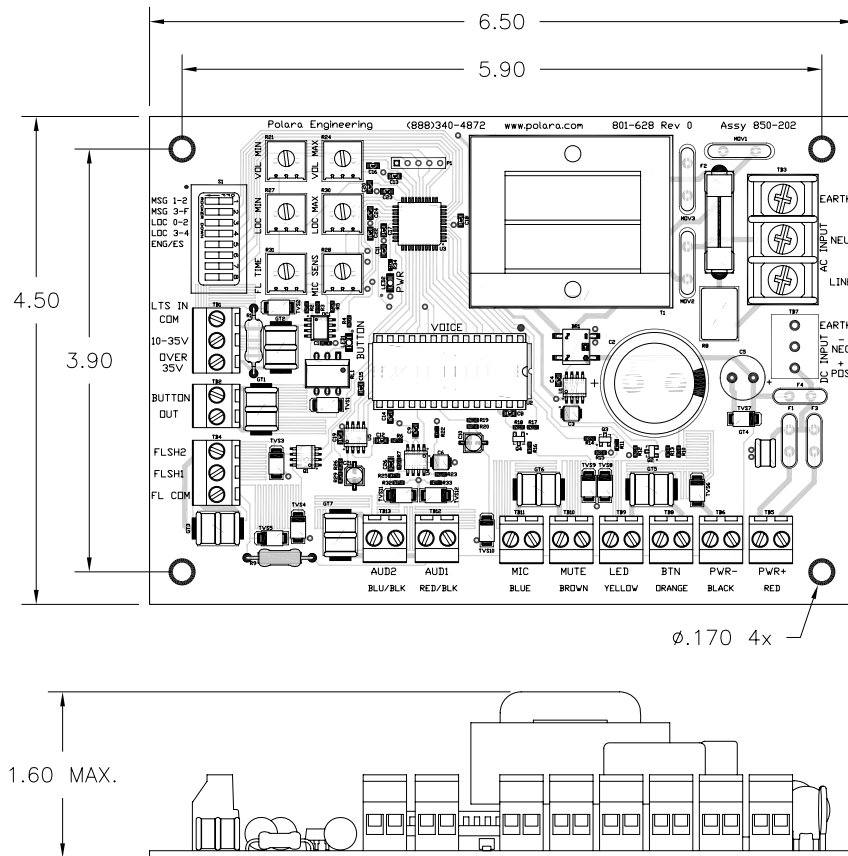


XAVCU2 - Control Unit for Models XAV2 and XAV2-LED Push Button Stations



The XAVCU2 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 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 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.

An 8-wire cable is required (furnished by installer) to connect between a remotely located XAVCU2 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.

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 - 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	
AC Power In	105-135 VAC, 60 Hz, 0.1A
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	Two
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° (NEMA)
Operating Temperature	-34°C to +74°C (NEMA)
Humidity	< 95% RH, non-condensing (NEMA)