



n.FORM™

ENGINEERED SYSTEM SOLUTIONS FOR
MASS NOTIFICATION AND
EMERGENCY COMMUNICATIONS

n.FORM™ Mass Notification System

Engineered System Solution

The Lencore **n.FORM™** Engineered System Solution for mass notification and emergency communications is a robust, versatile communications system that is supervised end to end and is easy to install and use. **n.FORM** meets UL 2572 standard for mass notification

systems. This listing allows the Lencore system to interface with a Fire Alarm Control Panel and conforms with the National Fire Protection Association code 72: Fire Alarm and Signaling.

n.FORM makes a complex design concept simple. Lencore leverages a three tier approach:



The headend equipment is a complete communications control center for mass notifications. The system comes fully loaded with pre-recorded messages, text-to-speech, variable audio inputs, Field PoP, zone controlling and more. The headend also leverages an open-protocol platform for programming with third-party devices.



The Operating Platform (OP) is a networked audio distribution component that monitors speakers and the health of the system. It is used to distribute the various communication messages to assigned outputs. The OP is designed to provide clear, intelligible messaging no matter what device is connected.



n.FORM's comprehensive repertoire of engineered indoor and outdoor speakers creates audible intelligibility. The system delivers signals through digital signage, email, text messaging, sirens, strobes and more. Lencore helps to ensure the message is received and has the capability to reach occupants throughout a facility, in other buildings, across a parking lot and around the world.

Information is Imperative

In certain situations and during emergency events the dissemination of information is key to life safety. Messages must not only be seen and heard – they must be understood. Key critical criteria of any mass notification system are: Reach, Clarity, Redundancy and Reporting.

- Reach is coverage to 100% of the intended audience to inform and instruct. Reach can be visual or audible.
- Clarity is the degree to which the audience understands the message they are intended to receive. Lencore is engineered to deliver a clear, intelligible message.
- Redundancy is about multiple methods of communication to ensure receipt as well as system fail safes for operability.
- Reporting provides opportunity to react in the event of a system compromise or failure as well as an evaluation tool for operation optimization.

A well designed MNEC solution will ensure that all intended audiences are well informed and directed to safety. The **n.FORM** system delivers the highest quality for reach, clarity, redundancy and reporting.

About MNEC, NFPA72, ADA & UL2572

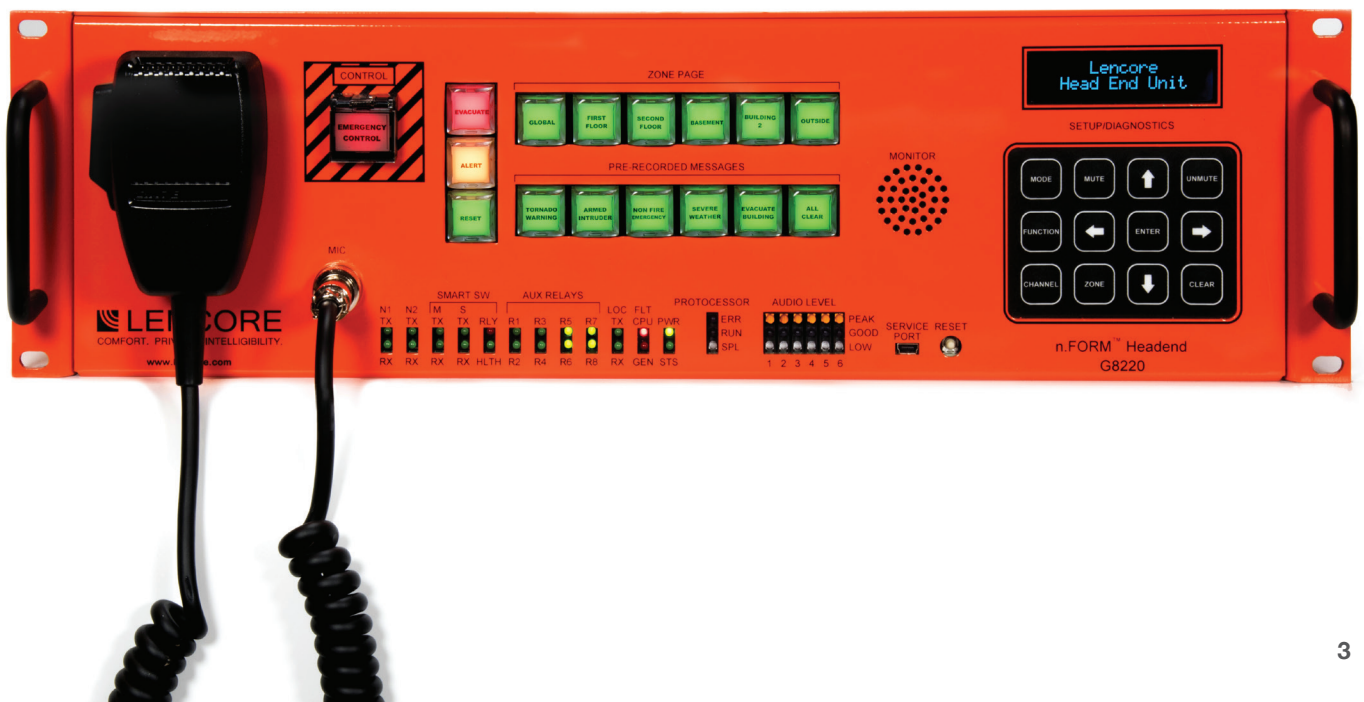
Day to day, building codes exist to keep us safe and to ensure good communication practices. In considering our Mass Notification Emergency Communication systems (MNEC), the intersection of building codes with fire detection and intelligent notification equipment is a positive way of ensuring safety.

