

The **AU-360 Series** amplifier module, is the primary component of a Voice Notification System.

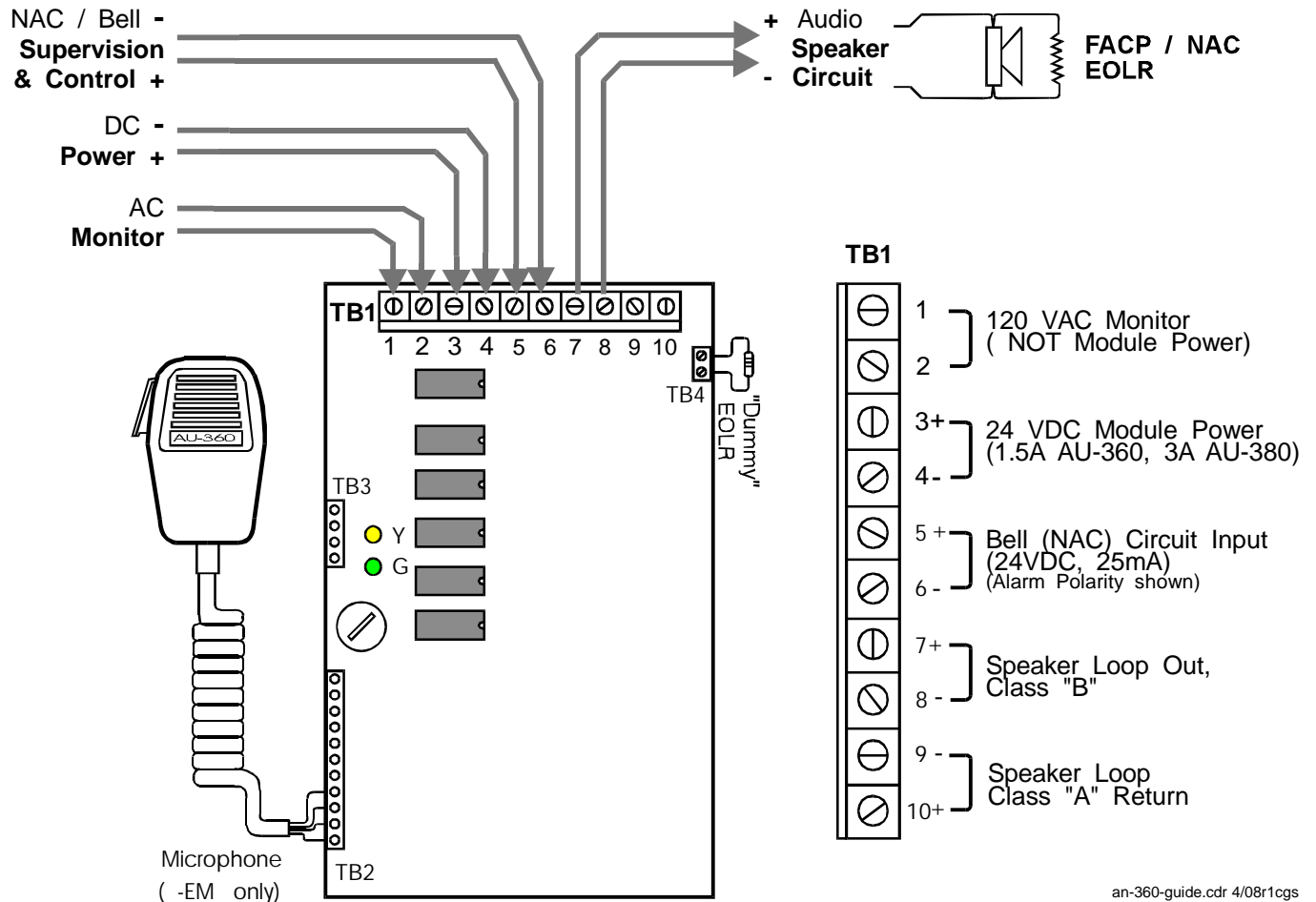
The Amplifier output is 20Watt (AU-360), or 40-Watts (AU-380) in either 25VRMS or 70VRMS (AU-367 / AU-387). The model is listed on a blue and silver label attached to the chassis of the module.

