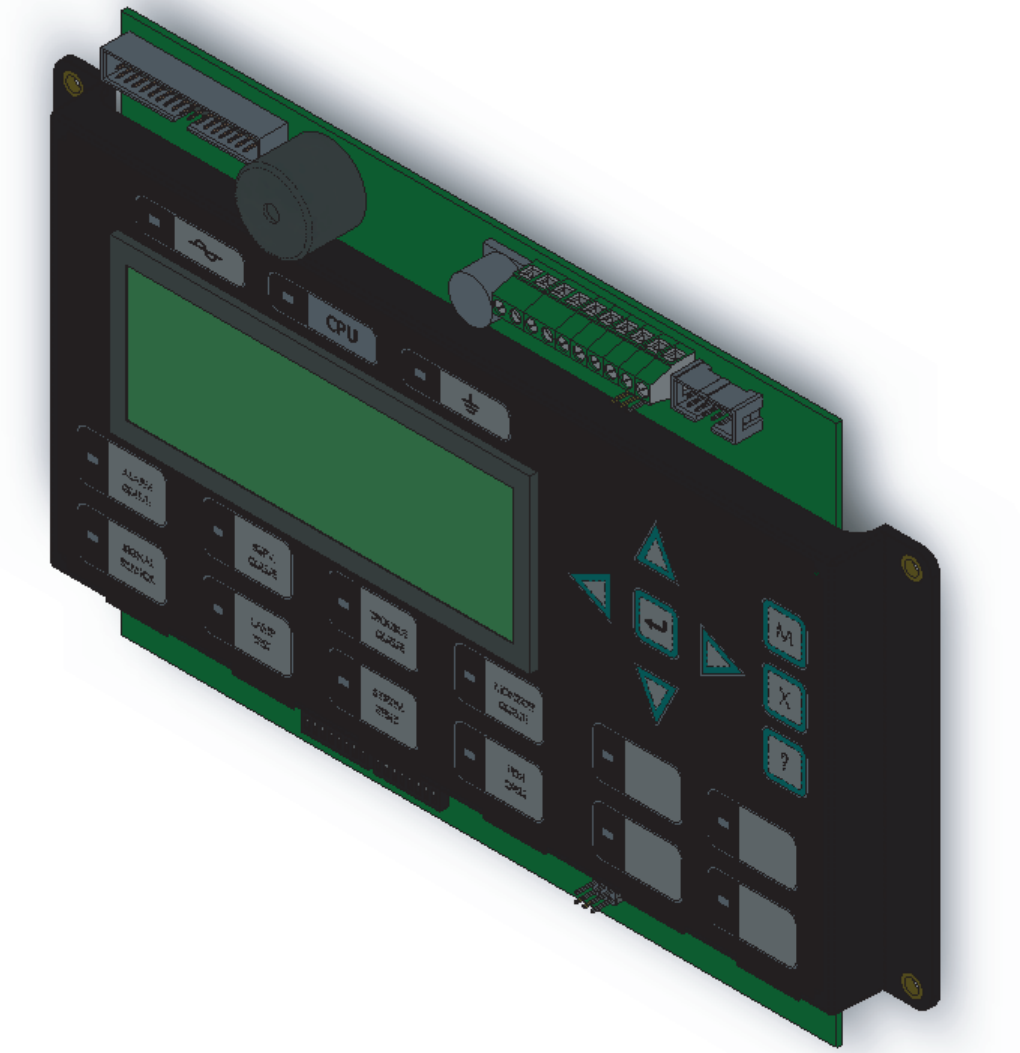
MGC

RAX-LCD-LITE

Remote Annunciator



Installation and Operation Manual

LT-1149 Rev.1
July 2014

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1.0 Introduction

MGC's FX-3500 and MR-2350 remote shared display is the RAX-LCD-LITE. The RAX-LCD-LITE shared display provides mimics the main Fire Alarm Panel display at a remote location. It is equipped with a large 4 line x 20 character back-lit alphanumeric LCD display that uses a simple menu system complete with a directional keypad and switches for Enter, Menu, Cancel and Info. There are five types of enclosure available: the BB-1001, BB-1002, BB-1003, BB-1008, and BB-1012 which can take 1,2,3,8,12 chassis respectively.