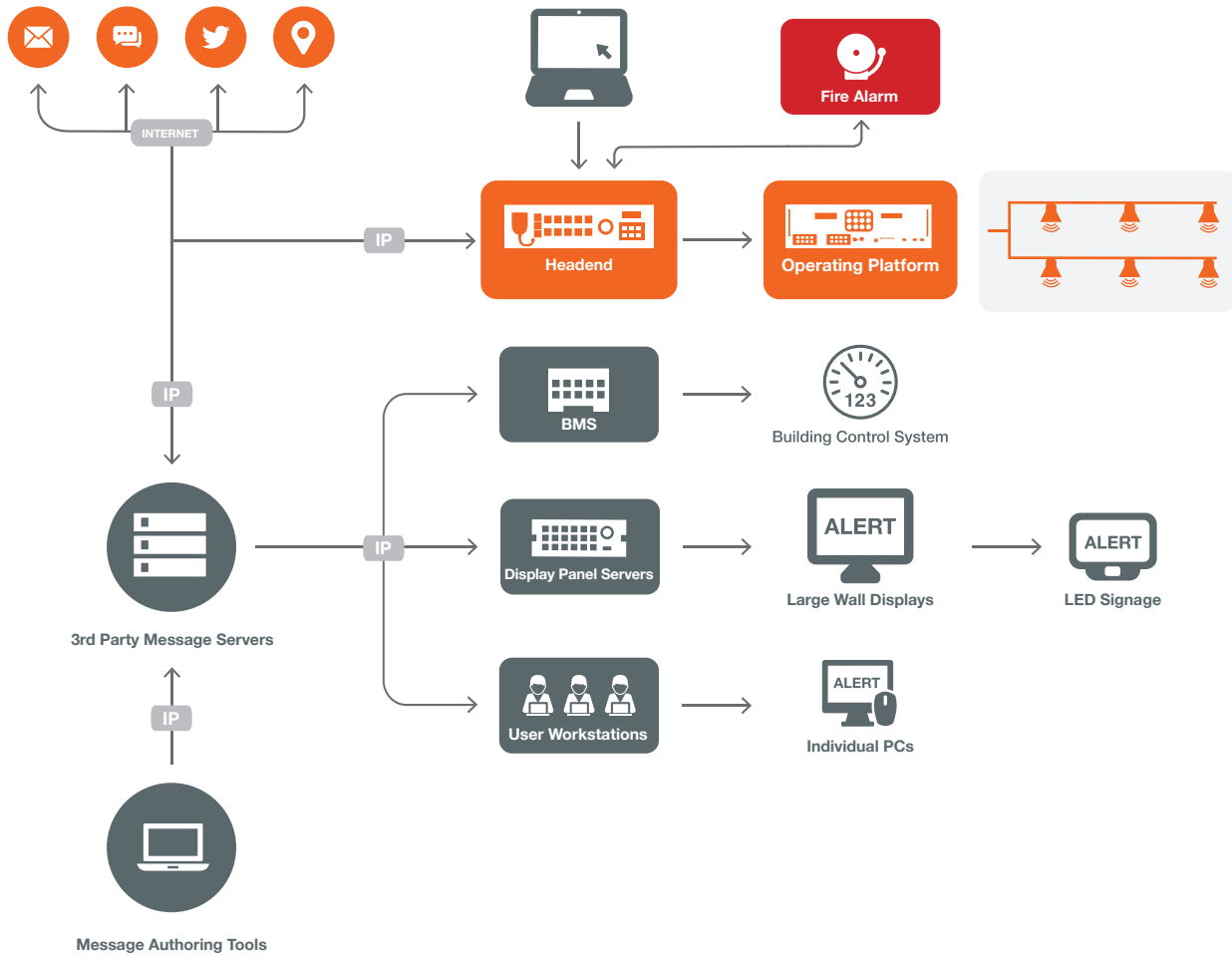
The National Fire Protection Association (**NFPA**) is the governing code body devoted to eliminating death, injury, property and economic loss due to fire, electrical and related hazards. One of the codes, NFPA 72: Fire Alarm and Signaling, specifically addresses mass notification systems. Highlights from NFPA 72 include the establishment of combination systems, equipment performance, supervision and interconnectivity of systems, shut down of ambient noise, and emergency communications requirements.

