

MMX-LOC

Local Operating Console



Installation & Operation Manual

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Mass Notification System

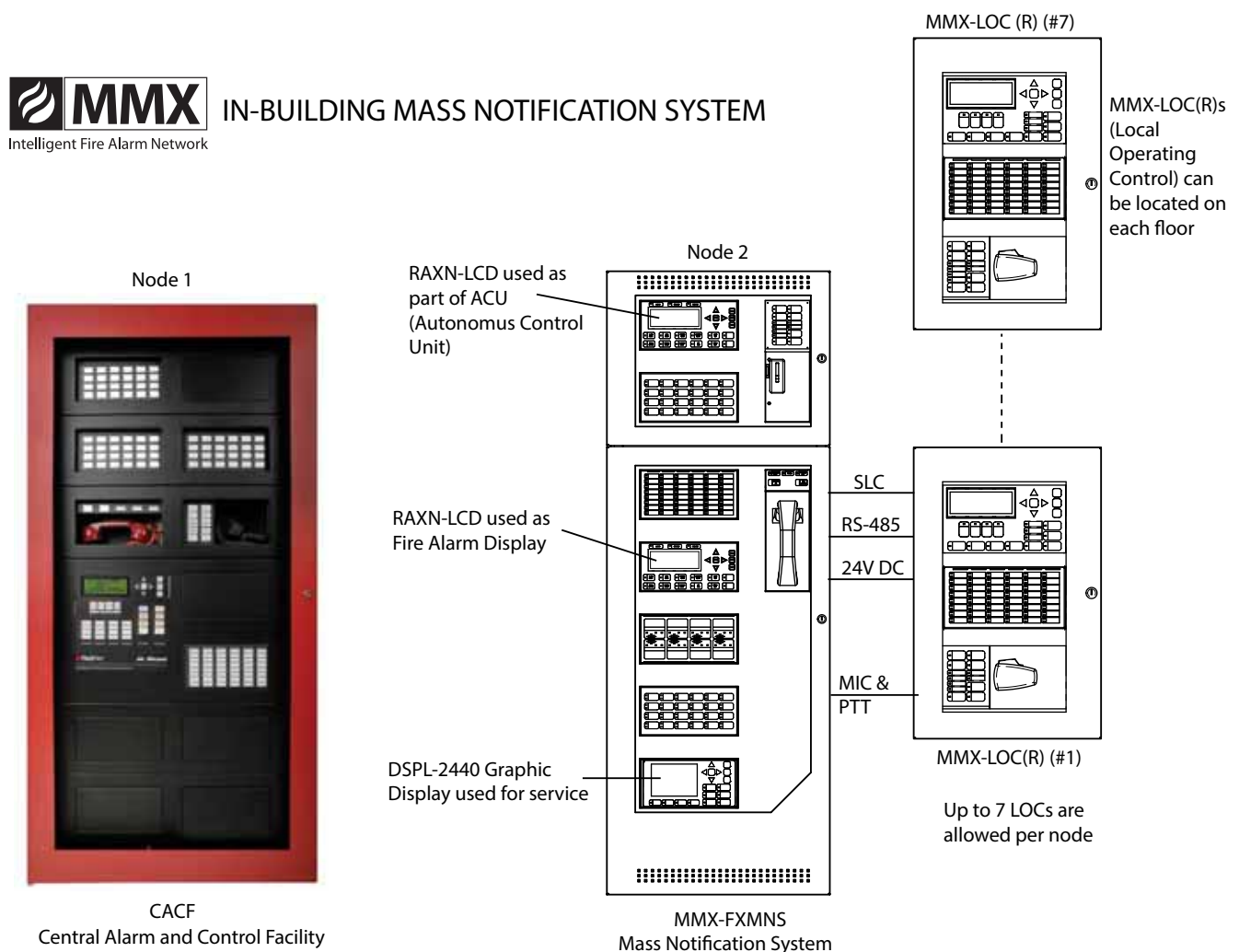
The MMX-LOC(R) Local Operating Console along with the Secutron MMX™ Network Fire Alarm system facilitates a Mass Notification System. The MMX-LOC(R) provides critical emergency (as well as fire) information to be communicated within buildings.

The MMX-LOC(R) Local Operating Console along with the MMX™ Network Fire Alarm provides compliance with the Mass Notification System (MNS) UL 2572 requirements.

The MNS portion of a complete Secutron MMX™ Network Fire Alarm system consists of a BBX-FXMNS Enclosure (see Node 2 in Figure 1). The BBX-FXMNS includes a RAXN-LCD Annunciator which is designated an ACU (Autonomous Control Unit) and a Master Microphone to provide emergency audio. Below the ACU is another RAXN-LCD which annunciates the fire alarm system along with a Master Telephone for emergency use. Below this is a display LCD such as the DSPL-420 or DSPL-2440 which may be used for service; this display will show all messages. Up to seven MMX-LOC(R)s can be connected to any MNS node.

