

SET UP AND OPERATING INSTRUCTIONS

VISUAL DOOR ALARM

MODELS VDA-1001, VDA-1001AZ





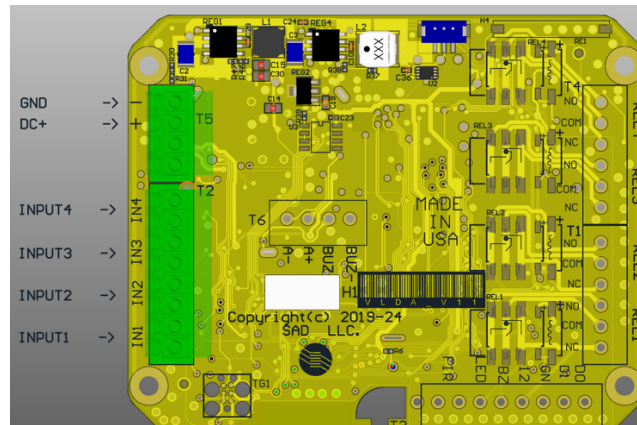
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1) Introduction

The Visual Door Alarm (VDA) is a device which produces programmable visual and audio alarms in response to a given contact input. The visual alarm is a 7 row/35 LED array, whose colors, intensity, and visible patterns may be set by the user. The audio sounder has the programmable properties of amplitude, pattern, and duration. The VDA is configured with an iOS/Android based application that connects via Bluetooth (BLE).

A key fob is used to acknowledge or bypass alarms via the reader of the front surface of the device.



2) Operation

a. Inputs

The inputs are dry-contact type (NO or NC) and numbered 1 through 4. It is intended that only one input is active at a time. Inputs correspond to pre-defined conditions, e.g. alarm.

However, if more than one input goes active concurrently, then the lowered numbered enabled input is used. Inputs are identical and defaulted to NO. This can be changed to NC through the VDA app.

b. Key Fob Reader

The VDA key fob reader has 2 functions.

First, a red LED within the reader flashes a visible red “heartbeat” signal periodically to signify that the unit is operating.

Second, a fob is registered with the unit via the VLDA app described below. The fob may then be used to acknowledge and bypass an alarm. It is also used to exit the bypass mode. The LED array presents displays to reflect these conditions as described below.

c. LED Array

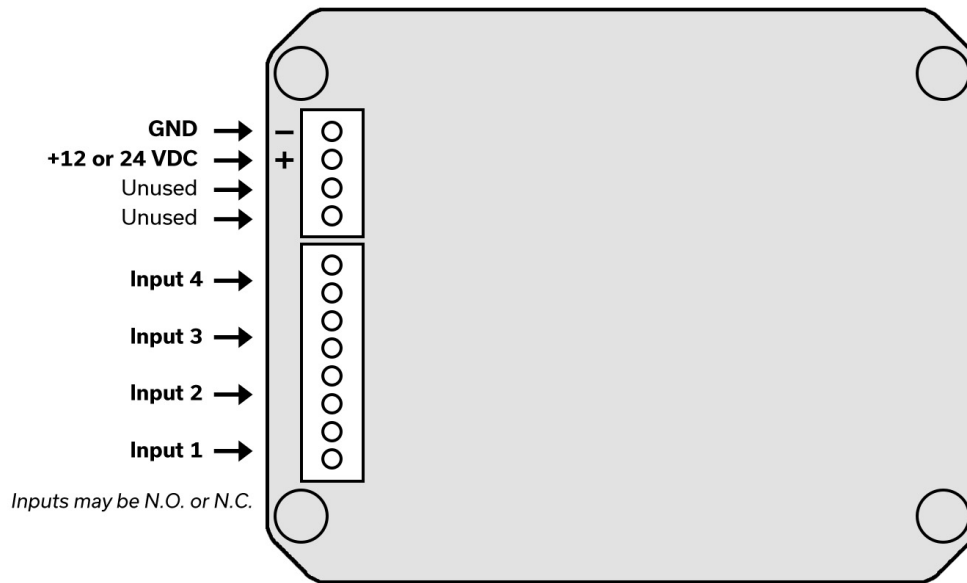
The LED Array is a 7 row, 35 LED array and is used to provide visual alarm and feedback. All LEDs are engaged in the display. Each LED is multi-color (RGB) addressable with 8 bits per color (24 total). If one of the inputs is active, then the LED array will, per its configuration, become active and display a single static color or a flashing pattern over a selected time period.

Upon alarm, the array will begin to fill the screen, as in a bucket filling up. When the alarm is cleared, the LED's will turn green, and gradually depopulate the screen, as in a bucket emptying.

d. Key Fob - Display

- Valid fob - The array will display a green rectangle when the reader is presented with a valid fob.
- Bypass - In an alarm condition, a fob held on the reader or tapped on the reader twice in quick succession will put the unit in bypass mode, signified by a yellow rectangle pattern. Tapping once again will take the unit out of bypass mode.
- Latching Mode - If an input has been set up for Latch, the alarm response (configured light and sound) will persist until the fob is tapped on the reader, even after an alarm input has been resolved.
- Invalid fob - A fob that has not been registered with the unit will cause a red pattern to appear on the screen.

