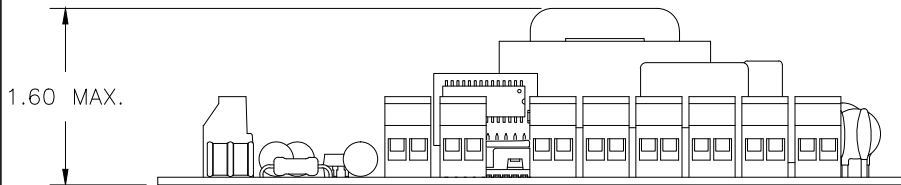
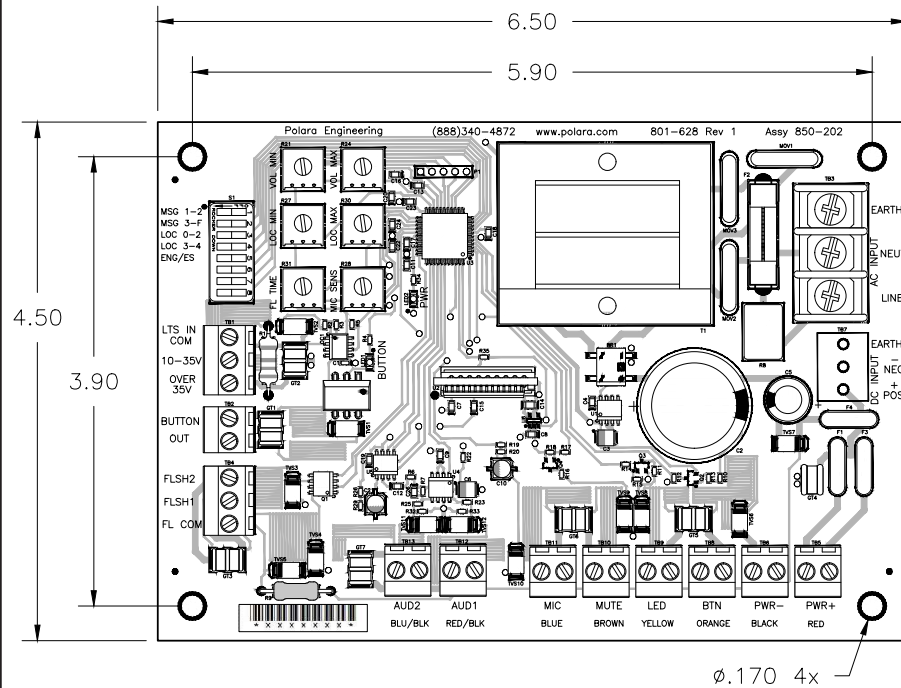


## XAVCU2 - Control Unit XAV2E-LED Push Button Stations



The XAVCU2 is a control unit that works in conjunction with Polara's XAV2E-LED Push Button Stations, and provides a system for playing a voice message at a pedestrian crosswalk where flashing yellow lights are installed. The system has several other features as listed below. Note: XAVCU2 model products are not compatible with the previous XAVCU model products.

### Operational Features:

- Dip-switch selectable number of message repetitions with options of repeating 1, 2, and 3 times or continuous while the crosswalk lights are flashing.
- Dip-switch selectable rate for the button locating tone. Options are; None, every 2 seconds, every 3 seconds, and every 4 seconds.
- Dip-switch selectable voice message. Options are; English only, or both English and Spanish. A custom message up to 19 seconds in length is also available by special order.
- Capability for setting the minimum and the maximum limits for the sound volume for both voice message and locating tone.
- Automatic volume adjustment to compensate for changes in ambient noise levels. The output volume stays within preset limits. The system also provides a gain adjustment for the built-in ambient noise sensing microphone.
- Two inputs for external light signal. One for 10-35 Volts AC/DC, and one for 35-130 Volts AC/DC. **This input is required to trigger the voice message.**
- The XAVCU2 comes with two flash control signal outputs which could be used to drive external relays for controlling flashing lights. A special program is needed for this function and the boards have to be ordered as such. An onboard adjustment is available to set the flash time. Use part number XAVCU2F to order this option.

