

System 500

Fire Alarm Control Panel

Section: Conventional Fire Alarm Control Panels

GENERAL

The NOTIFIER System 500 fire alarm control panel is a medium-sized system designed for maximum flexibility and ease of installation. The microprocessor control and modular construction enable users to configure the system to meet precise requirements. Field programmability simplifies initial installation and allows quick updates to meet future needs.

The center of the system is the Central Processor Unit (CPU-500) module which monitors and controls one or two additional user-selected modules. The System 500 may be configured as a 4, 8, 12, or 16-zone system. In addition, up to eight control points may be added, creating a maximum capacity of 48 points (16 zones and 12 output circuits).

Internal communications are accomplished over a high-speed serial data bus. Each module on the bus is automatically addressed, supervised and controlled by the CPU-500.

FEATURES

- Walk Test feature for single-person test of the system. Includes special zone-change audible indication and zone trouble indication.
- March Time, Temporal Code, or Steady selectable per indicating circuit or control relay.
- Alarm verification, programmable per zone, with automatic discrimination between smoke detectors and dry-contact initiating devices.
- Field-programmable with multiple passwords and a special programming key to ensure the integrity of field program information.
- Releasing service option with selectable time delays, abort circuit, and manual release.
- Multiple-hazard releasing option. Four cross-zone circuits.
- Pre-signal option with selectable time delays and manual evacuation control. Includes positive alarm sequence option per NFPA standards.
- Two-stage alert/evacuation option meets Canadian and U.S. requirements.
- All initiating and notification circuits are power-limited for use with limited-energy cable.
- Resound of subsequent alarms, troubles, or supervisory signals, each with a distinct local audible indication.
- Each notification zone may be programmed for normal, waterflow, or supervisory operation.



S635



CS68



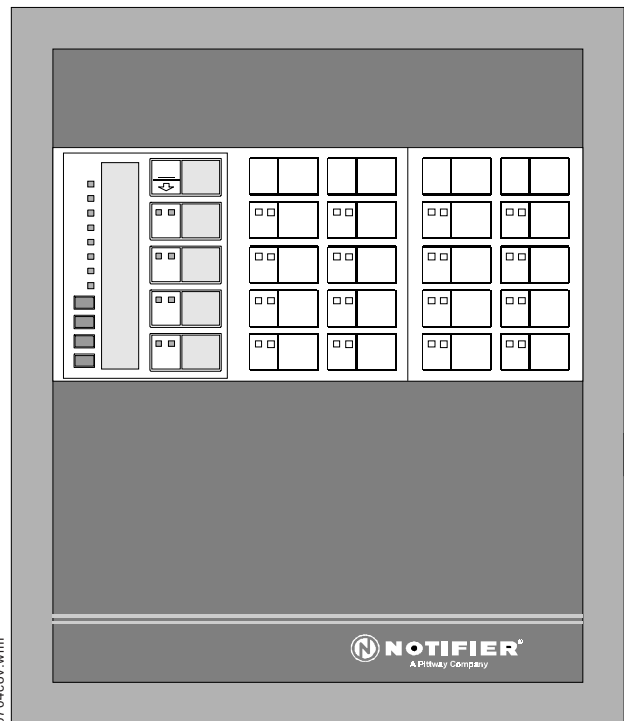
California State Fire Marshal
7165-0028:157



291-91-E



0V7A0.AY



0704cov.wmf

- Field-programmable supervisory complies with NFPA standards requiring distinction between supervisory condition and open-circuit trouble conditions.
- Map any output circuit to any input circuit in nonvolatile program memory.
- Enable/Disable per circuit from front panel switches.
- Small size permits semi-flush mounting between 16" (40.64 cm) center wall studs.
- Filtered notification circuit power.
- Integral charger for 7.0 AH to 17 AH battery options. **Note:** Use BB-17 when over 12 A.H. batteries.
- Ground fault detection and battery supervision.

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. For more information, contact NOTIFIER. Phone: (203) 484-7161 FAX: (203) 484-7118



NOTIFIER One Fire-Lite Place, Northford, Connecticut 06472

ISO-9001
Engineering and Manufacturing
Quality System Certified to
International Standard ISO-9001



Made in the U.S.A.

