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## OPERATING AND INSTALLATION INSTRUCTIONS

# RP1000eLCD KEYPAD

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DESIGN PATS. PENDING

WI603A 3/92

The RP1000eLCD is a user-friendly backlit keypad designed for Napco MA1000e, MA1008e, MA1010, MA1016 or MA1016e control panels or for use as a replacement for older keypads (note RP1000eLCD current requirements). A large alphanumeric liquid-crystal display functions as a readout for control-panel information and zone identification, and can also display messages downloaded from PCD2000 Quickloader™ software. The keypad functions as a programmer as well in its secondary mode of operation. Installation is quick and easy using only four wires.

This manual provides installation information only. Refer to the accompanying User's Guide (OI166) for keypad functions and operation, and to the manual furnished with the control panel for panel installation and dealer programming information. The RP1000eLCD has been listed by UL for use with listed MA1000e and MA1008e Control Units.

### SPECIFICATIONS

Operating Voltage: 9.0–13.0Vdc (supplied by panel)  
Current: 64mA typ., normal backlighting  
Dimensions (HxWxD): 43/8" x 57/8" x 1 1/16"

*Subtract keypad current from combined auxiliary current of the control panel.*

### MOUNTING

**Opening the Keypad.** There are two slots along the bottom edge of the keypad about 1 inch from each side. To open, insert a medium screwdriver into either slot and push up with a slight twisting motion to release the retainer tab. Repeat for the other slot. Pull out at the bottom and lift off the two hooks at the top.

This keypad features a handy pull-up reference label. (This label must be used in UL installations.) Before mounting the keypad onto the wall, push the Sliding Label Plate (with label and felt backing affixed and handle facing forward) down the guides at the rear of the keypad until it snaps into place. Once installed, the Sliding Label Plate cannot be removed without first removing the keypad from the wall.

When installing the rear case, be sure that the words "UP" and "TOP" (molded into the case) are properly oriented. The rear case is provided with a variety of holes to accommodate virtually any mounting situation. The four angled elongated holes are for mounting directly into a wall using appropriate screws; these holes will allow levelling adjustment. If installing into a double-gang box, insert mounting screws through the two vertical elongated holes on the left side of the case and into the box. If the box is visible when viewed from the front, adjust the keypad vertically, then

tighten the screws. Then, using hardware suitable for the mounting surface, add one or two screws at the right side of the case directly into the wall for a secure installation.

The four corner holes may be used when replacing an RP854 or RP1016 Keypad with RPB-1 Backplate for surface mounting directly onto a wall. The RP1000eLCD replaces both the keypad and the backplate.

### KEYPAD PANIC

The RP1000eLCD Keypad supports three keypad panics: Fire, Police, and Auxiliary. F/P/A panics are enabled in the configuration process (see *CONFIGURING THE KEYPAD: PANEL CONF Display*). If enabled, each is tripped by simultaneously pressing the following pairs of panic buttons:

- Fire Panic: press Keys [9/F] and [#].
- Police Panic: press Keys [\*/P] and [#].
- Auxiliary Panic: press Keys [B/A] and [#].

Also see *Remote Panic*, below.

**Note:** If used as a replacement keypad in MA854 or MA1008 systems, or in early MA1010 systems without F/P/A panic, do not configure the keypad for F/P/A panics.

### WIRING

**Caution:** Before connecting keypad, remove both ac and battery power. Check keypad wiring to panel: red is "+"; black is "-". Wire the keypad to the control panel in accordance with the wiring diagram of the panel in use. The maximum distance for a single keypad wiring run is 1000 feet using #22AWG wire. The maximum distance for up to 5 keypads connected to a single run is 300 feet using #22AWG wire.

**Note:** If using a soldering iron, be careful not to splash solder onto the keypad circuit board or components, as damage could result.

