SECURITRON®

ASSA ABLOY

AQE-Series

Multi-port Power Over Ethernet Midspan Injector

Installation Manual



ASSA ABLOY, the global leader in door opening solutions

500-33600, Rev. A

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Notes and Warnings

Symbol Definitions

The following symbols are used in the Warnings section below:



This symbol alerts the installer of shock hazards within the enclosure. Service should only be performed by qualified service personnel.



This symbol alerts the installer of important information intended to help the installer avoid personal injury or property damage.

Warnings



Installation and service should be performed only by qualified service personnel and should conform to all local codes.



To reduce the risk of electric shock or fire, this equipment must not be exposed to rain or moisture.



This equipment shall be installed in a manner which prevents unintentional operation by employees, cleaning personnel, or others working in the premises; by falling objects; customers; building vibration; or similar causes.



This equipment is not intended for use within the patient care areas of a health care facility.



Fuses shall only be replaced with the same type and rating as indicated in the specifications section of this manual.



To prevent impaired operation, all wiring is ensured to be routed and secured to prevent accidental open or short circuit conditions.



The system and any batteries (if used) should be tested at least once per year to ensure proper operation.

Regulatory Information

The equipment discussed within this manual has been tested to the following standards:

- EN60950 EN55022 CLASS A EN55024
- CSA C22.2 #60950

FCC Information

NOTE: *This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.*

Conventions Used Within this Manual

Positional information (e.g., top, bottom, up, down, left, right) is referenced with the board or enclosure in the orientation shown in the illustrations in this manual.

Introduction

Product Description

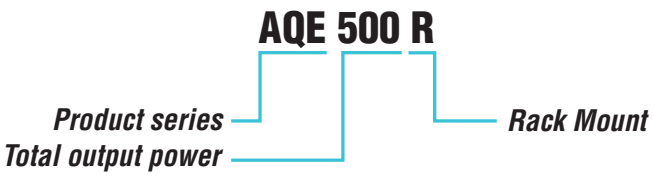
The AQE series of multi-port Power over Ethernet (PoE) midspan injectors are designed to provide power to PoE-compatible Internet Protocol (IP) devices such as IP surveillance cameras, IP phones, door locks, infrared (IR) illuminators and other PoE-compatible access control edge devices. The AQE-series products provide 32 watts (W) of power per port and are compliant with the Institute of Electrical and Electronics Engineers (IEEE) Standard 802.3, "Ethernet."

The chart below shows the list of models in the AQE product family:

The AQE Series

AQE Model No.	Description	Notes
AQE500R	16 port 32W per port 540W total Managed midspan injector	Programmable port priority
AQE250R	16 port 32W per port 270W total Managed midspan injector	Programmable port priority

The illustration below shows the model numbering convention of the AQE series using an example model number. AQE indicates the model series. The number “500” indicates a total of 500 Watts nominal output power available. Currently, 500W and 250W models are available. The letter “R” indicates rack mount, which is present on all models.



Example AQE series model number

Specifications

Input voltage range	100 – 230 VAC
Input frequency	47 – 63 Hz
Max input current (500W model)	9.0 A
Max input current (250W model)	4.5 A
Power factor	> 0.92

Section 1 – Installation

The following pages cover the installation of the AQE-series rack-mountable PoE power supplies.

1.1 Mounting the AQE Rack Mount Supply into a Standard 19" Rack

Use the following procedure when mounting an AQE-series supply into a standard Electronics Industry Alliance (EIA) 19" equipment rack.

1. If not already completed, securely MOUNT the included ears to the front of the enclosure sides using the eight included countersunk screws (four per ear).
2. LOCATE the rack-mounting holes in the ears of the enclosure. (Figure 1)
3. SLIDE the enclosure into an open 1U location in the EIA rack
4. CENTER the enclosure in the rack and SECURE with the four provided 10-32 x 3/4" screws.

NOTE: *Rails or other appropriate support for heavy enclosures shall be used. Heavier components shall be kept near the bottom of the rack to reduce the risk of toppling of a top-heavy rack.*