Applicable Standards: UL 2572, UL 864, NFPA 72, ULC

Figure 1: In-Building Mass Notification Sample System



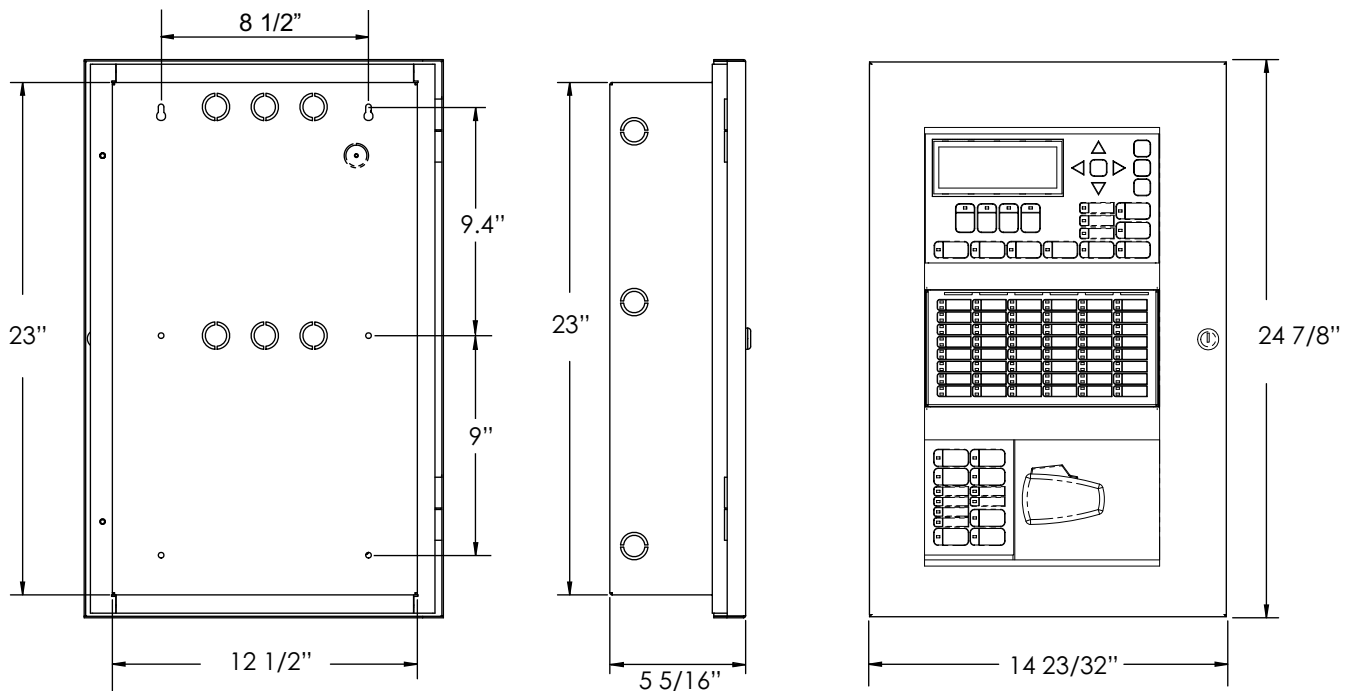
MMX-LOC(R) Local Operating Console

The MMX-LOC(R) consists of a remote main display (RAXN-LCD), an audio indication panel RAX-1048TZDS and a master paging microphone QMP-5101N within a small compact enclosure. The complete enclosure dimensions are approximately 15" wide by 25" long by 5.5" deep. Refer to figure below for accurate dimensions. The MMX-LOC model provides a white door and the MMX-LOC(R) model comes with a red door.

Summary of Parts:

1. MMX-LOC(R) Enclosure consists of backbox, inner door and outer door.
2. Main Display such as RAXN-LCD.
3. Audio indication panel RAX-1048TZDS.
4. Master paging microphone, model QMP-5101N.

Figure 2: MMX-LOC(R) Enclosure



The MMX-LOC(R) is made up of a mechanical backbox, a middle metal chassis which the modules are attached to and a front door with a Lexan window. The backbox may be mounted either surface or flush mount.

Surface Mount

For surface mounting the backbox is secured to the wall using six #8 screws with the six mounting holes provided. The mounting holes are 8 1/2" apart in width and 9.4" apart in length from the top two mounting holes to the middle mounting holes and 9" apart in length from the middle two mounting holes. Refer to figure above for all the dimensions.

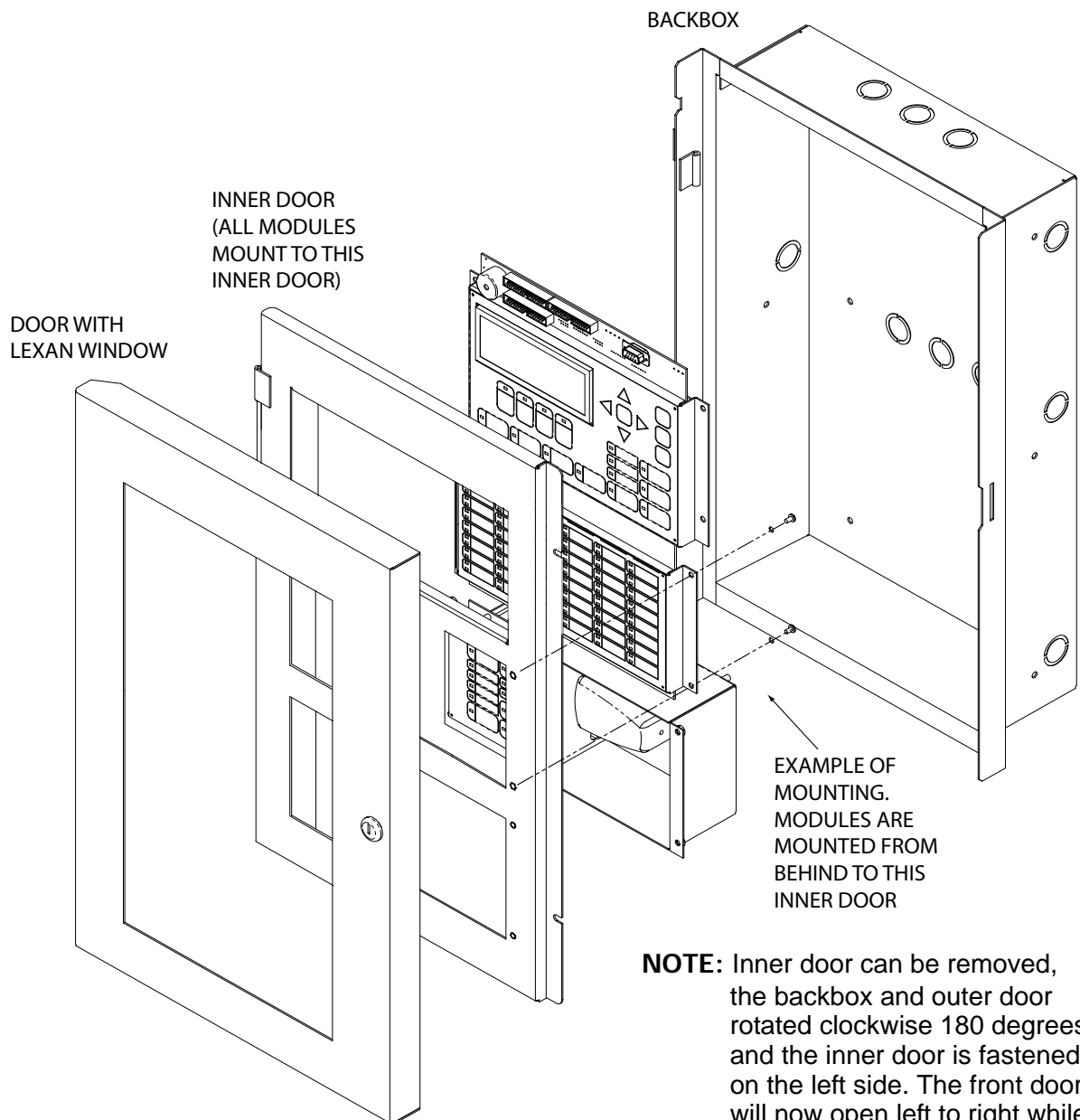
Flush Mount

For flush mount, cut out a hole 12 1/2" wide by 21" long and 5" deep. Allow at least 2.5" around the cutout for the lip of the backbox and door placement. Place the backbox into the hole and the bent edge of the box will frame the wall.

