

NCA-2 ONYX® Series Network Control Annunciator

General

The NOTIFIER **NCA-2** is a second-generation Network Control Annunciator for the **NOTI•FIRE•NET™** network, compatible for use with ONYX® Series nodes such as the NFS2-3030, NFS-3030, NFS-320, NFS-640 and NFS2-640 fire alarm control panels, and first-generation NCA Network Control Annunciators. Additionally, the NCA-2 may be configured with DVC Series products to create one or more Digital Audio Command Centers on NOTI•FIRE•NET. The NCA-2 provides system control and display capabilities for all, or for selected network nodes.

The NCA-2 display consists of a 640-character backlit LCD display, and a control interface consisting of “soft” keys used to navigate screen menus, “hard” keys with fixed control functions, and a QWERTY keypad.

When connected to one or more networked panels the NCA-2 provides network control and status/history display capabilities. It may also be configured as the Primary Display for displayless nodes on the network.

Hardware Features

- Certified for seismic applications when used with the appropriate seismic mounting kit.
- Approved for Marine applications when a marine-listed version is used with marine-listed compatible equipment. *See DN-60688.*
- Full supervision of all inputs and network integrity.
- **Enhanced-format 640-character LCD display with backlighting.**
- ACS bus for LED or graphic annunciators (EIA-485).
- Optically isolated printer interface (EIA-232).
- 11 LED status indicators: Power, Controls Active, Fire Alarm, Pre-Alarm, Security, Alert, Supervisory, Trouble, Signal, Silence, CPU Failure, Point Disabled, Other Event.
- Alphanumeric QWERTY rubber keypad.
- Four status relays: Alarm, Trouble, Supervisory, Security (Form-C).
- Nonvolatile real-time clock can be synchronized with network by master node.
- Optional Security Keyswitch enables keypad functions.
- Optional Security Tamper switch.
- Supports up to 32 remote ACS annunciators and modules.
- Requires 24 VDC, and a network connection.
- RDP port for LCD-160 or terminal mode LCD2-80.

NOTE: NCA-2 Firmware version 14.0 (and higher) can support LCD-160 on the RDP port, or LCD2-80 in terminal mode, but not both at the same time.

Function Features

- Individual Enable/Disable or Group Enable/Disable local for networked ONYX series panels.
- Control ON/OFF networked ONYX series panel control points.
- Read Status networked ONYX series panel points and zones.
- Network paging control/HVAC control (requires SCS series).
- Network-wide: Acknowledge, Silence, Reset.
- Lamp Test (local to NCA-2).
- History Buffer (1000 Alarm events; 4000 System events).
- Print NCA-2 programming and history reports.



- Report status of networked panels and their respective field devices to a central station via a single UDACT-2 (*see data sheet DN-60686*).
- One Master level, nine User level passwords. The Master can assign each User access levels (programming, alter status).
- Interactive Summary Event Count display, event handling package.
- Online programming and alter-status programs.
- Intuitive user guidance program including interactive soft keys.
- Enhanced Read Status/Alter Status displays.
- New history filters for report displaying and printing: All Events, Only Alarms, Only Troubles, Only Supervisory, Only, Security, Time Interval, Point Range.
- Fully programmable node-mapping subsystem.
- Advanced/Basic Walk-Test program.
- Timer control for Auto Silence, AC Fail Delay.
- Meets Canadian ULC display requirements (with ONYX panels).
- Environmental adjustment controls to maximize LCD legibility.
- Meets NFPA requirements for Firefighter Smoke Control Station (FSCS) and HVAC (requires SCS series)
- NCA-2 version 20 and higher complies with UL 2572 Mass Notification Systems (with ONYX panels).

NCA-2 Indicators and Controls

LED INDICATORS

- **POWER** (green) illuminates when 24 VDC power is applied; LED goes out if power is removed and NCA-2 is using a battery.
- **CONTROLS ACTIVE** (green) illuminates to indicate that the NCA-2 control functions are active.
- **FIRE ALARM** (red) illuminates when at least one fire alarm event exists; flashes when any of these events remain unacknowledged.
- **PRE-ALARM** (red) illuminates when at least one pre-alarm event exists; flashes when any of these events remain unacknowledged.