The **ADA** ensures access to the built environment for people with disabilities. The ADA Standards establish design requirements for the construction and alteration of facilities subject to the law. These enforceable standards apply to places of public accommodation, commercial facilities, and state and local government facilities.

Underwriters Laboratories (**UL**) is a safety consulting and certification company focused on the establishment of safety standards for electrical devices and components. Since NFPA 72 Chapter 24 permits the interconnection of Life Safety equipment with other nonperformance based systems, UL2572 provides requirements as well as guidance on how this can be achieved without impacting the integrity of a certified Life Safety system.

The **n.FORM** system is built to interface with a Fire Alarm Control Panel (FACP) in order to reinforce the fire alarm annunciation as well as take control in a non-fire emergency. Achieving the UL 2572 standard is positive proof that the **n.FORM** system is engineered to perform at the highest levels. It is the smart, future-proof solution for your building today.





Connectivity, Configuration & Control

Cloud server connectivity allows the user to see, monitor and access the building systems from the comfort of your office, no matter where the facilities are located. The user has the ability to remotely set-up and adjust the Lencore **n.FORM** system in a secure manner. **n.FORM** is an IP-based system that uses an open-protocol for programming with third party devices. This allows message delivery direct from the headend or through third party messaging servers. **n.FORM's** web server controls the network and provides flexibility to access the system, monitor settings, manage zones and make other changes virtually anywhere – on-site, off-site, or around the world. n.FORM is designed on an open-platform that makes integrating and interfacing with other control platforms and protocols simple. Connectivity has never been faster, easier or more cost effective.



Touch Screen



NFPA72



Panic Button



Ethernet



Switch Box



Telephone



Fire Alarm



Storm Watcher

n.FORM System Manager

The entire **n.FORM** line of products can be accessed, configured, controlled and monitored through a private, password protected user interface named System Manager. The configuration software manages all system settings diagnostics and zoning. From your browser, changes and adjustments can be made quickly and easily to your system for expansion and scalability. Lencore's System Manager raises the bar on user interface and puts real-time management at your fingertips!

Diagnostics

Lencore's **n.FORM** system delivers detailed diagnostics to ensure that the system operates at peak performance levels. From email and alerts for system compromise to speaker counts on each Operating Platform, **n.FORM** delivers self-checking system status for actionable reporting. The diagnostics tools allow you to see real-time temperatures and functional performance levels for amplifiers, monitoring of system devices and much more!