Module Placement within the MMX-LOC(R)

Once the backbox has been mounted, the RAXN-LCD, the audio annunciation panel and the paging microphone are fastened to the inner door chassis as shown below. Once the modules have been mounted to the inner door, wire the modules as instructed in the following sections. After wiring is complete, hook the door with the Lexan window and the inner door chassis onto the backbox. Refer to figure below for assembly instructions.

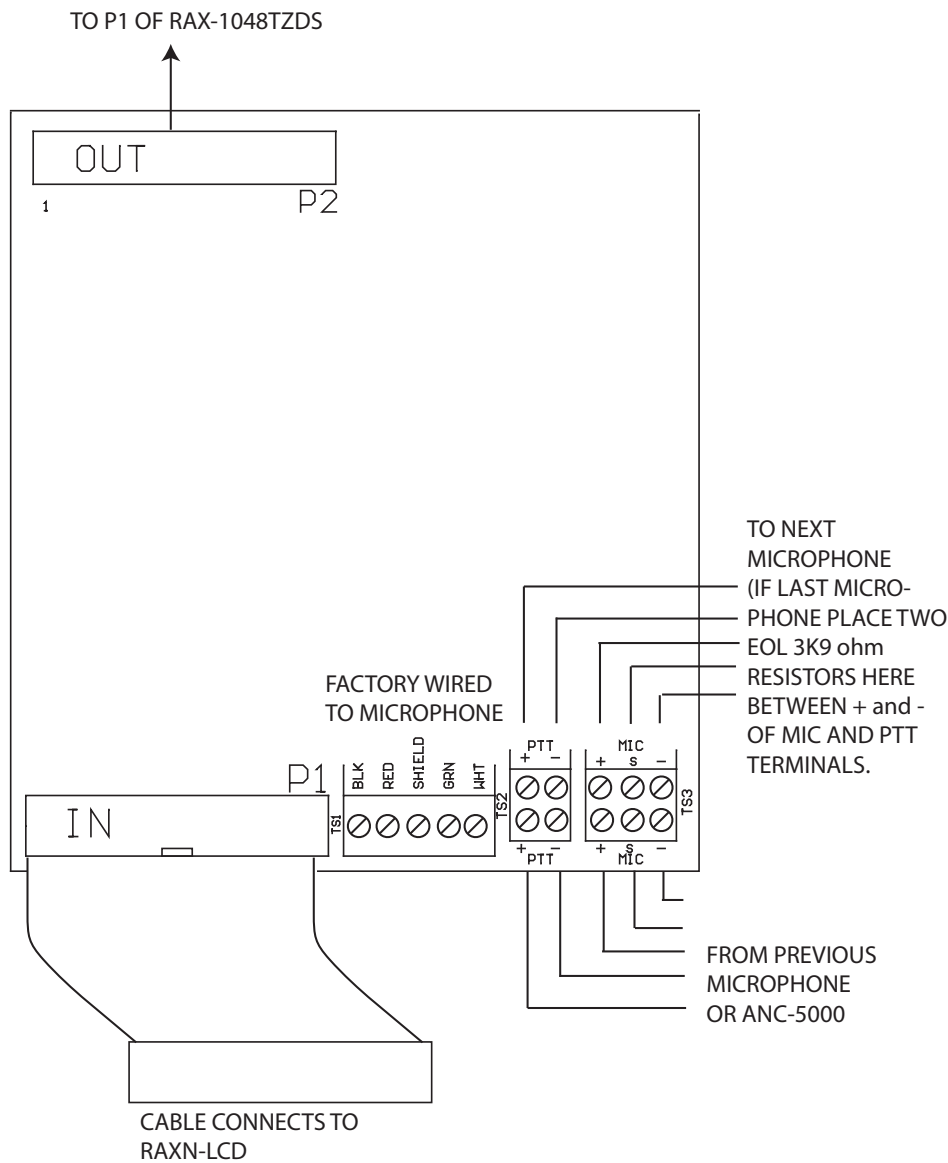
Figure 3: MMX-LOC(R) Mechanical Assembly



NOTE: Inner door can be removed, the backbox and outer door rotated clockwise 180 degrees and the inner door is fastened on the left side. The front door will now open left to right while the inner door opens right to left.

Wiring the Microphone and Selector Panel

Figure 4: QMP-5101N Network Master Paging Control Module Connections and Terminal Blocks



The interface wiring between the QMP-5101N, ANC-5000 and MMX-LOC(R) is as follows:

MIC+, MIC-, SHLD:	18-22 AWG Twisted Shielded Pair
PTT+, PTT-:	18-22 AWG Twisted Pair

