

PageNet Zone Paging System

Product Description

The PageNet is an 8 zone matrix system designed to accept up to 8 zone paging microphones, 4 program sources and 1 priority input. The heart of the system is the PN88 matrix which allows any of the 4 program inputs to be assigned to any of the 8 output zones. Up to 8 zone paging mics (PN88M) can be used with the system, allowing any combination of the 8 zones to be paged from any of 8 different locations. The PN88M is an attractive, compact desk mic with 'Zone Select', 'Zone Page', 'All Page, and 'Clear' buttons, The mic base also includes status LED's for each zone and a 'System Busy' LED. A mic sensitivity pot is included on the base of the mic. Two 'keyholes' are also provided in the base of the zone microphone for wall mounting.

System Operation: Operation of the system from the remote mics is easy, just select the output zones you wish to page and press and hold the 'Zone Page' button. All zones can be paged by simply holding the 'All-Page button. A large flashing busy LED will illuminate on all of the other paging mics while the 'Zone Page' button or 'All-Page' button is held to confirm to all other users that the system is busy. An internal pre-announce chime (defeatable) will automatically trigger into the desired zones when they are paged from any of the mics.

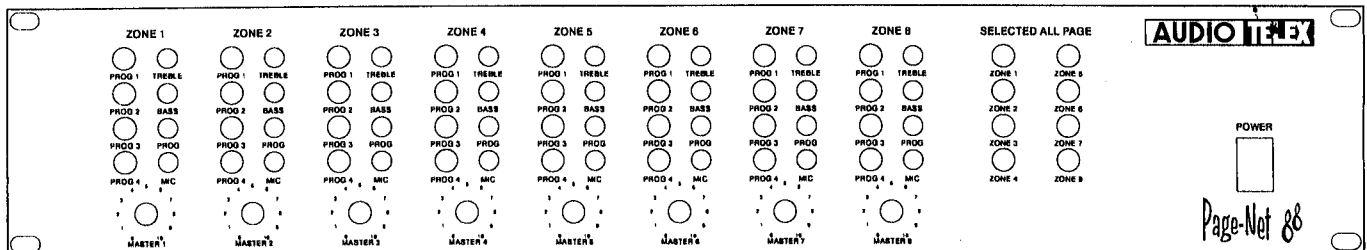
Priority Muting: The PageNet system features multiple levels of priority. Paging Mic 1 will mute Mics 2-8 while Paging Mic 2 will mute Mics 3-8. Any program source operating in to a selected zone will be muted by the paging mics when an announcement is broadcast in to that zone.

An added feature of the PageNet system is that zones can easily be removed from the paging function via front panel buttons on the matrix. For example, if a meeting room in a hotel is not to be disturbed, then that zone can be easily taken out of the paging chain. Likewise at the end of the meeting, the room can again be added to the paging function.

The PN88 matrix includes treble, bass, program level, mic level, and master level controls for each zone. The rear panel has 4 auxiliary inputs with trim controls and 8 line level XLR inputs designed to accept the audio input from the PN88M Zone Mics. Eight 15 pin 'D' female connector are also included to accept the switching and logic information from the zone mics. Outputs to the zone amplifiers are provided via 8 line level XLR outputs.

The PageNet system has facilities for DC backup and also includes evacuation and alert tones which can be triggered remotely. The "emergency" tones have overall priority and, if activated, will be heard in every zone regardless of any switch setting. An audio sub-emergency input is also provided. The PageNet is in a metal 2 rack unit chassis suitable for desk or rack mounting. The unit will operate from 240VAC-50Hz, or 12-24VDC. 110VAC-60Hz is available on special order.

Front Panel Controls



The panel is split up and labeled as 8 separate zones. Following is a description of the controls provided for each zone;

Prog 1, Prog 2, Prog 3, Prog 4 Buttons: Each zone has a program select function where any one of the 4 program/auxiliary inputs can be switched on in that zone. To select a program simply depress one of the program buttons. The unit is designed so that only one program can be active per zone. In other words, if program is running through a zone and a second program button is selected, then the first one will automatically switch off.

Treble Control: Each input channel has a recessed (screwdriver adjustable) treble control. Setting this control in the centre position will give a flat treble response. Adjusting the treble control in a clockwise direction will provide up to 10 dB of treble boost @ 10 kHz. Adjusting the treble control in a counter-clockwise direction will provide up to 10 dB of treble cut @ 10 kHz. This control affects everything running through that particular zone.

Bass Control: Each input channel has a recessed (screwdriver adjustable) bass control. Setting this control in the centre position will give a flat bass response. Adjusting the bass control in a clockwise direction will provide up to 12 dB of bass boost @ 100 Hz.

Adjusting the bass control in a counter-clockwise direction will provide up to 12 dB of bass cut @ 100 Hz. This control affects everything running through that particular zone.