Table 1 Annunciator Chassis Descriptions

Annunciator Chassis	Description
RAX-LCD-LITE	Remote Annunciator

Table 2 Enclosure Chassis Capacity

Enclosures	Chassis Capacity
BB-1001	1
BB-1002	2
BB-1003	3
BB-1008	8
BB-1012	12

1.1 Contact Us

For General Inquiries, Customer Service and Technical Support you can contact us Monday to Friday 8:00 A.M. to 5:00 P.M. E.S.T.

1.1.1 General Inquiries

Toll Free	1-888-660-4655 (North America Only)
Local	905-660-4655
Email	mail@mircomgroup.com

1.1.2 Customer Service

Toll Free	1-888-MIRCOM5 (North America Only)
Local	905-695-3535
Toll Free Fax	1-888-660-4113 (North America Only)
Local Fax	905-660-4113
Email	salessupport@mircomgroup.com

1.1.3 Technical Support

Toll Free	1-888-MIRCOM5 (North America Only)
	888-647-2665
International	905-647-2665
Email	techsupport@mircomgroup.com

1.1.4 Website

www.mircomgroup.com

2.0 Mechanical Installation

The RAX-LCD-LITE can be surface mounted using one of the BB-1000 series semi-flush enclosures:

BB-1001	9.00”H x 12.75”W x 1.20”D
BB-1002	18.00”H x 12.75”W x 1.20”D
BB-1003	26.4”H x 12.75”W x 1.2”D
BB-1008	33”H x 22.5”W x 1.25”D
BB-1012	45”H x 22.5”W x 1.25”D

These enclosures may also be mounted to a 4” square electrical box.

2.1 Mounting Dimensions

Table 3 BB-1001 Backbox Dimensions

Backbox Dimensions	9.00”H x 12.75”W x 1.20”D
Horizontal distance between mounting screws	9.95”
Vertical distance between mounting screws	7.50”

Table 4 BB-1002 Backbox Dimensions

Backbox Dimensions	18.00”H x 12.75”W x 1.20”D
Horizontal distance between mounting screws	9.95”
Vertical distance between mounting screws	16.5”

Table 5 BB-1003 Backbox Dimensions

Backbox Dimensions	18.00”H x 12.75”W x 1.20”D
Horizontal distance between mounting screws	9.95”
Vertical distance between mounting screws	24.90”

Table 6 BB-1008 Backbox Dimensions

Backbox Dimensions	33”H x 22.5”W x 1.25”D
Horizontal distance between mounting screws	20.9”
Vertical distance between mounting screws	35.2”

Table 7 BB-1012 Backbox Dimensions

Backbox Dimensions	45”H x 22.5”W x 1.25”D
Horizontal distance between mounting screws	20.9”
Vertical distance between mounting screws	52.0”