- **SECURITY** (blue) illuminates when at least one security event exists; flashes when any of these events remain unacknowledged.
- **SUPERVISORY** (yellow) illuminates when at least one supervisory event exists (i.e., sprinkler valve off normal, low pressure, fire pump running, guard's tour, etc.); flashes when any of these events remain unacknowledged.
- **SYSTEM TROUBLE** (yellow) illuminates when at least one trouble event exists; flashes when any of these events remain unacknowledged.
- **OTHER EVENT** (yellow) illuminates for any category of event not listed above; flashes when any of these events remain unacknowledged.
- **SIGNALS SILENCED** (yellow) illuminates if the NCA-2 Silence key has been pressed or if any other node sent a Network Silence command; flashes if only some points on a node are silenced.
- **POINT DISABLED** (yellow) illuminates when at least one disable exists on the network or in the system.
- **CPU FAILURE** (yellow) activated by the watchdog timer hardware, indicates an abnormal hardware or software condition. Contact technical support.

FIXED FUNCTION KEYS

- Acknowledge
- Signal Silence
- System Reset
- Drill/Alarm Signal
- Fire Alarm Scroll/Display
- Security Scroll/Display
- Supervisory Scroll/Display
- Trouble Scroll/Display
- Other Event Scroll/Display

The five keys labeled **SCROLL/DISPLAY** allow the user to scroll through messages for the particular event type. For example, pressing the **FIRE ALARM SCROLL/DISPLAY** key will scroll through all fire alarm events, as details of each are shown in the display area of the NCA-2.

NOTE: The **OTHER EVENT SCROLL/DISPLAY** key also scrolls between *Pre-Alarm* and *Disabled* events.

- **ACKNOWLEDGE** – press this key to acknowledge off all active events.
- **SIGNAL SILENCE** – press this key to turn off all control modules, notification appliance circuits, and panel output circuits that have been programmed as Silenceable.
- **SYSTEM RESET** – press this key to clear all latched alarms and other events and turn off event LEDs.
- **DRILL HOLD 2 SEC** – press this key, holding it down for two seconds, to activate all silenceable output circuits.

SPECIAL FUNCTION KEYS

- **PRINT SCREEN** – press this key to print what is currently on the LCD screen.
- **LAMP TEST** – press this key to test the LED indicators on the left of the keypad and to check firmware revision numbers.
- **NEXT SELECTION/PREVIOUS SELECTION** – these keys are used when setting parameters in NCA-2 data fields; for example, choosing a device type as a filter for requesting a Node History.
- **BATTERY LEVEL** – press this key to display voltage and charging current level for system batteries. Displays levels for local AMPS-24(E) or AMPS-24(E) connected to associated NFS2-3030 or NFS-3030 node.

Product Line Information

NOTE: “C” suffix indicates ULC-Listed model.

NCA-2: Network Control Annunciator. Requires a network communications module for networking. In direct connect applications NCM not required. NCA-2-C is for ULC applications. Non-English versions are available: NCA-2-FR, NCA-2-HE, NCA-2-KO, NCA-2-PO, NCA-2-SC, NCA-2-SP, NCA-2-TC, NCA-2-TH. For English marine applications, order NCA-2-M; for non-English Marine applications, order NCA-2-M and the appropriate KP-KIT-XX. (See DN-60688.)

NCM-W, NCM-F: Standard Network Communications Modules. Wire and multi-mode fiber versions available. See DN-6861.

HS-NCM-W(-2), HS-NCM-MF, HS-NCM-SF, HS-NCM-WMF(-2), HS-NCM-WSF(-2), HS-NCM-MFSF: High-speed network communications modules. Wire, single-mode fiber, multi-mode fiber, and media conversion models are available. See DN-60454

ABS-2D(C): Annunciator Backbox, Surface, black. Mounts one NCA-2 and one NCM.

ABS-2DR: Same as above, but red.

ABS-4D(C) Annunciator Surface Box.

ABS-1TB Annunciator Surface Box.

ABS-1B(C) Annunciator Surface Box.

ABS-1TB(C) Annunciator Surface Box.

ABS-2B Annunciator Surface Box.

CHS-2D: Chassis, required whenever the NCA-2 is mounted in an ABS-2D(R).

CHS-M3: Chassis, mounts an NCA-2 in a single row of a CAB-4 Series cabinet.

CA-2: Chassis, Audio, 2 rows. Mounts an NCA-2 and the DVC Digital Voice Command in two rows of a CAB-4 Series cabinet.