3) Wiring



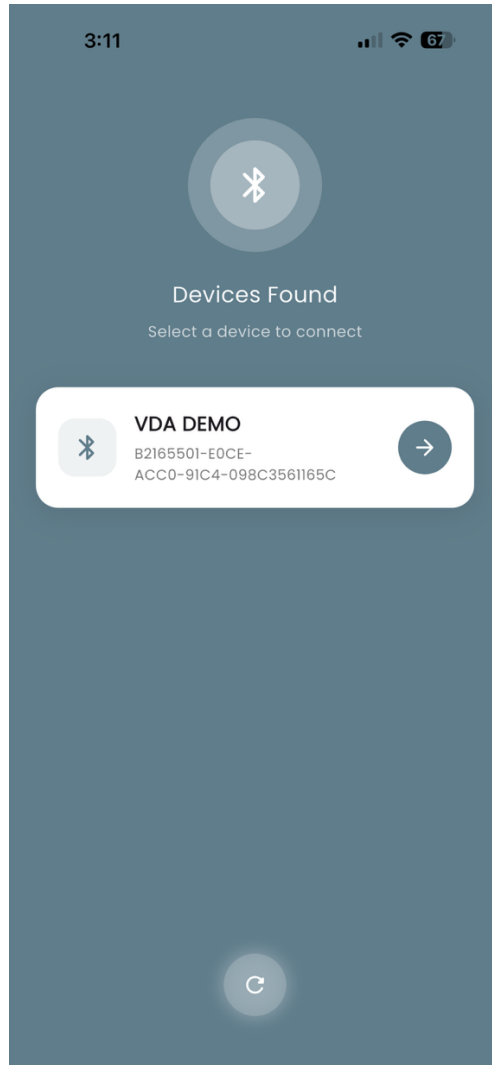
- a. Voltage - Connect 12 or 24 V DC as shown above. The unit is protected from reverse polarity.

Note that the maximum power dissipation is 12 W, reached when the LED array is at full brightness. Normal power consumption is approximately 1 W.

- b. Inputs - Each 2-wire input is programmable for Normally Open (NO) or Normally Closed (NC) operation. NO(non-supervised) is the default.

4) Mobile App Initiation

- a. Download the mobile app “VLDA” on the Apple or Google Play Store.
- b. Launch the app in close proximity to the VDA device being programmed.
- c. The device will appear in the app.

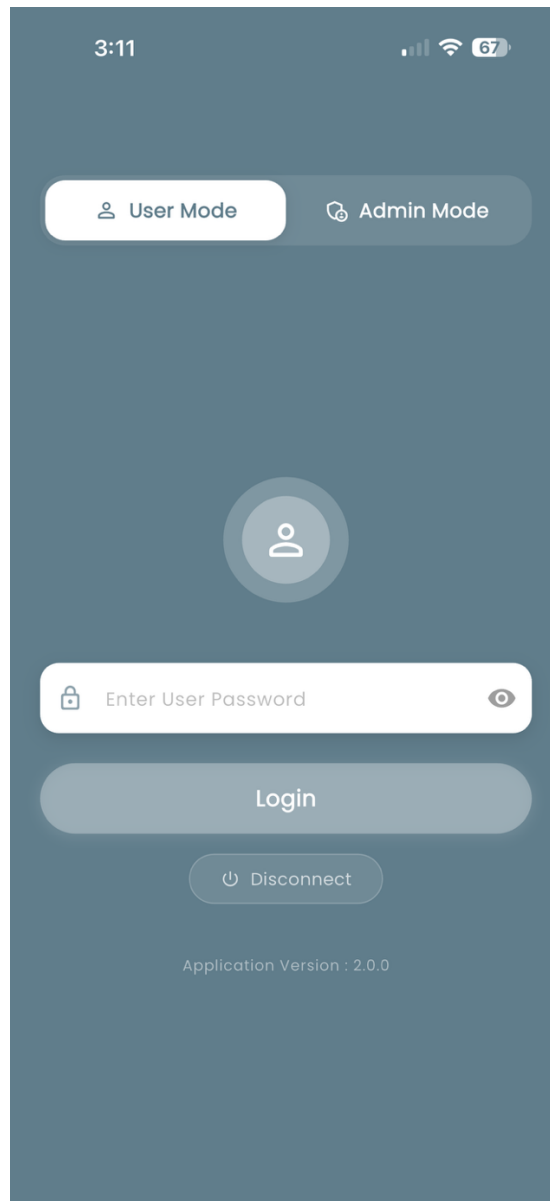


- d. Touch the right arrow for the displayed VDA device.

5) User Mode

- a. Log into the User mode.

Note that the default initial password is **admin**. Once entered, the user will be prompted to change the password. The system does not force any particular length or sequence of password, but the user should follow good standard practice for strong passwords.



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- b. System Information will be displayed.

