## EST Life Safety & Communications EST2 Multiplexed Fire Alarm System

#### Overview

EST2 Audio Fire Alarm is modular in design. Audio control panels provide all the features of EST2 with the added benefit of one or two channel audio. Audio cabinets integrate both Fire Alarm control equipment and audio control equipment ensuring both functionality and aesthetics. When distributed amplification is needed a single APS power supply cabinet supports mounting of up to two 50 watt distributed amplifiers in remote locations.

The EST2 audio panel provides an efficient emergency paging, evacuation signaling and firefighters telephone system in perfectly integrated modular packages.

#### Standard Features

- Uniform system design
- One or two channel audio
   Configure with or without Firefighters telephone
- 30 and 50 watt distributed amplifiers
- Integral 15 function tone generator
- Page by firefighters telephone with four state phones
- Signature series detectors and modules supported
- Class B or A Signature data circuit(s)
- 96 detectors and 94 modules per circuit
- Two integral Class A or B notification appliance circuits
- 576 event history log

# EST2 – Audio Control









#### **Application**

EST2 audio suits applications requiring emergency voice paging and evacuation signaling with or without firefighter's telephone. Single channel or dual channel applications easily configure using Signature distributed amplifiers. Distributed amplifiers are available in 30 watt and 50 watt sizes. All EST2 audio amplifiers easily configure for 25Vrms or 70Vrms operation through simple jumper selection.

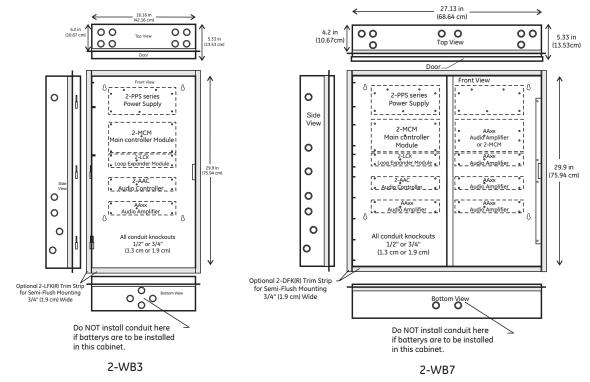
#### **EST2** with SIGA Amplifiers:

Signature amplifiers provide Class B or Class A wiring of audio output circuits. Speakers connect directly to the output of the SIGA amplifier or the amplifier output can run as an audio riser to signature modules where speaker zone selection is made. Each SIGA amplifier has a built in 1kHz tone generator and provision for

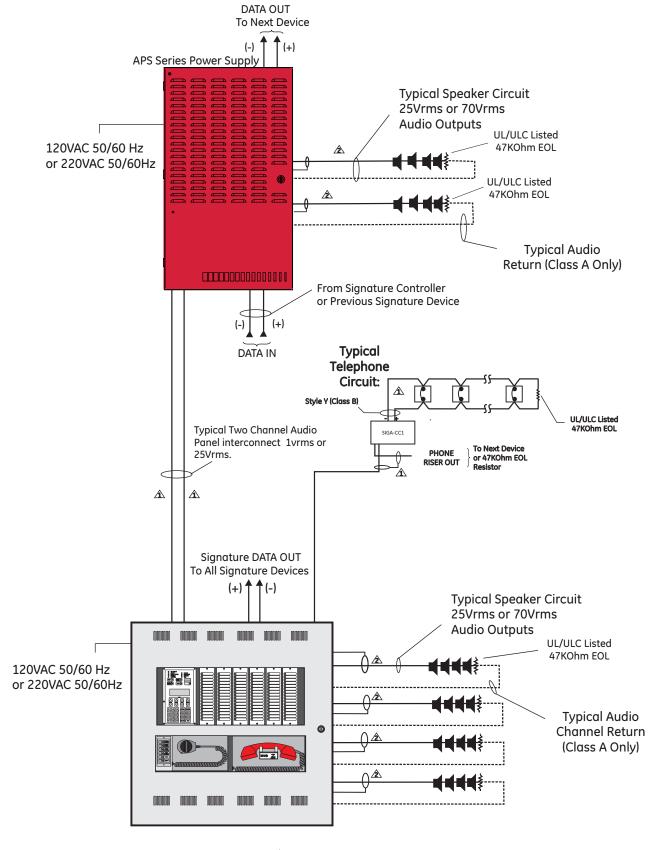
a back up amplifier. Should an amplifier lose its input signal the output will switch to a back up amplifier. If there is no back up amplifier or the output from the back up is unavailable the output will receive the internal 1kHz tone as the evacuation signal.

For installations requiring firefighter's telephone, EST2 offers a master telephone module that allows communication with remote telephone stations. System paging is available through the front panel master microphone or through remote telephone stations when configured. Six front panel switches allow the emergency user to Page to the EVAC riser, Page to the ALERT riser or quickly place EVAC or ALERT tones on the risers.