Sound Masking

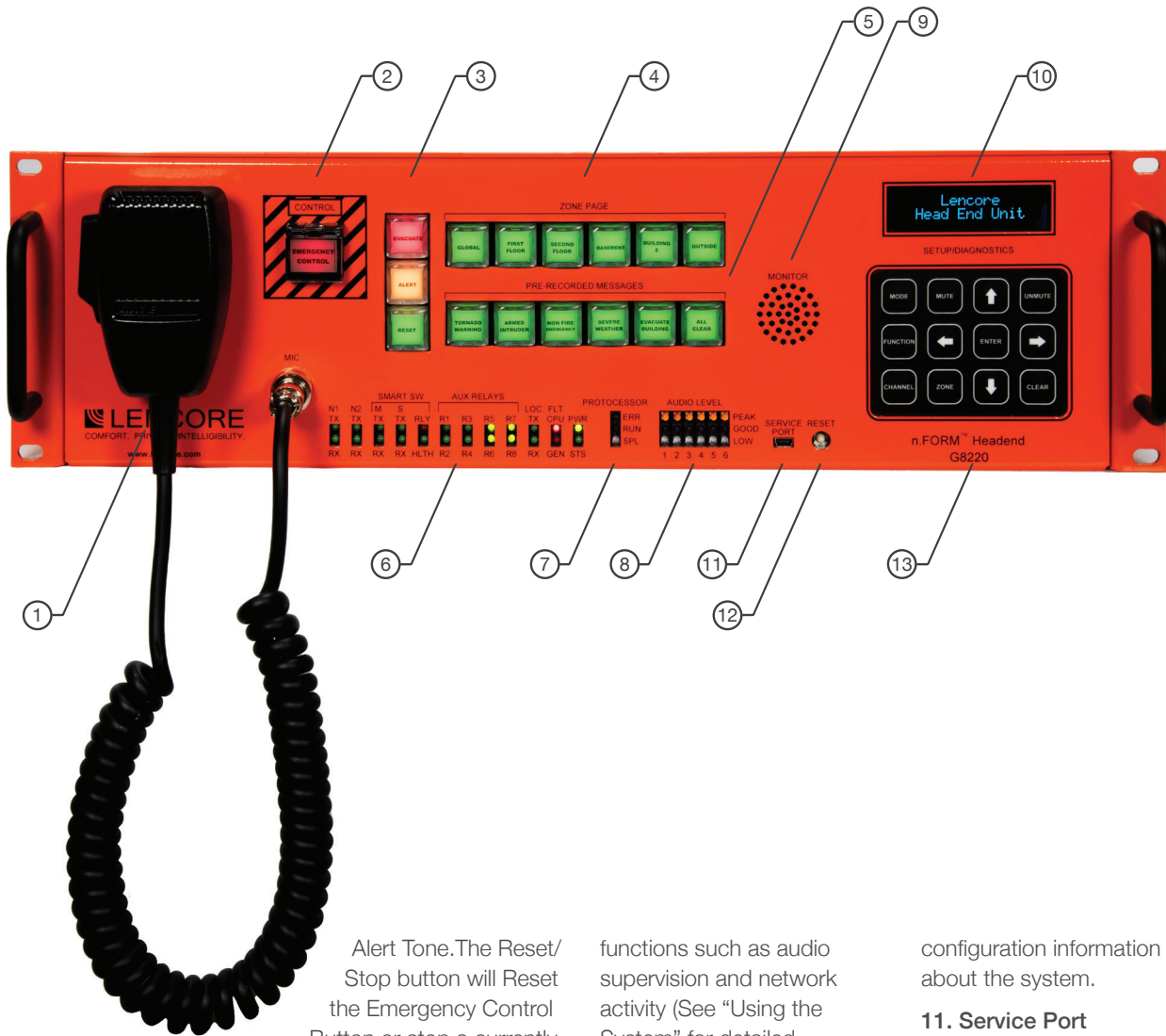
n.FORM also delivers the everyday added benefit of productivity and enhancing the comfort of your space with the inclusion of sound masking – at no additional cost. Sound Masking works by introducing a unique, broadband sound complimentary to the speech spectrum that effectively covers indirect speech levels. Sound Masking gently raises the background sound level to cover, or mask, unwanted office noise.

As a result, noise from overheard speech becomes less intelligible.

Leveraging the same speakers in use for audible, emergency communications, **n.FORM** is able to deliver sound masking. You now have the ability to communicate in the event of an emergency but also are able to utilize the equipment every day to improve productivity and comfort.



n.FORM HEADEND RACK



1. CB-MIC

The CB-MIC can be used for emergency All Call live voice paging.

2. Emergency Control Button

The emergency control button overrides the Fire Panel operation. If the FACP is already in Emergency mode, then this button is locked out.

3. Pre-sets

The Evacuation Button activates a standard Temporal 3 evacuation tone. The Alert Button activates a typical

Alert Tone. The Reset/ Stop button will Reset the Emergency Control Button or stop a currently playing prerecorded message

4. Zone page Buttons

The Zone Page buttons allow for a temporary override of the zone number to be used by the CB Mic.