The **120VAC** is monitored by the AU-360 to enable a low-power battery backup mode. So if the system loses AC power it can reduce the draw on the backup batteries.

The **24VDC** input powers the system from a listed, battery backed-up, power supply. Depending upon the amplifier, the power source needs to be a solid / steady 24VDC, with an amperage capability of 1.5A for the AU-360 and 3.0A for the AU-380.

System supervision and activation is by the **NAC (Bell) Circuit** input. This input needs to be a 24VDC, polarity reversing, supervised signal, that when in Alarm, will provide a 24VDC signal to the AU-360 to start the Alert Tone and Voice if so equipped. The supervision from the NAC (Bell) input, goes through a set of trouble contacts in the AU-360, then goes out to the speaker circuit.

The **Speaker Circuit** is typically a 25VRMS output with it's supervision coming from the NAC, therefore the EOLR for the speaker circuit is the same value as the NAC requirement.



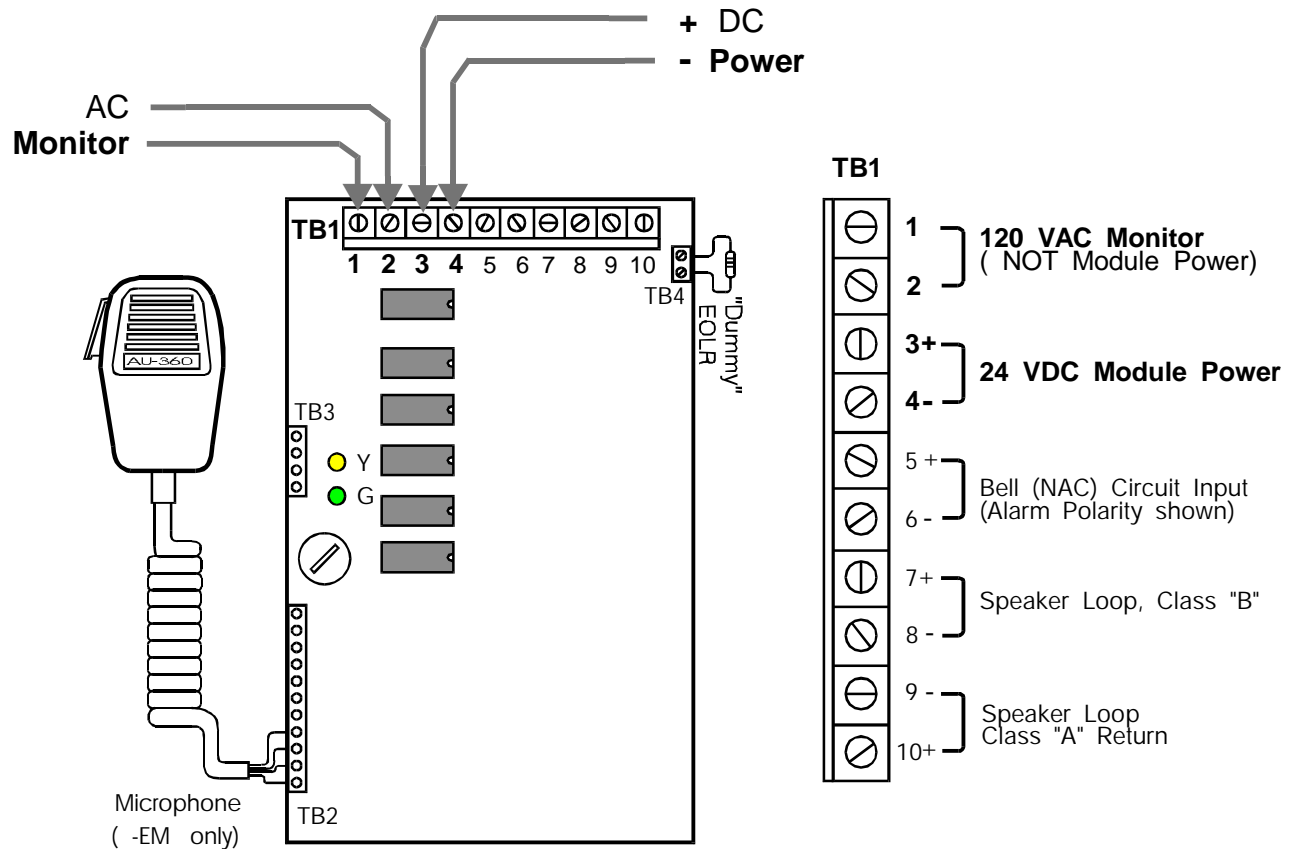
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The AU-360 Series, is powered by the 24VDC input on TB1 terminals 3 and 4.