Prog Control : This control adjusts the level of the selected program source in that particular zone. As mentioned earlier, the matrix will accept up to 4 auxiliary/program sources. Trim (gain) controls are provided on the rear panel so that all of the sources can be matched in level. Therefore when you change programs in a zone by pressing the front panel buttons, the level between the sources should be consistent. The 'Prog' control (screwdriver adjustable level control on the front panel) can be seen as the overall auxiliary level control for that zone.

Mic Control: The PageNet matrix will accept up to 8 x PN88M zone paging microphones. Each has the ability to select and page into any combination of zones. A 'Mic' level control is provided on the front panel for each zone. This control governs the level at which paging occurs in that zone, from any mic. Each microphone also includes a trim (gain) control in the base so that each can individually be setup to compensate for different voice levels, or for high ambient noise situations. The trim control simply allows for each mic to be setup for a particular application. The overall level of paging in each zone is controlled by the 'Mic' control on the front panel.

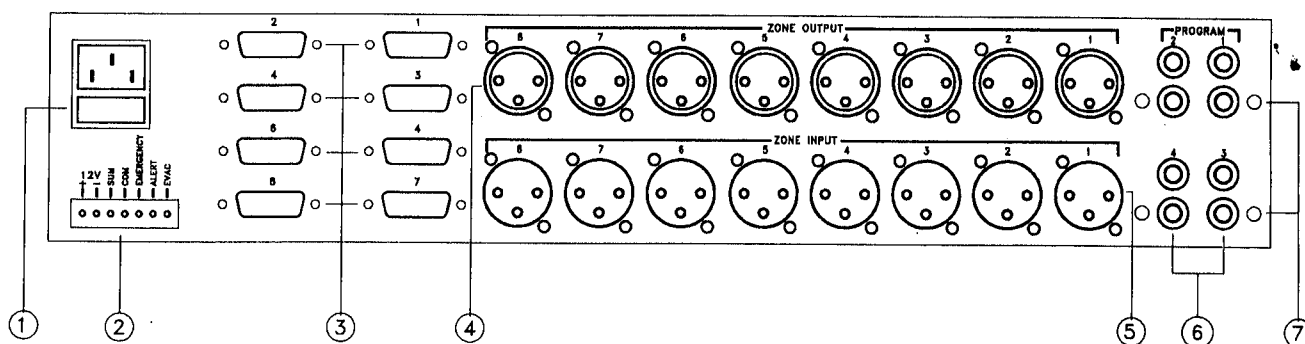
Master Control: Each Zone has a Master level control labeled Master 1, Master 2 etc. This control adjusts the overall level for that zone. In other words, the level being sent to the zone amplifier. The Master level control affects both the program and mic inputs, meaning that while both the 'Prog' and 'Mic' levels can be adjusted individually, they are both affected by the Master control. When setting up these level controls, standard gain structure rules apply. For example do not have the master level at near maximum if both the 'Prog' and 'Mic' levels are turned way down. The general rule is to try and have all level controls set so that nothing is turned all the way down, or near maximum.

The controls mentioned above are duplicated for each of the 8 zones.

Selected All Page : 8 buttons labeled Zones 1-8 are provided under 'Selected All Page.' This section allows zones to be removed from the paging function. With all 8 buttons pressed, paging can go to any zone. A zone button in the 'out' position means that that particular zone cannot be disturbed by paging. The zone will however still receive any selected program source as well as any emergency signal that has been activated. This feature is especially useful for meeting or conference rooms which may not wish to be disturbed by paging announcements.

Power Switch : The switch marked "Power" turns AC mains power 'On' and 'Off' to the PageNet system. Rocking the switch in to the 'Up' position turns on the AC power. When the switch is in the 'On' position, a red neon will glow in the body of the switch. If the PageNet matrix is connected to a 12-24 volt DC supply, this switch will not effect the operation of the system from the DC supply. If both AC and DC are connected, then the PageNet will continue to operate normally when this switch is turned 'Off'. The DC supply needs to be disconnected from the rear panel to completely 'turn off' the PageNet matrix.

Rear Panel



- 3 Pin IEC AC Mains Power Inlet:** The operating voltage is 240 VAC @ 50 Hz or 110 VAC @ 60 Hz (special order only). The inlet is equipped with an inbuilt AC fuse holder fitted with a 1 amp S/B fuse plus a spare. Power consumption is 25 VA.
⚠ Please ensure that the mains power cord is disconnected before attempting to check or replace this fuse.
- Terminal Block:** The terminal block below the mains power inlet provides a number of functions. A 'Phoenix' connector block (supplied) can be unplugged for easy cable connection. This terminal block carries the following features:

 - 12VDC:** The PageNet matrix will operate from 12-24VDC. Simply connect DC power source to the +/- terminals.
 - SUM:** This can be seen as a 5th auxiliary input. Connecting a line level source to the 'SUM and 'COM' (see below) allows a 5th input to be active to all zones. This input mixes with all other inputs and is transmitted to every zone irrespective of the status of 'Selected All Page' section. The 5th or SUM input can become a priority input by simply making and holding a contact closure (COM and EMERGENCY). When an EMERGENCY

contact closure is held, the SUM signal will have overall priority and be broadcast into every zone (including de-selected zones) while the contact closure is held. Such an input may be used for an external EWIS signal, or for special pre-recorded announcements. A Trim control for the SUM is provided internally.


