

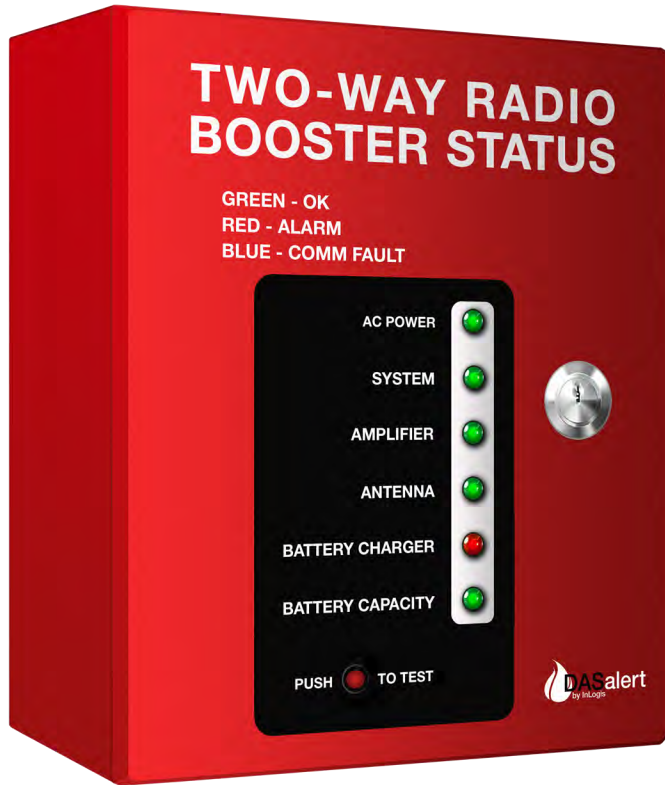


NFPA-Compliant

Public Safety Radio Enhancement System Monitoring Unit and Annunciator Panel



Meets NFPA-72, NFPA-1221 and IFC codes for a Dedicated Annunciator and Monitoring Panel



Displays Status of:

- BDA
- Donor Antenna
- 120 VAC Power
- Battery Capacity
- Battery Charger
- System Status

Includes Form-C relay contacts to interface with any fire alarm system

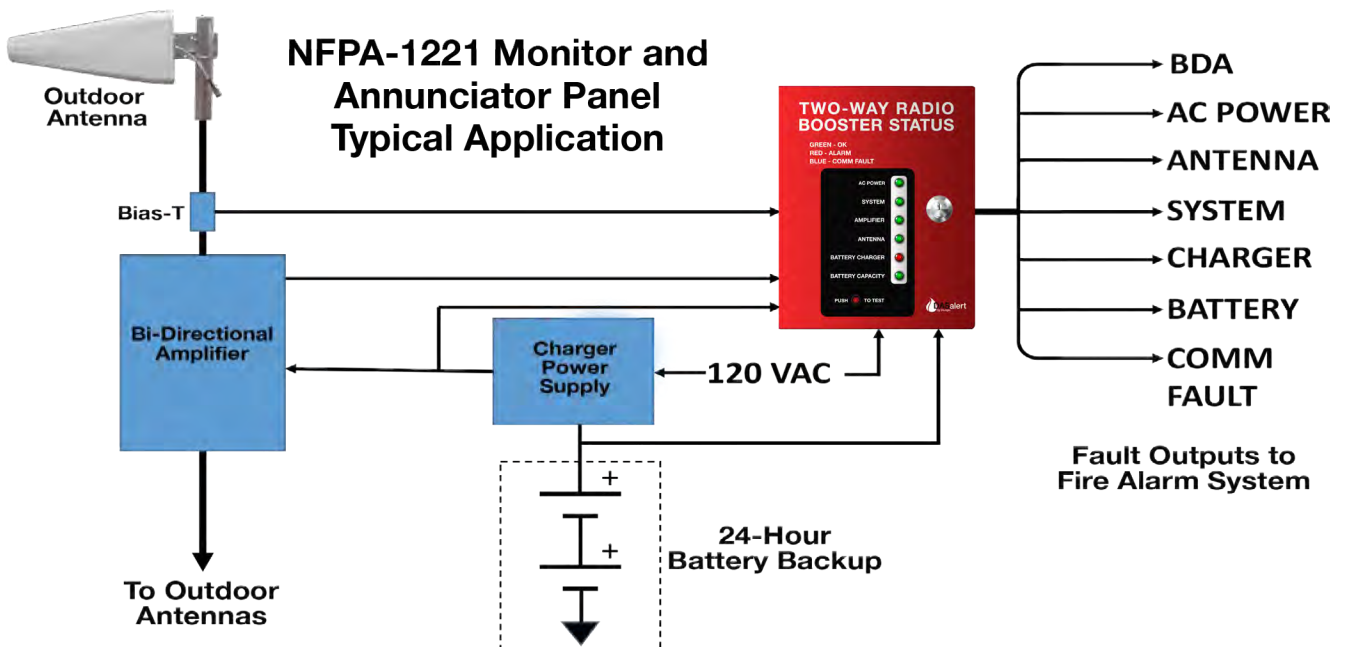
Monitors communications link for integrity

