

### Overview

The SIGCOM MNS-100BAS is a modular, state-of-the-art emergency communications system designed for a variety of voice alarm and mass notification applications. The system is ideally suited as a voice evacuation extension of existing fire alarm systems. It meets the stringent requirements of NFPA 72, UL864 9<sup>th</sup> edition, and UFC 4-021-01.

The MNS-100BAS accommodates virtually any host alarm system, integrating as quickly and easily as a single primary connection to a NAC output from the FACP. Many of the pre-set configurations provide a complete mass notification capability right out of the box. Additional activation is by a single supervised input from a dry contact closure, or by 8 dry contact closures.

Numerous audio inputs are provided for maximum control flexibility and system access. A supervised remote microphone input is provided for central placement for emergency personnel. A high priority supervised audio input is provided that overrides lower priority activations. The system also provides a 25 V<sub>RMS</sub> speaker-level input to allow power booster operation (see below). An additional non-supervised audio input provided; this lowest-priority input can be used for paging or background music as application needs dictate.

A highly efficient, Class D, 100 Watt digital audio power amplifier drives four selectable power-limited speaker circuits in the standard configuration. All speaker circuits are continuously supervised, even while activated. Each speaker can be configured for Class A or B wiring without loss of speaker circuits. Amplifier output voltage is 25 V<sub>RMS</sub> standard. An optional transformer can be configured for 70 V<sub>RMS</sub> output for longer speaker runs with low signal loss. An audio power boost option is also available for additional output power in multiples of 100 Watts.

The MNS-100BAS provides simple field programming of a variety of its features. These can be as simple as its response to contact closure inputs, or to the setting of internal SIP switch banks.



### Features

- 100 Watt, highly efficient Class D digital audio amplifier
- 4 speaker circuits (Class A or B wiring)
- Reverse polarity supervised FACP-NAC primary input
- Supervised dry contact primary activation input
- 2 standard messages preloaded, ready to go
- Prioritized contact closure activation inputs
- Remote microphone input
- Aux audio inputs for paging, background music, and remote system control
- 120/240V 50/60 Hz Input
- Power Supply, Charger and Battery Backup included

### Options

- Remote microphone
- 70 VRMS transformer
- Common alarm and trouble relays
- Audio power booster

# Options

## 70 V<sub>RMS</sub> Speaker Output

Compensate for audio power loss due to long speaker runs by installing the MNS-70V-XFMR 70 Volt Transformer. The transformer is contained in a small external cabinet that connects to the MNS-100BAS. All speaker circuits maintain active supervision and provide full output power. *(For more information, please refer to the MNS-70V-XFMR data sheet.)*