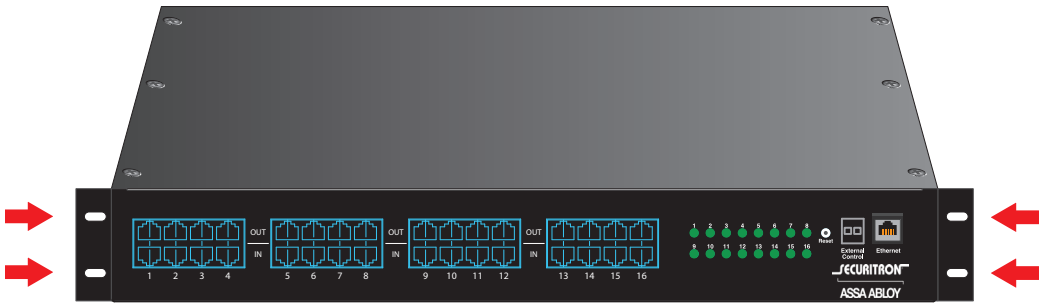


Figure 1. The Enclosure Mounting Holes

1.2 AQE Rackmount Power Supply Overview

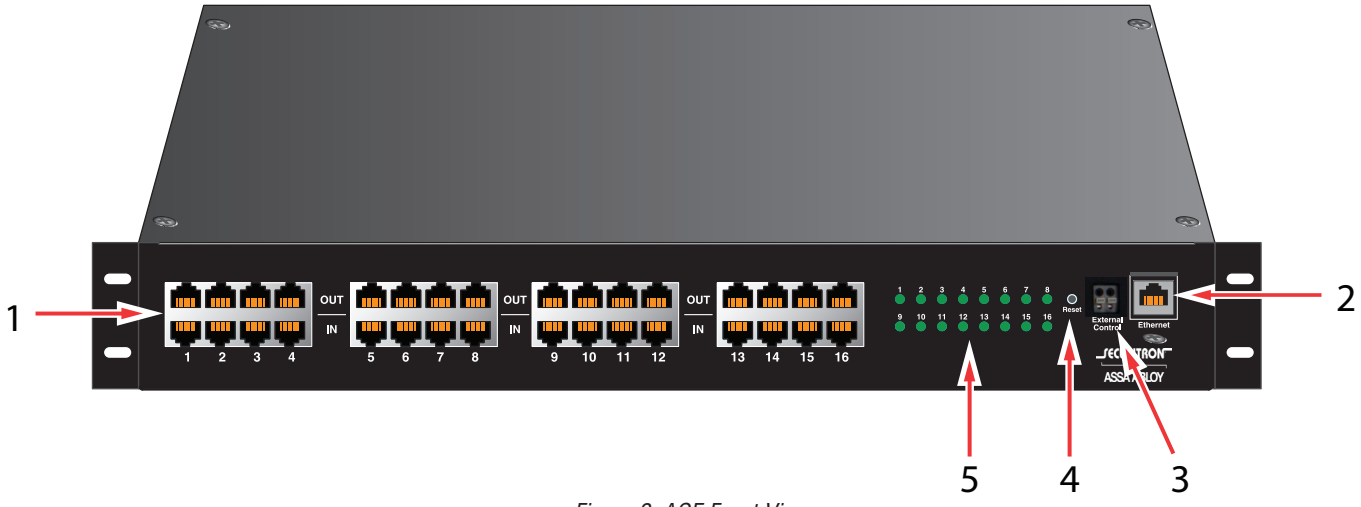


Figure 2: AQE Front View

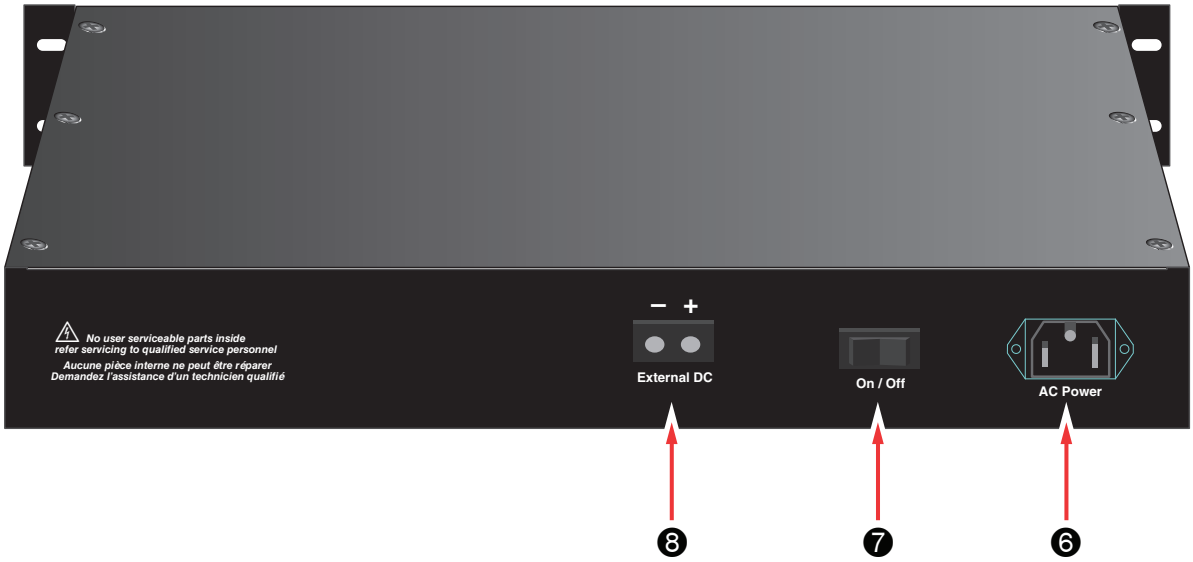


Figure 3: AQE Rear View

The following are basic descriptions. Refer to the appropriate section for more detailed information.

❶ *PoE Input / Output (IN / OUT)*

There sixteen RJ45 jack pairs (top and bottom pair) labeled sequentially. For each pair, the bottom jack is for network data input. The top jack is the data and power output.

CONNECT your data only cables to the bottom row of the RJ45 jacks (from a network switch, video server, etc.).

CONNECT the top jacks to the corresponding PoE compatible devices (e.g., IP cameras).

❷ *Ethernet Input (Ethernet)*

This port allows users to monitor and control the AQE multi-port midspan injector through a computer, over a Local Area Network (LAN) or the Internet. The management software AQE Power Supply Control Center is web browser based. You may connect a Personal Computer (PC) directly to this Ethernet port, or via LAN/Internet.

❸ *External Control (External Control)*

This connector allows an external trigger voltage to shutdown selected PoE outputs (programmed by user via the AQE Power Supply Control Center management software).

The trigger voltage is 5 to 24V, AC or DC.

❹ *Reset Button (Reset)*

Pressing the recessed reset button with a pin for 6 seconds will reset the IP address and password to the factory default values.

The factory default IP address is: ***192.168.1.9***
The factory default user name is: ***admin***
The factory default password is: ***admin***

❺ *Front Panel LEDs (1-16)*

The 16 front panel LEDs (labeled 1 through 16) indicate the port status of the corresponding PoE channels. When the output is connected to a valid PoE Powered Device (PD) within the specified current limit, the LED will be green, indicating normal operation. When there is a fault condition, such as when no PD is connected to that port, the LED will be yellow.

The LED will be turned off if the corresponding port is disabled by the AQE Power Supply Control Center software.

LED Status	Status
Green	Normal Operation
Yellow (Fault)	No Powered Device connected or fault condition present
Off	Port disabled

When the AQE is first powered, these LEDs will light yellow in sequence (1-16) six times as the unit performs a self-test.

❻ *AC Line Input (AC Power)*

This is the connector for the AC line cord.

PLUG the included computer-style line cord into this connector.

CONNECT the other end of the cord to the power strip inside the rack or another suitable AC power receptacle. The AQE series accepts 120–230 VAC ONLY.

❼ *Main AC Power Switch / Circuit Breaker (On/Off)*

This is the main AC power switch for the AQE. This switch lights when power is on and also has a built-in circuit breaker rated at 15 Amperes (A).

If the circuit breaker trips, RESET it by cycling the switch to off then back to on.

❽ *External DC Voltage Input (External DC +/-)*

This input may be used to either power the AQE via an external 50 VDC supply or to provide battery backup to the AQE. The "External DC" input is reverse polarity protected. See below for details:

To Use Battery Backup

Connect AC power to the AQE unit as normal. In addition, connect a 48V nominal battery set to the "External DC" connector, using the battery cable supplied.

To Use an External 50 VDC Supply

Connect a 50V power supply to the "External DC" connector at the rear. The ratings requirements for the DC power supply are given below:

Input voltage range	44 – 57 VDC
Max input current (500W model)	14.0 A
Max input current (250W model)	7.0 A

Note that if both AC and DC power sources are connected to the unit at the same time, the AC source will supply the power to the output ports. The external DC source will not supply the outputs unless the AC source is missing or the power switch is turned off.

