 Partial Read (1) Partial Scanning OFF (All pixels scanning) In this mode, all pixels independent signal from the DIGITAL connector is output each 1/60 second (Line order output). Video interval image 1/60s (525H) (2) Partial Scanning ON In this mode, the pixel signal of the vertical center portion from the DIGITAL connector is output.

Page 32: Input Output Signal Specificatoins

8. INPUT OUTPUT SIGNAL SPECIFICATOINS (1) HD Input Specifications 2.0 µs to 5.0 µs (3) Trigger Pulse Specifications More than 2 µs More than 2 µs (6) External HD/VD Input Phase Specifications External HD rising edge External HD The phase relationship of the external HD and VD should correspond to the center phase (i.e., the external HD falling...

Page 33: Ccd Output Waveform Timing Chart

9. CCD OUTPUT WAVEFORM TIMING CHART (1) Horizontal Output Waveform Timing Chart LVAL, DVAL 132 clk (5.38µs) 31 clk output signal Optical black Horizontal transfer portion Horizontal blanking interval 132 clk (5.38 µs) RGB data Pixel Clock (2) Vertical Output Waveform Timing Chart FVAL (636 µs) LVAL,...

Page 34: Specifications

10. SPECIFICATIONS Power supply Power consumption Pick-up system Image sensor (Effective pixels) Scanning system Scan frequency Sync system Horizontal resolution Sensitivity Minimum

illumination Lens mount Ambient temperature Ambient humidity Weight External dimension White balance Gain Output signal Sync signal output External sync input Interface Optional parts...

Page 35: External Appearance Diagram

11. EXTERNAL APPEARANCE DIAGRAM [0.20] 2-M3 Depth 3 [1.73] 12. BEFORE MAKING A SERVICE CALL Symptom No image Poor color [3.07] [0.20] [2.20] 4-M2 Depth 3 [0.98] [0.98] Items to be checked • Is the power supplied correctly? • Is the lens iris adjusted correctly? •...

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[2] You must schedule service within thirty days after you discover a defective product or part. [3] All warranty servicing of this product must be made by a Toshiba ISD Authorized Service Provider. [4] The warranty extends to defects in material or workmanship as limited above, and not to any products or parts that have been lost or discarded by user.