# 4-LINE LCD KEYPAD

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# 1    INTRODUCTION

The JVA 4-Line LCD Keypad is an integral component in the JVA Security Electric Fence product range. Providing a centralised interface between the Customer and their Perimeter Security Solution; it displays the current condition of each security device connected and can draw attention to adverse fence conditions. The keypad is used to control individual fence Energizers, Monitors or the entire site. The Customer has access to all of these features via a Menu Driven system or by entering key sequences. Security Installers also use the keypad to configure the JVA Security devices to the customer's needs.

# 2    FEATURES AND BENEFITS

The PTE0240 LCD keypad is a second generation Z-Series Keypad

- Control, monitor and program any Z-Series device
- Displays arm/disarmed status and any trouble or alarm
- Displays fence voltages for Z-Series electric fence devices
- 4-line Backlit Liquid Crystal Display
- Programmable zone names
- Key area glows red on alarm
- Menu driven interface
- Quick arm / disarm keys
- 500-entry Event-Log
- Battery-Backed Real Time Clock
- Event Log stores Date and Time of Alarm or Trouble

Limitations:

- Older Z-Series devices must be wired 1:1 with keypad for programming

Note: As the firmware is upgraded from time to time, an older keypad may not be compatible with the latest Z-Series devices. The firmware version of the keypad can be seen by pressing * 9 #.
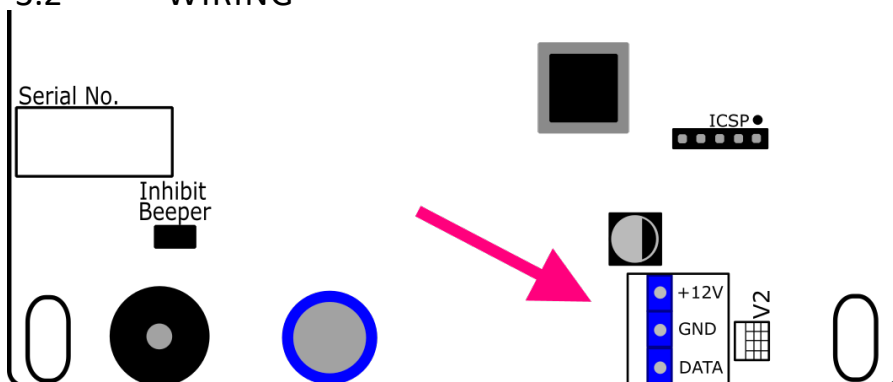
# 3    INSTALLATION

## 3.1    OPENING THE KEYPAD

Push the 4 side tabs in to release the cover from the base. This can be done one side at a time. Now the keypad hardware will slide up to release it from the base.

## 3.2    WIRING

Serial No.

Inhibit
Beeper

ICSP

+12V

GND

DATA

V2

The keypad only requires three wire connections to JVA energizers or monitors as indicated.

# 4      KEYPAD OPERATION

**User PIN: 1234**

**Installer PIN: 012345**

## 4.1      DISCOVERING ENERGIZERS

| Function | Key 1 | Key 2 | Key 3 | Key 4 |
|---|---|---|---|---|
| Discover Energizers/Monitors | * | 6 | 8 | # |

The Keypad needs to discover all of the Energizers/Monitors connected to the Keypad for it to work properly. This is best achieved after each Energizer/Monitor has been configured and wired together in a group. The display will show "Analysing Group", it will then list the discovered devices.

NOTE: For this to work, the Energizers need to be Disarmed.

## 4.2      ARMING/DISARMING THE FENCE

| Button | Function |
|---|---|
| 🔒 | Site Arm. Press this followed by your user PIN to arm the site |
| 🔓 | Site Disarm. Press this followed by your user PIN to disarm the site |
| ≡ | Menu. Press this followed by your user/installer PIN to access the keypad menu |
| 1470# | If a Siren is sounding, enter 1470# to mute the siren. |

Keypad Operation

## 4.3 DISPLAY SCREENS

In normal operation the keypad shows a Summary Page followed by the status of each device connected to the Keypad.