Section 2 – Initial Configuration

The AQE Power Supply Control Center management software allows users to configure, as well as monitor and control each output port of the AQE series midspan injector. It is embedded and web browser based and does not require the installation of any dedicated software on the user's PC. Any PC with an Ethernet port and a common web browser may be used to access

2.1 Preparing to configure the AQE

In order to perform the initial configuration of the AQE, you will need the following:

- A computer (PC or Mac) set to a static IP address in the subnet 192.168.1.xxx, where xxx is a subnet address (0 to 255) not being used by any other device on the network. DO NOT USE 192.168.1.9 or the final IP address you will be using for the AQE. (See Figure 4.)
- A web browser installed on the computer.
- A CAT5 or higher Ethernet cable long enough to reach between the computer and the AQE's Ethernet port.
- The AQE must be powered. After powering the AQE, WAIT for the AQE to initialize. When ready, the port LEDs will be lit steady.

After the AQE is powered and initialized, CONNECT the Ethernet cable between the Ethernet ports of the AQE and computer. The green LED on the Ethernet port of the AQE should light. A few seconds later, the yellow LED will begin flashing.

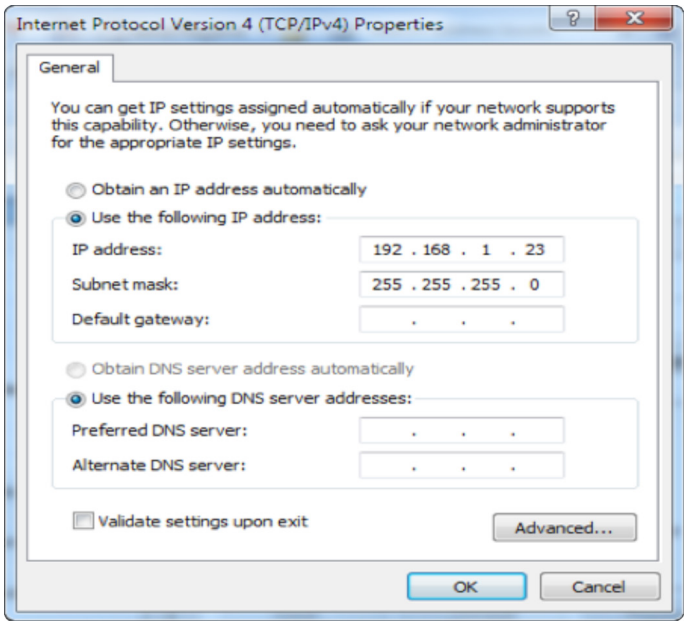


Figure 4: Example of a PC Ethernet port setting window

2.2 Logging into AQE Power Supply Control Center for the first time

From the factory, the AQE is preset with the following settings:

- IP Address: 192.168.1.9
- Username: admin
- Password: admin

OPEN a browser on the computer and enter "192.168.1.9" into the address bar (not in a search bar - you may need to disable a "search from the address bar" setting in your browser, if enabled). A window will appear asking for authentication (See Figure 5). ENTER "admin" for both the user name and password. The AQE Home Page should appear (See Figure 6).

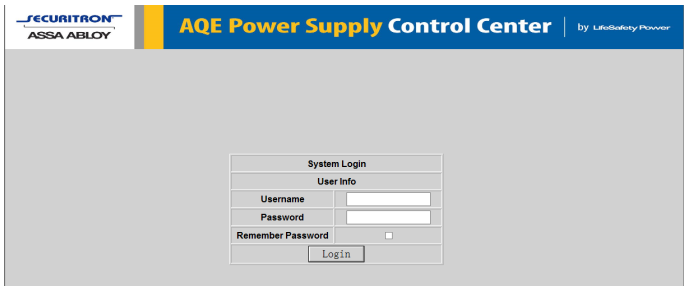


Figure 5: AQE Power Supply Control Center user login dialog box

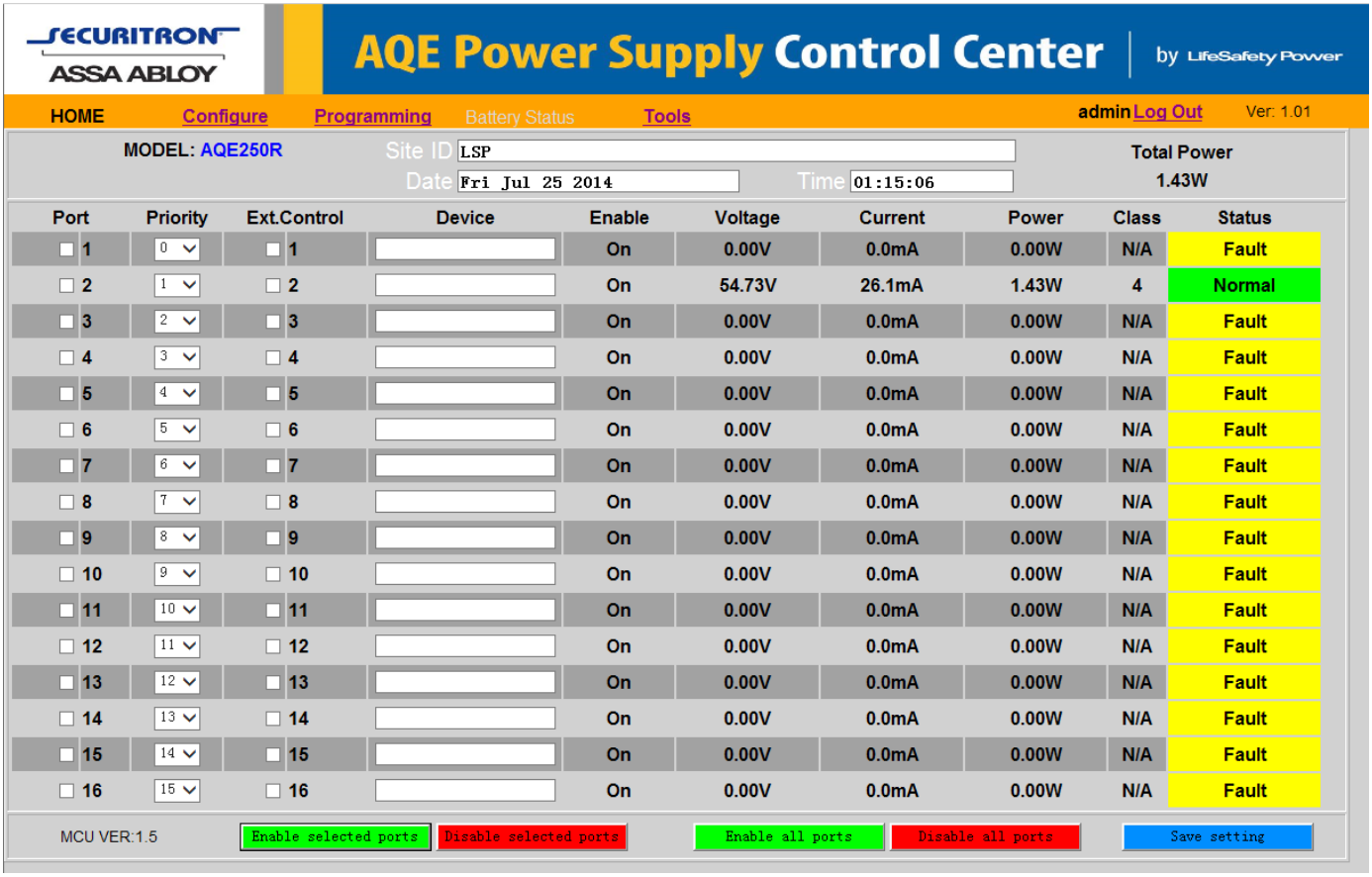


Figure 6: AQE Power Supply Control Center opening (HOME) page

2.3 Configuring the TCP/IP Settings

In the orange menu bar at the top of the browser screen, click the "Configure" link. Figure 7 shows the Configure page.