EMERGENCY: When used in conjunction with COM as a contact closure, this trigger will mute all program sources while the closure is held. It may be used in conjunction with the 'SUM' input (see above) or simply used as an overall mute switch (possibly to shutdown the unit in the event of a separate evacuation system being activated)

ALERT: The Alert terminal is an activation point (when used with COM) for the in-built Alert tone generator. The Alert tone will mute all program sources when it is active.

EVAC: The Evac terminal is an activation point (when used with COM) for the in-built Evacuation tone generator. The Evac tone will mute all program sources when it is active.

- 3. 15 Pin 'D Sub' Connectors:** Eight 15 pin 'D Sub' connectors are provided as a logic input from each of the 8 zone microphones. 15 core shielded cable is recommended (pin configuration-back page). Cable lengths from the matrix have been tested to 100 metres. **Microphones 1 and 2 have priority over Mic's 3-8 and need to be wired back to the matrix. These need to be wired without looping.** Microphones 3-8 however can either be cabled back to the matrix or 'daisy-chained' (15 pin input and output connectors are provided on each mic). No more than 3 mics are to be 'daisy-chained.' Although the 15 pin logic cables can be daisy-chained, please note that the audio from each mic (mic cable) needs to be individually wired from each mic back to the matrix (see Zone Inputs).
- 4. Zone Outputs:** An output is provided for each of the eight zones. Each is an active balanced XLR connection with a nominal level of 1.5 volts @ 600 ohms. This signal is designed to run into the balanced line level input of a power amplifier. It can however be used with unbalanced inputs over reasonably short runs. The pin connections are; pin #1-earth; pin #2-high (+); pin #3-low (-). When used in unbalanced applications, **do not** connect Pin 3 to ground.
- 5. Zone Inputs:** The matrix includes 8 zone inputs. In other words, the audio from each of the PN88M zone microphones. Each of these balanced XLR inputs is **line level**. While other line level sources *could* be plugged into these inputs, the only way to direct them to go anywhere is via a PageNet mic console. Much of the switching logic for the system is included in the zone microphone which, apart from pre-amping the signal from mic to line level, also tells the system where each input is to be sent. In summary, these inputs are really only designed for PageNet zone mics. Please note that the audio from **each** mic must be wired back to the matrix.
- 6. Program Inputs:** 4 program source inputs are provided. Each input features dual RCA inputs and is suitable for a variety of sources including Tape decks, CD players, digital message players and wireless mics with line outputs.
- 7. Program Input Trim Controls:** A recessed trim (gain) pot is provided for each of the 4 program source inputs. The trim pots are provided so that each source can be matched in level so that the volume is consistent when a user switches between program sources in a zone.

Other Internal Adjustments

 **The following adjustments involve access to the inside of the PageNet matrix. This should only be attempted by a qualified technician. Always turn off the AC power and remove the AC power cord before attempting to access the inside of the unit.**

Pre-Announce Chime Defeat: The PageNet system ships with an active pre-announce chime meaning that a chime is activated automatically when a zone is paged. The Pre-Announce chime can be defeated for any or all zones by moving an internal jumper (for each zone). A pre-announce on/off jumper for each zone can be found on the main board behind the Zone Input XLR's.

Pre-Announce Level Control: This pot adjusts the level of the Pre-Announce chime. The one pots affects the pre-announce level in all 8 zones. The pot is labeled 'R70' and can be found on the main board behind the Zone Input XLR's.

Alert and Evac Tone Level Control: The Evac/Alert trim pot, labeled 'R71', can be found on the main board behind the Program Input RCA's. It adjusts the level of both the Alert and Evac tones.

Sum Level Trim: The Sum level trim pot, labeled R72', can be found on the main board behind the Program Input RCA's. It adjusts the level of the sum input (rear panel Phoenix connector).

Wiring and Connector Information

Wiring of the 15 pin 'D' connector is simply Pin 1 to 1, 2 to 2, 3 to 3 etc connecting all 15 pins. The shield should be soldered to the connector case at both ends. Connectors and cable not supplied with the system.

Cable Type (Logic): Hartland HCE316 or equivalent

Cable Type (XLR) Twin core shielded microphone cable (eg Audio Telex S2C122B or MC6030)

Connector (Logic): Standard (not high-density) 15 pin 'D' Connector, both male and female required (all cables-male to female)

Connector (XLR): 3 pin female XLR required to mate with Zone Mic (Switchcraft A3FB)

3 pin male XLR required to connect Zone Mics to Matrix (Switchcraft A3MB)

3 pin female XLR required to mate with Zone Outputs (Switchcraft A3FB)