How to mount the BB-1000 Series enclosures directly to the wall

1. Open the front door.
2. Mount the backbox to the wall using the four screws provided.

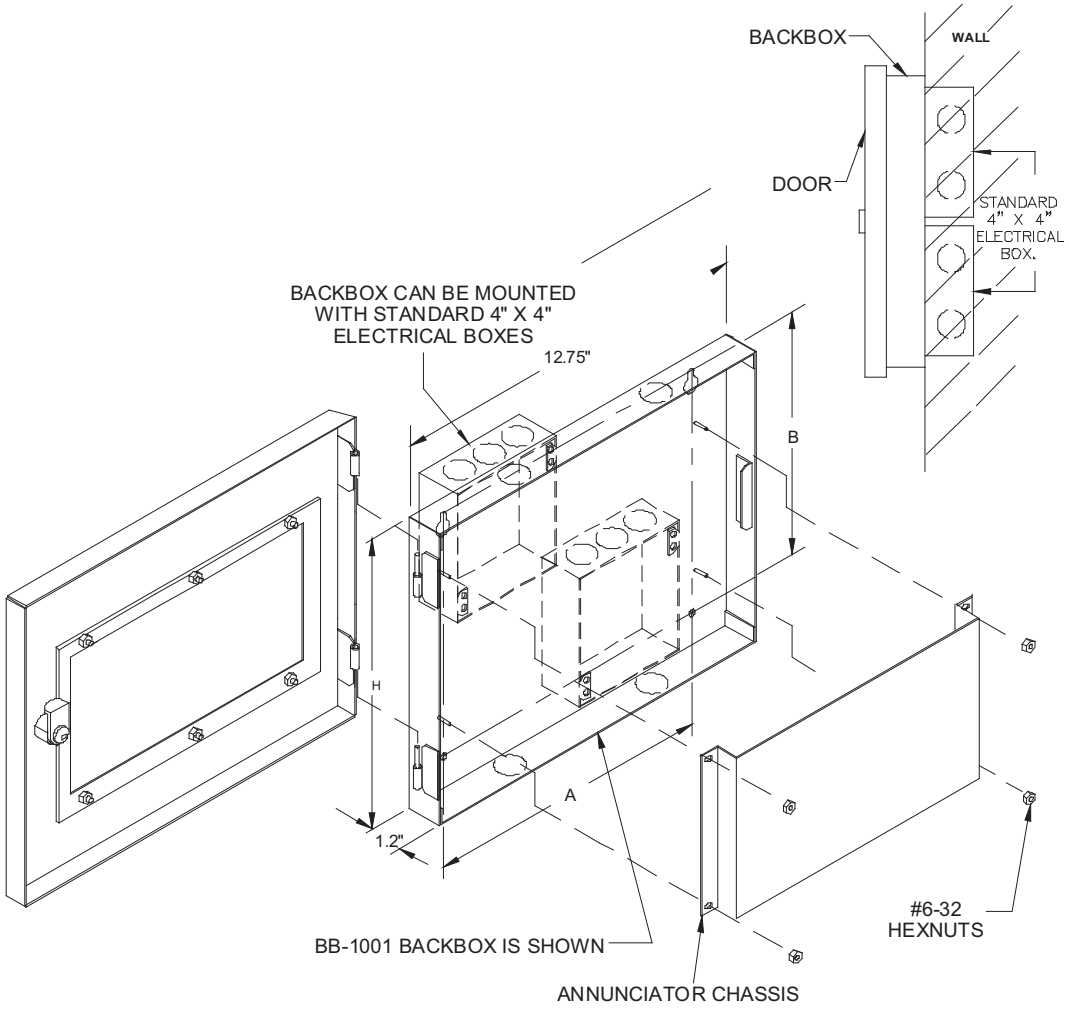

Figure 1 Mounting the BB-1001 backbox directly to the wall

How to mount the Annunciator Cover Bracket onto the RAX-LCD-LITE

1. Place the RAX-LCD-LITE into the backbox, ensure that the mounting holes on the annunciator line up with the studs in the backbox.
2. Place the Annunciator Cover Bracket over the RAX-LCD-LITE and use the nuts provided with the backbox to secure the assembly. Refer to the figure below.