At the top left of the Configure page is the “TCP/IP Setting” area. The settings in this area include:

Site ID
Entered by user. ENTER any meaningful name to identify the AQE midspan unit. This name will be displayed on the HOME page.

IP Address
The factory default IP address is set to 192.168.1.9. This address may be changed to any valid IP address. SET the first three values of the IP address to match the domain of the network to which the AQE will be connected. SET the final value to a number between 0 and 255 which is not being used by any other device on the subnet. In the event the IP address is later forgotten, PRESS the “Reset” button on the front panel of the AQE for 6 seconds and the IP address, default user name, and default password will be reset to factory default values.

Net Mask
Should typically be set to 255.255.255.0

MAC address
The MAC Address is factory set and is not programmable by the user.

Gateway IP
The default gateway is 192.168.1.1. This value may be changed by the user - consult with your IT department for more information.

DNS0, DNS1
The default value for DNS0 and DNS1 are 192.168.1.1. These values may be changed by the user - consult with your IT department for more information.

Enable DHCP

Normally, this option is left unchecked, however in some cases you may want to allow the network to assign an IP address to the AQE. However, please note that **once you select this option, you will need a network scanning tool to find the AQE's IP address before you will be able to log into the AQE and that the IP address of the AQE may change periodically.**

You must click the “Submit” button at the bottom right of this area to save the changes in this section. The new setting will take effect after the AQE product is power cycled, or rebooted.

2.4 Configuring the Administration Settings

On the top right of the Configure page is the “Administration Setting” area. The settings in this area include:

Admin User Password

The default password for the admin account is **admin**. This may be changed to any password of at least 5 characters. ENTER the new password into the "Admin User Password" field. If changing the password, ENTER it again into the "Verify Admin Password" field. These two fields must match in order to successfully change the password. CLICK the "Submit" button - a popup message will confirm a successful password change. When you leave the configure page, the AQE will ask you to re-log in.

Insert Date

ENTER the correct date in the specified value field. It should be noted that the format is YYYY-MM-DD. For example, for February, you should enter “02” not “2”.

Insert Time

ENTER the correct time in the specified field. The format is HH:MM:SS.

CLICK the “Submit” button to save the time and date settings.

2.5 Configuring the SNMP Settings

In the SNMP Setting block, under the "Basic" heading, SET Community to "public" and SET Location to a meaningful name of your choice. This entry will help you identify the specific AQE when multiple AQEs are installed on the same subnet. In the example, "LSP" is entered. This entry will be read by an SNMP system as "syslocation," OID .1.3.6.1.2.1.1.6. The default port for SNMP is Port 161. Be sure to open the SNMP port if accessing SNMP outside your firewall. CLICK the "Submit" button at the bottom of the "Basic" section to save the settings, otherwise you will lose

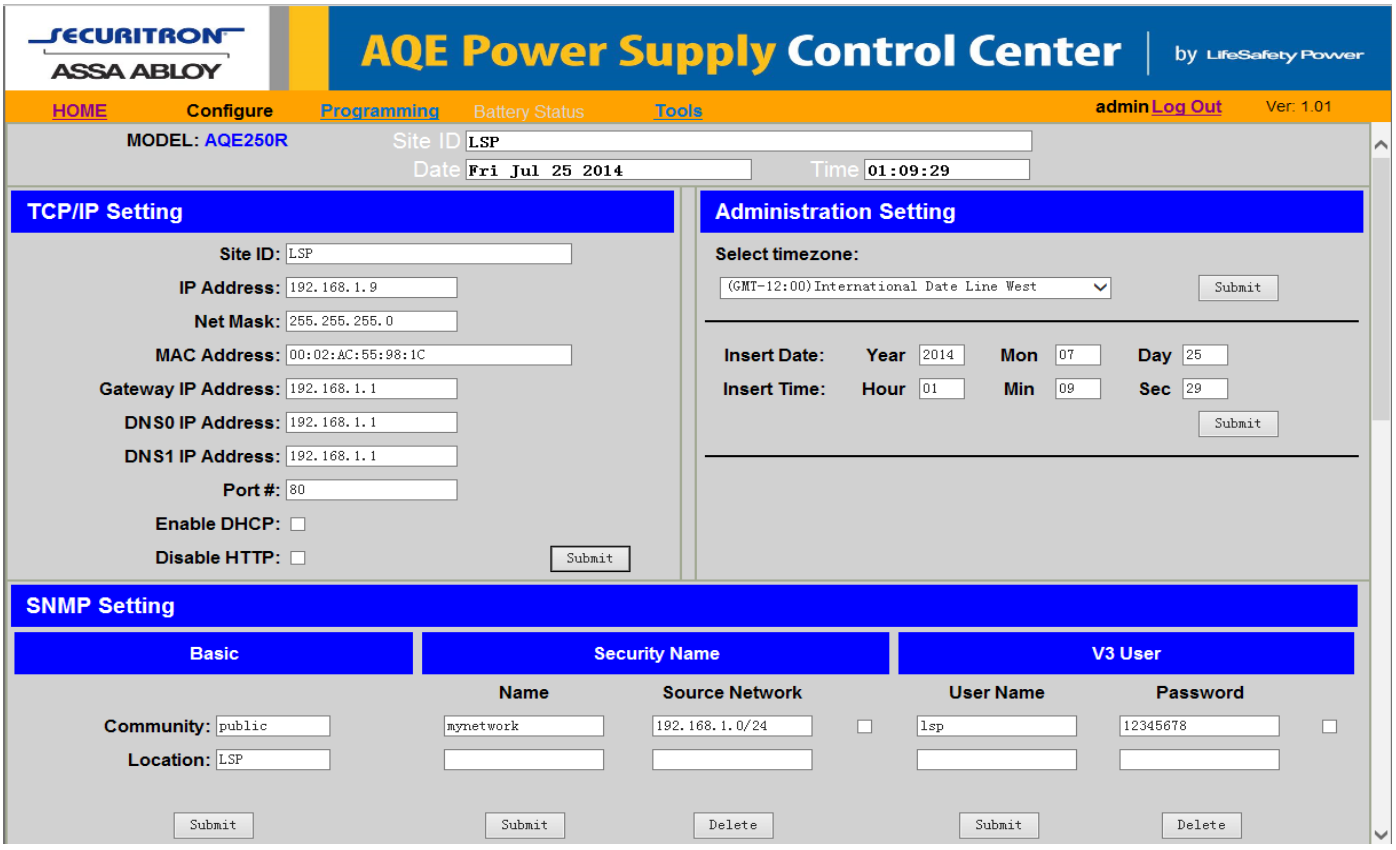


Figure 7: Top half of the AQE Power Supply Control Center Configure page

the settings. These settings will take effect after a reboot of the AQE.