- Silence inhibit timer (program option).
- EIA-485 serial port for high-speed data communication with remote annunciators. May be used for remote ACKNOWLEDGE, SIGNAL SILENCE, and SYSTEM RESET.
- Labels may be easily inserted to provide identification of all circuits.
- Nonvolatile EEPROM memory retains program information even with total loss of power.
- Optional auxiliary audible/visual power supply.
- Trouble reminder option.
- California code option.
- Program initiating zones to act as remote acknowledge, silence or reset.
- Tornado warning option.
- Positive non-interfering successive zone coding option (UZC-256).
- Optional 80-character remote LCD display (LCD-80).
- Networking option for use as slave panel to System 5000, AFP1010, or AM2020 (NIB-96).
- Non-alarm option for lower priority inputs such as drill.
- Auto-silence option.
- Extensive transient protection using MOVs and PTCs.
- High-capacity DACT option (UDACT).

STANDARDS

The System 500 complies with the following standards:

- NFPA-72, Standard for Central Station Signaling Systems (Protected Premises Unit), Local Protective Signaling Systems, Auxiliary Protective Signaling Systems, Remote Station Protective Signaling Systems, Proprietary Protective Signaling Systems (Protected Premises Unit).
- UL 864 – Standard for Control Units for Fire Protective Signaling Systems.

BASIC CONFIGURATIONS

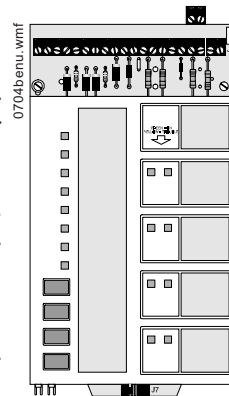
The following are minimum quantities of modules required to configure complete 4, 8, 12, or 16 zone controls.

	4 Zone	8 Zone	12 Zone	16 Zone
BE-500	1	1	1	1
CAB-500	1	1	1	1
IZ-4 or IZ-4A	1	0	1	0
IZ-8	0	1	1	2
IC-4, CR-4, TC-2, or TC-4 allowed?	1	1	0	0
CR-4L or ICR-4L allowed?	1	2*	2*	2*
NOTE: *Reduce to 1 if an expander (ICE-4, IZE-A, or CRE-4) or APS-6R is employed. Reduce to 0 when both an expander and an APS-6R are employed.				

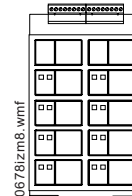
0704conf.tbl

PRODUCT LINE INFORMATION

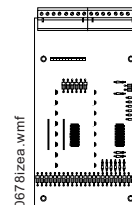
BE-500: Basic Equipment for System 500. Includes CPU-500, power supply/charger, power transformer, programming key, labels, cables, manual, and miscellaneous hardware. CPU-500 includes two notification appliance circuits, alarm and trouble relays, remote station, and master box transmitters. The CPU communicates with one or two modules (any mix of IZ, IC, CR, and TC).



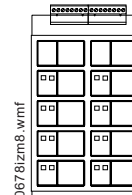
IZ-8: Initiating Zone module. Provides eight Style B (Class B) alarm initiating zones. Includes plug-in terminal block.



IZE-A: Initiating Zone Expander. Converts IZ-8 to eight Style D (Class A) alarm initiating zones (maximum of one per IZ-8). Includes plug-in terminal block.

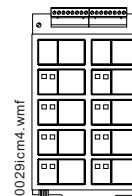


IZ-4: Initiating Zone module. Provides four Style B (Class B) initiating zones. Includes ELRs. **Note:** The IZ-4 will not accept an IZE-A.

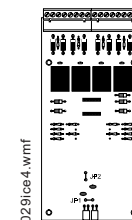


IZ-4A: Same as IZ-4 but with four Style D (Class A) zones.

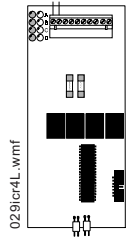
IC-4: Indicating Circuit module. Provides four Style Y or Style Z alarm notification appliance circuits. Maximum signaling current is 3.0 amps per circuit or 6.0 amps per module. Includes auxiliary bell power harness, ELRs, and plug-in terminal block.



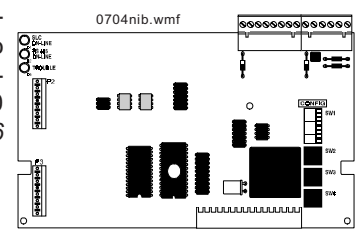
ICE-4: Indicating Circuit Expander. Expands IC-4 to provide a total of eight Style Y or Style Z alarm notification appliance circuits. Circuit ratings are same as IC-4. Maximum of one per IC-4. Includes plug-in terminal block.