*Summary Screen*

| Number | Description |
|--------|-------------|
| 1 | The Installer's Details (Dealer Message) |
| 2 | 24hr Clock, Date |
| 3 | Site is Armed/Part Armed or Disarmed |
| 4 | If the site is in Alarm/Trouble or All OK |



*Energizer Screen*

| Number | Description |
|--------|-------------|
| 1 | The Name of the Zone (Zone Label) |
| 2 | The Energizer Voltages |
| 3 | Alarms/Troubles are displayed here |

Since there can be many things to display, the keypad automatically "scrolls" through all relevant information. Each screen is shown for approximately 5 seconds. You can pause the auto scrolling for 20 seconds by pressing the # key. Pressing the # key again will advance the display one screen.

If a new alarm or trouble (AC fail, low battery etc) occurs, the keypad display will jump to the relevant zone, the keypad will beep (unless toggled off) and auto scrolling will cease for approximately 3 minutes.

# 5 KEYPAD MENU

## 5.1 MAIN MENU

The Main Menu contains the following list of entries. Use the Up and Down keys to scroll through the Menu until the Arrow is aligned with the required menu option. Pressing the # key will perform the menu function.

| Menu | Function (when # key is pressed) |
|---|---|
| Mute Siren | Mutes Energizer/Monitor Sirens currently sounding |
| Clear Alarms | Sends the Clear Alarm Memory command to the Energizers/Monitors |
| Show Event Log | Displays the Event Log. Use Up/Down keys to scan through events. The # key will exit the Log |
| Arm Low Power | Arm the Site in Low Power Mode |
| Arm High System | Arm the Site in High Power Mode |
| Test Menu | See "5.4 Test Menu" on page 9 |
| Keypad options | See "5.5 Keypad Options" on page 10 |
| Set Clock | See "5.6 Setting the Clock" on page 10 |
| Show Shortcuts | Displays commonly used Key Sequences for reference |
| Remember User PIN | Saves the PIN so that the Menu, Arm and Disarm buttons will not ask for a PIN |
| Exit | Exits the Keypad Menu |
| Menu | The following Menu items are only visible when the Installer PIN is used to access the Menu |
| Program Device | See "5.8 Program Device" on page 11 |
| Program Sectors | For Sectorizing ZM20/ZM50 |
| Clear Event Log | Remove all entries in the Event Log |
| Program this Keypad | Used to change Zone Labels and Keypad ID. See "5.9 Program this Keypad" on page 14 |
| Default User PIN | This will return the User PIN of connected devices to the default 1234. |
| Default Keypad | Factory Default this Keypad |
| Calibrate Device | Allows on-site calibration of Energizers |

**Keypad Menu**

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## 5.2    MUTE SIREN

This sends the 1470# command to the Energizers/Monitors. All devices that support this command will mute their siren.

## 5.3    EVENT LOG



*Event Log Screen*

The Event log contains information about Alarms, Troubles and Arm/Disarm commands.

Each event is displayed on a separate screen that is viewed by pressing the Up or Down key. To exit the Event Log, press the # key. The most recent entry is displayed when the log is first opened.

## 5.4    TEST MENU

| Menu | Function (when # key is pressed) |
|------|----------------------------------|
| Analyse Group | Discovers the Energizers connected to the Keypad |
| Siren Test | Turns on the Energizer/Monitor Siren Outputs for 2 seconds |
| Battery Test | Triggers the Battery Test in connected Energizers/Monitors. See the LCD display of the Energizer for the results |
| Show Keypad Ver | Displays the Keypad Version |
| Reset Energizers | Forces the Energizers to reset |
| Exit | Return to the Main Menu |

## 5.5    KEYPAD OPTIONS

| Menu | Function (when # key is pressed) |
|------|----------------------------------|
| Press Beeps | Turns ON/OFF the key press beeps |
| Chime Sounds | Turns ON/OFF the Gate Chime Sounds |
| Error Sounds | Turns ON/OFF the Error Sounds when entering a PIN for Energizer control |
| Alarm Sounds | Turns ON/OFF the Keypad Beeper sounding for a new Alarm/Trouble |
| Backlight | Cycles through the Backlight options (ON / Timeout / OFF) |
| Exit | Return to the Main Menu |

## 5.6    SETTING THE CLOCK



*Setting the Time and Date Screen*

The clock is formatted to 24 hour time followed by the Day/Month/Year.