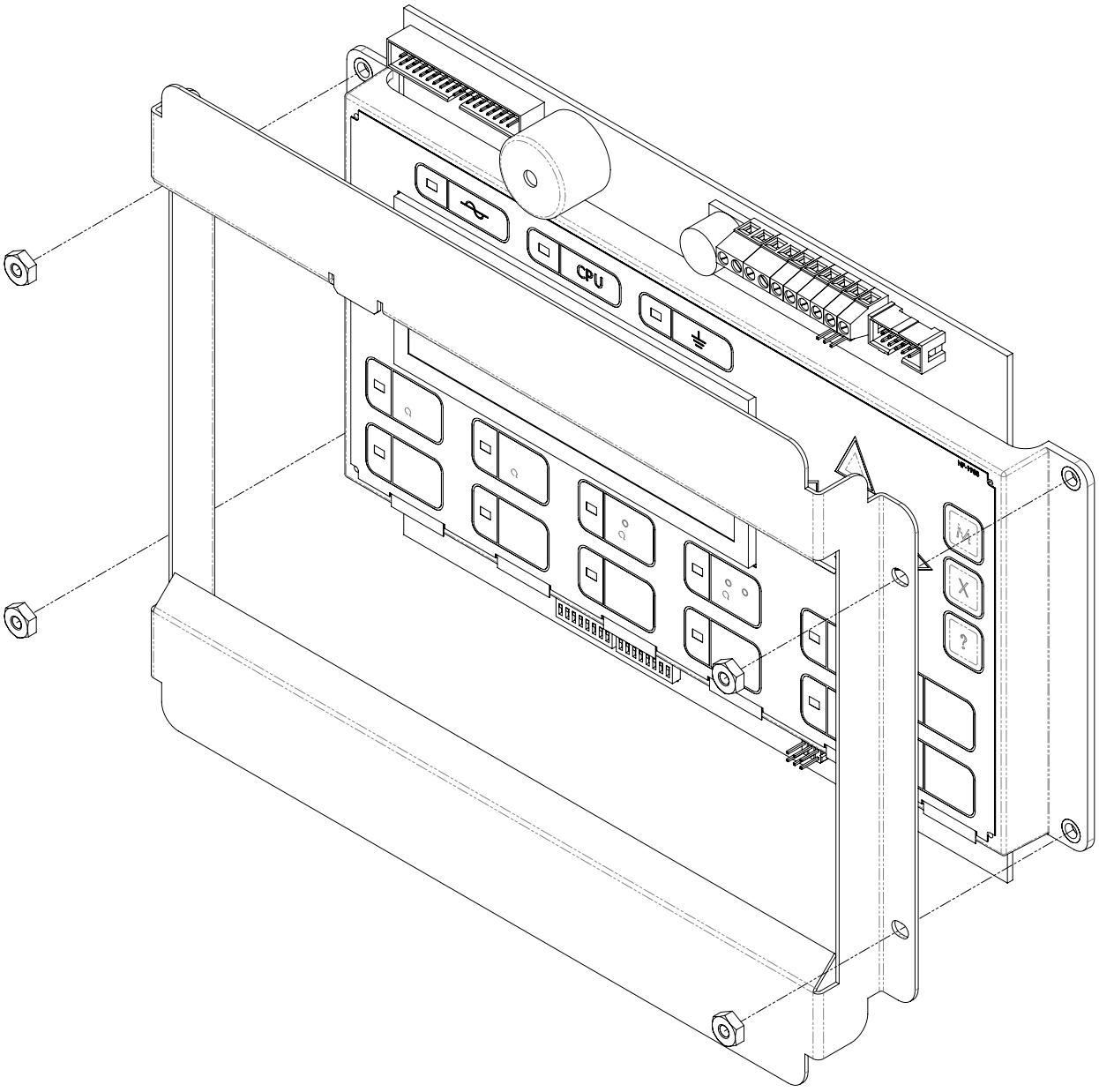

Figure 2 Installing the Annunciator Cover Bracket onto the RAX-LCD-LITE

3.0 Wiring Instructions

3.1 RS-485 Wiring

The RS-485 wiring to the RAX-LCD-LITE Module is recommended to be twisted shielded pair as shown in the diagram. The wire needs to conform to:

- 300mA power limited
- 22 AWG maximum of 2000 feet
- 20 AWG maximum of 4000 feet
- 18 AWG maximum of 8000 feet
- Maximum 40 ohm loop resistance

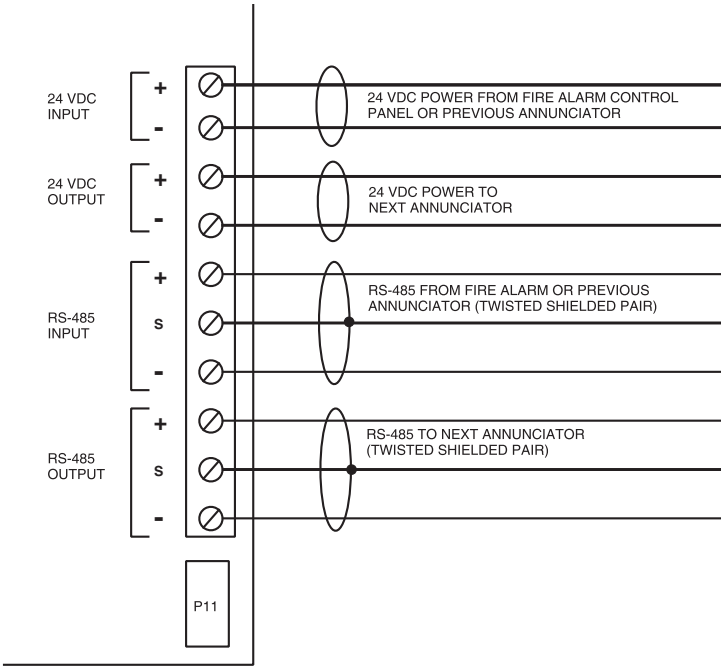

Figure 3 Wiring Diagram

The RS-485 wiring from the fire alarm control panel to the annunciator(s) must be point-to-point from the fire alarm panel to the first annunciator, then to the next annunciator, and so on. No star wiring or T-tapping is allowed. Each RAX-LCD-LITE Annunciator Module has a 120 ohm end-of-line resistor on JW6. The End-of-Line (EOL) jumper on JW6 should be installed on the right 2 pins on the last wired module. Otherwise it should remain on the left two pins or can be removed.

