# KBD4000 Multiplexer Keyboard
## FULL-FUNCTION, FIXED/VARIABLE-SPEED, JOYSTICK PTZ CONTROL

## Product Features

- Remote Controllable Multiplexer Functions
- Select up to 256 Cameras from One Keyboard Connected to a String of MX4000 Genex® Multiplexers
- Select up to 128 Cameras from a Maximum of Four Keyboards through an MX4000SVR Genex Multiplexer Server
- Joystick for Fixed-Speed and Variable-Speed Control of Pan/Tilt Units
- Preset Position and Pattern Control
- Main and Spot Monitor Control
- Digital Zoom Control on Main Monitor
- Auxiliary Operation

The **KBD4000** Keyboard is a full-function keyboard controller for the MX4000 Genex® Multiplexer and the MX4000SVR Genex Multiplexer Server.

There are two modes of operation – multiplexer mode and multiplexer server mode – depending on whether the keyboard is connected to a multiplexer or to a server.

In the multiplexer mode, a single keyboard interfaces up to 16 multiplexers that are daisy-chained together. With 9-channel multiplexers, the keyboard can control up to 144 cameras; with 16-channel multiplexers, up to 256 cameras can be controlled.

In the multiplexer server mode, up to four keyboards can be connected to a server, which interfaces up to eight multiplexers. Up to 72 cameras can be controlled with 9-channel multiplexers or 128 cameras with 16-channel multiplexers.

In addition to performing all the control functions that can be done from the front panel of the multiplexer, the keyboard also features a three-axis joystick and additional keys for full control of fixed-speed and variable-speed pan, tilt, and lens functions.

Under control of the keyboard, cameras can be viewed on the main and spot monitor outputs of the multiplexer. On the main monitor, select full screen or multiple screen (4, 9 or 16) images or picture-in-picture display. Get a closer

look with the 2X and 4X zoom feature. Use the spot monitor for control of pan/tilt and zoom functions, and to operate presets, auxiliaries, and patterns.

When used with a Genex multiplexer, the **KBD4000** Keyboard is capable of Coaxitron® control of pan, tilt, and lens functions, including setting and calling presets and patterns.(SEE NOTE ON BACK PAGE)

The keyboard provides two methods of camera addressing. One method allows selection of cameras by entering the multiplexer unit ID (1-16) followed by the desired camera (1-16). The second method allows selection of cameras by entering an incremental camera number (unit 1 = cameras 1-16, unit 2 = cameras 17-32, etc.).

The keyboard is supplied with a 25-foot (7.6 m) data cable with RJ-45 connectors for connecting the keyboard to a multiplexer or to the Local Keyboard Port of a server. One keyboard can be connected to a multiplexer or the Local Keyboard Port of a server. Three additional keyboards can be connected to the Remote Keyboard(s) Port of a server. Multiple keyboards may not be connected without a server (MX4000SVR). If using the Remote Keyboard(s) Port, a remote keyboard wiring kit (KBDKIT/KBDKIT-X) is required for each keyboard.

MULTIPLEXERS & QUADS

MULTIPLEXER, KEYBOARD CONTROL

## MODELS

KBD4000 — Full-function keyboard controller; use with Genex multiplexer and server
KBD4000V — Discontinued
KBD4000V-X — Discontinued

## ELECTRICAL

Input Voltage — 12 VAC or ±12 VDC
Power Consumption — 1 watt

## KEYBOARD COMMUNICATION

Keyboard Interface
Data — RS-485 (25-foot flat cable supplied)
Video — 1 Vp-p, 75 ohms (KBD4000V)
Connector Type
Data — RJ-45 8-pin modular (female)

## MECHANICAL

Keyboard Keypad — Mechanical
Joystick — Three-axis, vector solving, with twisting, return-to-center head
Digital Display Main/Spot — Two red seven-segment LEDs
Monitor Indicators — Two green LEDs

## GENERAL

Operating
Temperature — 20° to 120°F (-7° to 49°C)
Humidity — 10% - 90% non-condensing
Dimensions — 2.25" H x 9.50" W x 7.125" L (5.72 x 24.13 x 18.10 cm)
Weights
Unit — 2.5 lb (1.12 kg)
Shipping — 4 lb (1.81 kg)

## CERTIFICATIONS/RATINGS

◆ CE, Class B
◆ UL listed to Standard 2044
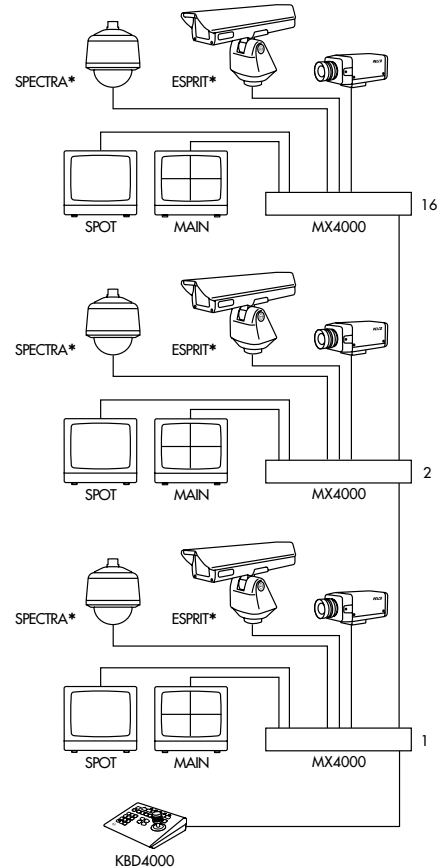◆ cUL listed to Standard CSA 22.2 No. 1-94
◆ FCC, Class B

## SUPPLIED ACCESSORIES

KBD4000 — 25-foot (7.6 m) RJ-45 data cable

## OPTIONAL ACCESSORIES

KBDKIT — Remote keyboard wiring kit. Required if using Remote Keyboard Port on multiplexer server or if extending Local Keyboard Port beyond 25 feet (7.6 m). Maximum distance of 4,000 feet (1,219 m) to last keyboard in daisy chain. Use shielded twisted pairs such as Belden 9843 or equivalent that meets RS-485 standards. (One kit for each keyboard required.)
KBDKIT-X — Same as KBDKIT except 230 VAC to 12 VAC transformer

Note: When used with 15-bit standard Coaxitron receivers (such as the CX9000 Series, the PT7700, and the ED25/27/28/29), the KBD4000 supports all pan, tilt, and lens functions, and AUX on/off. The keyboard will not set or call presets or support preset scanning.

When used with 32-bit extended Coaxitron receivers, such as Esprit™, Intercept®, Spectra®, and Legacy® LRD41C21/LRD41C22 Series, the KBD4000 supports all the functions above, including the setting and calling of presets and patterns. It will not support programming of labels for presets or patterns. If labels for presets or patterns are required, they would need to be programmed with a different control, such as the MPT9500.



MULTIPLEXER MODE

* INCLUDES BUILT-IN RECEIVER FOR CONTROL OF PAN/TILT/LENS FUNCTIONS. OTHER PAN/TILT UNITS MAY REQUIRE SEPARATE RECEIVER.