**Remote Panic.** To connect a remote panic button, splice the two white wires to a normally-open momentary-contact pushbutton switch. Similarly, additional panic buttons may be wired in parallel with the first, as needed. **Note:** (1) If the panic button is held closed for longer than about four minutes (and the system is disarmed and otherwise ready), the keypad will display "CHECK KP ZONE" to alert the user to check the keypad-panic zone. (2) If remote panic buttons will not be used, insulate both white wires, as a short across them will cause a Police panic alarm. (3) In UL installations remote panic buttons must be located in the same room as the keypad.

**Backlighting.** Backlighting requires no additional wiring. In normal use, the keypad is always dimly backlit. Pressing any key will increase the brightness to facilitate code entry,

but after 30 seconds of keypad inactivity, brightness will again be reduced. To disable backlighting, see *JUMPER OPTIONS* below.

### JUMPER OPTIONS

Several white jumpers provide a wide variety of options. They are conveniently located around the perimeter of the board for easy access. To identify the location of the jumpers, refer to the label affixed to the fishpaper on the back of the board.

**Disable Keypad Panic.** Cut Jumper A to disable the keypad Police Panic buttons, Keys [P] and [#].

**Display Only Area-1 Zones.** (For MA1016 & MA1016e only.) Leave Jumper B intact.

**Display Only Area-2 Zones.** (For MA1016 & MA1016e only.) Cut Jumper B.

**Disable Keypad Sounder.** Cut Jumper C to completely disable the sounder. **Note:** Do not disable the sounder in UL installations.

**Disable Tactile Beep.** Cut Jumper D to silence the tone that sounds whenever a keypad button is pressed. **Note:** If *Enable Keypad Tactile Beep* is programmed in the control panel, cut Jumper D to prevent a double beep from sounding.

**Disable Touchpad Backlight.** Cut Jumpers W1 and W3 to disable touchpad backlighting.

**Disable LCD Backlight.** Cut Jumper W2 to disable LCD display backlighting.

### LCD ADJUSTMENT

The viewing angle for the LCD display is adjustable by means of the LCD ADJUST screwdriver control on the back of the circuit board (refer to label affixed to the board). Viewing the board at its normal mounting height, turn the control in either direction for optimum contrast.

### KEYPAD RESET

Pressing the four top buttons ([1], [2], [3], [4]) simultaneously will reinitialize the keypad as from power-up. The keypad sounder will beep for about 1 second and the LCD will display **\*\*FORCED RESET\*\*** followed by RP1000 VXX, where XX is a two-digit number representing the software version. The keypad will then revert to normal operation.

### CONFIGURING THE KEYPAD

Keypad configuration matches the keypad to the panel with regard to the number of zones, number of user codes, area designations, etc. After connecting to the panel and powering up, resetting the keypad (see *KEYPAD RESET*, above) will automatically pre-configure the keypad to the panel using the default values shown in Table 1. With most panels, the keypad will function using these values, however when used with an MA1000e or MA1008e panel, the configuration *must be altered* (see *PANEL CONF Display*). To change any of the default conditions, manually configure the keypad as described in the following paragraphs. (For UL programming restrictions, refer to the installation instructions furnished with the control panel.) Programming in the Configuration Mode is similar to that in the Dealer Program Mode (see control-panel instructions: *DEALER PROGRAM MODE*) except that the BLANK Button (Key [6]) and PRIOR Button (Key [8]) are not enabled (although Key [8] is still used to exit).

To enter the Configuration Mode, arm, disarm, press Key [#], then Key [2]. Table 1 lists the configuration screens (with pre-configured default values) in the sequence they are displayed.

**Note:** The MA854 requires a special configuration method in order to establish a User Code. For the MA854 only, proceed as follows:

1. Insert a programmed PROM into the MA854.
2. Connect the four keypad wires to the panel and apply power.
3. Program a User Code.
4. Arm, disarm, press Key [#], then Key [2] to enter the Configuration Mode.
5. Press Key [4] repeatedly until PANEL CONF is displayed. (See next paragraph.) Program the right-most digit with a "4", that is, "...4"
6. Press Key [B] to save, then hold down Key [8] to exit.

