

## Description

The ZT-MNS-100BAS system can be expanded beyond the 100Watts by adding ZT-MNS-100APB units. Each Audio Power Booster (APB) can add up to 100Watts and 4 more speaker circuits.

### Audio

The Audio is usually provided by the Primary ZT-MNS-100BAS.

25 or 70VRMS audio can be from any supervised speaker circuit using In-Out wiring in the APB.

### Control

Control of the Secondary units (APB) can be by a Contact Closure from the main or previous unit, or a Voltage Signal such as a control output from the main unit or other panel.

#### Voltage Control

The voltage control is recommended for all applications and can be from the MNS-NAC-REL board voltage output configured for *Any Activation*.

Voltage control allows longer cabling between the Primary and the Secondary (APB) units and is the recommended control method for all installations.

The output supervises the control wiring and the APB and reports faults by opening the EOLR.

#### Contact Closure

The contact closure control can from the Active Relay on either the ZT-MNS-3-REL or the MNS-NAC-REL. Contact Closure is generally used when the APB panels are located close to the Primary panels.

Supervision of the wiring and the APB is via the speaker circuit and is reported back to the Primary panel as a Speaker Circuit Fault.

## Specifications

### Primary Specifications:

Same as ZT-MNS-100BAS,

### APB Specifications:

#### Input

Audio 25VRMS Speaker Circuit  
25K Impedance, 0.025W loading  
70VRMS Speaker Circuit  
70K Impedance, .07W loading

#### Control

Voltage, Polarity Reversal, Supervised  
10K Impedance, 9 to 30VDC  
or  
Contact Closure, Supervised  
10K EOLR, 100ohms max wire resistance

#### Output

Audio Power 100Watts  
Audio voltage 25VRMS (70VRMS with MNS-70V-Xfmr option)  
Speaker Circuits 4 Class A or B, Power Limited, Supervised

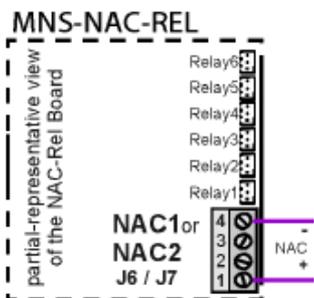
**Connections**

**Voltage Control**

Primary                      Secondary  
 Speaker Output 1        J8 pin 2  
 Speaker Output 2        J8 pin 1  
                                  Speaker EOLR across J8 pins 1 to 2

Voltage output +        J4 pin 1  
 Voltage output -        J4 pin 2  
                                  Alarm polarity voltage shown

Supervisory EOLR across J4 pins 3 to 4  
 Supervision via Activation circuit



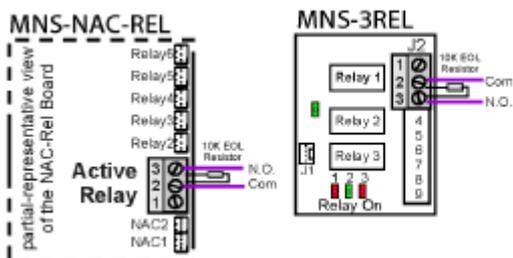
For Details on connections;  
 See MNS-NAC-REL installation manuals

**Contact Closure Control**

**Speaker Circuit Supervision**

Primary                      Secondary  
 Speaker Output 1        J4 pin 4  
 Speaker Output 2        J8 pin 1  
                                  J4 pin 1 to J8 pin 2  
                                  Speaker EOLR across J8 pins 1 to 2

