**NetSOLO® Broadband**

Intelligent, Networked, Multi-Channel Fire Alarm Control and Emergency Voice Evacuation System

**General**

The NetSOLO® Broadband is a revolutionary advance in fire detection and emergency voice evacuation system design. NetSOLO® Broadband employs the proven technology of the 7100 Series fire alarm control panel and expands it to accomplish emergency multi-channel voice evacuation.

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

Each NetSOLO 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 up to an 8dB loss using fiber-optic cable. Built-in isolation at each node permits Style 4, 6, and 7 network configurations.

NetSOLO Broadband is capable of the most sophisticated sequences of operations. The Field Configuration Program (FCP-NetSOLO) is based on Boolean logic statements providing AND, OR, NOT, and XOR logic operators. These operators can be combined to produce additional Boolean operators such as NAND, NOR, XNOR, etc. 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 system silence, etc.

**FEATURES & BENEFITS**

- IBC Seismic Certified
- All communication signals and control-by-event sequences transmit over a single pair of twisted unshielded wires or fiber-optic cable
- Distributed Architecture, including Style 7 wiring configurations allow system components to continue normal operation with no loss of function during single line fault conditions
- Ideal for a wide range of complex system applications including high-rise or campus installations
- Integrates 7100 NetSOLO Series fire alarm control panels, INX transponders and INCC command centers to create a complete audio evacuation system with up to sixty-four nodes
- Offers a network data transfer rate at 625K baud
- Graphic Network Annunciator (NGA) (optional)
- Each INCC supports up to sixteen ASM-16 addressable switch modules for a total of 256 switches in which the software can be programmed separately
- Remote 48 LED Driver Module (ANU-48) (optional)
- 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
- Software-programmable, multi-channel digital audio applications
- Up to 150 watts of audio power (three AM-50 Series amplifier modules) with an additional 50 watts of standby power in each intelligent network transponder (INX CAB-B) cabinet
- Each AM-50 Series amplifier module provides two individually activated speaker circuits supplying 50 watts total of power
- Sixteen message capacity with up to 3 minute duration per INX
- Messages easily field-configurable with a laptop computer
- Advanced Boolean Logic-based programming such as AND, OR, NOT, NOR, time delay, and calendar functions configurable through computer programming
General

The 7100 NetSOLO is a microprocessor-based fire alarm control panel with two analog, addressable signaling line circuits (SLC).

Each 7100 is equipped with an Intelligent Network Interface Module for unshielded, twisted-wire and fiber-optic cable (INI-7100 FO). Options include an integral Digital Alarm Communicator Transmitter (DACT) supporting the 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 NetSOLO Broadband network. A typical INCC assembly consists of the following:

- An Intelligent Network Interface-Voice Gateway (INIVG) module (fiber-optic or unshielded twisted-pair)
- INI-VGC-UTP (unshielded twisted-pair only)
- One or more Addressable Switch Modules (ASM-16)
- Optional Graphic Annunciator (NGA)
- Remote 48 LED Driver Module (ANU-48)

Options include a voice paging microphone and a fire fighter’s handset connecting to the INI-VGC. Each INCC can support up to sixteen ASM-16 modules. Each ASM-16 has sixteen push button switches for a maximum capacity of 256 switches per INCC command center. Each switch has three associated LEDs, colored green, yellow, and red. These switches and their LEDs are fully programmable to serve any system function desired. They can control audio speaker circuits, notification appliance circuits, addressable relay outputs, fire fighter phone control circuits. Switches may also be customized for any special application that might be required.

Multiple INCCs can be configured into the NetSOLO Broadband network to serve as a completely independent command center for their local area or serve as remote command centers mimicking in part or in whole the function of a main command center.

The Intelligent Network Transponder (INX) acts as a network audio transponder for the NetSOLO Broadband Network. The INX transponder serves as the point of distribution for the system’s audio and fire fighter telephone circuits and occupies a single node along the NetSOLO network.

A typical INX assembly consists of the following:

- an Intelligent Network Interface-Voice Gateway (INI-VGX) module
- a PM-9/PM-9G power supply
- up to four AM-50 Series amplifiers

The INX transponder occupies a single address on the network and provides termination points for the network connection using either a pair of twisted, unshielded wire (12 AWG max.) or fiber-optic cable.

The INI-VGX uses advanced Digital Signal Processing (DSP) technology for audio compression and filtering that allows the NetSOLO Broadband to produce the clearest audio possible while conserving the network bandwidth for an instantaneous response. During voice paging and fire fighter communication, background noise is automatically filtered. This feature allows increased audibility and eliminates the need for push-to-talk devices.

The INI-VGX can accommodate up to sixteen different messages with a total combined duration of three minutes. Each message can be installed in the field using a laptop computer. Available message options are voice messaging or evacuation tone.

