



# AX "V" Series

# INTEGRATED AUDIO INTELLIGENT FIRE ALARM CONTROL PANELS



### Unique Features:

- Standalone or Networked Integrated Audio
- Fully scalable up to 200 Intelligent Panels
- AV-VB Audio Booster w/Synchronized Audio
- Remote Microphone Channel
- IP Interface – Monitoring/Control/Email Notification
- Powerful yet Simple I/O Relationship Programming

### Description:

The latest advancements in digital, audio technology have been combined with the AX Series Intelligent Fire Control Panels to create a new line of fully integrated fire detection/voice evacuation control panels. The panels contain all of the same popular features as the standard AX Series panels, but also include the AV-AMP-80 audio module which provides 80 Watts of power that is fully controlled by the host fire alarm control panel. These panels are highly flexible and ideally suited to meet the needs of virtually any commercial, industrial or institutional application and may operate as standalone systems, or may be networked up to 200 panels in any combination using our Advanced AdNet Networking technology.

The models in the "V" series include the AX-CTL-1V (single loop), AX-CTL-2V (two SLC loops) and the AX-CTL-4V (four SLC loops). In addition to providing 80 Watts of Audio power, each panel comes equipped with both a microphone and a programmable AX-ASW-16 switch module. Keying the microphone allows priority paging and for generating live emergency audio messages. Doing so overrides any pre-recorded audio messages that are being generated. Pressing one or more AX-ASW-16 switches, allows selective zone or area paging as well as performing an All Call or All Alert function.

Modular construction permits field configuration of a panel(s) to suit specific installation requirements. Additional modules including AX-ASW-16 Switches and the AX-012 Thermal Strip Printer may be mounted to the inner door of the panel. A secure outer door with plexiglass permits viewing of these modules as well as the microphone. Upon request, the factory will install the modules you specify prior to shipment. Consult the factory for more details.

The AV-AMP-80 Audio Module provides two Class "A" or Class "B" (Style Z/Y) 40 Watt Audio Notification Appliance Circuits (ANACs). Sixteen programmable, Flash-Based, digital messages are freely programmable along with message repeat cycles and selection/activation of either or both output channels. Trouble conditions such as speaker wiring faults and amplifier malfunction are annunciated at the host fire control panel per industry codes and standards.



### Features:

- Integrated 80 Watt Digital Audio Features include:
  - 2 Class A or B, 40 Watt, 25 Volt RMS Outputs
  - Programmable 16 Channel Message Generator
  - Automatic one-to-one Backup Capability
- Local internally mounted microphone provides:
  - All Call, Alert and Selective Paging by Zone or Area
- Addressable NAC Modules provide
  - Addressable Speakers by point, zone or area
  - Isolation against faulty wiring
- Up to 126 Analog Addressable Points (standard w/ AX-CTL-1V)
- Up to 252 Analog Addressable Points (standard w/ AX-CTL-2V)
- Up to 504 Analog Addressable Points (standard w/ AX-CTL-4V)
- AV-VB Boosters expand audio wattage (16 per panel)
- Amplifier Cascading providing full synchronization

Product Data Sheet

The individual 40 Watt amplifiers can operate as separate independent amplifiers or as one-to-one backups of one another.

Expanding overall system audio wattage is simplified by adding an AV-VB Audio Booster (see separate data sheet for more details). The AV-VB is mounted externally in a separate enclosure and contains one AV-AMP-80 Audio Module, one AX-PSU-6 power supply and an optional microphone. Connecting the speaker output channel of an integrated AV-AMP-80 Audio Module inside of an AX "V" Series panel to an input of an external AV-VB Booster, expands audio wattage by 40 Watts per channel. Resulting audio generated is fully synchronized. AV-VB Audio Boosters may be cascaded as desired to extend overall wattage per channel, or may be simply added to expand overall system wattage as desired.

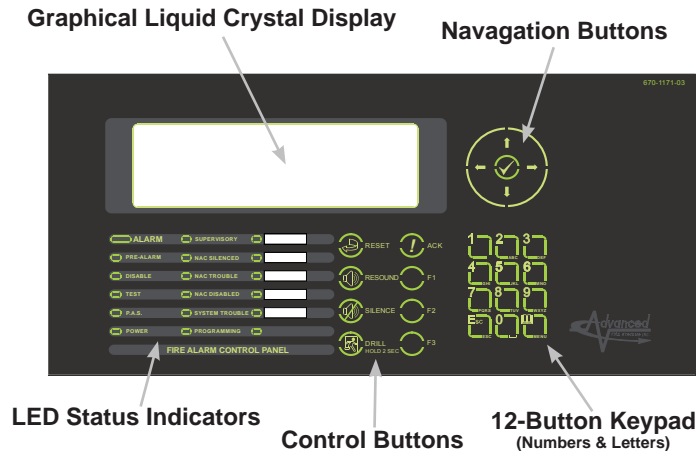
Simplifying and reducing initial system set-up, AX "V" Series Intelligent Fire Alarm Control Panels are equipped with an installer-friendly "Auto-Learn/Loop Detection" feature that permits the rapid recognition of all signaling line circuits' devices. This rapid recognition, simplifies the assignment of critical life safety functions immediately. Assignments include: intelligent detector type and operation criteria, addressable input device recognition as an alarm input, and addressable output control on a general alarm basis.