The 120VAC input on TB1 terminals 1 and 2 indicates to the AU-360 that AC is available.

These 120VAC terminals must be connected to the same AC Source as the Listed 24VDC Power Supply that is powering the AU-360, and should be the same circuit as the Fire Panel (FACP).

The AC is Monitored to keep the AU-360 'Normal' by indicating that the 24VDC input is from the 120V sourced supply, and not backup batteries.



During an AC Failure, the AU-360 Series will reduce it's internal power consumption to help lengthen the battery life. The AU-360 will still 'Activate' during Alarm. Both the 120VAC and the 24VDC need to be present to have the Green 'Normal' LED on. If Either 120VAC or 24VDC are missing, then neither Green or Yellow LEDs will light.

**Note:**

In older systems, if there is a loud buzzing sound coming from the top relay on the AU-360 pcb, then the AC Detect circuit on that board is failing. There is a 100uF 50V Capacitor on the board, just to the left of the buzzing relay, and above the large cement resistor. This capacitor has dried out and is no longer filtering the 60Hz from the relay drive. This is a factory repair. Contact SigCom Customer Service for a Repair Number.

# Multiple Amplifiers

# Application Note AU-360 Guide

In the AU-360 Series, when more than 20 Watts (AU-360), or 40 Watts (AU-380), is needed, multiple amplifiers are added to the system.

This creates a system with a virtually unlimited number of amplifiers and power.