SCREEN	MA854; MA1000e, MA1008e, MA1010	MA1016, MA1016e
# OF ZONES	8	14
# OF USERS	9	15
PANEL CONF	....	..11
AREA1 MASK	FFFF	FFFF
AREA2 MASK	FFFF	FFFF
EXIT/ENTRY	....	....

Table 1. Configuration screens and default values.

**PANEL CONF Display.** This screen auto-configures to the values shown in Table 1. If used with an MA1000e or MA1008e, change the default value of "...." to "...1". To enable F/P/A keypad panics, add an "8" to the right-most digit, that is, "...9" for the MA1000e or MA1008e; or "..19" for MA1016 or MA1016e. Press Key [B] to save. Press Key [4] to continue or hold down Key [8] to exit.

**AREA1 MASK Display** (For MA1016 & MA1016e only). At the AREA1 MASK display, program 4 digits as follows: | Table 2 below, circle the values shown for the Area-1 zones selected. Add up the circled values for each of the 4 groups, the four totals representing the four programmed digits. Note that each digit can have a total value of 1 through 15, as represented by numbers 1-9, 0, and letters B-F, where "0" represents 10 and "." represents a zero. (For detailed programming instructions, refer to the programming section of the control panel installation manual.) Program those 4 digits, in order. Press Key [B] to save. Press Key [4] to continue or hold down Key [8] to exit.

**AREA2 MASK Display** (For MA1016 & MA1016e only). At the AREA2 mask display, repeat the above for the Area-2 zones selected. Press Key [B] to save. Press Key [4] to continue or hold down Key [8] to exit.

	ZONE													
	14	13	12	11	10	9	8	7	6	5	4	3	2	1
AREA1	2	1	8	4	2	1	8	4	2	1	8	4	2	1
AREA2	2	1	8	4	2	1	8	4	2	1	8	4	2	1
Digit	1st		2nd				3rd				4th			

Table 2. Four-Digit Area 1/Area 2 Mask Programming.

**EXIT/ENTRY Display.** This keypad can display exit and entry time. Properly configured as described below, the LCD will count down, *independently of the control panel*, an exit delay or entry delay that emulates the equivalent delays programmed into the panel.

- At the EXIT/ENTRY mask, program 4 digits as follows:
- Program the left pair of digits for the same *exit delay* that is programmed in the control panel. The first (left) digit is x16; the second (right) is x1.

- Program the right pair of digits for the same *entry delay* that is programmed in the control panel. the first (left) digit is x16; the second (right) is x1.
- If it is desired not to display exit/entry time, program the four digits, "....".

Press Key [B] to save, then hold down Key [8] to exit.

**Note:** On entry, the keypad display will start counting down the programmed entry delay. If a second entry delay has been programmed for another entry zone, the secondary delay will be ignored by the keypad if that zone is subsequently violated.

### PROGRAMMING ENGLISH-LANGUAGE MESSAGES

English-language zone descriptions and/or a new "Ready" message can be programmed at the keypad. Refer to the Operating Guide (OI166) or the quick-reference programming instructions on the last page.

Zone descriptions, "Ready" message, shutdown messages and configuration information (automatic – no entry needed) can be downloaded using Napco's Quickloader system and your PC-compatible computer. Refer to the on-line help screens and the instructions furnished with the PCI2000 Interface (WI443) and accompanying PCD2000 software (WI446).

### TRANSFERRING MESSAGES TO OTHER KEYPADS

Zone descriptions, the new "Ready" message and panel configuration information can be transferred from the programmed keypad (master) to the unprogrammed others (slaves) in the system using one of the following methods. Program the required zone descriptions into any one of the keypads. As a safety precaution, remove ac and dc power to the panel, then proceed as follows.

*For all panels except MA854:*

1. Wire all keypads to the control panel and reapply power.
2. Hold down Key [9] (Reset) until the keypad sounder beeps.
3. On the programmed (master) keypad, arm the panel, disarm, press Key [#], then press Key [1]. The master keypad will start transmitting data to all slaves while it alternately displays PLEASE WAIT and \*SENDING ZONE ID. Similarly, the slave keypads receiving data will alternately display PLEASE WAIT and RECVING ZONE ID.
4. After data transmission is completed, check slave keypads for valid programming.