Use the number keys to set the new value for the current cursor location. Each number pressed will move the cursor to the right. If the keypad detects an error, the cursor will return to the first location and the original date time will be displayed again.

The entire Time and Date needs to be entered before the new value is saved. Pressing the * Key at any time during the process will cancel the update.

## 5.7    REMEMBER USER PIN

The Quick Arm, Disarm and Menu buttons require you to enter a PIN before they perform their function. If this Keypad is located in a secured area and PIN security is not required, this option is available. Once remembered, the Arm/Disarm buttons immediately control the site when pressed. The Menu will also be displayed when pressed.

This menu will change to Forget User PIN, for when you need to enter an

Installer PIN, or when this function is no longer needed.

## 5.8 PROGRAM DEVICE

### 5.8.1 Detection

The Keypad will determine if the connected devices are compatible with Menu Driven Programming. If one device in the group is not compatible, the system cannot proceed to Menu Programming. It will however put the devices into programming mode and you can enter the required key-sequences to change the settings. Please refer to your Energizer/Monitor user manuals for more information.

### 5.8.2 Device Selection Menu



*Device Selection Screen*

Use the Up and Down arrows on the keypad to select the device you want to program. Once highlighted, press the # key. To exit programming press the Menu key.

### 5.8.3 Device Programming

The Keypad will display the current settings. The flashing block on the right indicates the programming option to be changed.



*Device Programming Options Screen*

Use the Up and Down arrows on the keypad to change between the programming options. Use the Left and Right arrows on the keypad to change the value of the selected option.

### 5.8.4    Sub-menu programming

```
BEEPR          GATE+SIREN
FENCE TYPE STANDARD
OPTIONS1        >>
ANTI BRIDGE    00
```

*Sub-Menu Options Screen*

Some programming options have to '>>' symbols displayed. To alter these settings, press the Right arrow when selected. This will open a sub-menu.

```
<< OPTION1
N/A              OFF
MAX POWER        ON
IEC 2.5 J LIMIT  OFF
```

*Selecting Options in the Sub-Menu Screen*

These sub-menus have On/Off settings. Move the cursor using the Up or Down arrows and change the value using the Left or Right arrows. When finished, move the cursor to the top heading where the '<<' symbol is displayed and press the Left arrow.

**Keypad Menu**

### 5.8.5    Save / Cancel changes



*Saving Changes Screen*

Press the # key to Save Changes. If you want to proceed, press the # key a second time. If you want to continue editing, press the * key.



*Cancelling Changes Screen*

Press the * key to exit this device without making changes. If you want to proceed, press the # key a second time. If you want to continue editing, press the * key.

### 5.8.6    Exiting Programming



*Exit Programming Screen*

Press the Menu key at any time while in device programming and the keypad will ask if you want to exit Programming mode. Pressing # will exit you back to the main menu

## 5.9 PROGRAM THIS KEYPAD

Local Settings within the keypad allows the Zone names and Dealer/Service messages to be altered. It also contains the Keypad Address.

The Local Settings order is:

- SERVICE MESSAGE

- DEALER MESSAGE

- ZONE NAMES (1 – 16)

- BAUD RATE (should be left at 2400)

- KEYPAD ADDRESS

### 5.9.1 Exiting Keypad Programming

| Function | Key 1 | Key 2 |
|----------|-------|-------|
| Exit Keypad Programming | * | # |

Note: The keypad will also exit if you do not press a key in five minutes.