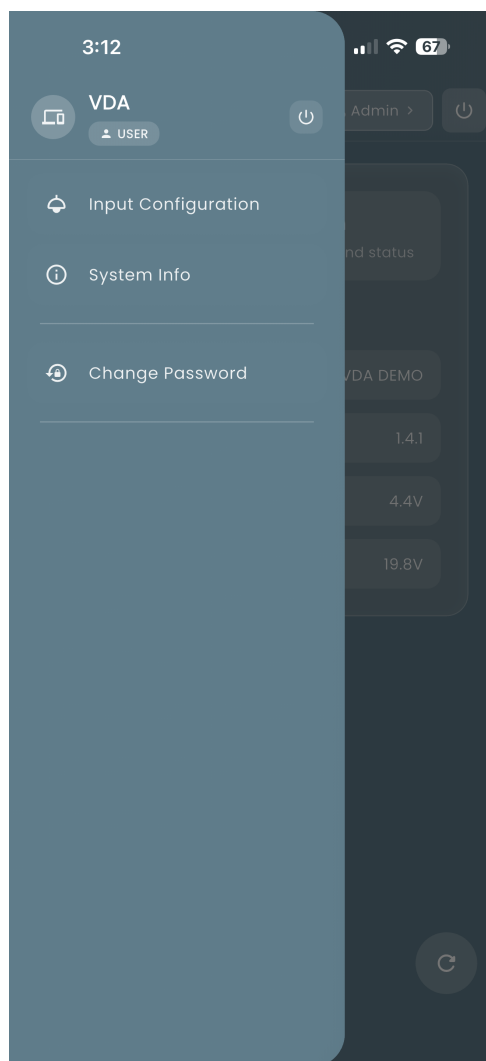
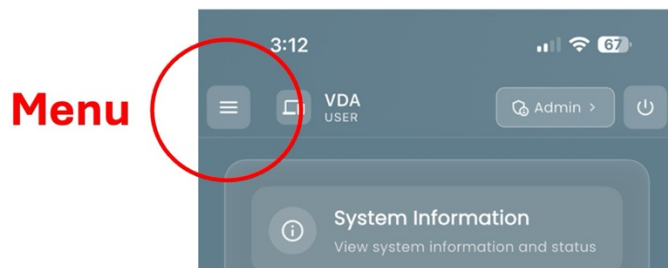


Vin represents the current input voltage to the unit.

Vio is an internal voltage used for diagnostic purposes.

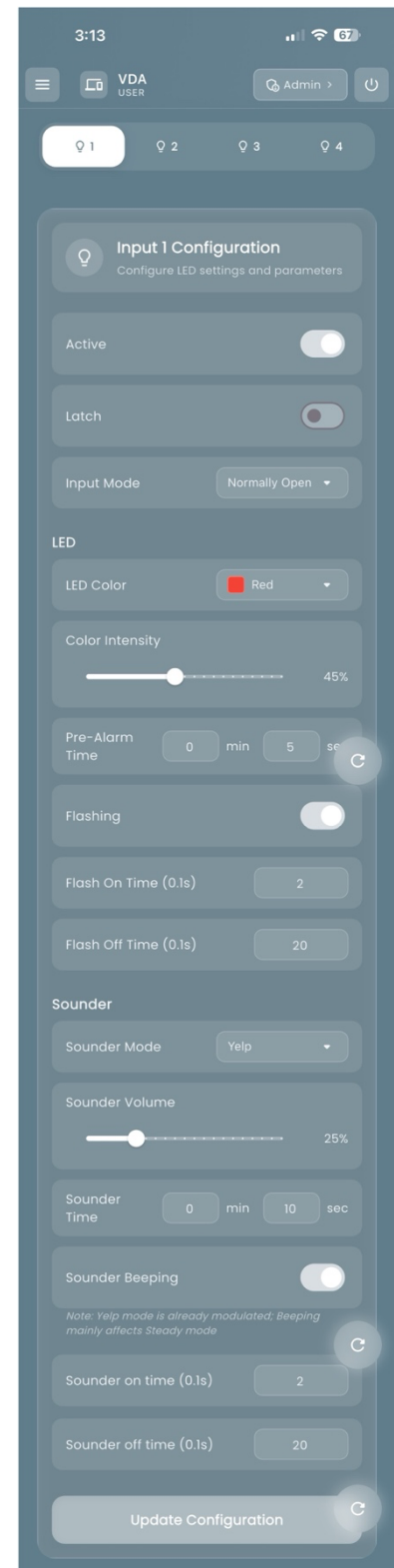
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- c. Access the menu in the upper left-hand corner of the screen.



d. Input Configuration

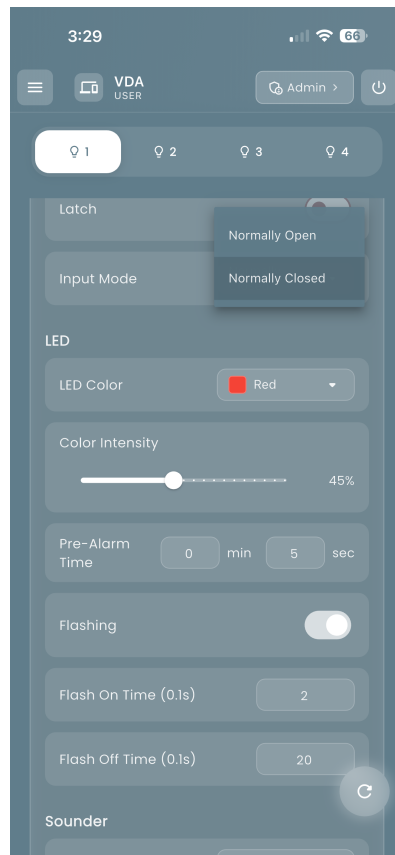
Each input is individually configured through this screen. They are designated 0.1 through 0.4. 0.1 corresponds to Wired Input 1 on the VDA. When configuration is complete, press the Update Configuration at the bottom of the screen.



