



# TOSHIBA

Toshiba JK-MX16A Instruction Manual

Color multiplexer



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# **TOSHIBA** Instruction Manual

16CH DIGITAL MULTIPLEXER JK-MX16

## **COLOR MULTIPLEXER**

# **JK-MX16A**

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# Summary of Contents for Toshiba JK-MX16A

[Page 1](#) Instruction Manual COLOR MULTIPLEXER JK-MX16A CAMERA SELECT DUPLEX LIVE/ 16CH DIGITAL MULTIPLEXER JK-MX16 MULTI SEQUENCE VIEW ZOOM PLAYBACK MENU Digital ALARM ENTER RESET...

[Page 2](#) WARNING This is a Class A of EN55022 product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures. INFORMATION This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules.

## [Page 3: Safety Precautions](#)

**SAFETY PRECAUTIONS** Read the following safety precautions carefully before using the product. These instructions contain valuable information on safe and proper use that will prevent harm and damage to the operator and other persons. Make sure that you fully understand the following details (indications, graphic symbols) before proceeding to the main descriptions in this manual.

[Page 4](#) Caution • Keep the followings when installing. • Do not put the product on an inflammable material such as carpet or blanket. • Do not put the product in a narrow space, since the heat generated from the product may be difficult to emanate.

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## [Page 6: Introduction](#)

(example: 2 x 2, 3 x 3, 4 x 4, etc.). Each camera is sequenced at a rate that is equal to the recording speed on the VCR up to 1/20 second. The JK-MX16A offers a wide variety of features designed to integrate with most any video surveillance system.

[Page 7](#) • VCR Bypass Function Many VCRs have on-screen displays that require a monitor in order to program the VCR. The JK-MX16A offers a VCR Bypass function that allows the user to directly view the output of the VCR enabling. This enables the user to view and program any on screen menus, which the VCR may have.

## [Page 8: Instruction In Brief](#)

Instruction in Brief Front Panel CAMERA SELECT DUPLEX LIVE/ 16CH DIGITAL MULTIPLEXER JK-MX16 MULTI SEQUENCE VIEW ZOOM PLAYBACK MENU Digital ALARM ENTER RESET 1 2 3 4 5 s d f g h Rear Panel MAIN RECORDER IN MAIN RECORDER ALARMS/TRIGGER DC 5V 1 2 3 4 5 6 7 8...

## [Page 9: Front Panel](#)

Front Panel 1 FULL SCREEN button Press to set a full screen display. 2 2x2 button Press to set a 2x2 screen display. 3 3x3 button Press to set a 3x3 screen display. 4 4x4 button Press to set a 2x2 screen display. 5 MULTI button Press to set the following types of displays: Squish screen, Vertical split screen with pan, Squash screen, Horizontal split screen with pan, 8+2 screen, 12+1 screen, and PIP screen.

[Page 10](#) button This button has multiple functions • Used during menu programming. • Used to navigate while in zoom mode. • Press together with the button to enter the CALL monitor operation mode. • Press together with the button to permit reloading of the most recently saved front panel display mode. •...

## [Page 11: Rear Panel](#)

H ALARMS/TRIGGER This connector is used for all alarm inputs, outputs, and also contains the input (REC Trigger In) for synchronizing VCR to multiplexer. If using a Toshiba time-lapse recorder, a synchronization cable is not required J CALL This is the call monitor output (BNC)

connector. This output is limited to display live full screen images.

## [Page 12: Connection](#)

(6) When alarm output contacts of this unit are to be connected to the VCR, it will be necessary to program the alarm recording duration of the time-lapse recorder to "MANUAL". The recording duration of the alarm event will be then be controlled by the dwell time that is programmed in the JK-MX16A. (Refer to page 23 for details). - 11 -...

[Page 13](#) Video Termination Switches (When using the looping connector) The termination switches are located near the rear panel on the main circuit board. The 75 ohm termination is enabled when the switch is in the "ON" position. The factory setting of 75 ohm termination for each camera input is ON.

## [Page 14: Operation](#)

Operation Viewing the Camera Image Use the LIVE/PLAYBACK button to select the Live mode (The LED will light). Full Screen Display The camera image can be viewed in a full screen display. 1 Press the FULL SCREEN button. 2 Press the CAMERA SELECT button of the channel you wish to view. The LED of the selected channel will light at this time.