The INI-VGX also provides a fire fighter phone riser and addressable signal line circuit that connects to multiple phone jacks or warden stations through as many as sixteen ADM-TELF modules. In addition, the INI-VGX SLC can support up to thirty-two speaker circuits using the AOM-2SF for single channel applications.

The INX CAB-B can contain up to four AM-50 Series amplifiers that produce 50 watts of power @ either 25 V_RMS or 70.7 V_RMS audio output. Each amplifier includes two separate speaker circuits that can be wired Style Y (Class B) or Style Z (Class A). In addition, each amplifier can broadcast its own tone or message independently of other system amplifiers. Thus, an INX transponder can produce three audio channels simultaneously. Each INX transponder can support up to four AM-50 Series amplifiers operating as main amplifiers with one AM-50 Series amplifier used as a fail-safe backup amplifier.

The INX transponder receives its power from a PM-9/PM-9G nine ampere, filtered, switching power supply providing 24 VDC nominal operating voltage. The PM-9/PM-9G has an integral standby battery charger capable of recharging up to 55 A/H batteries. The INX can house up to 12 A/H sized batteries.
Figure 1 illustrates the NetSOLO Broadband System configuration.

- INX Transponder with six independently programmable speaker circuits, each rated 50 watts (Class 2 Power-limited)
- Two analog addressable Signaling line circuits For 394 devices (Class 2 Power-limited)
- Style 6 (Class “A”) with optional CAOM
- 7100 NetSOLO® with two notification appliance circuits, each rated 1.7 amps, @ 24 VDC (Class 2 Power-limited)
- Three simultaneous audio channels. Up to 16 programmable voice messages
- Optional Integral Digital Alarm Communicator Transmitter (DACT) for local or network-wide event reporting
- Twisted-pair or fiber-optic cable between nodes. (3,000 ft. (900 m) distance with wire. Up to 8 dB loss fiber-optic.
- (Class 2 Power-limited)
- INCC Command Center shown with optional Microphone and Firefighter’s Handset, ASM-16 Addressable Switch modules with 16 Programmable, addressable switches, each with three programmable indicating LEDs: (red, green, yellow)
- One signaling line circuit with 16 AOM-TELF and 32 AOM-2SF addressable devices (AOM-TELFs shown) Style 4 (Class “B”) standard (Class 2 Power-limited)
- Fire fighter phone riser (Class 2 Power-limited)
Figure 2 illustrates the NetSOLO Broadband System configuration.

**NODE 1**
- Initiating Control Devices
- Typical for SLC No 2 if used
- Local Annunciators, LCD-7100 (Max. 5)
- Global display for all network events if set to Region "0"

**NODE 2**
- Optional Integral DACT
- Initiating Control Devices
- Typical for SLC No 2 if used
- Local Annunciators, LCD-7100 (Max. 5)

**NODE 3**
- One SLC, (16 AOM-TELFs & 32 AOM-2SFs)
- One phone riser
- 6 Speaker appliance circuits
- 150 watts max w/50 watts standby

**NODE 4**
- One SLC, (16 AOM-TELFs & 32 AOM-2SFs)
- One phone riser
- 6 Speaker appliance circuits
- 150 watts max w/50 watts standby

**NODE 5**
- NAC NO
- NAC RO
- Connect if wired
  - Class A, Style 6 or 7 only

**NODE 6**
- One SLC, (16 AOM-TELFs & 32 AOM-2SFs)
- Initiating Control Devices
- Typical for SLC No 2 if used
- 6 Speaker appliance circuits
- 150 watts max w/50 watts standby

**NODE 7**
- Local Annunciators LCD-7100 (max. 5)
- Global display for all network events if set to Region "0"

**NODE 8**
- Connect if wired
  - Class A, Style 6 or 7 only

**Note:**
- 3,000 ft. (max.) between nodes using wire
- 8 Db loss (max.) between nodes using fiber-optic cable
### ORDERING INFORMATION

