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The T460 projector controller

The JED T460/T461 projector and audio controllers offer a convenient system to control video and data projectors from a suitable place on a lectern, bench or wall near a speaker in a hall, theatre or room.

The front panel keyboard of the T460 is 76mm by 58mm, and is mounted on either a white or black Clipsal 2000 series blank power point base. Behind the window is a two-line backlit LCD screen showing system status. The T460 has an attractive white, or black, smooth escutcheon surrounding it to give an overall size of 110mm by 70mm. This covers the screw holes and can be mounted into a lectern or desk at a convenient point for the speaker to control video and data projector operations.



T460 controllers, available in both black and white

The T460 is wired to the LCD projector via an RS232 data cable, usually three wires, Tx, Rx and Gnd, although a powered CTS or DSR line is available. A CAT5 cable also allows power to be sent.

The control codes for a growing number of projectors (currently over 170) are programmed into the T460 controller, and a variety of customising set-ups can be performed on the unit via the front panel keys to select different projector makes and models, and then to name video sources from a menu and allocate them to projector input channels.

The control of audio level can be done in the projector, and audio control signals are sent to the projector along with the video source and power control signals. If a T461 audio rack is installed, it is controlled from a second RS232, T460 port. The T461 selects and controls the audio levels in step with "source select" signals sent to the video projector.

It is also possible to control other makes of audio and video switching equipment via the second RS232 channel, e.g. devices made by Extron.

If audio is not controlled from the T460, the "Volume Up/Down" keys can become "Muting On/Off" keys.

Users can set a time-out period after which the projector automatically powers down if no activity is detected on the keyboard or via the PIR. The time is adjustable from zero (disabled) to three hours.

An input is provided for the relay contact from a PIR (Passive InfraRed) detector in the room. This can be used for a reset of a time-out on the projector power, so that while people are in the vicinity the projector keeps running until manually turned off.

T461 audio attenuator/mixer

The T461 is a 1RU high 19-inch rack mount unit, with four line-level stereo RCA pairs inputs and one line-level RCA pair output. It has an RS232 input and a 240-volt IEC mains connector. 12-volt power is available to power the T460. All connections are on the rear: on the front are LED channel indicators and screwdriver adjustable prescaler trimpots.

T461 relays: screen or light control

This T461 option has eight relay contact outputs which can be used to control screen up/down functions, projector access hatch controls, scissor jack lowering actuator, room lighting preset selects, etc. The relays are also controlled via the RS232 secondary link from the T460 to the T461. The relay states are displayed on front panel LEDs. (A future, taller, T461 version could include 50W stereo audio amplifiers for complete theatre functionality.)



T461 audio switcher and attenuator, with T460s

Application

The simplicity of operation of the T460 is its major advantage when installed in locations where a number of users/teachers/lecturers who are unfamiliar with AV equipment, and without an audio-visual assistant/operator, need to run a "show".

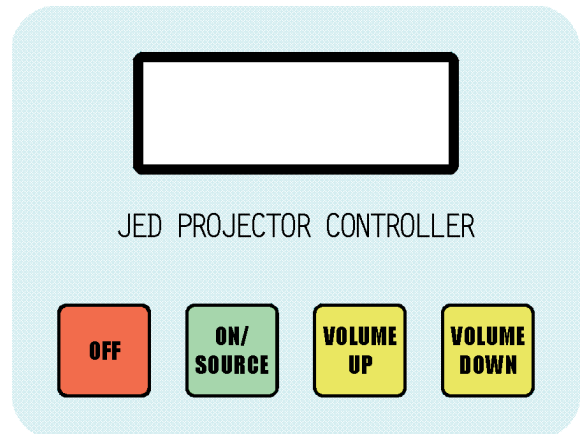
They need to power up the projector, select a source, run a video or computer presentation or demonstrate some other program, or display a feed from a document or microscope camera on the video screen, and then close the system down again. Contrast the four buttons on this unit with the 20 or 30 on some IR remote controls, each one different from room to room. This unit is identical from room to room, even with a mix of projectors.

At end of the show, a T460 controller does not walk out the door in the lecturer's pocket as IR remote controllers often do, and the batteries don't go flat!

Operation

The operation of the T460 is very straightforward:

1. Pressing the ON/SOURCE key turns the system on. The projector starts, and the LCD screen on the T460 shows the warm-up operation, either counting it down, or waiting for a signal from the projector indicating it is running. At this point the LCD screen shows the last-used signal source on the upper line;
2. If a different source is needed, keep pressing the ON/SOURCE key until the desired source is shown by name on the screen. It rolls through however many are connected in this particular installation, showing pre-selected names for the up to eight possible sources, and skipping deselected ones;
3. When running, the VOLUME UP and VOLUME DOWN keys set the desired audio level for that source. In "absolute" volume systems, or, in systems using the JED T461 audio attenuator-mixer, the last used setting is remembered channel by channel and recalled when that source is re-selected. In "incremental" systems, the projector displays the varying audio level on the screen. These keys also control "picture mute", if selected;
4. When the show is finished, pressing the OFF key ramps the audio down and turns off the projector. The proper warm-up and cool-down and lockout times are set for the projector, and countdown in seconds shows on the LCD screen until the unit goes to standby mode to wait for the next cycle.



T460 front panel and keyboard (full size)

Installation and programming

The wiring for the T460 system is very straightforward: simply connect the Serial 1, RS232 to the projector and Serial 2, RS232 to the T461, if used. Connect power (9 to 16 volts) from a plug pack (available from JED), or the T461, into the power terminals. A black or white Clipsal 2000 mounting base allows on-wall mounting, or the T460 can drop through a hole in a wall, desk or lectern surface.

Set-up is simple. A PIN number opens the menu, allowing projector choice, signal naming and configuration setting. As more projectors are added to the menu, field reprogramming from a laptop takes a couple of minutes via a serial cable and a free program. See the www site for models covered.

Futures and Options

Another version of the T460 is designed for shop windows, exhibition spaces and shopping malls, and is more "timer" orientated, where the keyboard sets operating times, days of the week, and dates.

Other configurations are possible, e.g. Using an RS485 network interface on Serial 2 to link controllers in re-configurable rooms with multiple projectors, or to network controllers for security purposes, alarming when a projector is unplugged.

For distribution details, please contact:

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