The "Security Name" section of the SNMP Setting block allows you to grant only specified computers (by IP address) SNMP v1 and v2 access. Since v1 and v2 do not have password protection, the Security Name settings add security to v1 and v2 access. The web server is password protected and a user must have the web server password in order to setup a computer in the Security Name settings and gain v1 and v2 access.

The example sets up computers connected to a subnet to gain SNMP v1 and v2 access. The subnet is named "mynetwork" and the source network is 192.168.1.xxx. It should be noted that the last part of the IP address needs to be replaced with "0/24" to allow all computers in the 192.168.1.xxx subnet to access the AQE with SNMP v1 and v2.

Multiple source networks can be added to the Security Name Setting block. CLICK the "Submit" button to save the settings. The settings will take effect after a reboot of the AQE.

The "V3 User" section of the SNMP Setting block allows for a user to set up an SNMP v3 user name and password. With a user name and password, the AQE may be accessed from anywhere via the internet by using the SNMP v3 protocol.

No security name setup is required for v3 users and multiple v3 users may be set up in the same table. CLICK the "Submit" button to save the settings, which will take effect after rebooting the AQE.

2.6 Configuring the Email Settings

The AQE can be configured to send email alerts on user-specified conditions and periodic status reports. Underneath the SNMP Setting block on the Configure page is the Email Setting block (See Figure 8).

Under "Receive Addresses", the email address or addresses to receive the alerts and reports should be entered. Up to four recipient email addresses may be entered.

Under "Sender", the settings of the account to send the emails should be entered. These settings include:

CLICK the "Submit" button to save the settings, which will take effect after rebooting the AQE.

Sender SMTP Server
This is the address of the SMTP server for the email provider. Consult with your email provider for this address.

Sender's Email
This is the email address which the AQE will use to send emails.

Sender Email Password
This is the password associated with the Sender's Email account.

TLS
CHECK this box if your email provider requires TLS or SSL encryption.

SMTP Port #
ENTER the port number required by your email provider for sending email. Usually this is "25".

Authentication
CHOOSE the proper authentication method for your email provider from the drop-down list. Usually, this is "login".

Send Period
Selects how often the NPR sends a regular email status report. The period can vary from 1 hour to 6 months or, if you do not want the NPR to send periodic reports, SELECT "Never". It should be noted that the "Send Period" setting does not affect the sending of email alerts generated on faults or events selected by the user, only the periodic status report.

NOTE: *Regarding Microsoft Exchange – By Default, Microsoft Exchange will not accept SMTP connections. To use the AQE's email functions through Microsoft Exchange, the Exchange service must be configured to allow SMTP connections. Consult with the administrator of your Microsoft Exchange Server.*

TIP: *Most mobile phone providers have an email address available which will convert an email into an SMS text message. This email address is usually in the form of: (the mobile phone number)@xxxxxx. Consult with your mobile provider for more information. The CSV attachment will be removed, since SMS text messages are not compatible with attachments. Because of this, it is recommended that the SMS email be entered as an ADDITIONAL "Receive Address" on the AQE, so that the CSV file will still be available via regular email.*

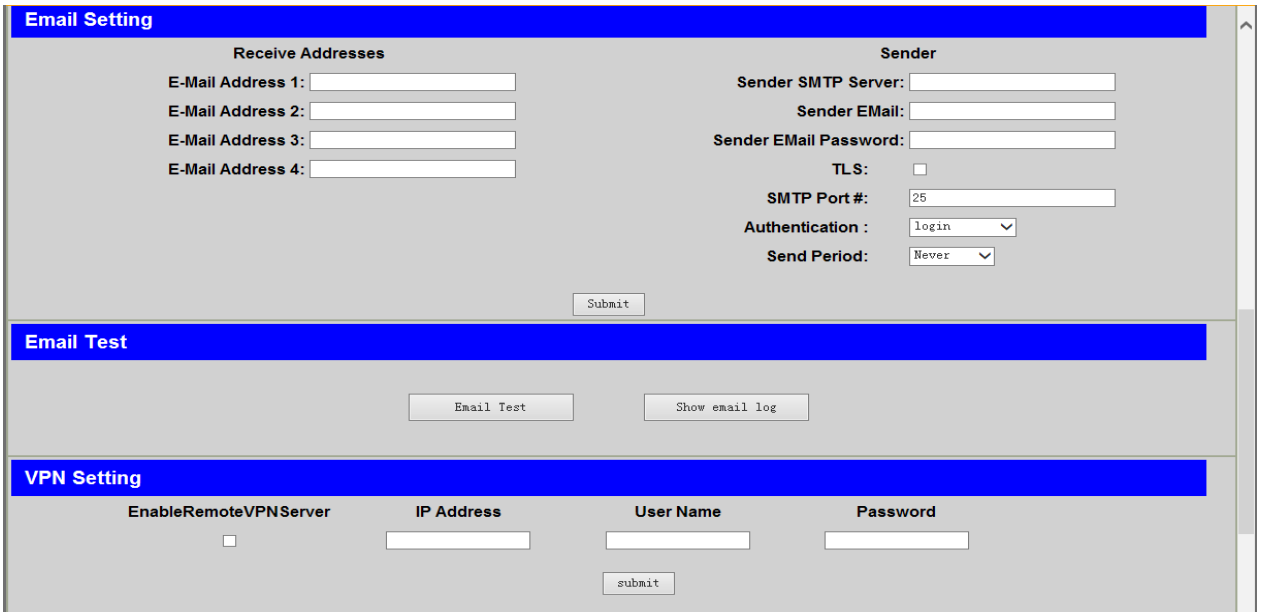


Figure 8: Bottom half of the AQE Power Supply Control Center Configure page

2.7 The Programming Page

Figure 9 shows the Programming page of the AQE Power Supply Control Center management software.

