

Emergency Communication System

Series 4800 User Guide



Cornell Communications, Inc.
Milwaukee, WI 53223 USA

800-558-8957

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Cautions and Warnings

The following Manual is to be used as a guide for the 4800 Emergency Communication System. Consult your local “Authority Having Jurisdiction” for required code compliance and installation standards. The **Caution** and **Warning** symbols are placed throughout this manual to identify critical requirements for a safe and proper installation/operation.



- 1. Caution** - The 4800 Digital Emergency Communication System requires installation by factory trained authorized dealers/distributors, in accordance with ANSI/NFPA 70 National Electrical Code.
- 2. Caution** - Properly trained personnel, familiar with Telecommunications Industry Associations 568 TIA/EIA standard, are required for proper installation. Failure to terminate the wiring correctly will cause damage to the system and void the warranty.
- 3. Caution** - The 4800 Digital Emergency Communication System shall be installed in a controlled, indoor dry environment, with temperatures maintained between 55°F and 95°F.
- 4. Caution** - The 4800 Digital Emergency Communication System requires an **Analog “POTS”** dedicated telephone line for “Offsite” modem communication.



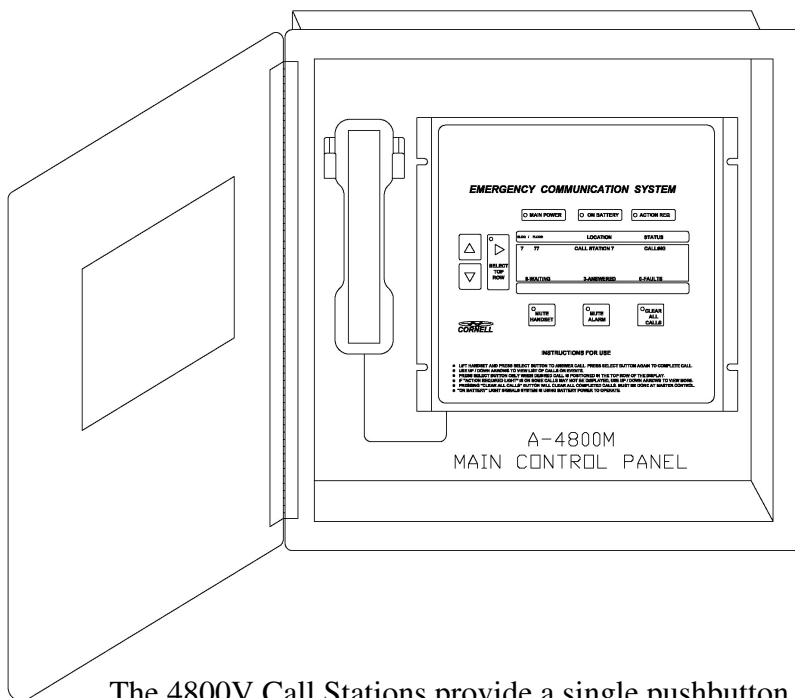
- 1. Warning** – Cornell Communications manufactures proprietary Control Panels and Switches that have 8 available RJ45 ports to connect to additional Remote Control Panels, Switches and Call Stations. These devices connect using the straight-thru, TIA/EIA 568A or TIA/EIA 568B, wiring standard. Any attempt to connect an “Off the Shelf” Ethernet switch will damage the system and void all warranty!
- 2. Warning** – The 4800 Digital Emergency Communication System requires installation by factory trained authorized dealers/distributors, in accordance with NFPA 70 National Electrical Code, by qualified electricians. The 4800 System meets FCC 15, Subpart A, Section A (Commercial Use) emissions and is ICES-003 (Canada) compliant, when installed according to the installation instructions and the state/local electrical codes. Component or device substitutions such as Power Supplies, Switches or required cabling types are not permissible.
- 3. Warning** - Failure to comply with the installation instructions, the NEC, NFPA and local building code will void all agency listings and warranty coverage.
- 4. Warning** - Control Panels, Expansion Switches, Call Stations and Power Supplies require EMI suppression filters, to be added to the field wire connections during installation, for FCC compliance. Refer to page 16 of the 4800 Installation Manual.
- 5. Warning** - To ensure proper operation, the 4800 system should be tested on a regular basis by qualified personnel.

System Overview

The 4800 Digital Emergency Communication System is designed to providing fully supervised, two-way voice communication, between each required location and a Main Control Panel. An internal modem, connected to **Analog “POTS”** dedicated telephone line, provides an automated-timed dial-out capability to a monitoring location.