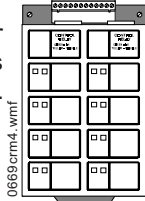
ICR-4L: Combination Output Module. Provides two standard dry Form-C alarm contacts rated for 5 amps @ 120 VAC or 28 VDC (resistive) and two Style Y notification appliance circuits. All relays and circuits are field programmable.



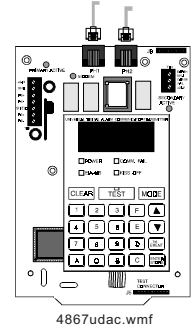
NIB-96: Network Interface Board. Installed to make System 5000 operate as a slave to AM2020 or AFP1010. See *NIB-96 catalog sheet*.



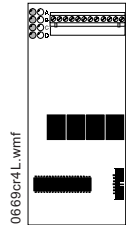
CR-4: Control Relay module. Provides four Form-C relay contacts, rated at 5.0 amperes @ 120 VAC or 28 VDC (resistive) per circuit. Includes plug-in terminal block.



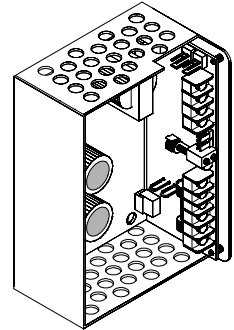
UDACT: Universal Digital Alarm Communicator Transmitter. Transmits system status to UL listed Central Station Receivers via the public switched telephone network. All 16 zones and other important system information can be transmitted. See *UDACT catalog sheet*.



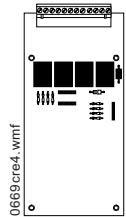
CR-4L: Control Relay Module. Provides four standard dry Form-C alarm contacts rated for 5 amps @ 120 VAC or 28 VDC (resistive). Each relay is field programmable to respond to a single initiating device circuit, a group of circuits, or all initiating device circuits.



APS-6R: Audio-Visual Power Supply. Provides 6.0 amps of filtered power for compatible notification appliances. Includes battery input and transfer relay, over-current protection. Mounts beneath third (far-right) module.

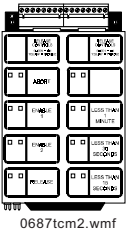


CRE-4: Control Relay Expander. Expands CR-4 to provide a total of eight Form-C relay contacts. Maximum of one per CR-4. May also be connected to add four relays to an IC-4, TC-2, or TC-4. Includes plug-in terminal block.



NOTE: If the APS-6R is installed, the module on the far right will not accept an expansion module (ICE, IZE, CRE, NIB-96, UZC-256, ICR-4L, or CR-4L).

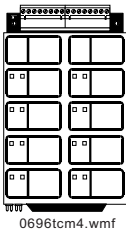
TC-2: Time Control module. Used for single-hazard release and pre-signal alert/evacuation applications. Release mode includes: cross-zone; abort circuit; two solenoid circuits; warning bell circuit with triple-code option; countdown time display. Pre-signal option includes programmable timer. Includes plug-in terminal block.



Serial Annunciators

These NOTIFIER annunciators communicate along a two-wire, twisted-pair EIA-485 circuit, which can be run up to 6,000 feet away from the control panel when using 16 AWG wire.

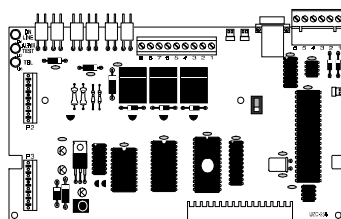
TC-4: Time Control module. Used for multiple-hazard releasing service or two stage alert/evacuation. Release mode provides four independent release circuits each with programmable cross-zone, delay timer, and soak timer. Two-stage alert/evacuate mode provides four independent circuits, meeting Canadian two-stage requirements, with one-minute timer. Includes plug-in terminal block.



The **ACM-16AT Series** Annunciator Control Module and the AFM-16AT Annunciator Fixed Module provide announcement of 16 points (circuits) per module. Each point features a control switch and an Alarm/Circuit On and a Trouble LED. System controls such as *Acknowledge*, *Signal Silence*, and *Reset* can be also executed from the remote annunciator, if desired.

UZC-256: Programmable Universal Zone Coder provides positive non-interfering successive zone coding. Microprocessor-controlled, field programmable from IBM-compatible PCs

0704uzc.wmf



(requires optional programming kit). See *UZC-256 catalog sheet*.

The **ACM-32A Series** Annunciator Control Module and the AFM-32A Annunciator Fixed Module provide 32 alarm-only points per module.

The **AFM-16A** provides 16 alarm LEDs, plus a system trouble LED, piezo, and silence. It mounts in a standard 4-gang electrical box.