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1) Input Settings:

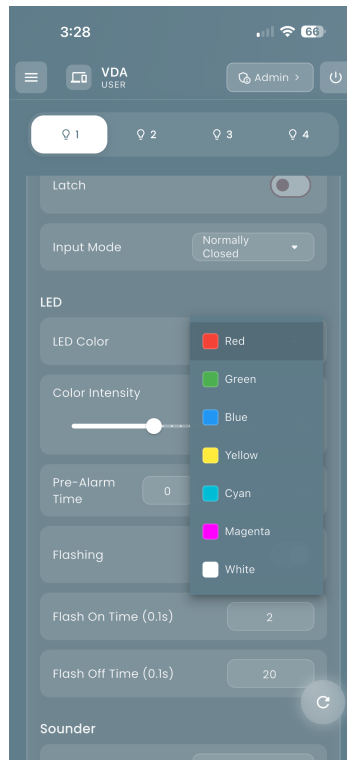
- a) Active - slide the button to the right to make the input active or to the left to make inactive.
- b) Latch - active when button is in the right-hand position. The latch function causes the unit visual display and sound to persist after an alarm is resolved, requiring a valid key fob to reset.
- c) Input Mode - configures the corresponding input terminals to be in the Normally Open or Normally Closed state (see below).



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2) LED

- a) LED_Color - selects the color of the LED array corresponding to that input. It is selected from the drop-down menu, as shown below:

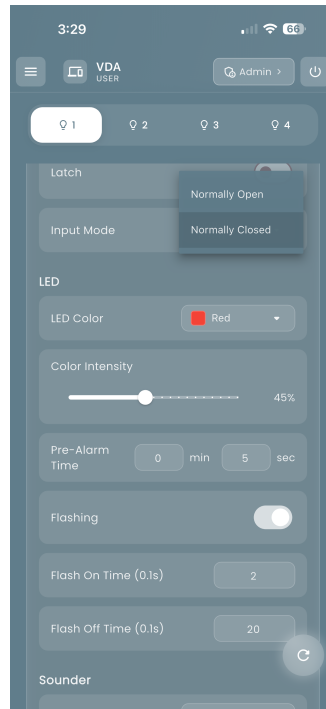


Each input should be assigned a different color. The color choices are:

- Red
- Green
- Blue
- Yellow
- Cyan
- Magenta
- White

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- b) Color Intensity - slide the bar to set brightness of the LED array from 0% (off) to 100% (maximum). Set points are in increments of 5%.

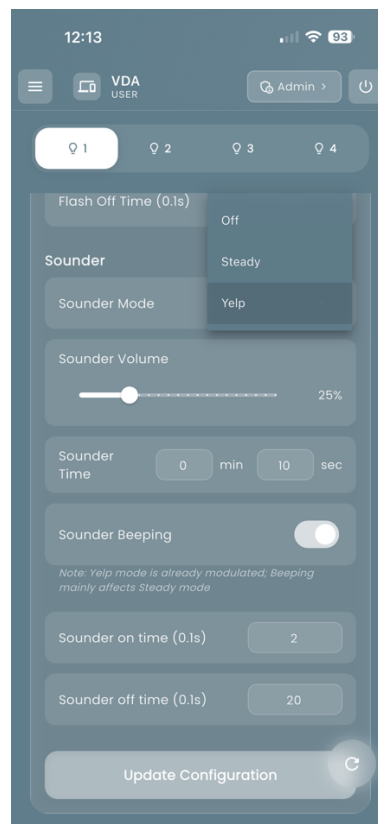


- c) Pre-Alarm Time - determines the time between when an input is triggered and the unit goes into alarm (LED's and sound on). This is set in minutes and seconds. During this time, the 35 LED's turn on in equal time increments from bottom to top until the display is filled. Once filled, the pre-alarm time has been reached and the programmed LED and sounder functions begin.
- d) Flashing_- the LED display flashes when the corresponding input is triggered. Otherwise, the display is a solid color.
- e) Flash On Time and Flash off Time - determine the frequency at which the LED array flashes, set in .1 second increments.

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3) Sounder

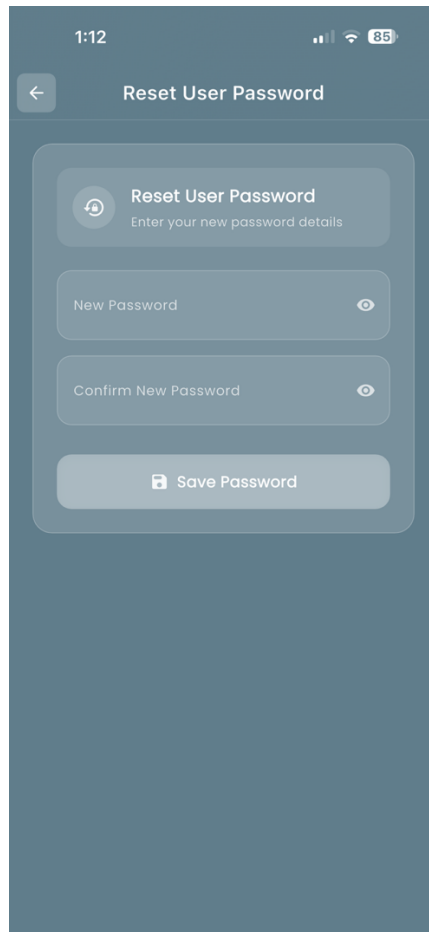
- a) Sounder mode- select Off, Steady (Tone Pattern 1), or Yelp (Tone Pattern 2) in the drop-down menu.
 - 1) Off turns the sounder off in an alarm condition.
 - 2) Tone Pattern 1 provides for a steady tone when in alarm. Energizing the Beeping function modifies the tone with a programmable on and off time.
 - 3) Tone Pattern 2 provides a continuous pulsed tone. With beeping, the tone is modified with a programmable on and off time.



- b) Sounder Volume - slide the bar to set the sounder volume from 0% (off) to 100% (maximum). Set points are in increments of 5%.
- c) Sounder Time - sets the length of time (min, sec) during which the sounder is active after alarm initiation.
- d) Sounder Beeping - modifies the performance of both tone patterns. When the beeping switch is on (right hand position), the Sounder on time and Sounder off time boxes are displayed. These determine the frequency of the beeping.