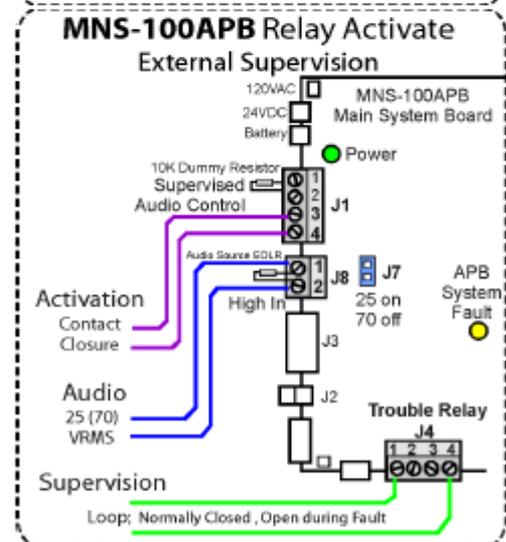
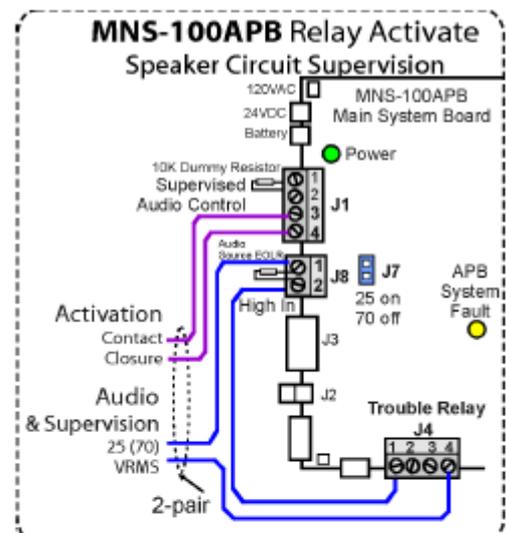
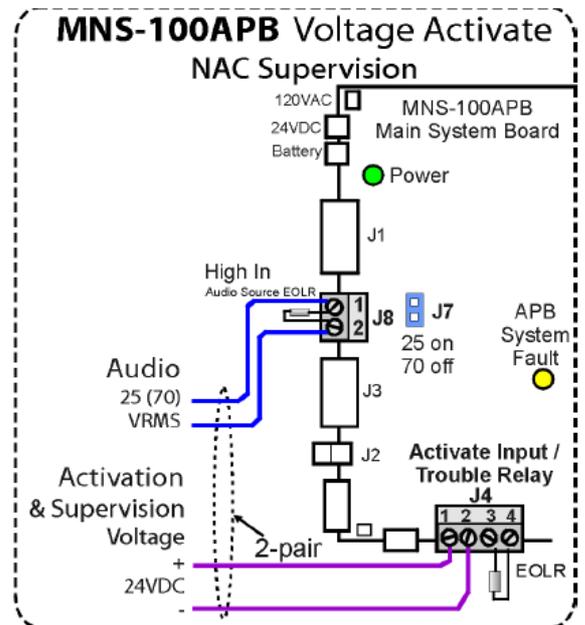
Contact **Common**        J1 pin 3  
 Contact **N.O.**            J1 pin 4  
                                  10K EOLR across Contact C to N.O.  
                                  Supervision via Audio/Speaker circuit