Each amplifier need to be connected to 120VAC for AC monitoring,

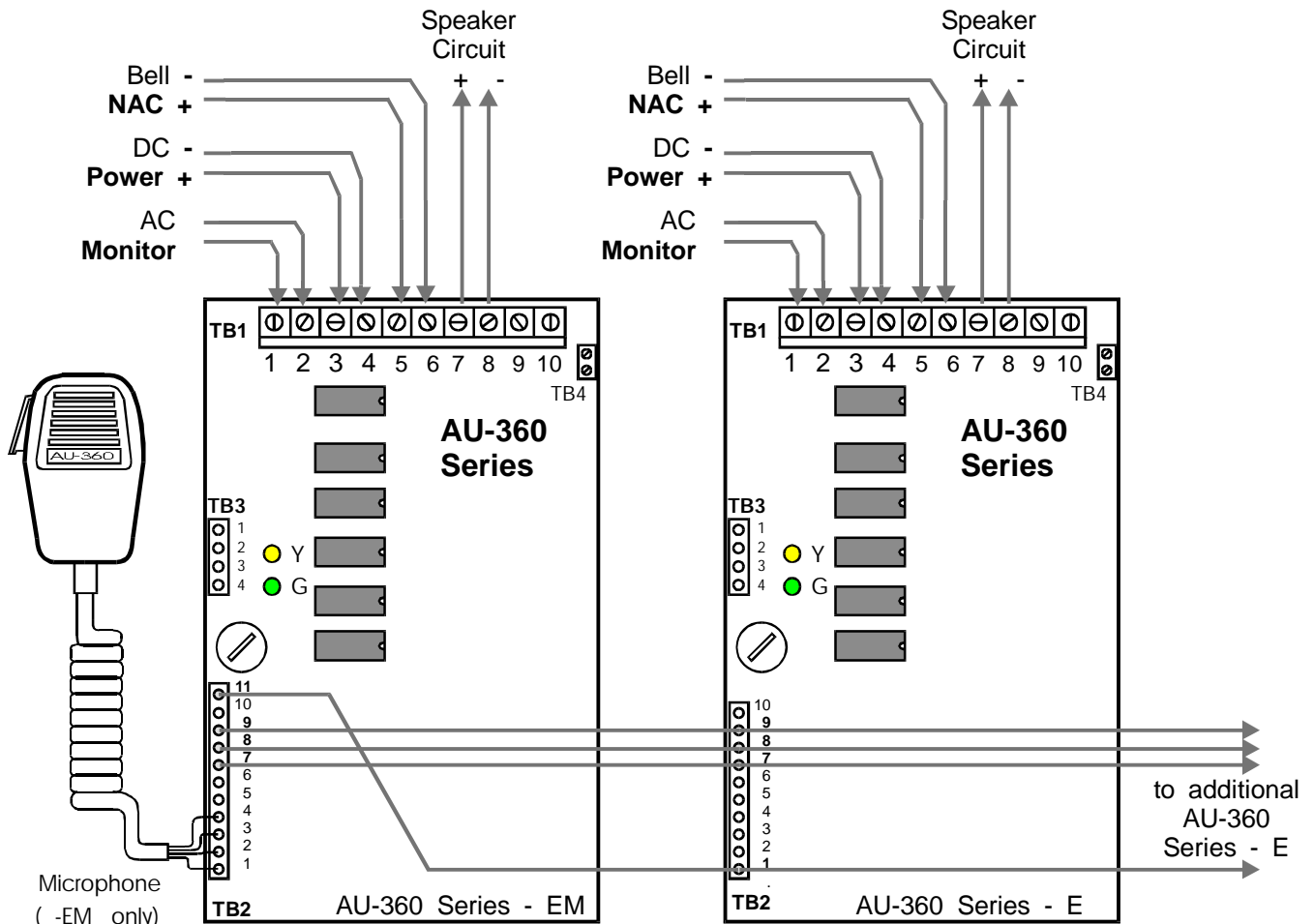
a solid source of 24VDC suitable for the power needed,

typically 1.5-Amps for the AU-360 and 3-Amps for the AU-380.

A separate Bell or NAC circuit is needed for each amplifier for proper system supervision.

Each amplifier has it's own Speaker output, for an individual circuit.

This can be fed into an AU-386 Speaker Splitter, or run directly to the speakers.



In the system, there is only one microphone. It is attached to the -EM version of the AU-360 Series.

To provide audio and control from the primary amplifier (-EM) to the expansion amplifiers (-E)

in the system, 4 wires are used connecting Audio, Common, PTT and Microphone audio.

These are all on the TB2 block on the lower left edge of the AU-360 board.

On the primary amplifier, there is a pin 11, this is the amplified Microphone audio,

and it connects to pin 1 of all the additional amplifiers.

System Audio (pin 7) Common (pin 8) PTT (pin 9), (and Mic (pin 1) from amp-2 on)

are connected to the same pin on all the additional amplifiers

# System / Speaker Supervision *Application Note AU-360 Guide*

System supervision and activation is by the **NAC (Bell)** Circuit input. This input needs to be a 24VDC, polarity reversing, supervised signal, that when in Alarm, will provide a 24VDC signal to the AU-360 to start the Alert Tone and Voice if so equipped.

The supervision from the NAC (Bell) input, goes through a set of trouble contacts in the AU-360, then goes out to the speaker wiring, the speakers, and to the EOLR.

The EOLR for this type of system is the FACP/NAC EOLR value.

The Dummy EOLR is for a special application.

Notice, whenever the AU-360 is activated, the amplifier is attached to the speaker circuit.

The NAC to the EOLR is interrupted.

This isn't a problem in an emergency as the FACP doesn't monitor the system for the EOLR.

But if the local microphone is used, without the system in alarm, then this loss of EOLR will cause the FACP to report a trouble with the system, restoring when the microphone is un-keyed.

To prevent this, the "Dummy" EOLR (which is the same value as the NAC EOLR) is attached to the TB4 terminal block.

This resistor is connected to the NAC input during paging operation,

preventing the trouble / trouble-restore sequence, whenever the system is used for paging.