3.2 24V DC Power Wiring

The 24 VDC field wiring needs to be of an appropriate gauge for the number of annunciators and the total wiring run length. Use Section 5.2 Current Drain for Battery Calculations to calculate the maximum current for all annunciators summed together.

Note: All circuits are power limited, supervised and must use type FPL, FPLR, or FPLP power limited cable.

Attention: Accidentally connecting any of the 24 VDC wires to the RS-485 wiring will result in damage to the annunciator and/or to the fire alarm control panel to which it is connected.

Table 8 Maximum Wiring Run to Last Annunciator

Max for all Annunciators									Max Loop Resistance
	18AWG		16AWG		14AWG		12AWG		
Amperes	ft.	m	ft.	m	ft.	m	ft.	m	Ohms
0.06	2350	716	3750	1143	6000	1829	8500	2591	30
0.12	1180	360	1850	567	3000	915	4250	1296	15
0.30	470	143	750	229	1200	366	1900	579	6
0.60	235	71	375	114	600	183	850	259	3
0.90	156	47	250	76	400	122	570	174	2
1.20	118	36	185	56	300	91	425	129	1.5
1.50	94	29	150	46	240	73	343	105	1.2
1.70	78	24	125	38	200	61	285	87	1.0

4.0 DIP Switch Settings

Each annunciator assembly (main and adder chassis) needs to be assigned a unique, sequential Address via the Main Chassis DIP Switch SW1. DIP Switch SW2 is used to allow disabling of some Front Panel push buttons (when individual switches are “ON” then the corresponding push button is disabled).

4.1 RAX-LCD-LITE DIP switches

DIP SWITCH SW1			DIP SWITCH SW2		
SW1-1	=	Address A0	SW2-1	=	Disable System Reset button
SW1-2	=	Address A1	SW2-2	=	Disable Fire Drill button
SW1-3	=	Address A2	SW2-3	=	Disable Acknowledge button
SW1-4	=	Address A3	SW2-4	=	Disable General Alarm button
SW1-5	=	Must be set to “OFF”	SW2-5	=	Not Used
SW1-6	=	Not Used	SW2-6	=	Disable Auxiliary Disconnect button
SW1-7	=	Not Used	SW2-7	=	Not Used
SW1-8	=	Must be on for 16 bit checksum.	SW2-8	=	Disable Signal Silence button

4.2 RAX-LCD-LITE Jumpers and Connectors

P4	Factory Use only.
P5	Connects to RAX-1048TZDS
CONTRAST	Adjusts LCD Display’s contrast levels
JW6 EOL Jumper	The last RAX-LCD-LITE annunciator in series must have this jumper set on the pins labeled EOL (the 2 pins on the right).

Set the annunciator “Address” (see the manual for the fire alarm control panel being used), as follows in the table below:

Table 9 Annunciator Addresses

DIP Switch Positions	Annunciator Address						
	1	2	3	4	5	6	7
SW1-1 (A0)	ON	OFF	ON	OFF	ON	OFF	ON
SW1-2 (A1)	OFF	ON	ON	OFF	OFF	ON	ON
SW1-3 (A2)	OFF	OFF	OFF	ON	ON	ON	ON
SW1-4 (A3)	OFF	OFF	OFF	OFF	OFF	OFF	OFF

Note: Annunciators on a common RS-485 connection must be numbered sequentially; i.e.: 1,2,3,4, and not randomly such as 5,3,8, 14! Note that NOT ALL annunciator “Addresses” are valid for all Fire Alarm Control Panels. Refer to the Fire Alarm Control Panel Manual for further information

5.0 Specifications and Features

5.1 Enclosure Models

The finish of all enclosures is painted semi-gloss off white. For enclosure dimensions see 2.0 Mechanical Installation.