The programming page allows users to set optional upper and lower limits for the measured voltage and current of each port. If any of these limits are exceeded, and the "E-Mail Alert" box is checked for the port, an email will be sent to the address configured in Section 2.6 of this manual. This email includes an attached CSV file containing all of the data in the HOME page. ***NOTE:*** *The email settings must be configured properly. See Section 2.6 of this manual.*

To enable upper and lower limit checking, CHECK the box next to "Voltage & Current Limit Setting" at the top of the screen. CHECK the "E-Mail Alert" box for any port to be monitored and ENTER the lower and upper limits for that port. CLICK the "Save" button to save the settings.

NOTE: *The upper and lower limits entered must be within the allowed range. For voltage limits, the range is 0 to 60V. For current limits, the range is 0 to 638mA.*

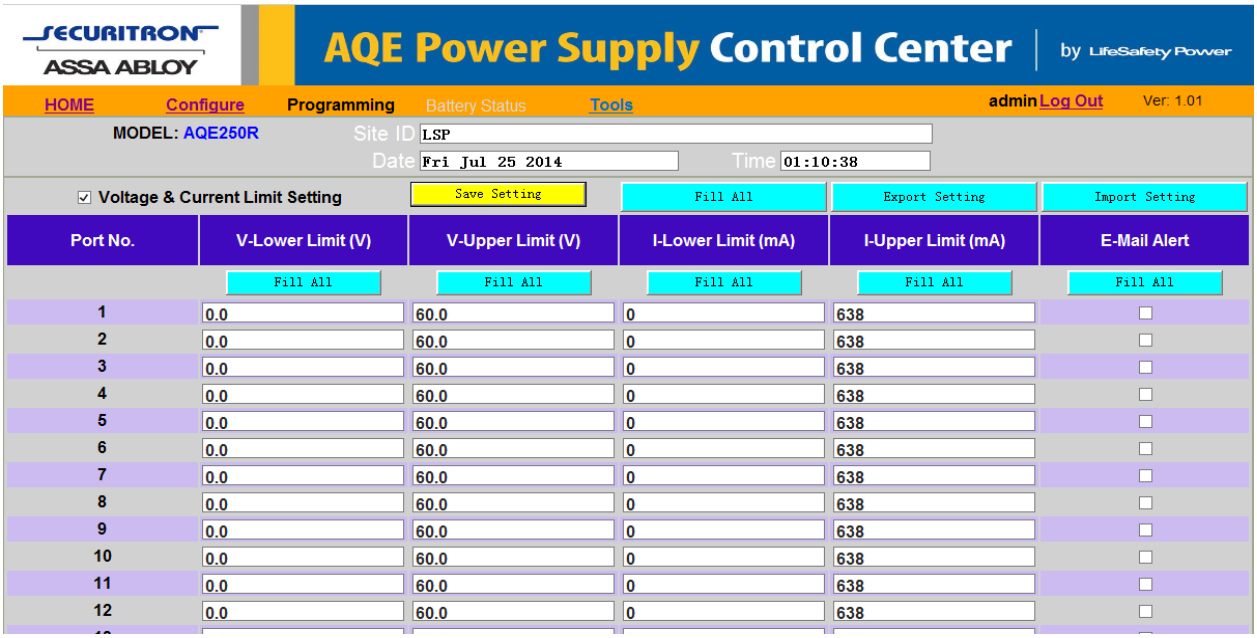


Figure 9: The Programming page of AQE Power Supply Control Center

Section 3 – Using the AQE

3.1 Viewing System Parameters on the AQE Home Page

The Home Page is shown in Figure 10. To access the Home Page, CLICK "Home" in the orange menu bar at the top of the page.

The top of the home page shows general information:

Model Number
This field displays the model number of the AQE being accessed. The model number in the example is “AQE250R”.

Site ID
This field is a descriptive name for the AQE unit being accessed and is set by the user on the Configure page.

Date and Time
This field shows the date and time as set up by the user in the Configure page. The date and time can be adjusted by time zone and is battery backed up via an internal battery.

Auto-refresh
CLICK the "Enable" button to turn on auto-refresh for the home page. Auto Refresh automatically reloads the page every five seconds to update the data shown. CLICK the button again to disable Auto Refresh.

Below the general information area is the port information and control area:

Port
This column lists the port numbers with a checkbox to the left of each number. The port numbers in this column refer the port numbers on the front panel of the AQE. CLICK the checkboxes to select one or more ports for enabling or disabling. CLICK the checkboxes again to deselect the port.

