MODEL 8111SYS-L/H

8000 SERIES™ SYSTEM

SAFETY PRECAUTIONS

Read this Manual or the Documentation provided with the equipment.

Personnel properly qualified in the application and use of life safety equipment ("qualified personnel") shall read this manual carefully before performing any actions to specify, apply, install, maintain and Perform operationally test of the IED 8111 system, and associated products in accordance with the instructions in this manual.

This manual shall be kept with the IED 8111 system for reference during the life of the system. This manual shall be made available to all qualified personnel who operate, test, maintain, or service the IED 8111 system, and associated products.

It is strongly recommend that such personnel read and understand the entire manual.

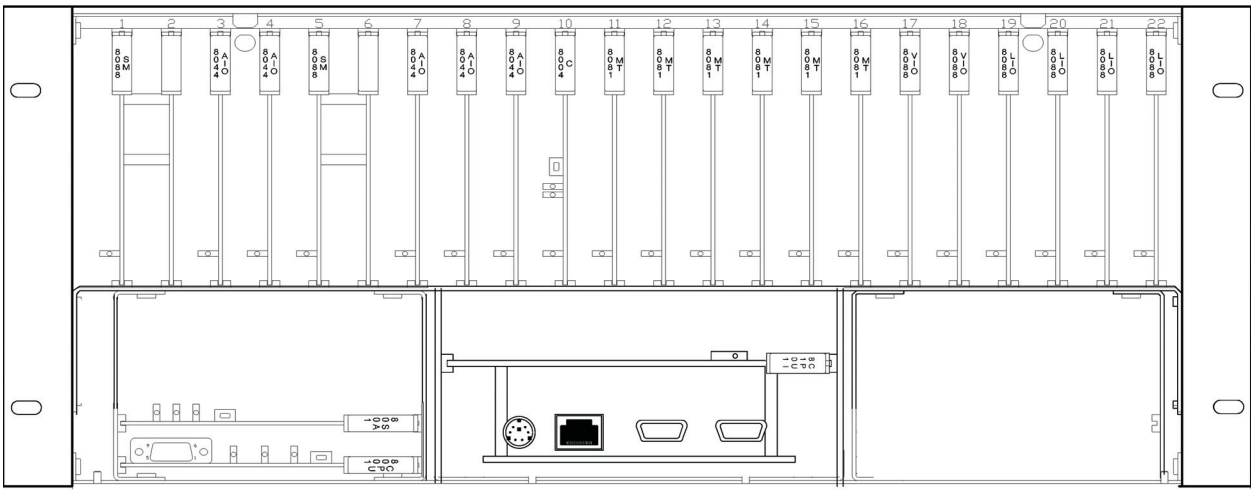

Figure 1 - 8011MF with Typical Card Complement
Front view, door not shown

Documentation reference symbol. If the product is marked with this symbol, refer to product documentation to get more information about the product.

WARNING: A WARNING in the manual denotes a hazard that can cause injury or death.

CAUTION: A CAUTION in the manual denotes a hazard that can damage equipment.

Do not proceed beyond a WARNING or CAUTION notice until you have understood the hazardous conditions and have taken appropriate steps.

Operational Safety

WARNING: if safety precautions, installation and testing instructions are not performed properly, the IED 8012PS power supply of the IED 8111 system may not operate in a situation which could result in property damage and serious injury or death to you and/or others.

CAUTION: IED 8111 system modules and printed circuit boards [assemblies] are sensitive to static electricity and have delicate components mounted on it. Discharge any static electricity from your body by touching a grounded object, such as a metal screw, which is connected to earth ground. Handle the assemblies by its edges and be careful not to twist or flex it. The IED 8111 system is to be installed in a static free area, and the user is to properly attach grounded wrist straps before touching any static sensitive areas. After handling IED 8111 system assemblies, the system should be tested in accordance with “Checkout Procedure”in the manual for the project, to verify that it is functioning properly.

NOTE: In areas prone to lighting strikes, using a surge protection device is recommended.

This IED 8111 system will not work without power. The IED 8111 system is powered by a 120VAC circuit or by a UPS with rechargeable batteries provide back-up power. If both sources of power are cut off for any reason, the IED 8111 system will not operate.

DO NOT assume any installation, operation and testing details not shown in this manual.

The IED 8111 system shall only be operated with the assemblies and doors properly in place.

Equipment cannot last forever. Even though IED 8111 system is expected to last up to ten years, any of its parts or components could fail before then. Therefore testing of the entire signaling system, including the IED 8111 system, all equipment, as well as all messages and their output channel, and priority assignment, shall be conducted at least

twice each year, or more often as required by local, state and federal codes, regulations and laws, by qualified personnel. If the equipment is not working properly, immediately contact the installer and have all/any problems corrected immediately. Malfunctioning components should be replaced immediately. Do not attempt to repair malfunctioning components. Malfunctioning components should be returned for factory repair or replacement. In the event you cannot contact the installer, contact the manufacturer.

