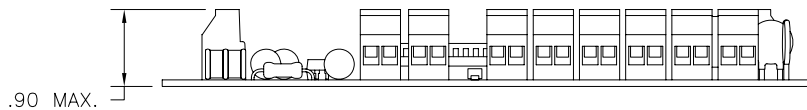
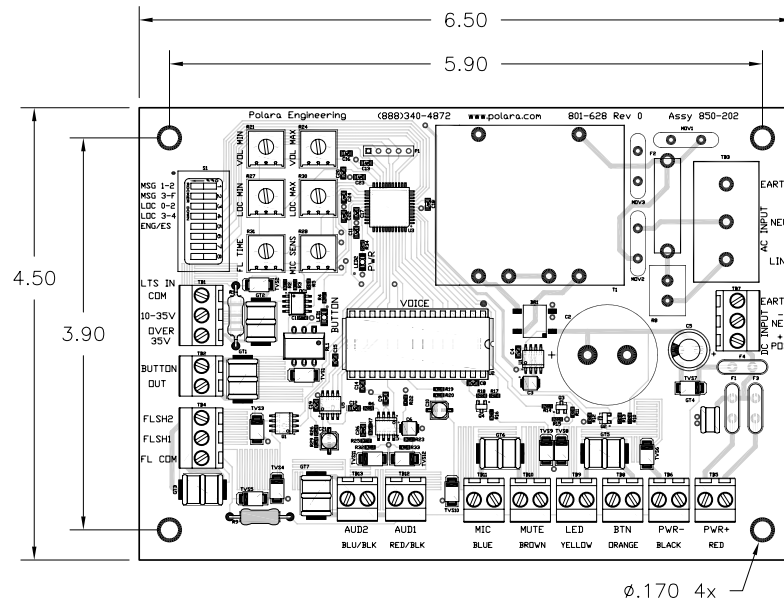


XAVCU2-DC - Control Unit for Models XAV2 and XAV2-LED Push Button Stations



The XAVCU2-DC is a control unit that works in conjunction with Polara's XAV2 and XAV2-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-DC model products are not compatible with the previous XAVCU-DC 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 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-DC 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.

An 8-wire cable is required (furnished by installer) to connect between a remotely located XAVCU2-DC and the push button stations. Polara stocks and sells our recommended direct burial rated cable that has matching colors to prevent any potential for miswiring. A maximum of two push button stations can be connected to an XAVCU2-DC.

A relay contact output is provided which closes when the XAV2 button is pressed. This may be used to trigger an external flashing system.

XAVCU2-DC - Detailed Specification

Function

Controls up to two Polara XAV2 or XAV2-LED Push Button Stations

Options Available

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

Electrical Properties

| Power | |
|---------------------------------------|---|
| DC Power In | 10-24 V DC |
| Idle Current Draw | ~2mA +1.2mA per XAV2/XAV2-LED |
| Peak Current Draw (15VDC input power) | ~500mA with voice message at maximum |
| Max # of XAV2s | 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 XAV2-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 - polarity) |
| FLASH COM | 10-24 Volts - Provides power for relays (+ polarity) |
| BUTTON OUT (2) | Optically isolated contact closure for button press |

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 |
| Standard English Message | "Cross street with caution, vehicles may not stop" |
| Standard Spanish Message | "Cruce con cuidado, los vehículos posiblemente no se detendrán." |
| 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° |
| Operating Temperature | -34°C to +74°C |
| Humidity | < 95% RH, non-condensing |