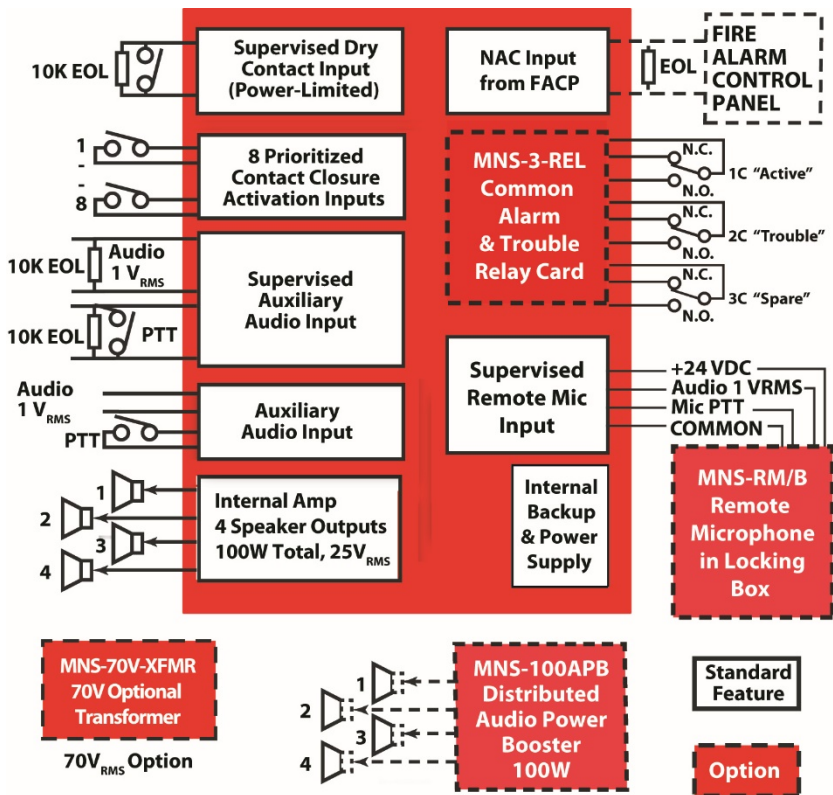
## Common Alarm and Trouble Relays

The MNS-3-REL 3-Relay Card provides three Form-C relay contact outputs to signal external devices in the system. The three outputs are typically used as Active and Trouble indicators, with the third used for other applications. *(For more information, please refer to the MNS-3-REL data sheet.)*

## Audio Power Booster

Need more power? The SigCom MNS-100APB Audio Power Booster panel can be added to act as a supervised remote 100 Watt power amplifier with its own 4 speaker outputs. As many MNS-100APB cabinets may be connected to the MNS-100BAS as needed to provide full facility coverage. In this configuration, the supervised audio input accepts a 25 V<sub>RMS</sub> typical speaker-level input, and broadcasts it to its speaker outputs. *(For more information, please refer to the MNS-100APB data sheet.)*

# Block Diagram



## Specifications

Standard Configuration; no options installed. For specifications on options, please refer to their individual data sheets. Specifications are subject to change without notice due to product improvements

### Interface

#### Inputs

Primary activation, supervised

1; reverse polarity NAC; 9-30 VDC, 10 mA;  
steady, non-coded, or

1; supervised dry contact closure rated for 24  
VDC, 10 mA

Secondary activation

dry contact closure rated for 24 VDC, 10  
mA

#### Auxiliary audio

600 to 3600 Hz frequency response

1; supervised, with override priority (control  
station), 1 VRMS audio input

1; unsupervised, lowest priority (paging and  
background music), 1 VRMS audio input

Remote microphone 1; 1 VRMS audio input;  
power-limited 24 VDC, 100 Ohms max line resistance

#### Outputs

Audio 100 W; 25 VRMS (70 VRMS Optional)  
Speaker circuits  
1; power-limited to 60 W  
3; power-limited to 25 W each with  
total power not exceeding 100 W  
10 KOhm EOLR continuously  
monitored

### Indicators

LED power (green)  
active (red)  
system fault (yellow)  
LED bar graph audio level; yellow 4-segment Power  
Supply

Primary Power 120/240VAC, 50/60 Hz; 5 A nominal  
Internal Power Supply 24 VDC regulated  
External Power Supply can power this device; 24 VDC  
regulated; Listed for Fire Alarm Use

#### Internal Battery Backup

Capacity 10 A-Hr

Standby Mode 24 hours

Alarm Mode 15 minutes

Recharge Time 48 hours

Mount: surface or semi-flush; fits between 16" O.C. studs

Enclosure, indoor; 18-5/8"h x 14-3/16"w x 4"d; painted steel

Temperature Range: 32°F to 120°F (0°C to 49°C) Humidity  
90% maximum, non-condensing;

Approvals/Listings ETL Listed for UL 864 9th Edition (Control  
Units and Accessories for Fire Alarm Systems) and UL 1711  
4th Edition (Amplifiers for Fire Protective Systems)

## Ordering

Description	Model
100 Watt Panel, 4 Speaker Circuits, Back-up Battery and Power Supply	<b>MNS-100BAS</b>
Common Alarm and Trouble 3-Relay Card	<b>MNS-3-REL</b>
70 Volt Transformer	<b>MNS-70V-XFMR</b>
Audio Power Booster Panel	<b>MNS-100-APB</b>
Remote Microphone	<b>MNS-RM/B</b>



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