Features include adding up to (4) Remote Control Panels, and connecting a total of (255) Call Stations. The 4800 Digital Emergency Communication System shall poll (supervise) all the Call Stations, Control Panels and Expansion Switches on a continuous basis to identify line faults and inoperative or non-functioning equipment. Faults will be alerted and displayed at the Control Panel(s).

A-4800M / A-4800R Control Panel



The Main/Remote Control Panels receive the alerts from the 4800V Call Stations and display the calls visually and audibly in order of activation.

The 4800V Call Stations provide a single pushbutton, call activation/received notification LED and hands free digital voice communication.



4800V Call Station

General Operating Instructions

Operation

The Cornell 4800 Rescue Assistance System provides both audible and visual indications of Emergency calls. Normal system function indicators include a steady red “Main Power” Led and a (10) second supervisory LED pulse at all of the call stations.

General

Momentarily depressing the push button on a 4800V Call Station causes a short acknowledge tone and steady call LED illumination at the 4800V Call Station. The 4800V Call Station LED begins flashing when the pre-recorded “Pending” message is announced. At the Control Panel(s), the location of the 4800V Call Station(s) is displayed in order of activation. Whenever there is one or more calls placed that have not been answered, a slow repeating audible alarm is sounded at the Control Panel(s), and the “Action Required” LED will be flashing.

Selecting an “Active” 4800V Call Station will connect 2-way voice communication between the Control Panel(s) handset and the 4800V Call Station. The Control Panel(s) operator will immediately be connected to listen/talk to the person at the 4800V Call Station. Momentarily depressing the “Select Top Row” button again will disconnect voice communication to the 4800V Call Station and complete the call.

Any Control Panel may respond to an incoming call. However, once a call has been “Connected” via the modem, the remaining Control Panel(s) will indicate that the call has been “Answered”, and will not be able to connect to that location.

Voice communication can be re-connected to any active 4800V Call Station shown on the display list, by pressing the Up/Down arrow keys, to scroll the location to the top line of the display and pressing the “Select Top Row” button. To cancel communication, press the “Select Top Row” button again. To clear all previous calls, press the “Clear All Calls” button twice, at the Main Control Panel. The “Clear All Calls” function only functions from the Control Panel designated as the “Main Control Panel” in the system.

Modem Operation

The 4800 Digital Emergency Communication System incorporates a programmable automatic dial feature to connect to an **Analog “POTS”** dedicated telephone line. In the event that an incoming call is not answered, at any of the Control Panels in a preset amount of time, the 4800 system will dial a pre-programmed phone number to directly connect the 4800V Call Station to a monitoring location.

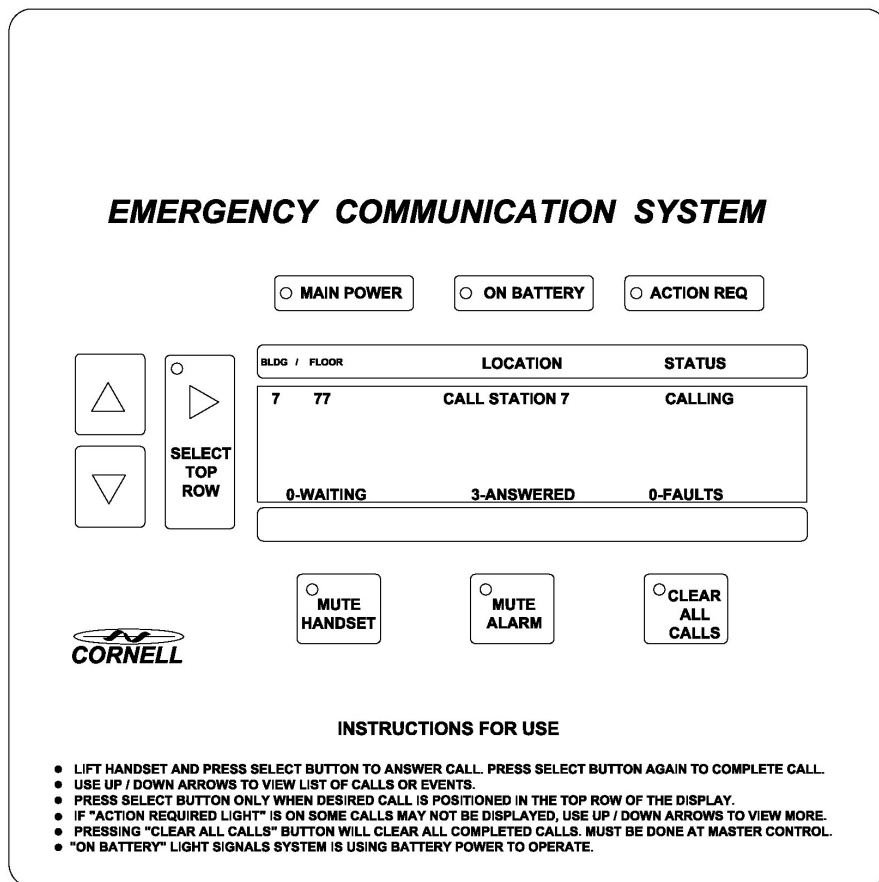
The “Monitoring” connection can be terminated by scrolling the “Connected” call to the top row of the display and pressing the “Select Top Row” button. This action will immediately terminate the phone conversation and connect a voice path from the Control Panel(s) to the 4800V Call Station.