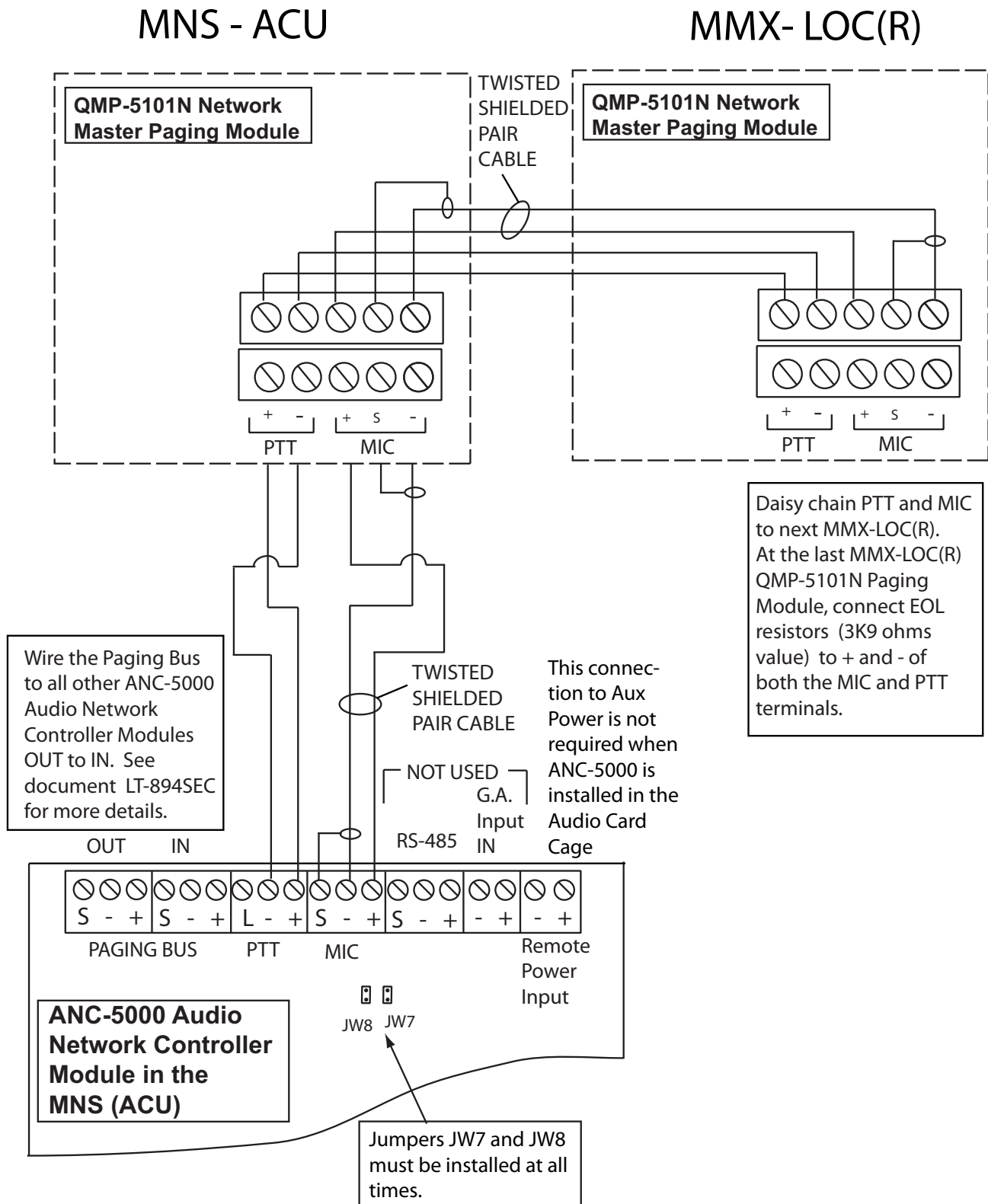
The maximum wiring run from the QMP-5101N and the ANC-5000 is 20 feet or 6 metres.



Note: The Common Trouble LED on the QMP-5101N Paging Module is configured as MIC Active for MMX-LOC(R). Replace the Common Trouble label with the MIC Active label and re-configure the Common Trouble LED using the MMX™ configurator MSW-025.

QMP-5101N Network Paging Wiring for Mass Notification

Figure 5: QMP-5101N Network Master Paging Control Module Wiring to the ANC-5000 Audio Network Controller Module



RAX-1048TZDS Audio Indication for Mass Notification

Connect the RAX-1048TZDS by connecting P1 cable into P1 on the QMP-5101N Master Microphone.

Figure 6: Zone Display Module (RAX-1048TZDS)

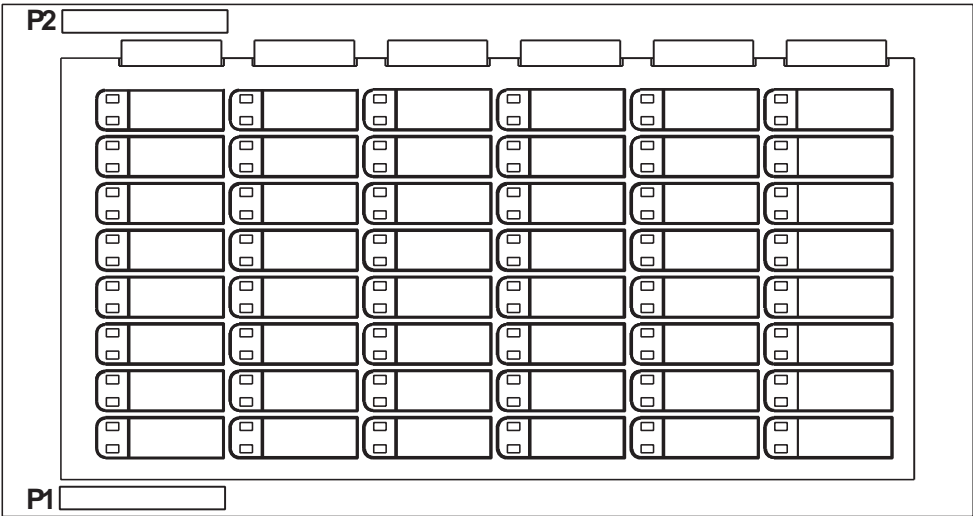


Table 1: RAX-1048TZDS Zone Display Module Cable Function

Connector	Function
P1	P1 Cable connects to P2 of previous display module QMP-5101N.
P2	P2 is not connected.



Note: The zone display module comes with laser printer-compatible slide-in paper labels for labelling.