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- 4) Reset User Password
 - a) Select Change Password from the menu in the upper left corner.
 - b) Enter and confirm the new password.
 - c) Press Save Password.

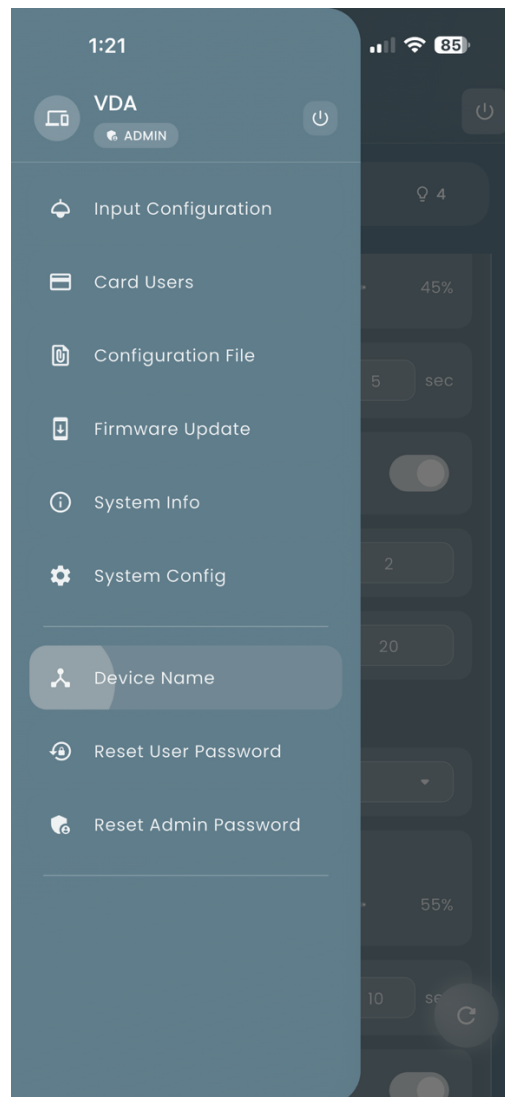


6) Admin Mode

- a. Log into the Admin mode.

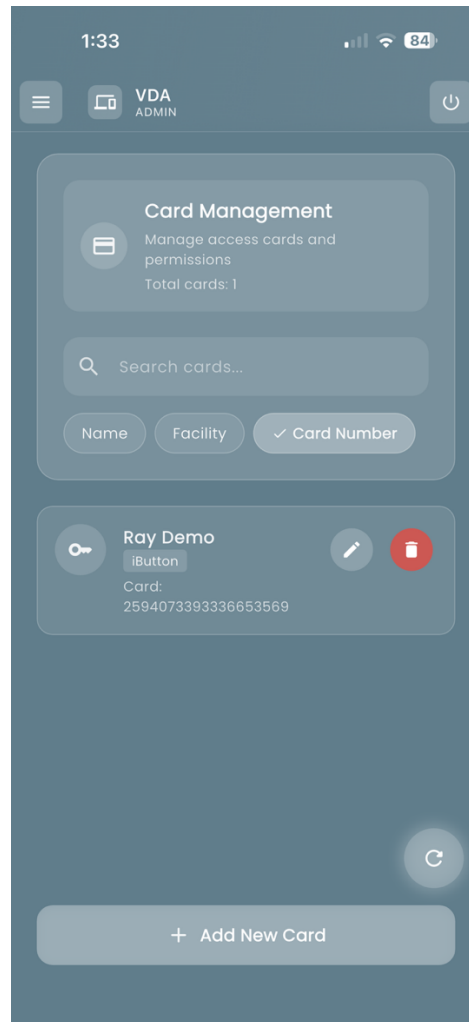
Note that the default initial password is **ADMIN**. Once entered, the admin will be prompted to change the password.

There is an expanded menu of functions available to the Admin. These incorporate all of the User functions.



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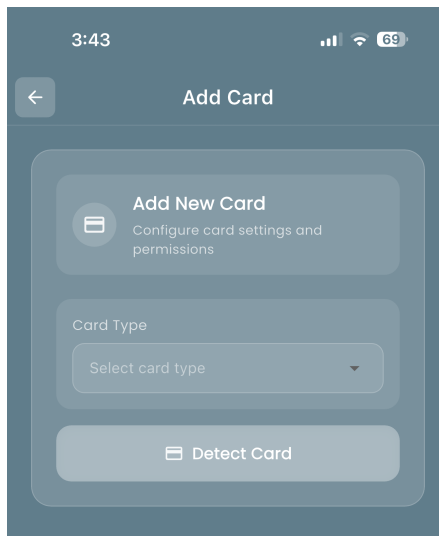
- b. Input Configuration - this is identical to the procedure used in the User mode, as documented in Section 5d (page 10).
- c. Card Users - (note that “card” is used in lieu of the term “fob” in this menu. This function allows the Admin to search, view, modify and delete existing credentials.



- 1) Any fobs that have been registered with a VDA device will be displayed. They may be edited for name and facility and searched by name or facility. They may also be deleted from the system.