## [Page 15: Sequence Display](#)

- Squash (1) The CAMERA SELECT button can be used to switch the camera image. (2) The ZOOM button can be used to change the position at which the camera is switched.
- Horizontal split screen with pan (1) The CAMERA SELECT button can be used to switch the camera image. (2) The ZOOM button can be used to change the position at which the camera image is switched.

## [Page 16: View The Vcr Playback Image](#)

2 To exit the VCR direct mode, press the LIVE/PLAYBACK button one more time. VCR Playback Adjustment Function The JK-MX16A has the VCR Playback Adjustment function for offering users improved image quality and synchronization. • Adjustment (1) Use the LIVE/PLAYBACK button to select the playback mode (and LED will go off).

## [Page 17: Using The Duplex View Function To Simultaneously View The Camera Image And The Vcr Playback Image](#)

Using the DUPLEX VIEW Function to Simultaneously View Live Camera Images and VCR Playback Images. (1) To view the VCR playback image while viewing the live camera image... 1 Press the LIVE/PLAYBACK button and select the Live mode. (The LED will light). 2 Press the DUPLEX VIEW button.

## [Page 18: Day/Night Function](#)

- 8+2 screen Monitor Screen The Duplex View Window will be in position A. \* When a recording is made and the multiplexer is programmed in "High Density" mode, the 8+2 screen is not available. Monitor Screen • 12+1 screen The Duplex View Window will be in position A.

## [Page 19: Set Up](#)

SET UP The JK-MX16A Set Up is accomplished through its on-screen menus. To enter the menu system, press the MENU button. The display will then show the main menu. Selection from the various items of the menu is done with the , ENTER, and MENU buttons.

## [Page 20: Setting Contents](#)

Setting Contents 1. System Set-up 1.1 Time & Date Functions System Set-up Hour Format Time & Date Functions Font Color Sets the hour display format. Comm. Set-up Save/Recall 1 24H : 24-hour display Default 2 AM/PM : 12-hour display :Select ENTER:Next Date Format MENU:Return...

## [Page 21: Camera Functions](#)

1.2 Font Color The color of the characters on main monitor screen can be changed. Font Color 1 White 2 Yellow 3 Cyan 4 Green 5 Magenta 6 Red 7 Blue White Yellow Cyan Green Magenta Blue :Set-up MENU:Accept & Return 1.3 Comm.

## [Page 22: Recording Set-Up](#)

Title View VCR PB Sets the title display of the VCR playback screen On/Off. Settings can be made for each channel, independently. 1 Off : Does not display the title on the VCR playback screen. 2 On : Displays the title on the VCR playback screen. Title Position Sets the position at which the title of the camera live screen (i.e., main monitor output) will be displayed (Full screen display only).

[Page 23](#) 3.2 Recording Function Sets the VCR recording mode and time mode. Recording Function Normal mode: Normal mode: time: 1 SP : SP mode (Example, 2 hour & 12 hour modes are SP modes). 2 EP : EP mode (Example 6 hour, 18 hour mode, & 24 Hour Virtual Real-time 120H 168H 240H...

## [Page 24: Alarm Functions](#)

3.5 High density Mode Sets the multiplexer into high-density mode. When high-density mode is selected, High density Mode the multiplexer compresses two fields of information into one field thereby doubling Normal High density the refresh rate. While the refresh rate is improved when high-density mode is enabled, there is a slight loss in image quality caused by image compression.

[Page 25](#) Call Mon Callout When an alarm signal is activated, the call monitor output displays the alarmed camera channel. Each camera channel can be programmed independently. 1 Off : Does not callout alarmed camera to call monitor when alarm signal is activated. 2 On : Calls out alarmed camera to call monitor when alarm signal is activated.

[Page 26](#) Motion Size Sets the size of the cell that detects the motion. Settings can be made for each channel, independently. 1 S : Small cell size 2 M : Medium cell size 3 L : Large cell size Motion Area Sets the detection area of the motion detection.

[Page 27](#) Motion Dwell Time Sets the alarm dwell time when the motion detection is used as an alarm. Settings can be made for each channel, independently. 10 sec 180 sec 01 sec 1 1 to 180 sec : Holds the alarm operation for the set time only. 2 Inf : Press the ALARM RESET button or maintain the alarm operation until the power is switched off.