Designed with built-in powerful installation and customization tools, the AX "V" Series Intelligent Fire Alarm Control Panels can adapt to virtually any application requirement. With *DynamiX* programming, typical time consuming complexities associated with I/O relationship programming such as two-stage multi-pattern NAC control, intelligent detector drift compensation, precision response/sensitivity mode settings, flexible timing functions, and more, are sharply reduced.

The AX "V" Series intelligent panels are fully field programmable via the onboard graphical LCD display and alphanumeric keypad. Front panel programming may encompass defining input to output relationships, configuring output circuit characteristics, entering zone, device, and other text descriptions, and configuring multiple user-access passwords.

**Advanced User Interface w/Graphical LCD:**

Designed to be user-friendly and easy to operate, the Advanced User Interface w/Graphical LCD (backlit 240 x 64) is the information and control center for the AX "V" Series Intelligent Fire Alarm Control Panels. The unit incorporates a graphical LCD display, LED status indicators, control buttons (including 3 programmable buttons), navigation buttons, and a 12-button keypad for complete system status, interrogation, and control.



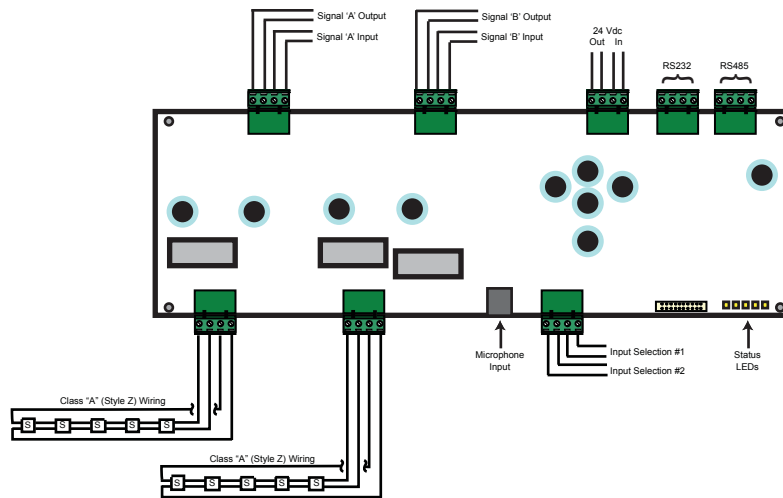
Buttons (Keys)	
	Reset
	Ack (panel buzzer acknowledge)
	Resound (resound signals)
	Silence (silence signals)
	Drill
	Function Keys (3 - programmable control buttons)
	Navigation Keys (up, down, left, right, and tick [enter])
	12-Button Keypad (numbers, letters, esc, and menu)

LED Indicators	
Alarm	Red
Pre-Alarm	Yellow
Disable	Yellow
Test	Yellow
P.A.S.	Yellow
Power	Green
Supervisory	Yellow
NAC Silenced	Yellow
NAC Trouble	Yellow
NAC Disabled	Yellow
System Trouble	Yellow
Programming	Yellow
Function 1	Red (programmable)
Function 2-5	Yellow (programmable)

To maximize the capability and flexibility of the AX "V" Series Intelligent Fire Alarm Control Panel, and expand upon the customization of an installation, the Advanced Fire Systems Windows based, PC-Net field configuration tool is available. The PC-Net field configuration tool is a powerful, user-friendly programming tool that allows users to perform virtually any I/O relationship with multiple criteria. Simple drop-down menus with point-and-click operation makes project commissioning and troubleshooting fast and efficient.

Designed with the technician in mind, each module of the AX "V" Series panel is easy to install and service. The integral power supply offers status LEDs, *temperature compensated charging*, and the ability to operate directly from the batteries when AC supply is not yet available at the installation site. A unique *built-in intelligent multi-meter* allows technicians to interrogate any input and/or output and diagnose potential time consuming trouble issues with virtually no complications or aggravation. With an AX "V" Series panel, servicing a customer after installation can be as simple as using Advanced Fire Systems *Remote Diagnostic Virtual Panel Simulator* or *ipGateway*.