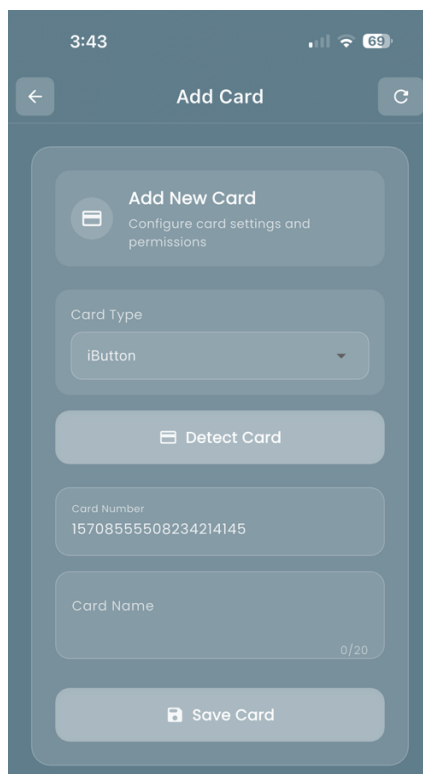
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- 2) Adding a new card - Touch the “+ Add New Card” box in the app.



- 3) When the next screen appears, touch the new fob to the reader on the VDA and press “Detect Card” in the app.

The unit will recognize this as a fob and show its serial number.



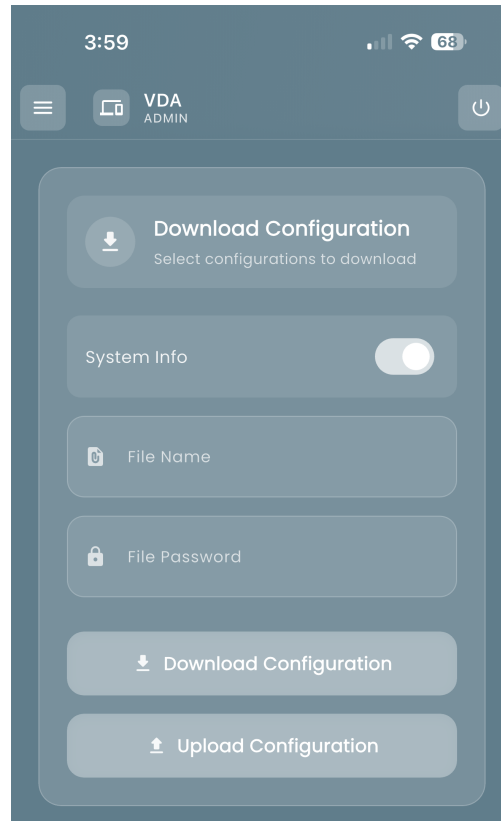
The “card” (fob) may then be named and saved.

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d. Configuration File

1) To save the current device configuration, perform the following steps:

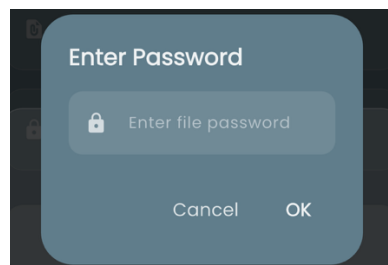
- Turn the System Info button on
- Provide a file name
- Provide (and retain) a password for the file
- Press “Download Configuration”



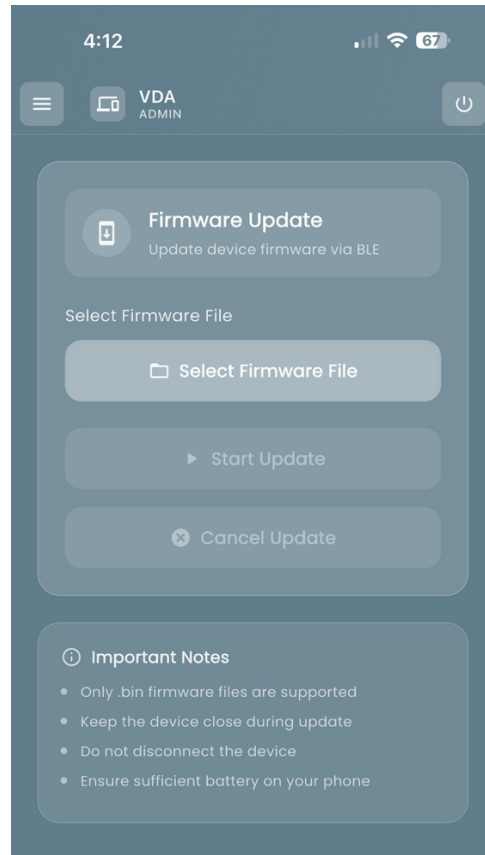
- The file will be saved to the mobile device with a .VLDA extension.

2) A configuration may be restored or provisioned to a VDA device using the Upload Configuration function, as follows:

- Choose the file from the mobile device
- Furnish the password
- Pressing OK updates the configuration



- e. Firmware Update - The VDA supports OTA (over the air) firmware updates. **Only factory authorized files may be used**, and these precautions should be followed:
- Ensure that the file has a .bin extension
 - The mobile device must be kept within range during the update
 - The VDA device must stay powered and connected to the mobile app
 - Ensure that the mobile device has a full battery or connected power source