5. Pre-Recorded Messages Buttons

Pressing any of the pre-recorded message buttons will play one of 66 pre-recorded messages.

6. LED Indicators and Audio Supervision

The LED indicators display various conditions and

functions such as audio supervision and network activity (See “Using the System” for detailed information).

7. Processor LEDs

Indicates the Processor Activity.

8. Audio Level LEDs

Indicates the audio level for the six audio feed outputs (low, good, peak).

9. Monitor

An internal speaker to allow the user to listen to the audio on any of the six audio output feeds.

10. LCD Display

The LCD displays various diagnostic messages and

configuration information about the system.

11. Service Port

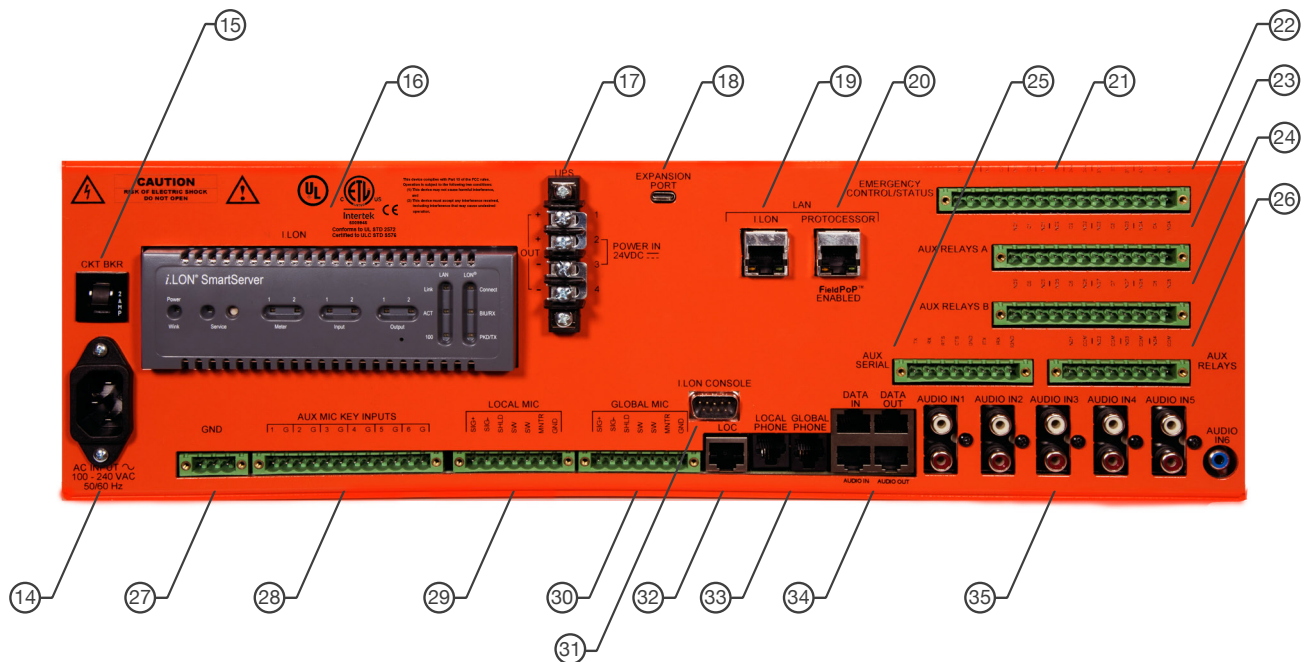
The service port is used to load custom prerecorded messages (See “Head-End Configurator” manual for detailed information).

12. Reset Button

The reset button is used to make a hardware reset for servicing purposes.

13. Keypad

The keypad is used to make a number of adjustments to the system without using a computer.



14. Power Input

Power cord connector (IEC 60320). 100-240vAC

15. Circuit Breaker

Resettable circuit breaker.

16. iLON

The iLON is the web server used to control the system through the installed System Manager (see the System Manager user guide).

17. UPS Terminal Block

Connect an external UPS to this. Connect an external DC UPS to this terminal block (See "Wiring" for detailed information).

18. Expansion Port.

USBC-For future use.

19. iLON Connector

Connect an Ethernet cable to access the iLON.