Includes independent circuitry to check antenna, AC power, battery capacity, charger and overall system status

Mates with or augments monitoring of any BDA, antenna, charger, battery or UPS

Low cost, easy to install and program
Small size NEMA-4 : 10"H x 8"W x 4"D

Backed up by internal battery



Code Requirements

The current edition of the NFPA 1221 fire code (shown below) and several previous editions including NFPA-72 and the International Fire Code (IFC) describe the requirements for monitoring the performance of Public Safety in-building two-way Radio Enhancement Systems with a dedicated panel (see excerpt). This panel is required to be located in the fire command center but many jurisdictions require that it be located in the same room as the Radio Enhancement System.

The Model NFPA-1221 Panel is designed to meet these requirements and also contains independent monitoring circuitry that can be used at the installer's option to monitor the various components of the Radio Enhancement System if the amplifier, donor antenna, battery charger, power supply, backup battery or UPS are not designed with these specific fault monitoring capabilities as part of their internal design.

Fault Signaling Relays

Since some DAS components are not always configured with the appropriate Form-C fault alarm relays that can interface properly with all Fire Alarm Systems, this unit provides these fault relays that can be programmed to mate with any Fire Alarm System with their 'normally OFF' or 'normally ON' states programmable for any 'fail safe' convention that is required by the Fire Alarm System.

Enclosure & Power Requirements

The enclosure is NEMA-4 rated consistent with the other requirements of the code and an internal backup battery inside the panel provides 24 hours of service to supplement loss of primary power. Primary power can be provided by either 120 VAC or 12 VDC.

Communication Integrity

Per code, fault detection cables between the Radio Enhancement System and the panel are monitored to detect open circuits or short circuits to ground. If this condition is detected the panel will trigger a fault alarm to the Fire Alarm System signaling the loss of communications integrity. Provisions are also supplied to attach an audible external alarm if desired.

Antenna Monitoring

If the Bi-Directional amplifier in the Radio Enhancement System does not have the capability to monitor donor antenna faults, the panel can provide this by adding an external Bias-T in line with the antenna. The panel will detect common faults such as open circuits or short circuits in the cable leading to the antenna without impacting the RF performance of the system.

Installation

This panel provides an economical easy-to-install solution to meeting the code requirements and the flexibility to interface with and augment, if required, the fault detection and alarm signaling capabilities of a large variety of standard components used in these system. Its small size and light-weight enclosure can be wall-mounted into any installation.

NFPA 1221 Compliant Dedicated Monitoring and Annunciator Panel

Excerpted from NFPA 1221 (2016 Edition):

Standard for Installation, Maintenance, and Use of Emergency Services Communications System

9.6.13.2 Dedicated Panel.

- (1) A dedicated monitoring panel shall be provided within the fire command center to annunciate the status of all RF emitting devices and system component locations. The monitoring panel shall provide visual and labeled indications of the following for each system component and RF emitting device:
 - (a) Normal ac power
 - (b) Loss of normal ac power
 - (c) Battery charger failure
 - (d) Low battery capacity (to 70 percent depletion)
 - (e) Donor antenna malfunction
 - (f) Active RF emitting device malfunction
 - (g) System component malfunction

- (2) The communications link between the dedicated monitoring panel and the two-way radio communications enhancement system must be monitored for integrity.

Specifications

Dimensions	10" x 8" x 4"	Fault inputs from Radio Enhancement System	Donor Antenna OK / Fail
Weight	8 lbs		Amplifier OK / Fail
Form C Dry Relay Outputs to Fire Alarm System	120 VAC Power	Analog Inputs	Charger OK / Fail
	System Fault		Battery Capacity OK / Low
	Amplifier		Amplifier Power OK / Fail
	Donor Antenna		120 VAC OK / Fail
	Battery Charger		Donor Antenna Sense
	Battery Capacity		Battery +/-
	Communications Error		DC to Amplifier +/-
Audible Alarm	Power	12 VDC from supplied external power supply	