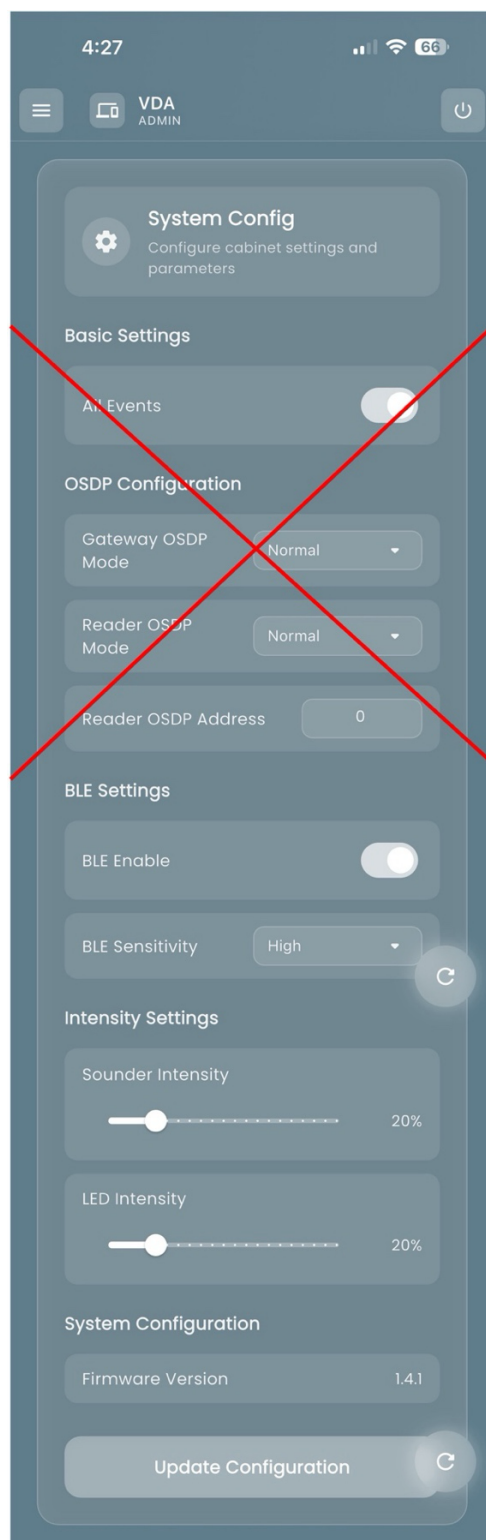
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- f. System Info - Displays device name, firmware version, external voltage (Vin) , and internal operating voltage (Vio).



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g. System Config

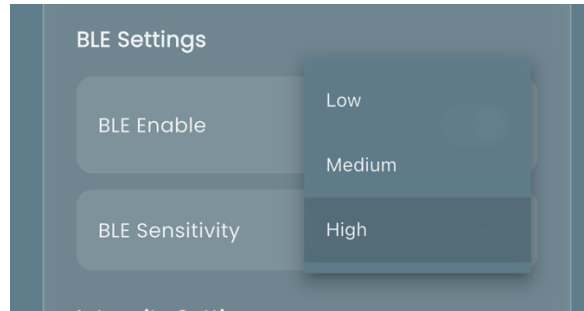


Note that the Basic Settings and OSDP settings in this screen are not currently used.

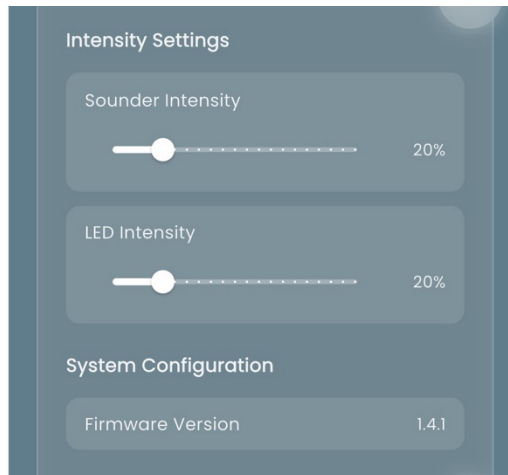
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- 1) BLE Settings - Allows for the disabling and sensitivity adjustments of Bluetooth communication. **BLE Enable should always stay in the On position.**

BLE sensitivity may be set to High, Medium, or Low. This is used if multiple VDA devices are in close proximity and the Admin wants to limit the range between mobile device and VDA.

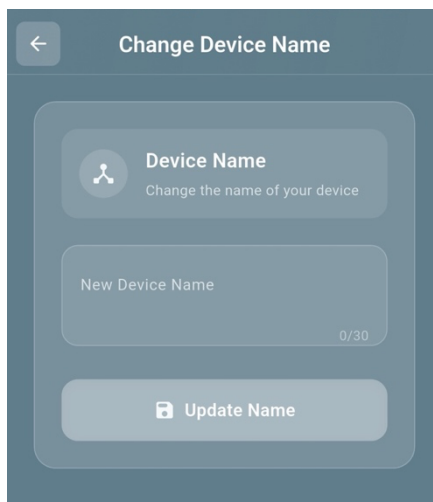


- 2) Intensity Settings - represent system level settings which do not apply to the individual inputs. These apply to general light and sound. For example, system start up displays LED patterns and audible sound.



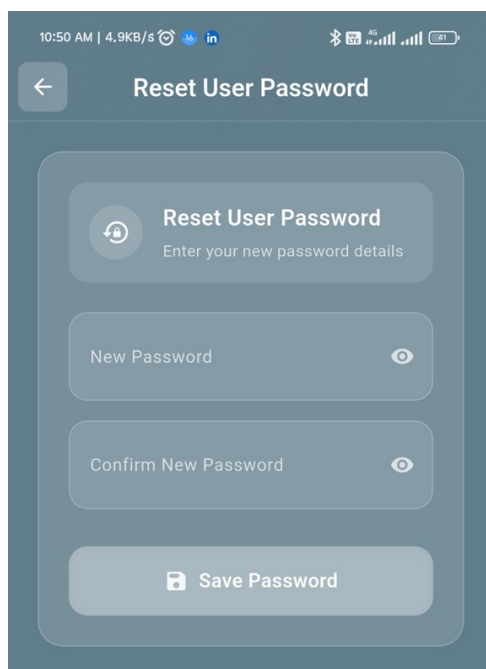
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- h. Device Name - provides the ability to update the name of the connected VDA device.