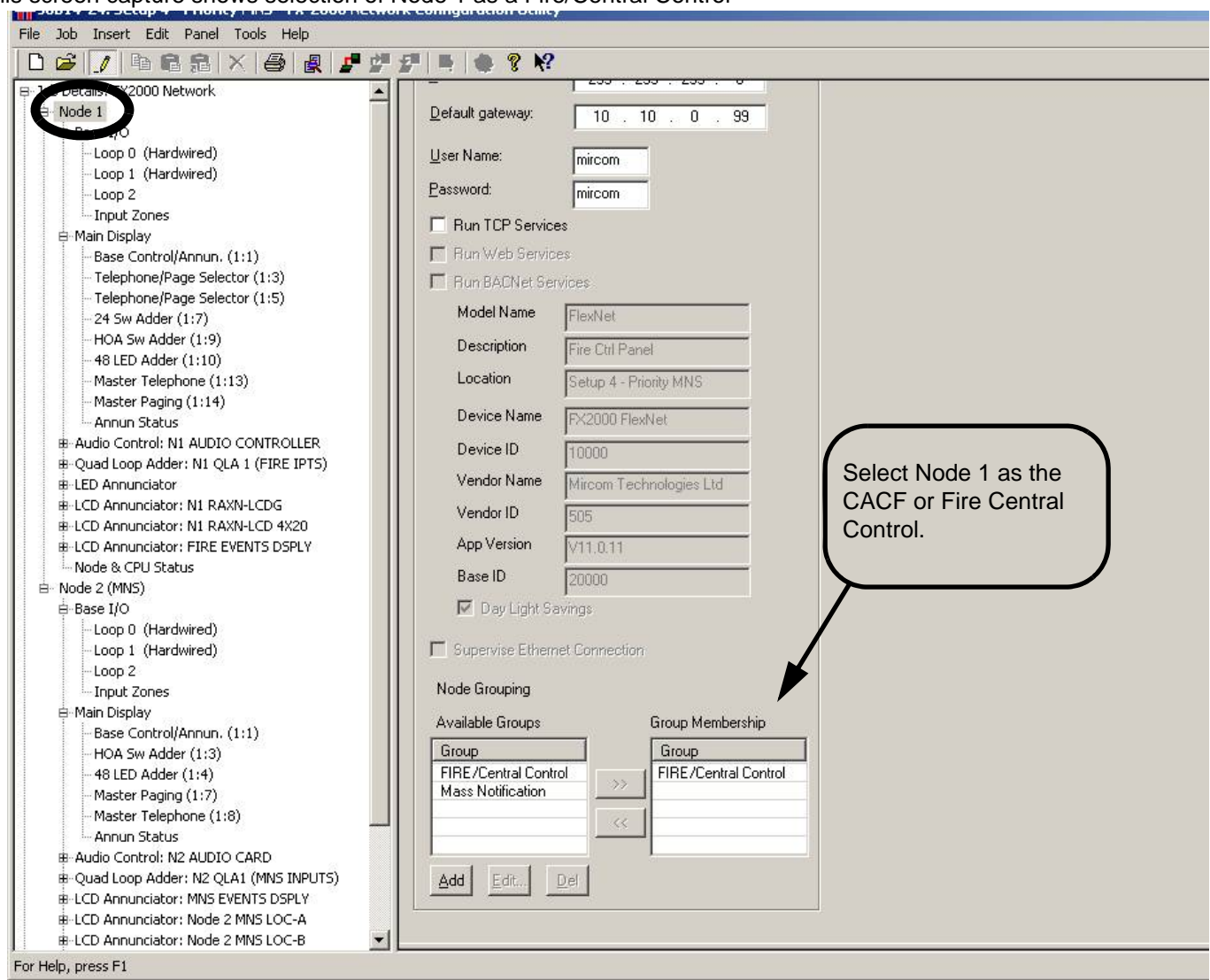
Configuration for Mass Notification

There are two groups that can be created for the nodes; one group is the fire/central control and the second is mass notification.

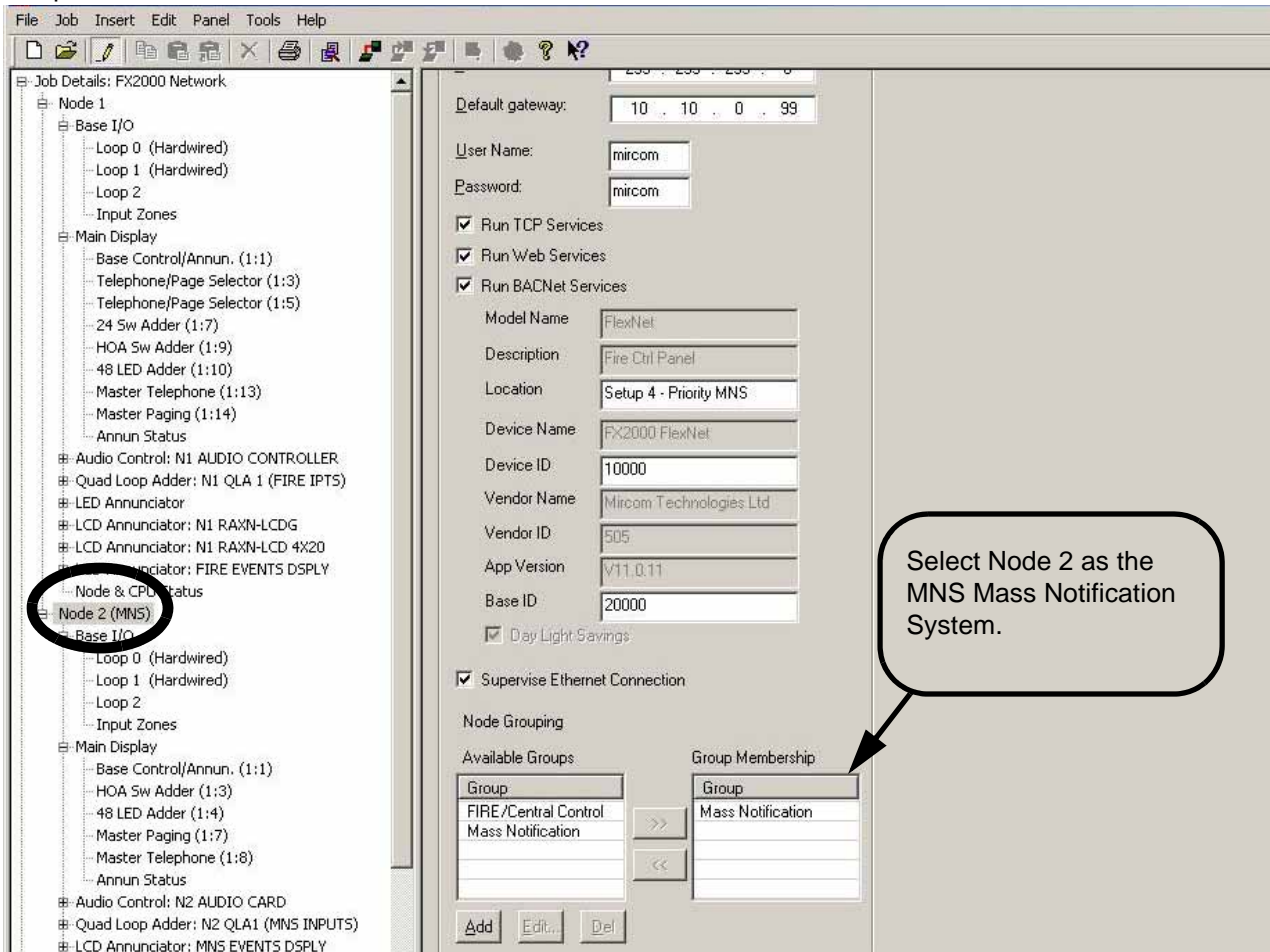
In order to have this distinction, all zones have to be assigned a “Zone Priority”. Priority can be high, low, normal or a percentage of + or - increments of 5. Maximum of +95 percent above normal and -95 percent below normal. This percentage allows specific levels of messaging priority above and below fire alarm messaging. For example one area of voice messaging may have +5 percent above normal zone priority, which means that this area has the first level priority (or override) above fire alarm messaging. Another area may have -10 percent below normal zone priority which will have this area two levels below fire alarm messaging priority.