Table 10 Enclosure Model Descriptions

Model Number	Material	Description
BB-1001	18 GA. (0.048") thick CRS	Backbox for one annunciator chassis with keylock door
BB-1002	18 GA. (0.048") thick CRS	Backbox for one annunciator chassis with keylock door
BB-1003	18 GA. (0.048") thick CRS Door is 16 GA (0.060”)	Backbox for one annunciator chassis with keylock door
BB-1008	16 GA. (0.060") thick CRS Door is 14 GA (0.075”)	Backbox for one annunciator chassis with keylock door
BB-1012	16 GA. (0.060") thick CRS Door is 14 GA (0.075”)	Backbox for one annunciator chassis with keylock door

5.2 RAX-LCD-LITE Specifications

- 24 VDC Power Limited Nominal Voltage
- Sealed membrane-like buttons and LED indicators.
- Local Buzzer, Indicators (AC-On, Common Trouble, Remote Failure, Aux. Disconnect, Acknowledge, General Alarm, Signal Silence, Test/Config Mode), and Controls (System Reset, Lamp Test, Fire Drill, Aux. Disconnect, Buzzer Silence, Signal Silence, General Alarm, Acknowledge). Refer to LT-1083 for more button and indicator descriptions.

Table 11 Button Descriptions

Description
Alarm Queue Button and Indicator Flashes red when there is an alarm in queue. The buzzer sounds steady. An alarm can be generated in two ways • When any Alarm configured point or input activates. • Pressing the General Alarm button and the system is set for Two Stage operation. Pressing the Alarm Queue button allows the user to cycle through and review a list of active alarms from oldest to most recent. Once all alarms in the queue have been reviewed the LED will illuminate steady. Resetting the panel clears the indication and turns the LED off.

Table 11 Button Descriptions

Description
Signal Silence/Releasing Service Signal Silence Button and Indicator Use Releasing Service Signal Silence for releasing operation and Signal Silence for other modes. Flashes yellow at the Trouble Flash rate when Indication Circuits are silenced by the following: • Pressing the Signal Silence button. • The Auto Signal Silence Timer. Any Subsequent Alarms cause the Signals to resound, clears the indication and turns the LED off. Pressing the Signal Silence button when the Panel is in Alarm turns on the Signal Silence Indicator and deactivates any Silenceable Indicating Circuits. Non-Silenceable Circuits are unaffected. Signals will re-sound upon any subsequent Alarm. This button does not function during of the following: • Any configured Signal Silence Inhibit Timer period. • If Fire Drill has activated the Indicating Circuits. **Additional Two Stage Function** If the Auto General Alarm Timer has not expired, this Signal Silence button also performs the same function as the Alarm Acknowledge button.
Supervisory Queue Button and Indicator Flashes yellow at the Fast Flash Rate when a Latching or Non-Latching circuit is activated. The buzzer sounds at the fast rate. Pressing the Supervisory Queue button allows the user to cycle through and review a list of active supervisory alarms from oldest to most recent. Once all alarms in the queue have been reviewed the LED will illuminate steady. If all Non-Latching Supervisory circuits are restored and there are no Latching Supervisory Circuits active, the indication will clear and the LED will turn off. Resetting the panel will clear the activation of any Latching Supervisory Alarms, clears the indication and turns the LED off.
Visual Indicator Test Button and Indicator Pressing the Visual Indicator Test button illuminates all front panel LEDs on steady in the appropriate color and turns the buzzer on steady. If Visual Indicator Test is active for more than 10 seconds, Common Trouble is activated.
Trouble Queue Button and Indicator Flashes yellow when any trouble condition is detected on the panel. The buzzer sounds at the slow rate. Pressing the Trouble Queue button allows the user to cycle through and review a list of active Troubles from oldest to most recent. Once all troubles in the queue have been reviewed the LED will illuminate steady. Clearing all Trouble conditions clears the indication and turns the LED off.