The screenshot shows a mobile app interface for changing the device name. At the top, there is a back arrow and the title "Change Device Name". Below this is a card with a person icon and the text "Device Name" followed by "Change the name of your device". Underneath is a text input field labeled "New Device Name" with a character count "0/30". At the bottom is a button labeled "Update Name" with a save icon.

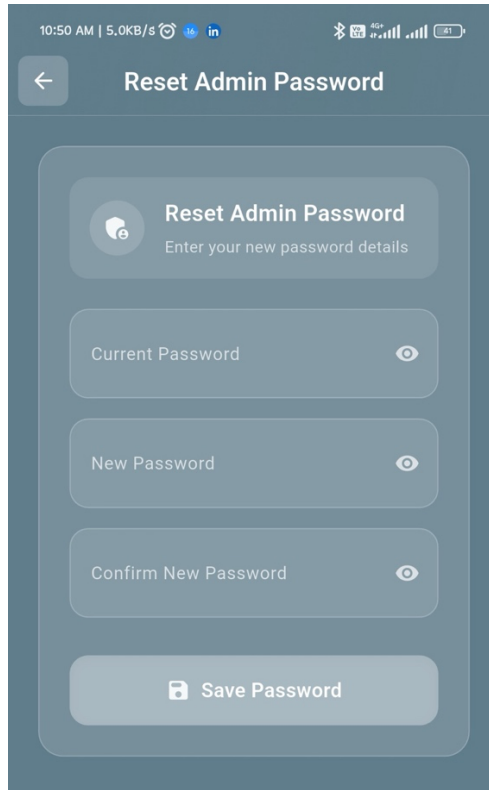
- i. Reset User Password - enter, confirm, and save new password



The screenshot shows a mobile app interface for resetting the user password. At the top, there is a back arrow and the title "Reset User Password". Below this is a card with a circular arrow icon and the text "Reset User Password" followed by "Enter your new password details". Underneath are two text input fields: "New Password" and "Confirm New Password", each with a toggle eye icon. At the bottom is a button labeled "Save Password" with a save icon. The top status bar shows the time "10:50 AM", data speed "4.9KB/s", and various connectivity icons.

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- j. Reset Admin Password - enter current and new passwords, confirm, and save new password



The screenshot shows a mobile application interface for resetting an admin password. At the top, the status bar displays the time as 10:50 AM, data usage at 5.0KB/s, and various connectivity icons. The app's header features a back arrow and the title 'Reset Admin Password'. Below the header, a card contains the title 'Reset Admin Password' with a key icon and the instruction 'Enter your new password details'. This card includes three input fields: 'Current Password', 'New Password', and 'Confirm New Password', each with a toggle icon for visibility. At the bottom of the card is a 'Save Password' button with a save icon.

7. Mounting

Secure the unit to a double gang metal electrical box using

- The supplied Stainless Steel Tamper-Resistant Button-Head Torx Screws, 6-32 Thread Size, 5/8" Long or other screw with suitable thread size

Note: a T30 Torx bit is required.

8. Specifications

VISUAL LED Display:	5(w) x 7(h) LED matrix Individually addressable RGB LED's Intensity (@ apex angle of 120°) Maximum per LED component: Green = 2.8 lumens Red = 1.5 lumens Blue = 0.95 lumens Total array output = 183.8 lumens Colors: full visible spectrum Window dimension: 35 mm (1.38") w x 49 mm (1.93") h
AUDIBLE Sounder:	Type: Piezo-electric, microprocessor driven Size: 30 mm (1.2") dia. Tones(2): Steady, Yelp (selectable) Frequency: 3.0 - 4.0 KHz Intensity: 0- 100 DB, adjustable Silenceable via programmed key fob (definable maximum # users)
ELECTRICAL:	Input Voltage: 12 – 30 VDC Power Consumption: Maximum: 12 W (maximum LED brightness) Normal state: < 1 W (LED's unlit)
ALARM	Contact Inputs (4) supervised or unsupervised, selectable (Note: Only 1 pair required for alarm)
COMMUNICATION	Bluetooth Core Specification Version 5.0 (BLE) 5.0
DIMENSIONS (L x W x D):	4.4" x 4.4"x1 .5" Mounting 2-gang box with Torx T30 screws
MOBILE APP	Apple IOS, Android

LIMITED WARRANTY

Smart Access Designs, LLC warrants to the ultimate purchaser that all products shall be free from defects in material or workmanship at time of shipment.

Our obligation under this warranty is limited to the repairing or replacing of any of our products within one year from date of installation, providing said products are used within the specified ratings and applied in accordance with good engineering practice, and providing said products are proved by our examination to be defective.

This warranty shall constitute the fulfillment of Smart Access Designs liability, and Smart Access Designs shall not be liable for any consequential damage.

This warranty does not extend to any of our products which have been subject to misuse, neglect, accident, improper application or installation, nor shall it extend to material which has been altered or repaired outside the factory.

This warranty is in lieu of all other warranties express or implied.

Note: Smart Access Designs reserves the right to make changes to any products without prior notice in order to improve reliability, function, design or accuracy.

SUPPORT

Contact support@smartaccessdesigns.com