Description

The E3 Series™ Broadband System includes the NetSOLO™ Broadband System. Like the NetSOLO™ Broadband System, the E3 Series™ Broadband is of modular design and allows a wide range of configurations from two basic assemblies. These assemblies form an integrated, distributed fire alarm system that includes audio evacuation and fire command capability. The network communication transmits all fire alarm, audio evacuation, voice paging, and fire fighter communications.

E3 Series™ Broadband is a revolutionary advance in fire detection and emergency voice evacuation system design. E3™ Series Broadband employs proven technology and expands it to accomplish emergency multi-channel voice evacuation, two-way fire fighter communications, and building control applications, all over a single pair of wires or fiber-optic cable.

It is a true peer-to-peer, token ring passing, networked system capable of supporting up to sixty-four (64), individual nodes. All system status, control-by-event sequences, audio voice paging, and fire fighter telephone signals are sent between nodes over a single pair of wires or fiber optic cable.

Each E3 Series™ Broadband node can be spaced along the network a maximum distance of 3,000 feet (914.4 m) over an unshielded twisted-pair of wires or fiber-optic cable with up to 8dB loss. Built-in isolation at each node permits Style 4, 6, and 7 network configurations.

E3 Series™ Broadband is simple to configure for any project requirement. A complete E3 Series™ Broadband application can be assembled from just three types of nodes; the 7100 NetSOLO, the INCC Command Center, and the INX Transponder.

E3 Series™ Broadband is capable of the most sophisticated sequences of operations.

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Features

- UL Listed for smoke control when properly configured.
- All communication signals and control-by-event sequences over a single pair of twisted, unshielded wires or fiber-optic cable.
- Distributed architecture, including Style 7 wiring configurations, allows system components to continue normal operation with no loss of function during single line fault conditions.
- Integrates INX transponders and INCC command centers to create a complete audio evacuation system with up to sixty-four (64) nodes.
- Redundant command centers with microphone and fire fighter’s handset easily configured by adding INCCs.
- State-of-the-art digital signal processor (DSP) technology for efficient audio compression and filtering.
- Up to 150 watts of audio power from three (3), AM-50 amplifiers with an additional 50 watts of standby power in each intelligent network transponder (INX) cabinet.

An ISO 9000-2000 Company

E3 Broadband
The Field Configuration Program (FCP) is based on Boolean logic statements providing AND, OR, NOT, and XOR logic operators. These can be combined to produce additional Boolean operators such as NAND, NOR, XNOR, etc. system silence, etc. The E3 Series™ Broadband is software-programmable for multi-channel digital audio applications. It is ideal for a wide range of complex system applications including high-rise or campus installations. An array of cabinets allows for neat, compact, attractive installations.

A comprehensive set of timing functions can also be attached to any input/output logic statement for staggered reset of fan control relays, time-delayed alarm activation, automatic.

The E3 is a microprocessor-based fire alarm control panel that uses an ILI-MB-E3 Intelligent Loop Module with two (2) signaling line circuits and two (2) notification appliance circuits. When transmitting to remote locations, the optional RPT-E3 provides the ILI-MB-E3 with signal boosting and transient protection, as well as connectivity for both wire and fiber-optic cables. Options also include an integral Digital Alarm Communicator Transmitter (DACT) supporting most popular reporting formats.

The Intelligent Network Command Center (INCC) serves as the point of interface between an operator and the system’s audio evacuation, fire fighter intercom, and building network. The INCC occupies a single address on the E3 Series™ Broadband network. A typical INCC assembly consists of an Intelligent Network Interface-Voice Gateway (INI-VGX) module, a PM-9 power supply, and up to four (4), AM-50 amplifiers. The INX transponder occupies a single address on the network and provides termination points for the network connection using either a pair of unshielded twisted-pair wire or fiber-optic cable.

The INI-VGX uses advanced Digital Signal Processing (DSP) technology for audio compression and filtering allowing E3 Series™ Broadband to produce the clearest audio possible while conserving network bandwidth for instantaneous response. Background noise is automatically filtered during voice paging and fire fighter communications increasing audibility and eliminating the need for push-to-talk devices.

The INI-VGX can accommodate up to sixteen (16), different messages with a total combined duration of three minutes. Each message can be field installed via a laptop computer and can be in the form of a voice message or an evacuation tone.

The INI-VGX also provides a fire fighter phone riser and an addressable signaling line circuit connecting to multiple phone jacks or warden stations through as many as sixteen (16), AOM-TELF modules. In addition, the INI-VGX SLC can support up to thirty-two (32), speaker circuits using the AOM-MUXF for dual channel applications.

The INX can contain four (4), 50 watt, 25 VRMS AM-50 audio amplifiers, each with two (2), separate speaker circuits that can be wired Style Y (Class B) or Style Z (Class A). Each amplifier can produce its own tone or message independently of other system amplifiers. Thus, an INX transponder can produce three (3), audio channels simultaneously. Each INX transponder can support four (4), AM-50s as main amplifiers with one (1), AM-50 as a fail-safe backup amplifier.