#### Installation and Mounting



### Typical Zoned Amplifier Wiring



⚠ Twisted-Shielded Pair Wire

⚠ One Twisted Pair Wire, Shield optional

### Typical Distributed Banked Amplifier Wiring UL/ULC Listed DATA OUT 47K Ohm EOL To Next Device **APS Series Power Supply** Typical Two Channel 25V rms or 70V rms Audio Outputs ~ CC2 From Signature Controller Typical Audio or Previous Signature Device Channel Return (Class A Only) Typical DATA IN Te lephone Circuit: Style Y (Class B) UL/ULC Listed 47K EOL Typical Two Channel Audio Panel interconnect 1vrms or To Next Device 25V rms. PHONE or 47K EOL Resistor RISER OUT Δ ⚠ UL/ULC Listed 47K Ohm EOL Signature DATA OUT To All Signature Devices Typical Two Channel 25V rms or 70V rms Typical Audio Channel Return Audio Outputs 2 (Class A Only) ⚠ Twisted-Shielded Pair Wire △ One Twisted Pair Wire, Shield optional

# Specifications

Power Supplies	2-PPS	2-PPS/6A	2-PPS/220	2-PPS/6A-220	
Notification Appliance	3.5 Amps	Two 3.2 Amp Taps	3.5 Amps	Two 3.2 Amp Taps	
Power	@24 Vdc nominal	@24 Vdc nominal	@24 Vdc nominal	@24 Vdc nominal	
Auxiliary Output Power	500mA Max	N/A	500mA Max	N/A	
Line Power	120 Vac 300Watts Max, 50/60Hz		220-240 Vac 300 Watts Max, 50/60Hz		
Agency Listings	UL				
Maximum Battery Size	Two 18 Amp Hour in 2-WB3 Two 18 Amp Hour or 11 Amp Hour batteries in 2-WB7 (See Note 1)				

Note 1: For applications over 17 Amp hour and up to 24 Amp hour use BC-1.

Main Controller/Display (2-MCD)		
Signature Data Circuit	One Standard. Expandable to two with optional 2-LCX	
Devices per SDC	96 Detectors, 94 Modules Maximum - 96 Isolators or Relay Bases	
Terminal Wire Gauge	18-12 AWG (0.75-2.5 mm²)	
Relative Humidity	10-93% non condensing	
Temperature Rating	0°-49°C (32° - 120°F)	
Wiring Styles	Class A or Class B	
Standard Auxiliary relays	1 Alarm Contact - 24 Vdc 1Amp; 1 Trouble Contact - 24 Vdc 1Amp; 1 Supervisory Contact - 24 Vdc 1Amp	

Audio Control (2-AAC)				
Agency Listings	UL, ULC, FM			
Standby Power	24 Vdc @ 65mA, 75mA with 2-TEL			
Active Power	24 Vdc @ 110mA			
Frequency Response	400Hz to 4kHz			
Output Level Distortion Wiring Configuration	Two Audio Outputs Channels 1 Vrms <1% Two Channels Class B or Class A			
Auxiliary Inputs Input Impedance Input Level	Two Electrically Isolated Inputs 10K Ohm 0.5 to 1.75 Vrms			
Loading	15 Signature Amplifiers Max.; 100 Ohm Max. 0.2µF Max.			
Supervision	DC: 47K Ohm EOL or AC Audio Pulse			
	Slow Whoop	1kHz 20 Beats per min.	Low Tone	
	1kHz Steady	Fast Whoop	Fast Hi-Lo Tone	
Internally Generated Tones	1kHz Morse U	1kHz March Time	4-4 Code	
	Chime Hi-Lo	Hi-Lo	1kHz @ 120 Beats per min.	
	Horn Temporal (3-3-3)	Horn		
Microphone	Dynamic, Push - to - Talk; 2-MIC mounts on inner door of 2-WB3 or 2-WB7			
Firefighters Telephone	Max. Five remote phones active. 2-TEL mounts on Inner door of 2-WB7			
Relative Humidity	10-93% non condensing			
Temperature Rating	0°-49°C (32° - 120°F)			
Wiring Styles	Class A or Class B			

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## **Ordering Information**

Catalog Number	Description	Ship Wt. lb. (kg)	
Electronics			
2-MCD	Main Control and Display (add "-CC" for City of Chicago)	1.5 (.7)	
2-PPS	4.5 amp power supply 120VAC	2.5 (1.1)	
2-PPS/220	4.5 amp power supply 220VAC	2.5 (1.1)	
2-PPS/6A	6.4 amp power supply 120VAC	2.5 (1.1)	
2-PPS/6A-220	6.4 amp power supply 220VAC	2.5 (1.1)	
2-MIC	Master Paging Microphone (add "-CC" for City of Chicago)	3 (1.3)	
2-TEL	Firefighters Master Telephone	4 (1.8)	
2-AAC	Audio controller (add "-CC" for City of Chicago)	1 (.45)	
Wallboxes			
2-WB3	EST2 Long Surface Wallbox - Gray finish.	20 (9)	
2-0003	For Semi-Flush mounting order trim Kit. See note 1.	20 (3)	
2-WB3D	Inner and outer doors for 2-WB3 wallbox. See note 1.	18 (8.2)	
2-WB7	EST2 Double Wide Surface Wallbox - Gray finish.	39 (17.7)	
	For semi-Flush mounting order trim Kit. See note 1.		
2-WB7D	Inner and outer doors for 2-WB7 wallbox. See note 1.	36 (16)	
RACCR	Remote Audio Closet Cabinet. Red Finish	19 (8.6)	
RACCDR	Door for RACCR wallbox	13 (5.9)	
Trim Kits			
2-LFK	Long Semi-Flush Trim Kit for 2-WB3 wallbox. See note 1.	4 (1.8)	
2-DFK	Double Wide Semi-Flush Trim Kit for 2-WB7 box. See note 1.	5 (2.3)	

Note: 1. Standard finish is gray, red versions are available by adding suffix R to the catalog number e.g. 2-WB3R.

Related Equipm	nent	
SIGA-AA30	30 Watt Intelligent Audio Amplifier	2 (.9)
SIGA-AA50	50 Watt Intelligent Audio Amplifier	2 (.9)
APS6A	6.5 Amp Auxiliary Power Supply	
APS6A/230	6.5 Amp Auxiliary Power Supply (220V)	26 (11.8)
APS10A	10 Amp Auxiliary Power Supply	20 (11.0)
APS10A/230	10 Amp Auxiliary Power Supply (220V)	