System Faults

The modem/phone line circuit integrity is checked every 24 hours. In the event of a failure, a “Fault” notification will appear on the Control Panel(s) display. System faults produce an audible signal at the Control Panel(s), a flashing “Action Required” LED and are indicated on the display(s).

Control Panel Function

Described below are the Control Panel Layout and the operation of the individual key functions.



MAIN POWER

The MAIN POWER LED is illuminated when system AC power is present.

ON BATTERY

The ON BATTERY LED will illuminate if the AC power has failed and the system is powered by batteries.

ACTION REQ

The ACTION REQ LED represents an active call or a fault in the system that needs to be corrected.

The header directly above the display screen provides information regarding the Call Station locations and their status.

BLDG: A single alphanumeric digit that represents a building number in a complex or large campus. (Optional programming)

FLOOR: A (2) digit numeric character space that ranges from 00-99. (Optional programming)

LOCATION: A (24) digit alphanumeric character space for Call Station location information.

STATUS: Displays the current condition of the call.

Calling: A Call Station is activated.

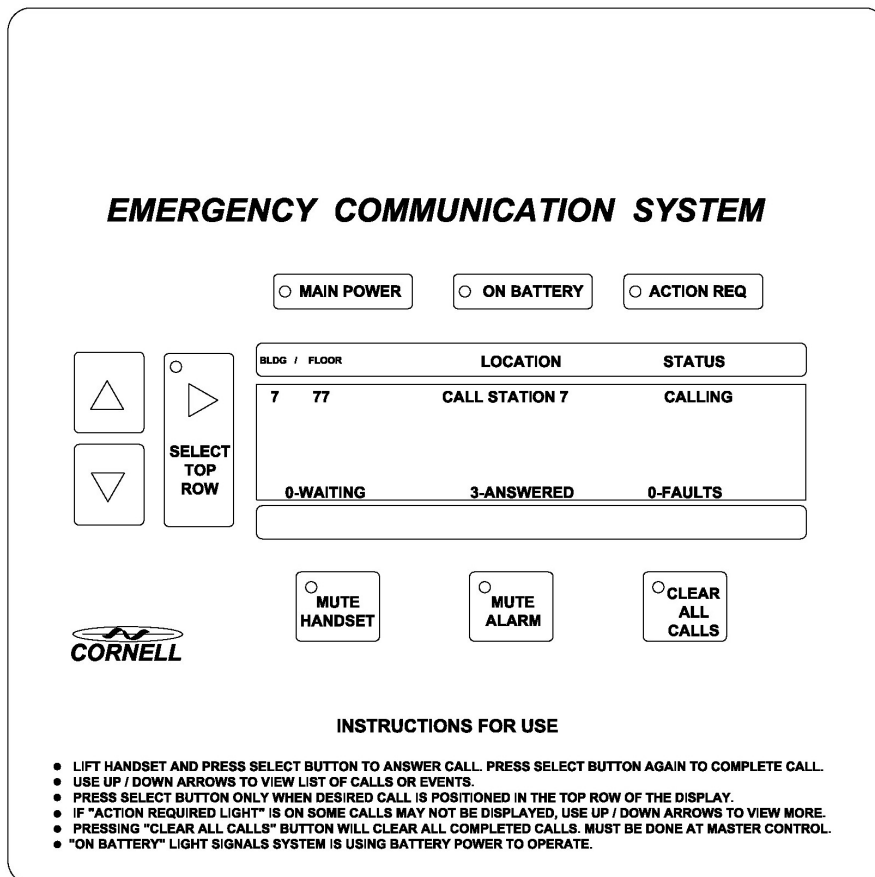
Connected: A voice path is open to the Call Station.