For Details on connections;  
 See MNS-NAC-REL or MNS-3REL installation manuals

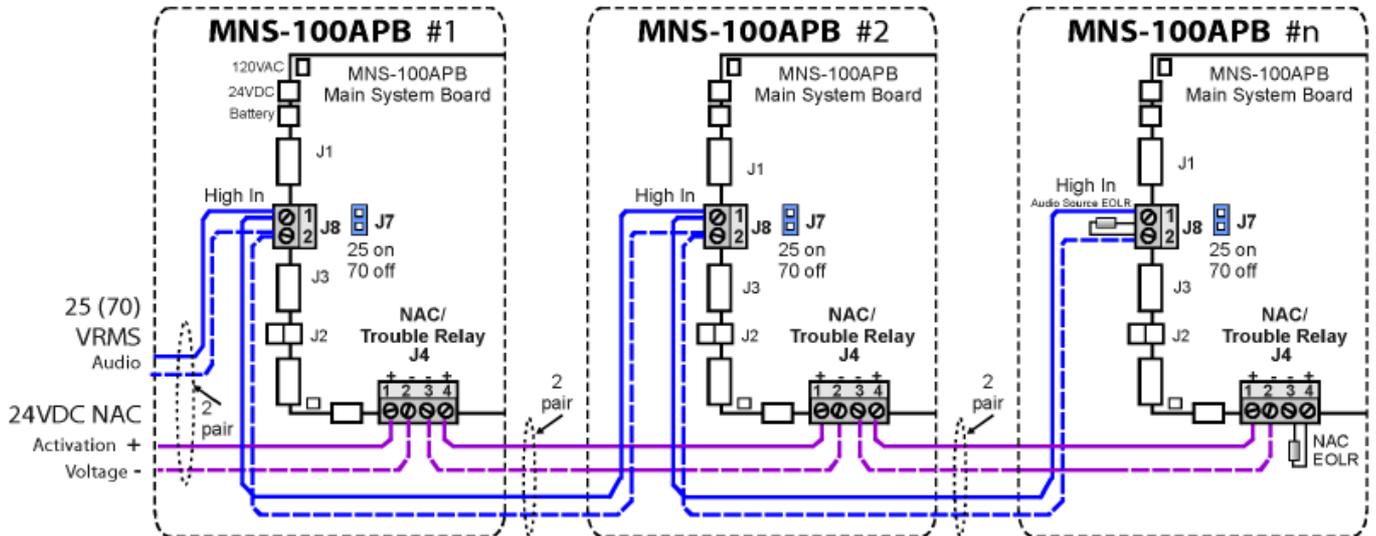
**External Loop Supervision**

Connect Activation; same as Contact Control  
 Connect Audio, same as Voltage Control  
 Connect Supervision; across J4-1 to J4-4  
 Supervision via External loop circuit



**More than one APB**

If the system requires more that 200Watts, more ZT-MNS-100APBs are added. The additional APBs are daisy chained from the primary cabinet. More than one speaker and voltage output from the primary can be used to provide multiple path (star configuration) if needed.



**Audio**

The audio should be a dedicated speaker circuit from the Primary MNS-100. The additional APBs have their audio paralleled onto the previous unit’s inputs, with the last APB containing the EOL Resistor. ‘Tapping’ into an existing speaker circuit is acceptable as long as proper supervision is maintained. Use of a dedicated audio circuit is recommended for ease of documentation, future circuit tracing and trouble shooting.

**Activation**

The activation voltage is routed in and out of the J4 Inputs of each APB, with the EOLR in the last. J4 Active polarity voltage Input is 1 positive, and 2 negative. The continuation of the activation is the J4 output with 3 being negative and 4 positive. If any ZT-MNS-100APB goes into Fault, it will open the Trouble contact in J4 and signal the Primary MNS-100 of the Fault. If during this trouble, the system is activated, the Trouble Contact will re-close to continue the activation signal down the chain of APBs.

**VDOT-70VRMS Option**

25 or 70Vrms inputs can be used on the input, with the J7 jumper being removed if the input is 70V. The outputs of the APB can be 25 or 70Vrms, independent of the input voltage. Adding the ZT-MNS-70V-XFMR to the Booster will convert all 4 outputs to 70VRMS. A separate 70V-XFMR would be needed for each APB that needs to have the 70V output. Follow the Installation Instructions (#1000-0831) for the ZT-MNS-70V-XFMR to set the outputs correctly.

**Limited Warranty**

Velocity Detection over Time Zeta Alarms Ltd declares that this product is free from defects in material and workmanship and it will repair or replace any product or part thereof which proves to be defective in workmanship or material for a period of twelve (12) months from the date of purchase but not to exceed eighteen (18) months from the date of manufacture. Please contact Velocity Detection over Time Zeta Alarms Ltd directly for a return merchandise authorization (RMA) number before returning goods under warranty. Shipment must be prepaid and Velocity Detection over Time Zeta Alarms Ltd will repair or replace the product if the failure was caused by a manufacturing defect.