**Note:** In MA1016-series systems, if transferring information to *alternate-area* keypads, be sure to revise the EXIT/ENTRY configuration of the alternate-area keypad to conform to the delays programmed into the panel for the alternate-area entry zone.

*For MA854:*

Before proceeding, be sure that the panel has been properly configured. (See *CONFIGURING THE KEYPAD: Note.*)

1. Remove power to the panel.
2. Connect red and black wires from all keypads to the respective control-panel terminals. Do *not* connect data lines (green and yellow wires).
3. Splice all green wires together and all yellow wires together, but do *not* connect to the panel. Reapply power.
4. On the programmed (master) keypad, press Key [#], then Key [1]. The master keypad will start transmitting data to all slaves while it alternately displays PLEASE WAIT and \*SENDING ZONE ID. Similarly, slave keypads receiving data will alternately display PLEASE WAIT and RECVING ZONE ID.
5. After data transmission is completed, remove power to

the control panel. Connect yellow and green keypad data wires to their respective control-panel terminals.

6. Reapply power to the panel, then check slave keypads for valid programming.

### "OUT OF SYSTEM" MESSAGE

The keypad will display "OUT OF SYSTEM" for one of the following reasons:

- The control panel is in the process of downloading or uploading data to or from a computer.
- The data lines (yellow and green wires) to the panel are faulty (open, reversed, etc.).
- Either the keypad or the panel is defective.

### TESTING THE KEYPAD

To test the keypad, simultaneously press Keys [\*] and [3]. This will initiate a test that checks all LCD elements, the sounder, and both LEDs. Repeatedly pressing these keys will change the pattern displayed on the LCD. The test will end about 3 seconds after releasing the buttons.

### COMPLETING THE INSTALLATION

To reassemble the keypad after installation, hang the top of the front panel onto the hooks in the rear case and push in firmly at the bottom until the retainer tabs snap into place. (If difficulty is encountered, push the retainer tabs up slightly using a screwdriver, as when removing.)

### HOLD-DOWN FUNCTIONS

The keypad functions that follow are selected by holding down the specified numerical key for about 2 seconds (until a beep sounds). To review the available functions at the keypad, hold down Key [\*] and watch the display for a menu of "hold-down" functions (described below) with their respective activating keys.

[1]	BELL TEST	Briefly sounds alarm device.
[2]	DISPLAY BYPASS*	Displays shunted zones.
[3]	DISPLAY STATUS*	Displays faulted zones.
[4]	INSTANT	Cancels entry delay.
[5]	CHIME	Turns Chime Mode on or off.
[6]	TELCO TEST	Activates telephone-line test.
	MANUAL D/L**	Downloads PCI2000 program.
[7]	WATCH MODE***	Turns on all Day Zones
	FAULT FIND**	Activates Fault-Find Mode.
[8]	PROGRAM	Enters/exits Program Mode.
[9]	RESET	Resets panel and keypad.
[B]	ALARM HISTORY*	Displays last alarm.
[#]	ZONE DIRECTORY	Displays zone descriptions.
[*]&[3]	KEYPAD TEST	Checks keypad indications.

(See *TESTING THE KEYPAD*).

\*Hold button down until all zones have been displayed.

\*\*Execute within 10 seconds after arming and disarming.

\*\*\*MA1016 Series only.

### SYSTEM TROUBLE INDICATIONS

(*Not in MA854 or earlier MA1000-Series panels*). The following system troubles will display at the keypad, whether armed or disarmed, accompanied by flashing LEDs. The indication may be temporarily reset by holding down Reset Key [9] in order to check zone status and/or arm the system. If the system trouble is not corrected, it will return after about 3 minutes.

**Ac Failure.** Displays when ac power is restored after a lengthy power failure (and the backup battery is dead).

**Low Battery.** Displays when battery terminal voltage drops below its specified level.

**Failure to Communicate.** Indicates a transmission failure. Hold down Key [9] to reset the keypad, then hold

down Key [6] to test the phone lines. If the test is successful, the display will clear; otherwise it will return, indicating a need for service.