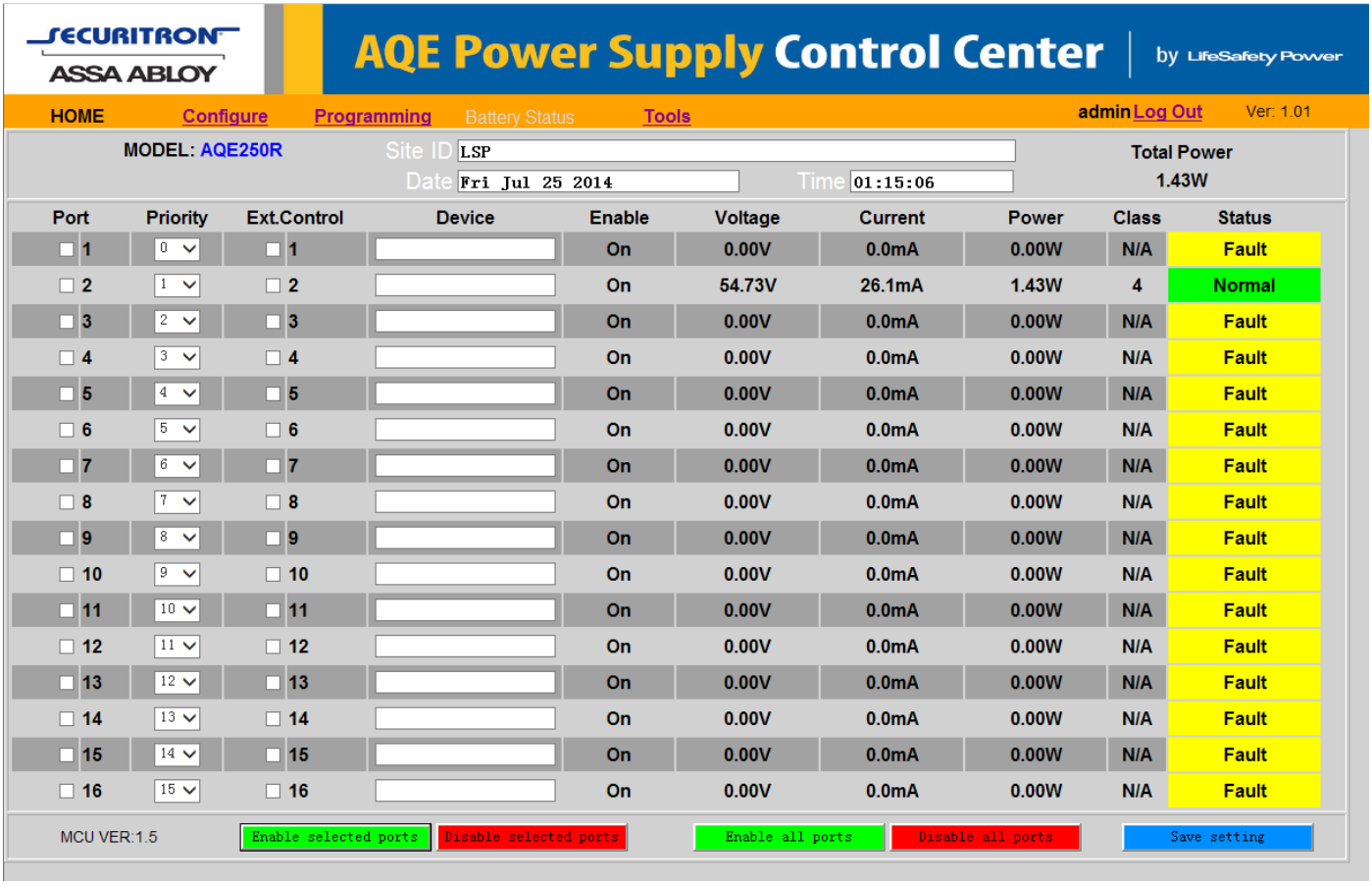


Figure 10: Home page of AQE Power Supply Control Center

Priority
This column allows users to set a priority for each port. For each port there is a corresponding priority drop-down list where a priority between 0 and 15 can be selected (where “0” is the highest priority and "15" is the lowest priority). After the priorities are set, the "Save setting” button at the bottom right of the HOME page must be clicked to save the priority settings.

When the total power drawn from the AQE exceeds the rated value (ex. 270W for the AQE250R), the lowest priority ports will begin disabling to prevent the AQE from overloading. ***NOTE:*** *Each port can supply a maximum of 30W of power per the IEEE 802.3at standard provided that the total power drawn does not exceed rated power for the AQE model used.*

NOTE: *If two or more ports have the same priority selected, the AQE will disable the lowest number port first (i.e., Port 1 will disable, then Port 2 if both are set to the same priority).*

External Control
This column allows users to select which ports will be controlled by the "External Control" input terminals on the front panel of the AQE. When the External Control terminals are activated (by an access control panel, switch, or other device), the ports that are selected will disable. After checking the ports, save the selection by clicking the “Save setting” button at the bottom right of the HOME page.

Device
This column allows the user to enter names for the PoE compatible devices connected to each output port of the AQE. The maximum length of the entry is 20 characters. After entering the names, click the “Save setting” button at the bottom of the HOME page.

Enable
This column shows the enable/disable state of each port. If a port is enabled, the display shows “On”. If a port is disabled, the display will show “Off”. See the Enable and Disable button sections of this manual for more information.

Voltage
This column displays the measured PoE port output voltage for each port in volts.

Current
This column displays the measured PoE port output current for each port in milliamps.

Power
This column displays the power output of each PoE port in watts.

Class
This column displays the power class of each port. The “power class” information is provided by the connected Powered Device (such as a PoE compatible IP camera) during the power interface between the PoE midspan injector and the Powered Device. When a port is not connected to a load (Powered Device), or when a port is disabled, the class display shows “N/A”.

Status
This column displays the status of each output port. When a port is normal (a Powered Device is drawing power within the specified limits), the corresponding status will display “Normal” with a green background. If there are any fault conditions or the port is disabled by the “External Control” signal, the corresponding status will display “Fault” with a yellow background. If a port is disabled by the AQE Power Supply Control Center GUI, the corresponding status will display “Disabled” with a grey background.

Underneath the data table, there are five colored buttons. Their functions are described as follows:

Enable selected ports
Clicking this button enables any ports whose checkbox in the "Port" column is checked. After the button is clicked, any ports selected in the "Port" column will be deselected.

Disable selected ports
Clicking this button disables any ports whose checkbox in the "Port" column is checked. After the button is clicked, any ports selected in the "Port" column will be deselected. This function is useful for momentarily cycling power to frozen PoE cameras or other devices.

Enable all ports
Clicking this button will enable all output ports of the AQE midspan.

Disable all ports
Clicking this button will disable all output ports of the AQE midspan.

Save setting
Clicking this button will save the settings in the “Ext. Control” and “Device” columns.

3.2 The Tools page

Upgrading Firmware

The Upgrade Firmware section is at the top left of the Tools page (See Figure 11). To upgrade the firmware, first ENSURE that the new firmware file is available on your computer, then CLICK the "Upgrade" button and the Upgrade window will appear.

CLICK the "Browse..." button and locate the new firmware file with the file extension ".bin" on your computer. Once the file is selected, CLICK "Open". CLICK the "Download" button to temporarily download the new firmware into the RAM of the AQE. This process will take from 30 seconds to one minute, depending on network speed and traffic and the message box will display "Downloading...". Once the firmware is loaded into the NPR's RAM, it can then be burned to the processor in the AQE. VERIFY the correct file name and CLICK the "Confirm" button to confirm the upgrade. Next CLICK the "Burn" button to begin burning the firmware to the AQE's processor. This process may take up to 12 minutes - DO NOT REMOVE POWER TO THE AQE DURING THIS PROCESS or the AQE will be rendered nonfunctional.

Once the update is complete, a message will appear in the message box indicating "Update Finished". The AQE must be rebooted in order to start the new firmware.

Rebooting the AQE

The "Reboot" section is on the top right of the Tools page (See Figure 11). To reboot the AQE, CLICK the "Submit" button.

Once the "Confirm Reboot" message appears in the Message window, CLICK the OK button to confirm the reboot. The rebooting process will take approximately 1 minute, during which you will lose communication with the AQE. Communication will be restored once the yellow LED lights steady.