Completed: The voice path is closed and the station is reset.

Fault: The device is malfunctioning and requires attention.

Answered: Offsite monitoring or another Control Panel is connected.

Control Panel Function Cont.



The Control Panel display(s) provide four rows of currently active system information.

The top three rows of the Display is a window to a list of events that can be accessed by scrolling with the Up/Down arrow keys.

The fourth row of the Display indicates the numeric value of calls that are "Waiting", "Answered" and system "Faults" that are present.

System events are prioritized and displayed in the following order.

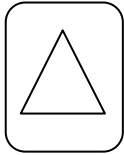
Call Station Activation: "New" Call Station events are placed in the top row of the display screen. Multiple "New" calls will be displayed in order of activation. Re-activation of a Call Station, that is present in the event list, will appear below "New" active calls. Use the Up/Down arrow keys to locate the Call Station for connection.

Answered "New" Call Station activations will appear on all of the Control Panels, under the "Status" column, as "Calling". Once a Control Panel connects to the Call Station, the "Primary" panel changes its "Status" to "Connected", and the remaining Control Panels change their "Status" to "Answered". Control Panels that are displaying the calls as "Answered", do not have access to the Call Station, until the "Primary" panel completes the call.

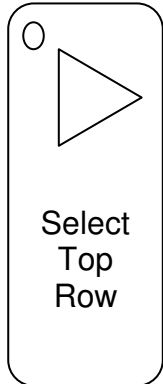
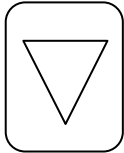
Completed Calls: "Completed" calls are placed at the bottom of the event list.

Faults: "New" system Faults are placed in the top row of the display screen, or just below the "New" active calls in the system. System "Faults" are automatically cleared from the event list when the inoperative device is repaired.

Selectable Function Keys



The Up/Down buttons allow you to scroll to view the active calls on the display. Press the buttons, until the location you wish to contact is in the top row, inline with the “Select Top Row” arrow, as shown below.



BLDG/FLOOR	LOCATION	STATUS
7	77	CALL STATION 7
		CALLING

Pressing the “Select Top Row” button, when a call is active, (CALLING) will connect a voice path from the main panel to the calling location. The “Status” will change from “Calling” to “Connected” and the LED will illuminate. The “Mute Alarm” button will illuminate and the alarm tone will be silenced. Pressing the “Select Top Row” button again will end the call and change the “Status” from “Connected” to “Completed”. The “Select Top Row” LED will extinguish and the completed call will then be placed at the bottom of the event list.



Pressing the “Mute Handset” button will illuminate the LED and silence the outbound voice, allowing you to speak privately to someone nearby, without the person at the call station hearing you. Pressing the “Mute Handset” button again will turn off the “Mute” function.



Pressing the “Mute Alarm” button will illuminate the LED and silence the alarm tone for the active (Calling) Call Stations. Following a time period of 5 minutes, if the Call Station has not been answered, the alarm tone will continue.



The “Clear All Calls” button, when pressed at the “Main Control” panel, will clear all previously “Completed” calls in the event list. Once the calls have been cleared from the system, you are not able to re-connect to a location. The “Clear All Calls” button also provides the current software version that is loaded in the Control Panel(s).

Cornell Communications recommends clearing the event history, once the emergency communication is completed. This action will allow active calls to be placed at the top row of the display.

Modem Operation

The 4800 Digital Emergency Communication System incorporates a programmable automatic dial feature to connect to **Analog “POTS”** dedicated telephone line. In the event that an incoming call is not acknowledge, at any of the control panels in a preset amount of time, the 4800 system will dial a pre-programmed phone number to directly connect the call station to a monitoring location.

If local authorities arrive, the “Monitoring” connection can be terminated by scrolling the “Answered” call to the top row of the display and pressing the “Select Top Row” button. This action will immediately terminate the phone conversation and connect a voice path from the Control Panel to the Call Station.

The modem/phone line circuit integrity is checked for proper operation every 24 hours. In the event of a failure, a “Fault” notification will appear on the display.