## [Page 28: Multi-View Functions](#)

5. Multi-view Functions 5.1 PIP #1 Multi-view Functions Sets the display position of sub screen 1 for picture-in-picture (PIP) display. There PIP #1 PIP #2 will not be a PIP display when "None" has been selected. 8+2 Fix Cam Select Duplex position 1 Top-Left 2 Top-Right...

## [Page 29: Sequence Set-Up](#)

6. Sequence Set-up 6.1 Call Mon Sequence Sequence Set-up The camera sequence dwell time and camera selection that's displayed in the call Call Mon Sequence monitor can be programmed in this menu. By pressing the ENTER button while in the Main Mon Sequence 2x2 Sequence Call Mon Sequence menu, all connected cameras will be added to the call monitor...

## [Page 30: Security Set-Up](#)

6.5 8+2 Sequence The camera sequence dwell time and camera selection that is displayed in the 8+2 Sequence upper left channel of an 8+2 display can be programmed in this menu. By 1:ch1 07:ch7 12:ch12 pressing the ENTER button while in the 8+2 Sequence menu, all connected 2:ch2 8:ch8 13:ch13...

## [Page 31: Schedule Setting](#)

Schedule setting The schedule management function serves to operate the Day/Night or alarm operations daily for only a specific time over a period of one week. Setting of the schedule is done on the schedule setting screen by setting the starting time and ending time. Setting Method (1) Press the button on the schedule setting screen and select the day.

## [Page 32: Factory Default Settings](#)

Factory Default Settings The factory default settings of menu are as indicated below. When the default settings are set, all items except for the time input are set to the condition of the factory default settings. Item Factory default setting 1.

[Page 33](#) Factory Default Settings (continued) Item Preset (at time of factory shipping) 4.

Alarm Functions 4.1 Alarm Rec Priority Level : 3 4.2 Alarm Input Alarm Type N.O ( All channel )  
Main Mon Callout On ( All channel ) Main Mon Display Full Call Mon Callout On ( All channel )

### [Page 34: Alarm/Trigger Connector And Com Connector](#)

ALARMS/TRIGGER Connector and COM Connector ALARMS/TRIGGER Connector See the Pin Configuration Table below for the functions of the various pins. Terminal Board DB 37 Note: When using the Terminal board When using the Terminal board, please fix the provided Ferrite core to the cable. Ferrite core Connector Pin Arrangement (DB37 pin connector)

[Page 35](#) COM Connector This is the RS-232C/RS-422 control connector. RS-232C or RS-422 settings are made using the internal switches of this unit (Factory setting is RS-232C). Remote control operation of this unit and changes of the setting contents can be performed by serial communications. For details, please consult your dealer.

### [Page 36: Signal Levels Of Input/Output Terminals](#)

Signal Levels of Input/Output Terminals Input/Output Terminal Signal Level Internal Circuit (Equivalent) DC3.3V 100ms or greater 3.3V To CMOS input • Alarm Input Inside Negative logical the main unit signal input DC3.3V 32ms or greater DC5V 10ms or greater • Moving picture 4.7k trigger input Inside...

### [Page 37: Troubleshooting](#)

Troubleshooting Symptom Items to Check There is no image • Is the power plug of the AC adapter securely plugged into the power outlet? • Are the cables properly connected? Image is disturbed • Perhaps the VCR direct mode has been set? Front panel buttons don't function •...

### [Page 38: Specifications](#)

Note: Please acknowledge that we reserve the right to make changes in product performance or specifications without prior notice. Also please note that we bear no responsibility for mistakes, misprints or omissions of the instruction manual. Accessories • Instruction manual (JK-MX16A) • Quick reference guide • Terminal board • Ferrite core •...

### [Page 39: Limited Warranty](#)

LIMITED WARRANTY MULTIPLEXER The Imaging Systems Division of Toshiba America Information Systems, Inc. ("ISD") makes the following limited warranties with regard to this MULTIPLEXER ("Product"). These limited warranties extend to the Original End-User ("You[r]"). One (1) Year Limited Warranty of Labor and Parts ISD warrants that this Product will perform in accordance with specifications for a period of one (1) year from the date of purchase by the Original End-User.