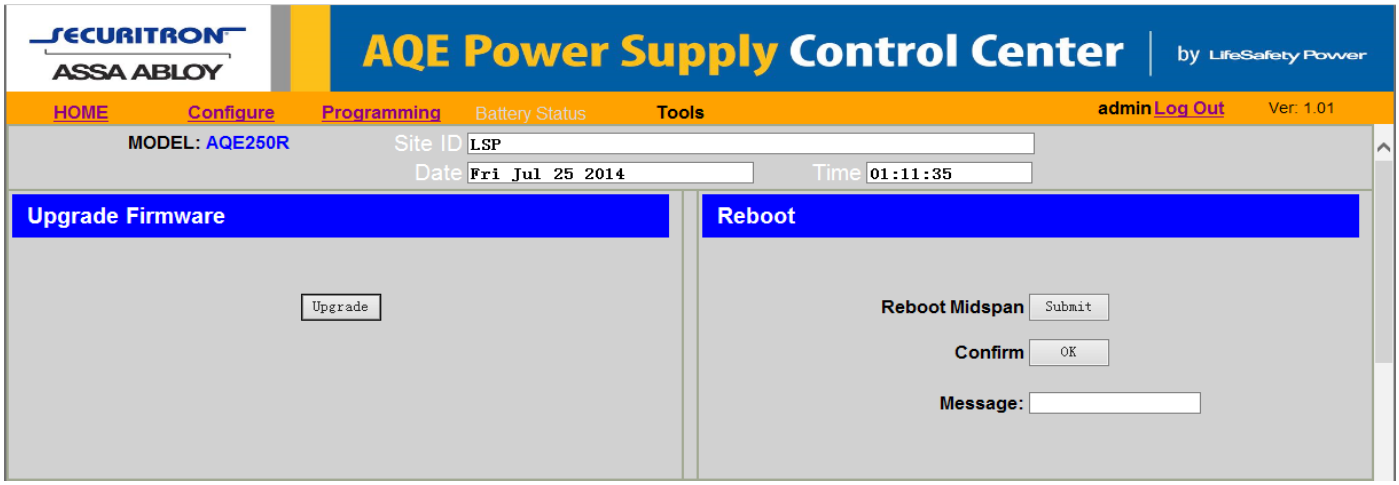


Figure 11: The Tools page of AQE Power Supply Control Center

Appendix 1 – Software License Agreement and Warranty Statement

NOTICE: PLEASE READ THIS DOCUMENT CAREFULLY.

This Software License Agreement ("AGREEMENT") defines and governs use of HANCHETT ENTRY SYSTEMS INC. Software and includes WARRANTY DISCLAIMERS. Your acceptance of this AGREEMENT is an acknowledgement, representation and warranty that you have the full right and authority to enter into, execute, and perform obligations under this AGREEMENT, or that you have the authority to enter into and execute this AGREEMENT as an Authorized Representative of a business entity or corporate entity and to bind that business entity or corporate entity to perform obligations under this AGREEMENT by your acceptance, acknowledgment and representation.

TERMS AND CONDITIONS

1. Definitions.

(a) "Authorized Representative" refers to any person duly authorized by a business entity or corporate entity (i.e. a "legal entity") to enter into this AGREEMENT and to bind the legal entity to the terms and conditions herein.

(b) "Recipient" refers to any individual or legal entity, entering into and executing this AGREEMENT for purposes of use of HANCHETT ENTRY SYSTEMS, INC. Software, where "use" is as defined by this AGREEMENT.

(c) "Documentation" refers to any related explanatory written materials or files including, without limitation, any end-user manual, specifications or other written materials provided to Recipient for the Software.

(d) "Facility" refers to any facility where HANCHETT ENTRY SYSTEMS, INC. Equipment is located and/or where the Software is installed or used under control of Recipient in conjunction with such Equipment.

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7. Miscellaneous.

(a) Notice and Contact Information. HANCHETT ENTRY SYSTEMS, INC. may be contacted at the mailing address below or by the HANCHETT ENTRY SYSTEMS, INC. website. Notices pursuant to this AGREEMENT should be sent to the address below, or to such others as may be provided in writing. Such notices will be deemed received at such addresses upon the earlier of (i) actual receipt or (ii) delivery in person, by fax with written confirmation of receipt, or by certified mail return receipt requested.

(i) Corporate Headquarters, Mailing Address: HANCHETT ENTRY SYSTEMS, INC., 10027 South 51st Street Suite 102, Phoenix, AZ, 85044 USA.

(ii) Website Address: www.Securitron.com

(b) Independent Contractors. The parties are independent contractors and will so represent themselves in all regards. Neither party is the agent of the other and neither may bind the other in any way. Nothing in this AGREEMENT is intended or shall be construed to create between the Parties a relationship of principal and agent, partners, joint venturers, or employer and employee. No Party shall hold itself out to others or seek to bind or commit another Party in any manner inconsistent with this AGREEMENT.

(c) No Waiver. Neither party will be deemed to have waived any of its rights under this AGREEMENT by lapse of time or by any statement or representation other than (i) by an Authorized Representative and (ii) in an explicit written waiver. No waiver of a breach of this AGREEMENT will constitute a waiver of any prior or subsequent breach of this AGREEMENT.

(d) Force Majeure. To the extent caused by force majeure, no delay, failure, or default will constitute a breach of this AGREEMENT.

(e) Choice of Law & Jurisdiction. This AGREEMENT shall be governed solely by the internal laws of the State of Arizona, without reference to such State's principles of conflicts of law. The parties consent to the personal and exclusive jurisdiction of the federal and state courts of Arizona, United States of America.

(f) Severability. All of the provisions of this AGREEMENT are intended to be distinct and severable. To the extent permitted by applicable law, the parties hereby waive any provision of law that would render any clause of this AGREEMENT invalid or otherwise unenforceable in any respect. In the event that a provision of this AGREEMENT is held to be invalid or otherwise unenforceable, such provision will be interpreted to fulfill its intended purpose to the maximum extent permitted by applicable law, and the remaining provisions of this AGREEMENT will continue in full force and effect.

(g) Conflicts among Attachments. In the event of any conflict between the terms of this main body of this AGREEMENT and those of any attachment including those of any documentation, the terms of this main body will govern.

(h) Electronic Execution, Binding Agreement. This AGREEMENT may be executed as a "click-wrap" or "browse-wrap" AGREEMENT or by other form of electronic signature and Recipient agrees that this execution shall result in a binding AGREEMENT between the parties. RECIPIENT AGREES THAT THIS AGREEMENT IS ENFORCEABLE LIKE ANY WRITTEN NEGOTIATED AGREEMENT SIGNED BY RECIPIENT OR RECIPIENT'S AUTHORIZED REPRESENTATIVE. THIS AGREEMENT IS ENFORCEABLE AGAINST RECIPIENT AND ANY LEGAL ENTITY THAT OBTAINED THE SOFTWARE AND ON WHOSE BEHALF IT IS USED. IF YOU DO NOT AGREE, DO NOT INSTALL OR USE THIS SOFTWARE.

(i) Interpretation and Construction. The parties agree that the terms of this AGREEMENT result from negotiations between them. This AGREEMENT will not be construed in favor of or against either party by reason of authorship.

(j) Entire Agreement. This AGREEMENT sets forth the entire AGREEMENT of the parties and supersedes all prior or contemporaneous writings, negotiations, and discussions with respect to the subject matter hereof. Neither party has relied upon any such prior or contemporaneous communications.

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