WARNING: For proper operation in various applications, the IED 8012PS Power Supply MUST be installed properly. To have the IED 8111 system to operate properly. all equipment shall be properly interconnected and operating. The installer shall check compatibility of all equipment prior to installation. Otherwise, the IED 8111 System may be damaged and/or fail to operate.

Compliance with applicable codes, regulations, laws, standards, and guidelines

COMPLY with all of the latest applicable codes, regulations, laws, standards, and guidelines.

WARNING: For emergency, life safety, and fire protective signaling, system applications using the IED 8111 system, installation, testing and maintenance shall be performed by qualified personnel in accordance with all the latest National Fire Protection Association (NFPA), underwriter's laboratory (UL), national electric code (NEC), occupational safety and health administration (OSHA), state, county, local, province, district, federal, and other applicable building and fire standards, guidelines, regulations, laws, and codes including, but not limited to, all appendices and amendments and requirements of the local authority having jurisdiction **(AHJ**).

OVERVIEW AND FEATURES

Description

GENERAL – IED 8111 SYSTEM.

The IED 8111 system comes with one IED 8012PS providing +/– 15 VDC at 150 watts each. A second IED 8012PS is optional. With two IED 8012PS power supplies, the units operate in the most reliable mode of power sharing, and each is checked for proper operation by the IED 8001CPU every 5 minutes.

The **IED 8111 system** is an integrated, multi-channel, supervised voice evacuation/emergency message system or an announcement system with additional features of Ambient Noise Compensation, and Background Music distribution, and provides general announcements.

IED 8012PS Power Supply and 8011MF Mainframe

The Model IED 8111 System provides a housing for and connections to and between the motherboard, the IED 8012PS power supply modules, IED 8111PIA module, and the 8000 Series™ function cards. It has slots for a total of 24 function cards. Slots 1 through 24 can be used for any function card except the 8001CPU or the 8001SA. Slots 25 and 26 are dedicated to the 8001SA System Signal Analysis Card and the 8001CPU Central Processing Unit, respectively. Slots 1 through 22 are arranged vertically and are numbered from left to right. Slots 23 and 24 are oriented horizontally and are located on the right side of the mainframe below slots 1 through 22. Slots 25 and 26 are located similarly, but on the left side of the mainframe. See Figure 1. Input and output connection is easy through the use of plug-in rear panel compression-type screw terminal connectors. The system can be powered from a 120 VAC or 240 VAC line, with any line frequency from 50 to 400 Hz. The 8011MF Mainframe mounts in a standard 19" equipment rack. It occupies 5 EIA rack spaces (8.5" of vertical space) with a depth of 17".

IED 8111 MAINFRAME

The IED 8111 Mainframe provides all signal handling capabilities, digital voice processing, and supervision.

The Fire alarm panel that activates the IED 8111 system must provide a Notification Appliance Circuit [NAC] with a ground closure. The IED 8111 system **does not** sense an emergency condition or hazards such as fire; it is interfaced with a system that does sense such conditions. The IED 8111 system, when activated, provides a pre-recorded voice message(s) to speaker notification appliances. When used as part of a protective signaling system, the IED 8111 system must be properly connected to a compatible Fire Alarm control panel that has been approved by a nationally recognized testing laboratory (“LISTED”) and to LISTED compatible notification appliances for proper operation. The IED 8111 system must be installed in enclosures that have been approved by a nationally recognized testing laboratory (“LISTED”) , and connected to a (“LISTED”) UPS, and Class 1 electrical service.

The IED 8111 system must be properly installed, programmed, and connected to a compatible fire alarm control panel to function in a voice evacuation system. IED expressly disclaims all liability for the content, clarity and languages of, and output channel and priority level assigned to any and all messages. It is essential that you have message content and language, sequence, output channel and priority assignments reviewed and approved by qualified legal and safety advisors, qualified representative(s) of owner(s) and user(s), and authorities having jurisdiction.

Standard Features

- All IED 8111systems delivered will boot up in an Evacuation mode covering all zones as evacuation zones, and a zone mapping for an all call live announcement.
- Multiple output zones up to 32 independent zones
- Multiple input microphone stations up to 10

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- Requires NAC Circuit input to operate the Digital Voice messaging. Mic Station Key Strokes can also trigger messages as approved.

- Trouble LEDs for Open, Short, and ground conditions could be provided on an appropriate panel with the associated interface.