The **LCD-80** provides an 80-character liquid crystal display with up to 40 custom characters per point. It is field-programmable using a CRT-2 or personal computer (with communications software).

Annunciator Enclosures

A variety of backboxes are available for NOTIFIER serial annunciators. The **ABS-1**, **ABS-1T**, and **ABS-2** provide for surface mounting one or two annunciator modules respectively. The **ABF-1** and **ABF-2** offer flush-mounting of one or two modules respectively.

For more information, see the catalog sheets for NOTIFIER serial annunciators.

Agency Listings

See the first page of this catalog sheet for listing agencies and file numbers. These listings and approvals apply to the basic System 500 control panel. In some cases, certain modules may not be listed by certain approval agencies, or listing may be pending.

Custom Display Drivers

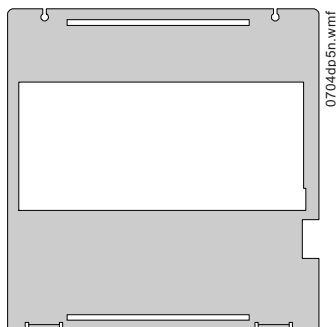
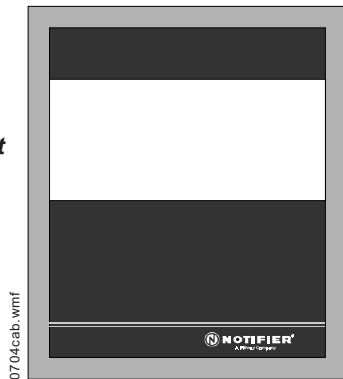
The **LDM-32** Lamp Driver Module provides the System 500 with a direct interface to a custom-built graphic annunciator. Each module may be configured to provide 32 alarm indications or alternately, 16 alarm, 16 trouble and 16 control switch points.

An optional **LDM-R32** Relay Expander Module provides 32 dry normally-open contacts for electrical isolation when connecting the control panel to other equipment.

For more information, see the catalog sheet for NOTIFIER LDM Series.

CAB-500: Backbox and door for System 500. Dimensions: 17-1/4" (43.815 cm) high x 14-3/4" (37.465 cm) wide x 5" (12.7 cm) deep. Includes lock and keys. Slide-in labels provide custom information. Includes inner dress panel, *shown below*.

Door Front



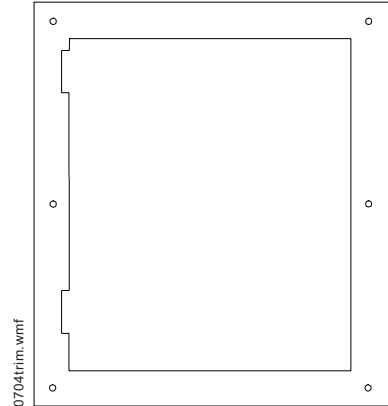
Inner Dress Panel

PS1270: Battery, 12 V, 7.0 AH, Gel Cell.

PS12120: Battery, 12 V, 12 AH, Gel Cell.

TR-500: Semi-flush trim ring.

Height = 21" (53.34 cm);
width = 18-1/2"
(46.99 cm).



BM-2: Blank Module, cover plate for one unused module space.

CONSTRUCTION

Each module consists of one or two printed circuit cards that mount to the chassis with captive screws.

Windows in the hinged door allow for viewing of the status LEDs. Slide-in pockets allow the insertion of descriptive labels for the circuits (label windows are 0.875" [22.225 mm] high by 0.975" [24.765 mm] wide).

The Main Power Supply mounts in the back of the enclosure. Space is provided next to the power supply for up to 12 ampere hours of gelled electrolyte batteries.

The Central Processor Unit module monitors and controls two initiating, indicating or control modules. The APS-6R power supply may be mounted below the far-right module.

A key-locked hinged door enclosure allows viewing of the modules with the door closed. The door assembly is separable from the backbox to allow easy installation.

ELECTRICAL SPECIFICATIONS

- Primary input power, 120 volts, 50/60 Hz.
- Primary input power, 240 volts, 50/60 Hz as option. Order BE-500E.
- Ground fault detection of positive and negative voltage.
- Low primary AC input power supervision with brownout indication.
- Available 24 VDC notification circuit power: 2.0 amps filtered.
- Available resettable power: 200 mA @ 24 VDC regulated.
- Integral battery charger for 7.0 to 17 AH batteries.
- Supervised standby batteries (*order separately*).