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>INCC Intelligent Network Command Center</td>
<td></td>
</tr>
<tr>
<td>INI-VGC</td>
<td>Command Center Voice Gateway</td>
</tr>
<tr>
<td>INI-VGC-UTP</td>
<td>Voice Gateway for fiber-optic and unshielded twisted-pair wire</td>
</tr>
<tr>
<td>ASM-16</td>
<td>Programmable Switch Module (occupies single slot of inner door)</td>
</tr>
<tr>
<td>NGA</td>
<td>Network Graphic Annunciator</td>
</tr>
<tr>
<td>ANU-48</td>
<td>Remote LED Driver</td>
</tr>
<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</td>
</tr>
<tr>
<td>Dimensions:</td>
<td>19” W x 19” H x 4” D</td>
</tr>
<tr>
<td>(48 W x 48 H x 10 D cm)</td>
<td></td>
</tr>
<tr>
<td>Optional Accessories</td>
<td></td>
</tr>
<tr>
<td>ANU-48</td>
<td>Remote LED Driver</td>
</tr>
<tr>
<td>INCC-TEL</td>
<td>Fire Fighter Telephone Handset (requires INCC-IDT Inner Door)</td>
</tr>
<tr>
<td>INCC-MIC</td>
<td>Paging Microphone Module (occupies one single slot of Inner Door)</td>
</tr>
<tr>
<td>INCC-BP</td>
<td>Command Center Blank Face Plate (occupies one single slot of Inner Door)</td>
</tr>
<tr>
<td>INX Intelligent Network Transponder</td>
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<tr>
<td>INX-VGX</td>
<td>Transponder Voice Gateway</td>
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<tr>
<td>PM-9/PM-9G</td>
<td>INX 9 ampere Power Supply</td>
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<tr>
<td>AM 50 Series Amplifiers:</td>
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<tr>
<td>AM-50-25</td>
<td>INX 50 Watt amplifier @ 25 VRMS output</td>
</tr>
<tr>
<td>AM-50-70</td>
<td>INX 50 Watt amplifier @ 70.7 VRMS output</td>
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### Cabinets:

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
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<tbody>
<tr>
<td>INX-CAB</td>
<td>INX Backbox with Black Door</td>
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<tr>
<td>Dimensions:</td>
<td>19” W x 19” H x 4” D</td>
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<tr>
<td>(48 W x 48 H x 10 D cm)</td>
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</tr>
<tr>
<td>INX-CABR</td>
<td>INX Backbox with Red Door</td>
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<tr>
<td>Dimensions:</td>
<td>19” W x 19” H x 4” D</td>
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<tr>
<td>(48 W x 48 H x 10 D cm)</td>
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<tr>
<td>INX-CAB-B</td>
<td>Enclosure louvered door and INX-CAB-B Mounting Plate</td>
</tr>
<tr>
<td>Dimensions:</td>
<td>19 3/8” W x 19 3/8” H x 4.5” D</td>
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<tr>
<td>(49 W x 49 H x 11 D cm)</td>
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Note: For additional information on the cabinets, refer to the E3 Series Cabinets Data Sheet (Part Number: 9020-0649).

### Seismic Battery Bracket Kits

<table>
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<tr>
<th>Part Number</th>
<th>Description</th>
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<tbody>
<tr>
<td>90518</td>
<td>NetSOLO NS-INX 7 A/H Seismic Battery Bracket Kit</td>
</tr>
<tr>
<td>90519</td>
<td>NetSOLO NS-INX 12 A/H Seismic Battery Bracket Kit</td>
</tr>
</tbody>
</table>

Note: For information on the types of Seismic Battery Bracket Kits available and the Seismic Battery Bracket Kit Part Numbers, refer to the following documents:

- Seismic Battery Bracket Installation Guide, P/N: 53839
- E3 Series Cabinets Data Sheet, P/N: 9020-0649
NetSOLO® Broadband Technical Specifications

SPECIFICATIONS
Detailed product specifications may be found in the following documents:
9020-0542: INCC Intelligent Network Command Center Data Sheet
9020-0531: NetSOLO Data Sheet
9020-0541: INX Intelligent Network Transponder Data Sheet

TEMPERATURE AND HUMIDITY RANGES
This system meets NFPA requirements for operation at 0 – 49°C/32 – 120°F and at a relative humidity 93% ± 2% RH (non-condensing) at 32°C ± 2°C (90°F ± 3°F).
However, the useful life of the system's standby batteries and the electronic components may be adversely affected by extreme temperature ranges and humidity. Therefore, it is recommended that this system and its peripherals be installed in an environment with a normal room temperature of 15 – 27°C/60 – 80°F.

STANDARDS
The E3 Series® Broadband System is designed to comply with the following standard:
UL® Standard: UL 864 9th Edition

AGENCY LISTINGS AND APPROVALS
These listings and approvals apply to the modules specified in this document. In some cases, certain modules or applications may not be listed by certain approval agencies, or listing may be in process. Consult the factory for the latest listing status.
UL Listed: S1869
FM Approved: 3025415
MEA FDNY: 6077
CSFM: 6911-1703-0116
City of Chicago Approved: 7165-1703-125
City of Denver Approved
ISO 9001 Certification

For more information
Learn more about Gamewell-FCI’s NetSOLO® Broadband and other products available by visiting www.Gamewell-FCI.com

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For a complete listing of all compliance approvals and certifications, please visit: http://www.gamewell-fci.com/en-US/documentation/Pages/Listings.aspx

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