MODEL IED 8012PS POWER SUPPLY

The Model IED 8012PS is a component of the IED 8000 Series™. The standard unit is a dual output, +15 VDC and –15 VDC at 150W per voltage, switch mode power supply. The input voltage range is 95 VAC to 240 VAC. Power limiting prevents damage due to overloads and short circuits, including over voltage and over temperature. This protection by limiting or shutdown is contained within each module which makes up the IED 8012PS. The 8011MF Mainframe power system has two modes of operation. In the case of an 8011MF with one IED 8012PS, the power supply functions in the main mode. If the 8011MF contains two IED 8012PS Power Supplies, the supplies function as a power sharing pair. In the power sharing mode, each IED 8012PS supplies ½ of the load current. If one should shut down, the other will supply the full load current. The IED 8012PS Power Supplies are “hot-swappable”. The 8001CPU will switch between the supplies and check the voltages to ensure that both supplies are operating properly. This ensures that either supply is ready to handle the full system load if one supply should fail or be removed. Green LED Supply Active indicators shows the status of the power supply. The LEDs are located on the IED 8012PS mounting plate, have appropriate labels, and are viewable from the rear of the frame.

The soft start feature of the IED 8012PS assures that there will be zero overshoot of the output voltage during startup.

Test points are provided on the card edge of the 8001CPU for checking the system supply voltages of +15 VDC and –15 VDC.

All input and output connections are made via the motherboard.

The 8001CPU monitors the logic status output from the supply modules for conditions of over current, over or under voltage, and temperature rise. If any out-of-tolerance condition occurs, the 8001CPU will shut down the supply module and provide an indication.

INSTALLATION AND SETUP

Introduction

The lives of people depend upon your safe and proper installation of the IED 8111 system. Please read, understand and carefully follow the specific installation instructions set forth below to avoid damage to the IED 8111 system and equipment connected to it. Only qualified personnel in accordance with the procedures in this manual should conduct installation.

WARNING:

Shut off all power before starting the installation. Electrical shock can cause death or serious injury.

WARNING:

Do not connect AC power or backup power until system wiring has been connected, modules have been installed, and field wiring has been tested and inspected.

CAUTION:

The IED 8111 system printed circuit boards and modules are sensitive to static electricity and has delicate components mounted on them. Before handling the boards or any component on it, discharge any static electricity from your body by touching a grounded object such as a metal screw, which is connected to earth ground. The IED 8111 system is to be installed in a static free area and the user is to properly attach grounded wrist straps before touching any static sensitive areas.

WARNING:

Two different sources of power may be connected to this unit. Disconnect both sources of power before servicing. Failure to disconnect both power sources before servicing could result in property damage, serious injury, or death to you and/or others.

WARNING:

Always apply AC voltage before applying UPS backup voltage. Failure to do so may cause damage to the IED 8111 system.

Power Connection Requirements

The IED 8111 contains a DC Power Supply and requires an AC connection, and/or UPS connection per appropriate standards.

Checkout Procedure.

CAUTION:

Connect the AC power source before connecting the UPS backup power. Disconnect the UPS backup power before disconnecting the AC power source. Connect AC power, then connect UPS backup.

WARNING:

All protective signaling systems require periodic testing. All protective signaling system equipment shall be tested by qualified personnel at least twice a year for proper operation, or more often if required by codes, regulations and laws. Failure to maintain and test protective signaling system equipment can result in not detecting equipment failure that can cause property damage and serious personal injury or death to you and/or others during an emergency situation.

AC Power and UPS Installation Procedures

NOTE:

Appropriate application of the IED 8111 System may rquire it to be wired in conduit.

WARNING:

Two different sources of power may be connected to this unit. Disconnect both sources of power before servicing. Failure to disconnect both power sources before servicing could result in property damage, serious injury, or death to you and/or others.

WARNING: Always apply ac voltage before applying UPS backup voltage. failure to do so may cause damage to the ied 8111 system.

TROUBLESHOOTING

Introduction

WARNING:

Some electronic components store a high voltage charge, even though power is not connected, and can cause a dangerous shock if touched. Do not touch exposed circuitry on the IED 8111 System unless the circuitry has discharged for one hour and a safe discharge procedure is used.

WARNING:

Provide UL required alternative signaling means during trouble conditions and servicing to assure adequate protection of people and property. Have qualified service persons immediately replace any modules that have malfunctioned.

CAUTION:

Only qualified persons in accordance with the procedures in this manual should conduct troubleshooting and servicing. Do not attempt to make other adjustments, modifications, or repairs. Never use water, steam, cleaning liquids or sprays on the panel.

CAUTION:

User servicing of the IED 8111 system is limited to field-wiring changes and following the instructions and procedures in the manual provided with the system. After any troubleshooting procedure is completed, perform a complete system checkout as described in this manual.

LIMITATION OF LIABILITY

IED'S liability on any claim of any kind, including negligence and breach of warranty, for any loss or damage resulting from, arising out of, or connected with this contract, or from the manufacture, sale, delivery, resale, repair or use of any product covered by this application shall be limited to the price applicable to the product or part thereof which gives rise to the claim. IED'S liability on any claim of any kind shall cease immediately upon the installation in the product of any part not furnished by IED. In no event shall IED be liable for any claim of any kind unless it is proven that our product was a direct cause of such claim. Further, in no event, including in the case of a claim of negligence, shall IED be liable for incidental or consequential damages. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the preceding limitation may not apply to all purchasers.

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