



Installing A/V systems? You need **JED Controllers!**

JED Microprocessors, Melbourne, designs and builds low cost wired remote controllers for video projectors and flat panels in classrooms, laboratories, meeting rooms, chapels, lecture theatres and places of worship. They can be built into a lectern or desk, or can wall-mount, and match standard Australian power point (Clipsal 2000) hardware.

T460: Display Functions

One of the great advantages of the JED T460 controller is the LCD display.

It shows:

- **Status:** Warm-up, Running, Cool-down, Mute/Freeze etc;
- **Current source:** DVD, Computer, Laptop, etc;
- **Screen motions;**
- **Audio Volume, numerically;**
- **Lamp and filter hours;**
- **Communications status; and**
- **Interactive setup using the LCD screen.**

Each JED T460 system has a large library on board, with 1700 code sets. It is set up on the LCD screen ... no laptop downloads are necessary at install time. Just select the projector (or flat panel) make and model, and name the eight channels. Other menu control screen times, warm-up, cool-down and running times, and relay operations for screens, lamp dimming, video switchers, etc.

T460 setups can be cloned for multi-rooms with identical setups. The T460 can be updated from JED's web site with new releases via a simple serial cable from a laptop application.

T461, T441 and T464: Extending the T440 and T460 Functionality

The **T461** and **T441** are a four and two-channel audio mixers and attenuators, which are controlled by the second serial port on the T460 and the T440. They switch the audio in step with video switching in the projector.



The T461 rack-mounted box has an option of eight relays for control of electric screens, projector droppers, room light control and external VGA and video switchers. (The **T462** is just a relay box with two or four relays.)

The **T464** is JED's Ethernet interface. It communicates with the T460 via the second serial port, and presents a "spread-sheet" format of multiple rooms, or a full-page display per room. The remote monitor is displayed on a screen in the campus tech centre, showing current status, lamp hours, etc, and also provides remote control of the room A/V electronics.



T460-M-Vol Metallic Version



T460-W-Vol (blue)



T460-W-Vol (beige)

Keyboard Operations

The **On/Source** button scrolls between up to eight sources, with each channel having "real" names, such as DVD, VCR, Computer, and Laptop on the LCD. (Users can also name channels to suit the installation. Unused channels are skipped.)

The **Volume Up** and **Volume Down** buttons control the room audio level. Audio is switched with the video and level-controlled in the projector or via a JED T461 audio controller (see left).

Audio/Video Mute is provided by pressing both volume keys together. Alternative keyboards label the right-hand keys as **Mute On / Off** or **Mute / Freeze** toggles if no audio control is needed.

Controller Benefits: Green Solutions

Without a controller in a classroom, the projector control via a hand-held device is subject to device loss, damage by dropping, or theft. Some IR remote controllers have 30 or 40 confusing buttons! With a JED mounted controller, these problems disappear!



All JED controllers have inputs for a PIR (Passive Infra-Red sensor.) This detects when everyone has left the room and turns off the projector a short time later, saving bulb life and the running power. This helps the class-room and school meet energy saving targets.

T430, T440 Low Cost Classroom Controllers:

Ideal for Interactive Whiteboards

These controllers have 2, 4, 6 or 8 buttons and signal LEDs and are targeted at simple installations, for example, with Electronic White Boards and one to five sources.

They have high quality, (rear-printed) polycarbonate keyboards to customize the installation. LEDs show the system status, with a green LED flashing during warm-up and the red OFF LED flashing during cool-down. It signals the projector and shows an RS232 "Communications OK" flash on the OFF LED at startup.

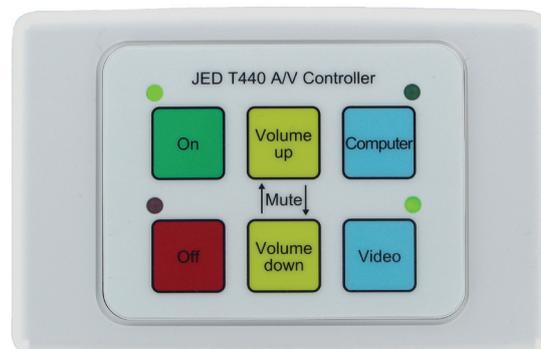
T430: An Even Simpler Controller



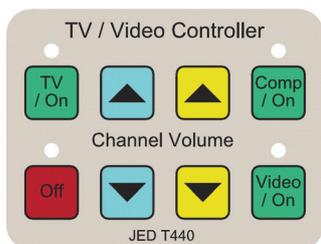
This controller has one serial port and offers a very simple system for IWB systems. (It has an output to drive the 439 USB switcher.) Two keyboards are available: KB1 just has On and Off, and KB3 (shown) allows toggling between

two sources. The PIR input provides automatic closedown when it senses the room has emptied.

See: www.jedmicro.com.au/T430.htm



T440: Eleven Different Keyboards



The T440 is very flexible, with eleven different keyboard formats available: these allow between one, and five sources, and options of mute, freeze and volume control. LEDs associated with the keys show the currently selected sources. A vertical format is also available.

The Code E (shown) controls a flat panel TV with channel switching.

T440: Simple 6-button Controller

This controller has two serial ports: one controls the projector via RS232, and the other can control audio switchers (such as the JED T441 or T461) or the 439 USB switcher (below). It has two-way communications with the projector and indicates successful connection to it by LED "blink" codes. A PIR input closes down the room.

It has direct FET drives for screen control and an IR output for projectors such as the Epsom 'S/X5 ... 8' family.

See: www.jedmicro.com.au/T440.htm

T430/T440: Simple On-site Setup

These products all use the same simple setup process: the **two lower rotary switches** on the back (right) are set-up with a screwdriver to select a projector or flat panel family. Simply set the digits, and the command strings are set up automatically from the large internal data-base of codes and options.

An **8-way DIP switch** on the back is used to set-up options. This sets up one-hit or two-hit options on the source selections, they allow swapping selections for the Video and Computer channels, and select audio control mode (via projector or via T441/T461 audio controllers).

Another switch sets 'reply' mode, in which the projector state is checked every five seconds, and the T430/T440 closes down if it detects the projector is powered down.



T439: USB A → B Switcher

The 439 is used for Interactive Whiteboards which need to be controlled from two different USB sources. Typically, in a classroom, a desk PC usually controls the IWB, but when a teacher's laptop is to be connected, the 439 switches the USB signal from PC to laptop. The 439 can be controlled by switch inputs, relay inputs and also by simple RS232 commands from either JED T440 or T460 controllers, (or other control systems.) In "auto" mode it senses a laptop being plugged in, and switches control to it.



See: www.jedmicro.com.au/USB_Switcher.htm

T440: Back View

The connectors across the bottom of the unit are: Power in, IR drive out, two screen control FET outputs, second serial port (to audio controller) and the last connector is the RS232 to the projector. At the top are switch inputs (PIR, aux) and Relay 3, which can drive power control for audio systems. At the centre-left is a CAT5 connector for simple wiring to the JED T447.

T447: Simple CAT5 Wiring On-site

The T430/T440 can connect to the T447 box shown here via a pre-terminated CAT5 cable. The plug pack, PIR and projector all plug into the other end, providing a simple pre-wired system interconnection on site. It even has signal LED indicators to verify communications.