The INX transponder receives its power from a PM-9, 9 ampere, filtered, switching power supply providing twenty-four (24), VDC nominal operating voltage. The PM-9 has an integral standby battery charger capable of recharging up to fifty-five (55), A/H batteries. The E3-BB-BC/INX cabinet can house up to 18 A/H sized batteries.
Two (2), notification appliance circuits, each rated 2.0 amps. @ 24 VDC (Power-limited).

Two analog addressable signaling line circuits for 39 devices (Power-limited) Style 6 (Class “A”) with optional CAOM.

INCC-C Command Center with optional microphone and fire fighter’s handset.

ASM-16 Addressable Switch Modules with 16 programmable, addressable switches, each with three (3), programmable indicating LEDs (red, green yellow).

INX Transponder with six (6), independently programmable speaker circuits, each rated 50 watts at 25 VRMS (Power-limited).

Three simultaneous audio channels up to 16 programmable voice messages.

Optional digital alarm communicator transmitter (DACT-E3) for local or network-wide event reporting.

Twisted-pair or fiber-optic cable between nodes 3,000 ft. (900m) distance with wire up to 8 dB loss with fiber-optic (Power-limited).

One signaling line circuit with 16-AOM-TELF and 32-AOM-MUXF addressable devices (AOM-TELFs shown) Style 6 (Class “A”) standard (Power-limited).

Fire fighter phone riser (Power-limited).

Figure 1
Local Annunciators, LCD-7100, (Max. 5)
Global display for all network events if set to Region “0”

Initiating / Control Devices Typical for SLC No. 2 (if used)

3,000 ft. (7,620 cm) (max.) between nodes using wire
8 dB loss (max.) between nodes using fiber-optic cable

One SLC
(16 AOM-TELFs & 32 AOM-MUXFs)

6 Speaker appliance ckt.
150 watts max. @ 25 V RMS
w/ 50 watts standby

Figure 2
Specifications

Detailed product specifications may be found in:
9020-0542 INCC Intelligent Network Command Center Datasheet
9020-0637 E3 Series™ Datasheet
9020-0541 INX Intelligent Network Transponder Datasheet

Ordering Information

E3 Control

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
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<tbody>
<tr>
<td>ILI-MB-E3</td>
<td>Intelligent Loop Interface-Main Board</td>
</tr>
<tr>
<td>LCD-E3</td>
<td>LCD Keypad Display</td>
</tr>
<tr>
<td>PM-9</td>
<td>Power Supply</td>
</tr>
<tr>
<td>RPT-E3</td>
<td>Network Repeater</td>
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<tr>
<td>DACT-E3</td>
<td>Digital Alarm Communicator Transmitter</td>
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<tr>
<td>LCD-7100</td>
<td>Remote Serial LCD Display</td>
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INCC Intelligent Network Command Center

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<tr>
<th>Part Number</th>
<th>Description</th>
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<tbody>
<tr>
<td>INI-VGC</td>
<td>Command Center Voice Gateway</td>
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<tr>
<td>INI-VGC-UTP</td>
<td>Voice Gateway for unshielded twisted-pair wire only</td>
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<tr>
<td>ASM-16</td>
<td>Programmable Switch Module (occupies single slot of inner door)</td>
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<tr>
<td>NGA</td>
<td>Network Graphic Annunciator</td>
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<tr>
<td>ANU-48</td>
<td>Remote LED Driver</td>
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<tr>
<td>INCC-IDT</td>
<td>Inner door w/one double slot for INCC-TEL fire fighter handset and 4 single slots</td>
</tr>
<tr>
<td>INCC-ID</td>
<td>Inner door w/6 single slots</td>
</tr>
<tr>
<td>INCC-CABR</td>
<td>INCC backbox (black) with red outer door, 19&quot; H x 19&quot; W x 4&quot; D (48 x 48 x 10 cm)</td>
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INX Intelligent Network Transponder

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
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<tbody>
<tr>
<td>INX-VGX</td>
<td>Transponder Voice Gateway</td>
</tr>
<tr>
<td>PM-9</td>
<td>INX 9 ampere Power Supply</td>
</tr>
<tr>
<td>AM 50</td>
<td>INX 50 Watt amplifier</td>
</tr>
<tr>
<td>INX-CAB</td>
<td>INX 19&quot; x 19&quot; x 4&quot; (48 x 48 x 10 cm) Backbox with Black Door</td>
</tr>
<tr>
<td>INX-CABR</td>
<td>INX 19&quot; x 19&quot; x 4&quot; (48 x 48 x 10 cm) Backbox with Red Door</td>
</tr>
</tbody>
</table>

For additional information on the cabinets, refer to the E3 Series™ Cabinets data sheet (Part Number: 9020-0649).