The following are screen captures of the group and zone priority for an sample system with a CACF and MNS and two MMX-LOC(R)s (refer to Figure 1).

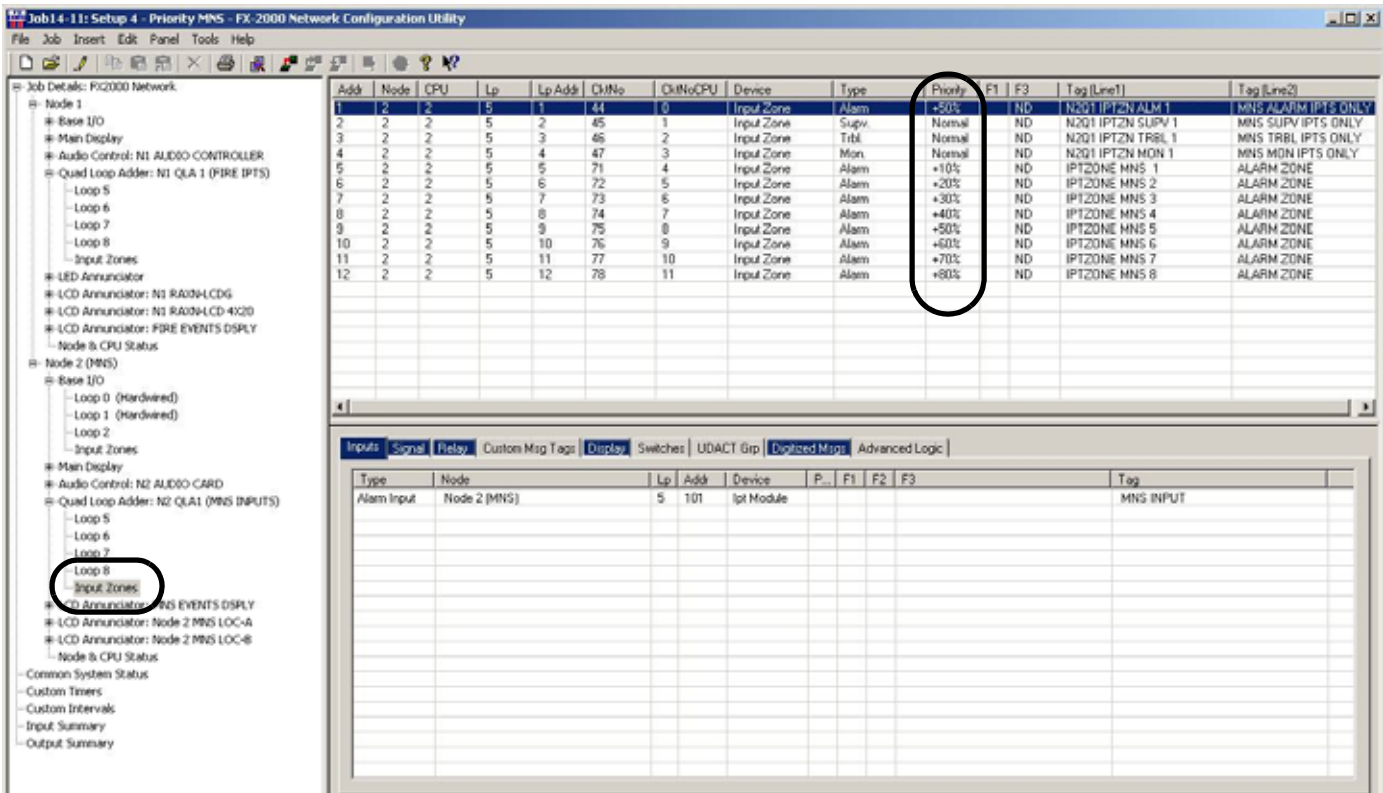
This screen capture shows selection of Node 1 as a Fire/Central Control



This screen capture shows selection of Node 2 as Mass Notification



This screen capture shows input zone priority settings for the Mass Notification Node 2



MMX-LOC(R) Active

As part of the Mass Notification requirements, an RAX-1048TZDS Annunciator is part of the MNS and MMX-LOC(R). Configure one LED (to indicate active paging) per each microphone in the system. Each LED is configured to illuminate when the respective microphone push to talk (PTT) button is active; i.e. paging is in use.



Configuration Note: The RAX-1048TZDS normally displays Initiating circuit status and trouble indication, the MMX™ configuration must be used to set LEDs to annunciate paging. To configure, select CPU Status for one LED per microphone. Assign CPU PTT PRESSED to correlate to LOC and MNS(ACU).

This screen capture show the configuration of the RAX-1048TZDS LEDs to indicated paging activity.