Table 11 Button Descriptions

Description
System Reset Button and Indicator The System Reset button resets the Fire Alarm Control Panel and all Circuits. Pressing the System Reset button causes a trouble to occur and the LED to illuminate steady yellow. The following events will occur • Resets all Latching, Trouble Conditions. • Resets all Initiating Circuits. • Resets 4-Wire Smoke Supply and Aux. Power Supply. • Turns off all Indicating Circuits. • Turns off Signal Silence, Ack & GA Indicators. • Turns off Fire Drill. • Stops and resets all Timers. • Processes inputs as new events. • Aux Disconnect is not affected. • Reset cannot be activated until the Signal Silence Inhibit timer has expired. Resetting the System clears the indication and turns the LED off.
Building Queue Button and Indicator Flashes yellow at the Trouble Flash rate when any Building condition is detected on the panel. The buzzer sounds at the fast rate. Pressing the Building Queue button allows the user to cycle through and review a list of active Building Conditions from oldest to most recent. Once all conditions in the queue have been reviewed the LED will illuminate steady. Clearing all Building conditions clears the indication and turns the LED off.
Fire Drill Button and Indicator Illuminates steady yellow during an active Fire Drill. Pressing the Fire Drill button activates all programmed and non-Disconnected Indicating Circuits. It does not transmit any Alarms via the City Tie, or Common Alarm Relay. Fire Drill may be programmed to operate specific NAC Circuits. Fire Drill is cancelled by pressing the button again (toggle switch), or if the Panel goes into a real Alarm.
General Alarm Button and Indicator - Two Stage Operation or Positive Alarm Sequence LED and Indicator are active only when the Panel is configured for Two Stage Operation. LED illuminates steady red when the following occurs: • Pressing the General Alarm button. • Activating a General Alarm Initiating Circuit. • The Auto General Alarm Timer expiring. Resetting the System clears the indication and turns the LED off.

Table 11 Button Descriptions

Description
Alarm Acknowledge Button and Indicator - Two Stage Operation and Positive Alarm Sequence LED and Indicator are active only when the Panel is configured for Two Stage Operation or Positive Alarm Sequence. Flashes yellow at the Fast Flash Rate as the Auto General Alarm Timer is timing. Illuminates steady yellow by pressing the Acknowledge or Signal Silence buttons and cancelling the Auto General Alarm Timer. The expiring of the Auto General Alarm Timer causes the Panel to enter General Alarm, clears the indication and turns the LED off.
Auxiliary Disconnect Button and Indicator Activating the Auxiliary Disconnect button activates the Auxiliary Disconnect function. The Auxiliary Alarm Relay is always disconnected with this button. The Common Alarm Relay, the Common Supervisory relay and all correlated alarm relays may be disconnected as selected through configuration. Activating the Auxiliary Disconnect button also causes the Common Trouble LED to illuminate steady, the common trouble relay to send a trouble message and the trouble buzzer to flash at the trouble flash rate. Pressing the Auxiliary Disconnect button again de-activates this function and the system will go back to normal.
Buzzer Silence Button and Indicator Flashes yellow at the Trouble Flash rate when the Buzzer Silence button is pressed. Any new alarm, supervisory or trouble events resounds the buzzer and will cause the Buzzer Silence LED to turn off.
Automatic Alarm Signal Cancel Button and Indicator LED and Indicator are active only when the Panel is configured for PAS or Two Stage Operation. Flashes yellow at the Fast Flash Rate as the Auto General Alarm Timer is timing. If the panel is configured for Positive Alarm Sequence (PAS), activation of the Acknowledge button within 15 seconds of a PAS alarm will delay a common alarm activation for 180 seconds. The expiring of the Auto General Alarm Timer causes the Panel to enter General Alarm, clears the indication and turns the LED off.

- Standby: 65mA Max., All LEDs “On”: 80 mA Max.

5.3 Current Drain for Battery Calculations

The lamp test feature draws the maximum normal current because it illuminates all lamps on one chassis at a time. Thus the currents are:

Normal Standby Current = 65 mA+ _____ X 15 mA = _____
(number of adder chassis)

Maximum = 80 mA+ _____ X 15 mA= _____
(number of adder chassis)

Use the **Normal Standby Current** for battery size calculations (see the fire alarm control panel manual for battery calculations). Use the **Maximum Current** to calculate the wire size (see *Wiring Instructions* on page 11).

5.4 Environmental Specifications

This annunciator is intended for indoor use only.

6.0 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 our 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.

MGC MAKES NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO ITS GOODS DELIVERED, NOR IS THERE ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, EXCEPT FOR THE WARRANTY CONTAINED HEREIN.

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