## 5.9.2    Changing the Messages

The Dealer Message, Service Message and each of the 16 Zone Labels can be changed using a Multi-Touch Entry System

- The Dealer Message is displayed on the Summary page

- The Service Message is displayed on the Summary page during AC failure, communication failure, or low battery

- Zone Labels are displayed at the top of each Device Page

Note: The keypad will also exit the programming mode if you do not press any key within a five minute period.

You can access a useful image of the Multi-Touch system using a web browser. Access jva-fence.com/multi

| 1 | 2 | 3 | Emergency |
|---|---|---|---|
| 1 | A B C 2 | D E F 3 | Move Cursor Left |
| 4 | 5 | 6 | Arm |
| G H I 4 | J K L 5 | M N O 6 | Move Cursor Right |
| 7 | 8 | 9 | Disarm |
| P Q R S 7 | T U V 8 | W X Y Z 9 | Upper Case Character |
| * | 0 | # | Menu |
| Don't save and display previous | [space] 0 . ! @ # $ % ^ & * ( ) - + | Save and display next setting | Lower Case Character |

*Text Setting (Multi Touch Entry)*

The Multi-Touch entry system is based on the system older mobile phones used for text entry. Pressing a key more than once will change the character based on the values assigned to that number. When the correct letter is displayed, either press a different Key or Pause for 2 seconds before pressing the same Key.

For example:

- To enter the letter R, you would press Key 7 three times.

- To enter JVA, you would press 58882

- To enter ACE, you would press 2 (pause for 2 seconds) 22233

If a mistake has been made, each press of the Emergency key will move the Cursor to the left one character.  If you want to enter a lower case character, first press the Menu key. To change back to upper case characters, press the Disarm key

Pressing the # Key will Save the message and move on to the next message. Pressing the * Key will discard any changes to the current message and move to the last message.

| 1 | 2 (Up Arrow) <br> Increase Value | 3 | Emergency |
|---|---|---|---|
| 4 | 5 | 6 | Arm |
| 7 | 8 (Down Arrow) <br> Decrease Value | 9 | Disarm |
| * <br> Don't save and display previous | 0 | # <br> Save and display next setting | Menu |

*Number Setting (Arrow Entry)*

The Keypad BAUD, Keypad ID options can be changed using the Arrow Keys. When the correct value has been selected (using the Arrows), press the # key to save the value. Pressing the * key will discard any changes and the display will show the previous option.

# 6     GROUP CONNECTION

## 6.1     USING MORE THAN ONE KEYPAD

Up to four keypads may be used to remotely monitor and control Z-Series devices.

To operate correctly, each keypad must be configured to use a unique keypad address. This is best achieved by connecting one keypad (at a time) to the master Z-Series device (Zone 1) and updating the keypad address (Local Settings). Once all keypads have a different address, all can be connected to the system. A recommendation is that one keypad is kept at address 1.

If the security system is to use a PC based interface such as Perimeter Patrol, keypad address 2 should not be used by a keypad. The PC software uses this address to control the Z-Series devices.

The Z-Series master device now needs to be introduced to all of these keypads. This is achieved by resetting the Z-Series device using the keypad (with Keypad Address 1), by pressing the above key sequence. Alternately the power (AC and Battery) can be removed from master to reset it. After a reset, the Z-Series device will determine what keypads are connected.

## 6.2 WIRING

# 7 TROUBLE SHOOTING

## 7.1 FACTORY RESET

To return the Keypad to Factory default settings use the Menu option.

| | |
|---|---|
| `Factory Reset?`<br><br>`# = Yes` | Pressing any other key will cancel the Factory Reset |

## 7.2 THE KEYPAD IS UN-RESPONSIVE

| | |
|---|---|
| `   JVA Security`<br>`10:07  01/12/15  25C`<br>`Armed    Keypad`<br>`All Ok   Not Polled` | If the Summary Page displays "Keypad Not Polled", then it needs to be introduced to the Master Energizer. Refer to "6.1 Using More Than One Keypad" on page 17 . |

If there is more than one Keypad on the site, someone may be using that Keypad and the Site is "Talking" to that keypad. Be patient. Wait a few seconds and try again.