Job80-01: Mass Notification Setup - MGC Fire Detection and Mass Notification Configurator

File Job Insert Edit Panel Tools Help

Job Details: MGC Network

- Node 1
 - Base I/O
 - Loop 0 (Hardwired)
 - Loop 1 (Hardwired)
 - Loop 2
 - Input Zones
 - Main Display
 - Base Control/Annun. (1:1)
 - Master Paging (1:3)
 - 48 LED Adder (1:4)
 - Annun Status
 - LCD Annunciator: L.O.C. #1
 - LCD Annunciator: L.O.C. #2
 - LCD Annunciator: L.O.C. #3
 - LCD Annunciator: L.O.C. #4
 - Node & CPU Status
- Common System Status
- Custom Timers
- Custom Intervals
- Equation Summary
- Input Summary
- Output Summary

...	Type	Assignment	Node Group	Priority
0	CPU Status	CPU PTT Pressed		
1	CPU Status	CPU PTT Pressed		
2	CPU Status	CPU PTT Pressed		
3	CPU Status	CPU PTT Pressed		
4	CPU Status	CPU PTT Pressed		
5	<unassigned>			
6	<unassigned>			
7	<unassigned>			
8	<unassigned>			

Main CPUs and Annunciators

No...	Tag	CPU	Tag
1	Node 1	8	LCD Annunciator: L.O.C. #1

Reset

As per UL, resets are handled separately for Fire/Central Control and the Mass Notification System. They are mutually independent.

MMX-LOC(R) Emergency Response Operation

1. Access control of MMX-LOC(R).
2. Mass Notification Node will be notified of paging at MNS (ACU) and MMX-LOC(R) in use via LEDs on RAX-1048TZDS.
3. Select areas to receive paging or digitized messages or use all call to page to all the zones of the MMX-LOC(R).
4. Page or send digitized message as necessary.

Electrical Specifications

RAXN-LCD Remote LCD Annunciator

- 24V DC nominal.
- Provides exact functions as the MNS main display.
- Standby: 139 mA Max., All LEDs ON: 164 mA Max.

RAX-1048TZDS

- 24V DC nominal.
- Provides audio activity indication at each MMX-LOC.
- Standby: 22 mA Max., one LED ON 26mA, All LEDs ON: 262 mA Max.
- Only one LED can be ON at any time.

QMP-5101N Master Microphone Paging Module

- Interconnects between other QMP-5101N module at the MNS and within the associated MMX-LOC(R)s
- Standby: 175 mA Max., Alarm: 175 mA Max.

Current Drain for Battery Calculations (Example)

The following are the currents for the RAXN-LCD to which is added to the RAX-1048TZDS plus QMP-5101N for a total current per MMX-LOC(R):

Normal Standby Current = 139 mA + 22 mA + 175mA = 336 mA

Maximum Alarm Current = 164 mA + 26 mA + 175mA = 365mA

The **Normal Standby Current** is used for battery size calculations to add to the main Fire Alarm Panel (see the MMXTM Manual for additional battery calculations) and includes the current drain for the Trouble Buzzer, Trouble LED, and one alarm LED.

Warranty & Warning Information

Warning Please Read Carefully

Note to End Users: This equipment is subject to terms and conditions of sale as follows:

Note to Installers

This warning contains vital information. As the only individual in contact with system users, it is your responsibility to bring each item in this warning to the attention of the users of this system. Failure to properly inform system end-users of the circumstances in which the system might fail may result in over-reliance upon the system. As a result, it is imperative that you properly inform each customer for whom you install the system of the possible forms of failure.

System Failures

This system has been carefully designed to be as effective as possible. There are circumstances, such as fire or other types of emergencies where it may not provide protection. Alarm systems of any type may be compromised deliberately or may fail to operate as expected for a variety of reasons. Some reasons for system failure include:

•*Inadequate Installation*

A Fire Alarm system must be installed in accordance with all the applicable codes and standards in order to provide adequate protection. An inspection and approval of the initial installation, or, after any changes to the system, must be conducted by the Local Authority Having Jurisdiction. Such inspections ensure installation has been carried out properly.

•*Power Failure*

Control units, smoke detectors and many other connected devices require an adequate power supply for proper operation. If the system or any device connected to the system operates from batteries, it is possible for the batteries to fail. Even if the batteries have not failed, they must be fully charged, in good condition and installed correctly. If a device operates only by AC power, any interruption, however brief, will render that device inoperative while it does not have power. Power interruptions of any length are often accompanied by voltage fluctuations which may damage electronic equipment such as a fire alarm system. After a power interruption has occurred, immediately conduct a complete system test to ensure that the system operates as intended.

•*Failure of Replaceable Batteries*

Systems with wireless transmitters have been designed to provide several years of battery life under normal conditions. The expected battery life is a function of the device environment, usage and type. Ambient conditions such as high humidity, high or low temperatures, or large temperature fluctuations may reduce the expected battery life. While each transmitting device has a low battery monitor which identifies when the batteries need to be replaced, this monitor may fail to operate as expected. Regular testing and maintenance will keep the system in good operating condition.

•*Compromise of Radio Frequency (Wireless) Devices*

Signals may not reach the receiver under all circumstances which could include metal objects placed on or near the radio path or deliberate jamming or other inadvertent radio signal interference.

•*System Users*

A user may not be able to operate a panic or emergency switch possibly due to permanent or temporary physical disability, inability to reach the device in time, or unfamiliarity with the correct operation. It is important that all system users be trained in the correct operation of the alarm system and that they know how to respond when the system indicates an alarm.

•*Automatic Alarm Initiating Devices*

Smoke detectors, heat detectors and other alarm initiating devices that are a part of this system may not properly detect a fire condition or signal the control panel to alert occupants of a fire condition for a number of reasons, such as: the smoke detectors or heat detector may have been improperly installed or positioned; smoke or heat may not

be able to reach the alarm initiating device, such as when the fire is in a chimney, walls or roofs, or on the other side of closed doors; and, smoke and heat detectors may not detect smoke or heat from fires on another level of the residence or building.

•*Software*

Most MGC products contain software. With respect to those products, MGC does not warranty that the operation of the software will be uninterrupted or error-free or that the software will meet any other standard of performance, or that the functions or performance of the software will meet the user's requirements. MGC shall not be liable for any delays, breakdowns, interruptions, loss, destruction, alteration or other problems in the use of a product arising out of, or caused by, the software.