CAB-4 Series Enclosure: Available in four sizes, “A” through “D”. Backbox and door ordered separately; requires BP2-4 battery plate. See DN-6857.

CAB-BM Marine System: Protects equipment in shipboard and waterfront applications. Order NCA-2-M; for non-English order NCA-2-M and the appropriate KP-KIT-XX. (See DN-60688.) Also order **BB-MB** for systems using 100 AH batteries. For a full list of required and optional equipment, see DN-60688.

DP-DISP: Annunciator Dress Plate. Dress plate is used when NCA-2 is mounted in the top row of a CAB-4 Series cabinet with a CHS-M3 chassis.

NCA-2RETRO: Kit for retrofit mounting the NCA-2 to a DP-DISP dress plate.

NCA/640-2-KIT: Mounting kit for directly mounting the NCA-2 to CPU2-640 chassis.

LCD-160: 160 character LCD annunciator. See DN-66940

LCD2-80: 80 character LCD annunciator. See DN-60548

TR-ABS2D: Trim ring for semi-flush mounting of ABS-2D.

TEMPERATURE AND HUMIDITY RANGES

This system meets NFPA requirements for operation at 0°C to 49°C (32°F to 120°F); and at a relative humidity (noncondensing) of 85% at 30°C (86°F) per NFPA, and 93% $\pm$ 2% at 32°C $\pm$ 2°C (89.6°F $\pm$ 1.1°F) per ULC. 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 all peripherals be installed in an environment with a nominal room temperature of 15°C to 27°C (60°F to 80°F). Product weight is 3 lbs (1.36 kilograms).

ELECTRICAL REQUIREMENTS

The NCA-2 may be powered from a Main Power Supply AMPS-24(E) (see data sheet DN-6883) mounted in a separate cabinet (see specifications below); or from any UL Listed non-resettable 24 VDC source from a compatible NOTIFIER fire panel (see panel data sheets). The battery on the **NCA-2** motherboard is for RTC and SRAM; holds the history memory through power failure. Replacements are available (P/N 31004). Power source: 1) **AMPS-24** (120 VAC, 50/60 Hz, 4.5 A maximum) or **AMPS-24E** (240 VAC, 50/60 Hz, 2.25 A maximum) power supply; 2) the NFS-640, NFS2-640 and NFS-320 on-board power supply; or 3) a **supervised +24 VDC power supply** that is UL/ULC-listed for fire protective service. The current of the **NCA-2** is 400 mA with backlight and 200 mA with the backlight off.

AGENCY LISTINGS AND APPROVALS

These listings and approvals apply to the NCA-2 and NCA-2-C. In some cases, certain modules or applications may not be listed by certain approval agencies, or listing may be in process. Consult factory for latest listing status.

- UL Listed: file S635.
- ULC Listed: S527-11.
- FM approved.
- CSFM: 7165-0028:0224, 7165-0028:0243.
- FDNY: COA#6211, COA#6212.

Marine Applications: Marine approved systems must be configured using components itemized in the Marine ONYX Systems data sheet DN-60688. Specific connections and requirements for those components are described in the Marine-EQ installation document, PN 54756. When these requirements are followed, systems are approved by the following agencies:

- **US Coast Guard** 161.002/55/0 (Standard 46 CFR and 161.002).
- **Lloyd's Register** 11/600013 (ENV 3 category).
- **American Bureau of Shipping (ABS)** Type Approval.

NOTE: For information on the CAB-BM marine system, see DN-60688.

STANDARDS

The NCA-2 has been designed to comply with standards set forth by the following regulatory agencies:

- Underwriters Laboratories Standard UL 864, 10th edition
- Underwriters Laboratories Standard UL 2017 for General-Purpose Signaling Devices and Systems

- Underwriters Laboratories Standard UL 2572 for Mass Notification Systems
- NFPA 72 National Fire Alarm Code
- ULC-S527-11 Standard for Control Units for Fire Alarm Systems
- ULC S524 Standard for the Installation of Fire Alarm Systems



This document is not intended to be used for installation purposes.
We try to keep our product information up-to-date and accurate.
We cannot cover all specific applications or anticipate all requirements.
All specifications are subject to change without notice.

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NOTIFIER

12 Clintonville Road
Northford, CT 06472
203.484.7161
www.notifier.com

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