**Auto-Download Failure.** (Where available.) Indicates failure of a Function-6 Auto-Download from the PCD2000. Reset the display by holding down Key [9], then try again to download the program.

### KEYPAD PROGRAMMING (MA1000-Series only)

The following keypad functions are enabled only in the Dealer Program Mode. For programming instructions, refer to the installation manual furnished with the control panel.

**Key [1] - PRIOR.** Sequences back to the previous location.

**Key [2] - NEXT.** Advances to the next location.

**Key [3] - NEXT.** Same as Key [2].

**Key [4] - DATA UP.** Selects the data for the chosen location: numbers 1-9, 0 and letters B, C, D, E, and F, in ascending order.

**Key [5] - CLEAR.** Clears the data from the selected location.

**Key [6] - PRIOR.** Same as Key [1].

**Key [7] - DATA DOWN.** Selects the data for the chosen location: numbers 1-9, 0, and letters B, C, D, E, and F, in descending order.

**Key [8] - EXIT.** All LEDs will light. Enter Dealer Program Code with 10 seconds to verify and exit.

**Key [B] - SET LOCATION.** Enter a 3-digit location number.

## DEALER PROGRAM AND CONFIGURATION MODES

### To Enter Dealer Program Mode

- Hold down Key [8] until beep sounds.
- Enter Dealer Program Code.

### To Enter Configuration Mode

- Arm; disarm; press Key [#], then Key [2].
- Configure 6 screens (see text)

**NOTE:** In Configuration Mode,  
• Key [6] (BLANK) is not enabled.  
• Key [8] is EXIT only.

### To Access a Location

- Press [B] (Set location)
- Enter 3-digit location.

### To Change Data

- Use [DATA UP] and [DATA DOWN] keys to change entry.

### To Increment/Decrement Location

- Use [PRIOR] and [NEXT] to change location.

### To Exit Dealer Program Mode

- Hold down Key [8] 2 seconds (until beep).
- Enter Dealer Program Code.

CHARACTER NO.----> 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

    A D D R =                      D A T A =

ARMED STATUS

1

PRIOR/←-CRSR

2

NEXT/CRSR->

3

4

NEXT

5

DATA/CHAR UP

6

BLANK

7

8

PRIOR/EXIT

9 F

DATA/CHAR DOWN

\* P

MENU

B A

SET/SAVE

#

### KEYPAD PANICS

- [F] + [#] = FIRE
- [P] + [#] = POLICE
- [A] + [#] = AUXILIARY

## USER PROGRAM MODE

### First, Enter User Program Mode

- Hold down Key [8] until beep sounds.
- Enter User Program Code.

### To Program User Arm/Disarm Codes

- Press Key [8]; Enter User Number.  
(MA1016e: 2 digits; all others: 1 digit)
- Enter a 6-digit code.
- To exit user Program Mode, press Key [8] 3 times (MA1016e); or twice (all other models).

### To Program English-Language Messages

(Do not enter Program Mode.)

- Arm; disarm; press Key [#], then Key [3].
- Use [PRIOR] and [NEXT] keys to select zone.
- Use [←-CRSR] and [CRSR->] keys to move cursor.
- Use [CHAR UP] and [CHAR DOWN] keys to change entry.  
(Use [CHAR UP] and [\*] or [CHAR DOWN] and [\*] to

change entry in lower case.)

- Use [BLANK] key to delete character at cursor.  
(Use [BLANK] and [\*] to delete entire description.)
- Press [SAVE] key to store description in memory.

### To Copy Description to Another Zone

- Move cursor to zone number using CRSR keys.
- Change number using CHAR UP/DOWN keys.
- Edit zone description as necessary.
- Press [SAVE] key.

### To Move Text (All text to right of cursor)

- Left: Press [\*] and [←-CRSR].
- Right: Press [\*] and [CRSR->].

### To Exit English-Language Program Mode

- Hold down Key [8] for about 2 seconds (until function beep sounds).