Every fire is different in the amount and rate at which smoke and heat are generated. Smoke detectors cannot sense all types of fires equally well. Smoke detectors may not provide timely warning of fires caused by carelessness or safety hazards such as smoking in bed, violent explosions, escaping gas, improper storage of flammable materials, overloaded electrical circuits, children playing with matches or arson.

Even if the smoke detector or heat detector operates as intended, there may be circumstances when there is insufficient warning to allow all occupants to escape in time to avoid injury or death.

•*Alarm Notification Appliances*

Alarm Notification Appliances such as sirens, bells, horns, or strobes may not warn people or waken someone sleeping if there is an intervening wall or door. If notification appliances are located on a different level of the residence or premise, then it is less likely that the occupants will be alerted or awakened. Audible notification appliances may be interfered with by other noise sources such as stereos, radios, televisions, air conditioners or other appliances, or passing traffic. Audible notification appliances, however loud, may not be heard by a hearing-impaired person.

•*Telephone Lines*

If telephone lines are used to transmit alarms, they may be out of service or busy for certain periods of time. Also the telephone lines may be compromised by such things as criminal tampering, local construction, storms or earthquakes.

•*Insufficient Time*

There may be circumstances when the system will operate as intended, yet the occupants will not be protected from the emergency due to their inability to respond to the warnings in a timely manner. If the system is monitored, the response may not occur in time enough to protect the occupants or their belongings.

•*Component Failure*

Although every effort has been made to make this system as reliable as possible, the system may fail to function as intended due to the failure of a component.

•*Inadequate Testing*

Most problems that would prevent an alarm system from operating as intended can be discovered by regular testing and maintenance. The complete system should be tested as required by national standards and the Local Authority Having Jurisdiction and immediately after a fire, storm, earthquake, accident, or any kind of construction activity inside or outside the premises. The testing should include all sensing devices, keypads, consoles, alarm indicating devices and any other operational devices that are part of the system.

•*Security and Insurance*

Regardless of its capabilities, an alarm system is not a substitute for property or life insurance. An alarm system also is not a substitute for property owners, renters, or other occupants to act prudently to prevent or minimize the harmful effects of an emergency situation.

IMPORTANT NOTE: End-users of the system must take care to ensure that the system, batteries, telephone lines, etc. are tested and examined on a regular basis to ensure the minimization of system failure.

Limited Warranty

Mircom Technologies Ltd., MGC Systems Corp. and MGC System International Ltd. together with their subsidiaries and affiliates (collectively, MGC) warrants the original purchaser that for a period of three years from the date of shipment, proprietary manufactured product shall be free of defects in materials and workmanship, under normal use. During the warranty period, MGC shall, at its option, repair or replace any defective product upon return of the product to its factory, at no charge for labor and materials. Non-proprietary, third party or OEM product shall be warranted in accordance with the warranty period of the manufacturer. Any replacement and/or repaired parts are warranted for the remainder of the original warranty or ninety (90) days, whichever is longer. The original owner must promptly notify MGC in writing that there is defect in material or workmanship, such written notice to be received in all events prior to expiration of the warranty period.

International Warranty

The warranty for international customers is the same as for any customer within Canada and the United States, MGC shall not be responsible for any customs fees, taxes, or VAT that may be due.

Conditions to Void Warranty

This warranty applies only to defects in parts and workmanship relating to normal use. It does not cover:

- damage incurred in shipping or handling;
- damage caused by disaster such as fire, flood, wind, earthquake or lightning;
- damage due to causes beyond the control of MGC such as excessive voltage, mechanical shock or
- water damage;
- damage caused by unauthorized attachment, alterations, modifications or foreign objects;
- damage caused by peripherals (unless such peripherals were supplied by MGC);
- defects caused by failure to provide a suitable installation environment for the products;
- damage caused by use of the products for purposes other than those for which it was designed;
- damage from improper maintenance;
- damage arising out of any other abuse, mishandling or improper application of the products.

Warranty Procedure

To obtain service under this warranty, please return the item(s) in question to the point of purchase. All authorized distributors and dealers have a warranty program. Anyone returning goods to MGC must first obtain an authorization number. MGC will not accept any shipment whatsoever for which prior authorization has not been obtained. NOTE: Unless specific pre-authorization in writing is obtained from MGC management, no credits will be issued for custom fabricated products or parts or for complete fire alarm system. MGC will at its sole option, repair or replace parts under warranty. Advance replacements for such items must be purchased.

Note: MGC's liability for failure to repair the product under this warranty after a reasonable number of attempts will be limited to a replacement of the product, as the exclusive remedy for breach of warranty.

Disclaimer of Warranties

This warranty contains the entire warranty and shall be in lieu of any and all other warranties, whether expressed or implied (including all implied warranties of merchantability or fitness for a particular purpose) and of all other obligations or liabilities. MGC neither assumes nor authorizes any other person purporting to act on its behalf to modify or to change this warranty, or to assume for it any other warranty or liability concerning this product.

This disclaimer of warranties and limited warranty are governed by the laws of the province of Ontario, Canada.

Out of Warranty Repairs

MGC will at its option repair or replace out-of-warranty products which are returned to its factory according to the following conditions. Anyone returning goods to MGC must first obtain an authorization number. MGC will not accept any shipment whatsoever for which prior authorization has not been obtained.

Products which MGC determines to be repairable will be repaired and returned. A set fee which MGC has predetermined and which may be revised from time to time, will be charged for each unit repaired.

Products which MGC determines not to be repairable will be replaced by the nearest equivalent product available at that time. The current market price of the replacement product will be charged for each replacement unit.

The foregoing information is accurate as of the date of publishing and is subject to change or revision without prior notice at the sole discretion of the Company

WARNING: MGC recommends that the entire system be completely tested on a regular basis. However, despite frequent testing, and due to, but not limited to, criminal tampering or electrical disruption, it is possible for this product to fail to perform as expected.

NOTE: Under no circumstances shall MGC be liable for any special, incidental, or consequential damages based upon breach of warranty, breach of contract, negligence, strict liability, or any other legal theory. Such damages include, but are not limited to, loss of profits, loss of the product or any associated equipment, cost of capital, cost of substitute or replacement equipment, facilities or services, down time, purchaser's time, the claims of third parties, including customers, and injury to property.

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