## 7.3 NON-MASTER PROGRAMMING ISSUE

Connecting directly to a Energizer/Monitor that is not the Master device requires the Keypad to have a Keypad Address of 1. The Keypad Address is displayed when power is connected to it. *9# will also display this.

## 7.4 THE ZONE NAMES ARE CORRUPTED

Something has gone wrong with the Keypad's Internal Memory. Suggest performing a Factory Reset to clear up any other issues. Unfortunately this will mean re-entering the Zone Names and Dealer Messages in the Local Settings Menu

## 7.5 AN ENERGIZER IS ALWAYS IN COMS FAIL

Has the Group ID of this Energizer been changed? Or has this Energizer been removed from the Site? If so, the Keypad will need to re-Discover the site Energizers. See "4.1 Discovering Energizers" on page 6

# 8  COMMON KEYPAD COMMANDS

Default Installer PIN: 012345     Default User PIN: 1234

| Energizer Function | Key 1 | Key 2 | Key 3 | Key 4 | Key 5 | Key 6 | Key 7 | Key 8 | Key 9 | Key 10 | Key 11 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arm/Disarm | User PIN | | | | # | | | | | | |
| Silence the Energizer Siren | 1 | 4 | 7 | 0 | # | | | | | | |
| # Energizer Programming Mode | Installer PIN | | | | | | * | 0 | # | | |
| # Keypad Programming Mode | Installer PIN | | | | | | * | 0 | 1 | # | |
| Exit Programming (any mode) | * | # | | | | | | | | | |
| Arm All Zones (Multi-zone groups) | User PIN | | | | * | 1 | 0 | # | | | |
| Arm Specific Zone (up to Zone 15) | User PIN | | | | * | 1 | Zone Num. | # | | | |
| Disarm All Zones | User PIN | | | | * | 2 | 0 | # | | | |
| Disarm Specific Zone (up to Zone 15) | User PIN | | | | * | 2 | Zone Num. | # | | | |
| Switch All Zones to low power mode | User PIN | | | | * | 4 | 1 | # | | | |
| Switch Zone to low power mode | User PIN | | | | * | 4 | 1 | Zone Num. | # | | |
| Switch All Zones to high power mode | User PIN | | | | * | 4 | 2 | # | | | |
| Switch Zone to high power mode | User PIN | | | | * | 4 | 2 | Zone Num. | # | | |
| Arm in Agricultural Mode | User PIN | | | | * | 9 | Zone Num. | # | | | |
| Reset and Display Version number | User PIN | | | | * | 6 | 8 | # | | | |
| Factory Reset Energizer | Installer PIN | | | | | | * | 6 | 8 | # | |
| Changing the User PIN | User PIN | | | | * | 0 | # | New PIN | # | * | # |

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# Common Keypad Commands

| Energizer Function | Key 1 | Key 2 | Key 3 | Key 4 |
|---|---|---|---|---|
| Clear Alarm memory | * | 1 | # | |
| Display the Group ID of the Energizer | * | 2 | 6 | # |
| Siren test | * | 6 | 3 | # |
| Battery test | * | 6 | 4 | # |
| Display the Stored Joules | * | 6 | 7 | # |
| Re-analyse the Energizer group | * | 6 | 8 | # |
| Power Boost | * | 9 | 9 | # |
| Panic – Trigger the Siren and Disarm the Energizer | Emergency key followed by # | | | |

| Keypad Specific Function | Key 1 | Key 2 | Key 3 | Key 4 |
|---|---|---|---|---|
| Keypad Audible Feedback On/Off | * | 5 | 1 | # |
| Keypad Chimes On/Off | * | 5 | 3 | # |
| Keypad Error Tones On/Off | * | 5 | 4 | # |
| Local Keypad Alarms On/Off | * | 5 | 5 | # |
| Backlight mode On/Timeout/Off | * | 8 | # | |
| Display Keypad Model | * | 9 | # | |

Refer to your Energizer / Monitor User Manual for a complete list of Keypad Functions.

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