AX "V" Series Intelligent Fire Alarm Control Panel Specifications	
Operating Voltage	120 VAC (1.4A) - 240 VAC (0.7A), 50/60Hz
System-Brown-Out	98 VAC nominal
Battery Circuit Charging Voltage Temp. Compensated Charging Current Battery Derating Factor Battery Capacity Battery Fuse	27.4 VDC nominal 2 Amp 0.83A 7 Ah (minimum), 48 Ah (maximum) 5A @ 240 VAC, Time Delayed, Ceramic, High Breaking (In-line Wire Link)
Fire, Supervisory, and Trouble Relays Type Rating Trouble Relay	(Power Limited - when utilizing system power) Form "C" 1A @ 30 VDC/VAC Normally Active (fail-safe operation)
Auxiliary Power Outputs Resettable Voltage Current Reset Time Non-Resettable Voltage Current	(Power Limited)  24 VDC .5A 10 - 15 Seconds  24 VDC .5A
Humidity	85% RH
Temperatures Operating Recommended Room	32°F - 120°F (0°C - 49°C) 60°F - 86°F (15°C - 27°C)
Enclosure Dimensions /V Enclosure Back Box Housing	22.6"H x 14.5"W x 5.5"D 24.1"H x 16"W x 6.3"D
SLC Loop Class (Style) Voltage Minimum Return Voltage Current	(Power Limited) Class "A" or "B" (Style 4, 6 or 7) 24 VDC 17 VDC .5A
NAC Circuit Class (Style) Voltage Minimum Return Voltage Current Maximum Voltage Drop Maximum Line Impedance	(Power Limited) Class "A" or "B" (Style Z or Y) 24 VDC (regulated) 16 VDC 2A 3 VDC 1.5Ω
RS232 Baud Rate Parity Data Bits Stop Bits	Supervised, Optically Isolated 9600 None 8 1
Base Card Operating Current AX-CTL-1L AX-CTL-2 AX-CTL-4	Quiescent      Alarm 110 mA      195 mA 110 mA      195 mA 175 mA      260 mA
AV-AMP-80 Input Voltage (DC) Amplifier #1 Output Amplifier #2 Output Activation AX-Mic	24 VDC (operating range 15-30 VDC) 40 Watts @ 25 Vrms, Class "A" or "B" (Style Y or Z) Wiring 40 Watts @ 25 Vrms, Class "A" or "B" (Style Y or Z) Wiring RS-485 (PBus) or Contact Closure Supervised Microphone Input
* Refer to individual AX Series module data sheets for specific specifications regarding optional modules.	



### Ordering Information

AX-CTL-1V	AX "V" Series Intelligent Fire Alarm Control Panel with cabinet, 2 power supplys/chargers, 1 SLC, 2 NACs, 2 40 watt speaker circuits, 1 AX-ASW-16 switch module and Microphone
AX-CTL-2V	AX "V" Series Intelligent Fire Alarm Control Panel with cabinet, 2 power supplys/chargers, 2 SLC, 2 NACs, 2 40 watt speaker circuits, 1 AX-ASW-16 switch module and Microphone
AX-CTL-4V	AX "V" Series Intelligent Fire Alarm Control Panel with cabinet, 2 power supplys/chargers, 4 SLC, 4 NACs, 2 40 watt speaker circuits, 1 AX-ASW-16 switch module and Microphone
<i>Options:</i>	
AX-LPD	2 SLC, 2 NAC Expander Card
AX-NAC	2 NAC Expander Card
AX-PSU	5 Amp Expansion Power Supply Module
AX-PSU-6	6 Amp Power Supply and Charger for AV-AMP-80 Amplifier
AX-NET4	Network Interface Card (Style 4)
AX-NET7	Network Interface Card (Style 7)
AV-AMP-80	Audio Amplifier with Two 40 Watt Speaker Circuits
AV-MIC	Microphone Module
AX-ASW-16	Switch Module with 16 Switches and 48 LEDs
AX-RL8	8-Way Relay Output Card (Programmable)
AX-CTY	City Tie Module
AX-ANN-C	Remote Graphical LCD Annunciator w/Control (Style 4)
AX-ANN-C/ST7	Remote Graphical LCD Annunciator w/Control (Style 7)
AX-ANN-D	Remote Graphical LCD Annunciator w/o Control (Style 4)
AX-ANN-D/ST7	Remote Graphical LCD Annunciator w/o Control (Style 7)
D9068P	SIA & Contact ID Digital Dialer

\* Refer to individual Ax Series module data sheets for more specific details.



100 South Street, Hopkinton, Massachusetts, USA MA 01748

Tel: 508.453.9995 ■ Fax: 508.453.9996 ■ [www.afsi.us.com](http://www.afsi.us.com)

As our policy is one of constant product improvement the right is therefore reserved to modify product specifications without prior notice.