ECC - Emergency Call Center, Procedures

General:

An automated call system will dial a pre-programmed telephone number and play a pre-recorded message (Optional) that will contain information such as building address, and other relevant instructions as required. The operator will then be connected “live” to the calling station “opening a direct audio path” between the person requesting help and the call center operator.

A few basic key strokes will help the operator manage calls as additional telephone calls may arrive during an emergency. The ECC operator’s voice has priority during the live conversation so please allow the caller to speak, understanding they may be under duress. At any time, local authorities may take control on site, abruptly disconnecting your call.

It will be important to learn as much information from the caller as to the type of emergency, and their exact location in side the building, such as the floor # and or surroundings, garage, stairwell, number of persons at the location, etc.

The ECC should then contact the local emergency response authority with details and stand-by for additional calls from the same building. Each facility may also request that additional persons be notified.

Do not respond to or forward the actual caller ID telephone number as this may be a dedicated phone line and would tie up additional calls from processing.

Control:

If a pre-recorded message is provided, it should contain important site information. The message can be replayed several times by momentarily pushing the [*] button, allowing the operator to take detailed notes before talking live with the caller.

When all the information from the live conversation has been documented, it is critical to properly disconnect the telephone call by momentarily pushing the [#] button. Failure to use press the [#] button will delay additional calls from being processed. It may be necessary to push the [#] button more then once if the phone will not disconnect.

DO NOT HANG UP THE PHONE WITH OUT FIRST PUSHING [#] BUTTON !

Typical Message:

Please stand by! A request for help has been activated. A call originating from _ _ _ _ has been activated. You will be connected live in just a moment. Special instructions may vary from each facility.

This Call Center Procedures sample will vary from each location and is just a guideline.

Please contact your Cornell Regional Account Manager for assistance.

Maintenance

Periodic Maintenance

In general, the 4800 system will provide system fault information at the Control Panel(s) display. The “ACTION REQUIRED” LED represents an active call or a fault in the system that needs to be corrected.

The phone line circuit is checked every 24 hours for proper operation. A notification of a fault will be shown on the Control Panel(s) display, in the event of a failure.

The power supply is monitored at the Control Panel(s) for AC Fail, and Low Battery/Fail. The “ON BATTERY” LED will illuminate if the AC power has failed and the system is powered by batteries.

WARNING

Warning – To ensure proper operation, the 4800 system should be tested on a regular basis by qualified personnel.

Power Supply Maintenance

Each Unit should be tested at least once a year for the proper operation as follows:

- **Output Voltage Test:** Under normal load conditions, the DC output voltage should be checked for proper voltage level. (24VDC)
- **Battery Test:** Under normal load conditions check that the battery is fully charged, check specified voltage both at battery terminal and at the board terminals marked [+ BAT -] to insure there is no break in the battery connection wires.

Note: Expected battery life is 5 years. However, it is recommended changing batteries in 4 years or less if needed. (See install documentation provided with each Power Supply)

Service

It is recommended that all defective units be returned to the manufacturer for repair. The 4800 system does not have any field serviceable parts or components.

Warranty>Returns

Warranty:

CORNELL warrants its products to be free from defects in materials and workmanship for thirty-six (36) months from the date of manufacture, under normal use and service.* Obligation of *CORNELL* is limited to repairing or replacing at its option, any part, which, in its opinion, shall be proved defective in materials or workmanship, under normal use and service. This warranty is void if the product is altered, damaged by lightning or repaired by anyone other than *CORNELL* personnel. No other warranty, expressed or implied, will be allowed unless agreed to in writing by the factory.

***36 month Warranty does not apply to 3rd Party OEM products which carry the original manufacturer's warranty. Please verify OEM warranty with your Cornell Regional Account Manager if you have any questions.**

Returns:

Warranty returns will be accepted with RMA# for no cost. Defective materials will be repaired for a minimum of \$100 and cost of the repair will be for time and materials not to exceed the cost of a new unit. Returns of unused, unmarked boxed equipment are subject to a MANDATORY 25% restocking charge when returned within 90 days of purchase. **ABSOLUTELY NO RETURNS WILL BE ACCEPTED AFTER 90 DAYS.** Returns of used equipment or custom equipment will not be accepted. All returns/repairs must be adequately packaged for shipment.

For an RMA #, (Return Materials Authorization) please call Cornell at 1-800-558-8957.

Agency Approvals:



This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.