An 8-wire cable is required (furnished by installer) to connect between a remotely located XAVCU2 and the push button stations. Polara recommends Belden 27601A. This cable is suitable for direct burial and color matches the labeling on the XAVCU2. A maximum of two push button stations can be connected to an XAVCU2.

A relay contact output is provided which closes when the XAV2E-LED button is pressed. This may be used to trigger an external flashing system.

## XAVCU2 - Detailed Specification

### Function

Controls up to two Polara XAV2E-LED Push Button Stations

### Options Available

XAVCU2 (for AC voltage operation)  
XAVCU2-DC (for DC voltage operation)

### Electrical Properties

| Power                                 |  |
|---------------------------------------|--|
| AC Power In                           | 105-135 VAC, 60 Hz, 0.1A   |
| Idle Current Draw                     | ~2mA +1.2mA per XAV2E-LED  |
| Peak Current Draw (15VDC input power) | ~500mA with voice message at maximum   |
| Max # of XAV2E-LEDs                   | Two (-DC: Limited only by current available)   |
| Inputs                                |  |
| BTN                                   | Normally high, pulled up to PWR+ (pulled to GND when the PB is pressed)  |
| MIC (Microphone)                      | 0-1.5 Volts (ambient noise feedback)   |
| LTS IN - L                            | 10-35 Volts AC/DC (External Light - Flashing)  |
| LTS - H                               | 35-130 Volts (External Light Control - Flashing)   |
| LTS - COM                             | Common GND reference   |
| Outputs                               |  |
| PWR+                                  | 10-24 Volts DC referenced to PWR-  |
| PWR-                                  | DC Ground  |
| LED                                   | Open collector to drive LEDs in PCB (typical 22mA sink from XAV2E-LED)   |
| MUTE                                  | Open collector active low < 0.3 Volts (Turns off speakers)   |
| AUD1                                  | Differential outputs for PBS audio amplifier   |
| AUD2                                  | Differential outputs for PBS audio amplifier   |
| FLASH1/FLASH1 (2) (optional)          | Optional relay drive, normally open Energizes external relays with onboard flash time adjustment (- negative polarity) |
| FLASH COM                             | 10-24 Volts - Provides power for relays (+ polarity)   |
| BUTTON OUT (2)                        | Optically isolated contact closure for button press. Max Operating Voltage: 36V DC or peak AC                          |

### Features

| Dipswitch Selectable Options |  |
|------------------------------|--|
| Message Repetition Rate      | 1 time, 2 times, 3 times, or continuous while flashing   |
| Button Locating Tone Rate    | None, 2 seconds, 3 seconds, and 4 seconds  |
| Voice Message Language       | English, English & Spanish, or optional custom (19 seconds max.)                                     |
| Standard English Message     | "Yellow lights are flashing"   |
| Standard Spanish Message     | "Las Luces amarillas estan relampaqueando"   |
| Adjustments and Settings     |  |
| Volume Adjustment            | Adjusts automatically in response to ambient noise. Volume stays within preset min and max settings. |
| Noise Sensitivity            | Allows for microphone sensitivity adjustment.  |

### Mechanical Properties

| Physical                 |                                 |
|--------------------------|---------------------------------|
| Product Type             | PC Board                        |
| Installation             | Mounting holes: 3.90" x 5.90"   |
| Dimensions               |                                 |
| Width                    | 4.50"                           |
| Length                   | 6.50"                           |
| Maximum Component Height | 1.60"                           |
| Environmental            |                                 |
| Storage Temperature      | -45°C to +85° (NEMA)            |
| Operating Temperature    | -34°C to +74°C (NEMA)           |
| Humidity                 | < 95% RH, non-condensing (NEMA) |