20. Protocessor Connector

Connect an Ethernet cable to access the Protocessor.

21. Emergency/Control Status Connector (inputs)

Supervised inputs from the Fire Panel, for FACP Active, Fault status In, FACP PTT, Mute Masking and External System Reset. Wire the dry contacts from the fire panel to this connector.

22. Emergency/Control Status Connector (outputs)

Dry Contact Outputs for Emergency Status out and Fault status out. Wire these dry contact relay outputs to the fire panel

23. AUX RELAYS 'A' Connector

This connector contains dry contact relays for PTT Output and strobe output.

24. AUX RELAYS 'B' Connector

Zone triggered relays.

Connect external equipment to be triggered by a zone page.

25. AUX Serial Connector

Serial connector for Creston, AMX, or any third-party RS232 control system.

26. AUX Inputs Connector

Auxiliary inputs. Triggered by N.O. dry contacts. Their function depends on the system mode. Either Strobe and UPS faults, or Play Message inputs (See "Wiring" for detailed information).

27. GND Connector-J5

Connect a common audio ground wire from the GND connector to the first OP.

28. AUX MIC Key Inputs Connector-J46

Connect external MIC PTT keys here to trigger pre-configured paging zones. All Call, 251-255.

29. Local MIC Connector-J44

Connect an external MIC here to make Local pages.

30. Global MIC Connector-J57

Connect an external global MIC here to make Global/Campus pages.

31. iLON Console Connector

Connect a null modem cable to connect to the iLON to change iLON settings such as the IP address.

32. LOC Connector

For future use.

33. Local/Global Phone Connectors

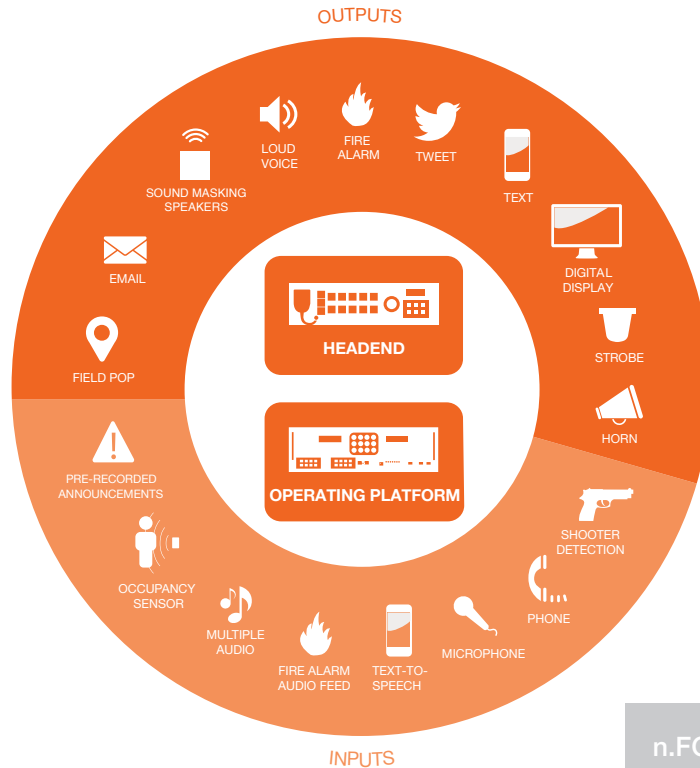
Connect a local and/or global phone using RJ12 connectors.

34. Data/Audio In/Out Connectors

Connect the Data and Audio cables to the first OP using RJ45's. Data/Audio IN Connectors receive the Data and Audio cables from the last OP using RJ45's.

35. RCA Audio In 1-6

Connect external line level audio sources using RCA cables. Note: Audio input 6 is for an all-call page only.



Features of the n.FORM™ MNEC System

n.FORM System Meets
UL 2572 / ULC S576 Standard

Founded in 1990, Lencore has a long history of providing innovative systems for sound masking, paging, background music and mass notification. Our advancements in sound quality, audio distribution, software and networking solutions have propelled Lencore to industry leadership. We are proud that our products are manufactured in the USA and offer an unparalleled 10 year conditional warranty.

Contact Lencore for more on our Engineered System Solutions for speech privacy, comfort and emergency communications, Preventative Maintenance and Service Contracts, Dealer Programs, GSA Offerings, LEED Credits and other capabilities.

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