PSDA-MU1
Annunciator with Remote Monitoring for BDA Emergency Radio System
Owners Guide

- • **Designed to Monitor NFPA 72 IDC Circuits**
- • **NEMA 4, UL Listed Enclosure E333443**
- • **AC Power 90-264 VAC**
- • **Automatic Internal Battery Backup**
- • **Monitors up to 6 Closed Contacts and wiring**
- • **Separate 50 Ohm Antenna Fail**
- • **9 Form C Relays to Connect to Fire Alarm Panel, Including System Fault and System Trouble**
- • **9 Bright LEDs Indicate Status**
- • **Audible Alarm with Inside Mute/Unmute**
- • **User Scheduled Unmute**
- • **Self-Test Button Inside**
- • **Remotely Monitor Status and More via Ethernet**
- • **Email and SNMP notifications**
- • **3 Year DuraComm Warranty**

*NOTE: Specifications are subject to change without notice.

Description

The DuraComm Annunciator provides visual and audible alarms at the installed location of a BDA in an Emergency In-Building Radio system. This annunciator is designed to monitor NFPA 72 IDC Circuits and report the status to a Fire alarm panel via Form C relay contacts. Power input is 90 to 264 VAC with an internal 12 Volt 12-hour backup battery. A loud audible alarm will sound when a fault or trouble alarm is triggered. The Alarm can be muted until a normal condition is restored, or until a scheduled daily unmute occurs. Audible alarm Mute, Unmute, and Self-Test buttons are located inside for security.

It also provides remote monitoring via Ethernet. This allows the test point voltages to be monitored in relation to their alarm points by a bar graph for each monitored input. The internal battery backup voltage is also monitored with its own bar graph. Password-protected remote-control functions allow the system designer to set alarm voltages, manage user logins, schedule audible alarm unmute, and many other features. Notifications of alarms can be sent via email or SNMP traps. The DuraComm Annunciator comes with a 3-year warranty.

Table of Contents

Section 3: PSDA-MU1 Feature List

Product

- Designed to be Compatible with NFPA 1221.
- AC-Powered Annunciator with Remote Monitoring via Ethernet. (autorange 90 to 264VAC).
- UL Listed Enclosure E333443
- Removeable Cable/Conduit Panel at Bottom.
- Internal 12-Hour Battery Backup with automatic switchover
- 6 Fully Isolated Inputs for normally open contact monitoring. Requires 10Kohm EOL resistors. (Ignores single fault to earth ground)
- One 50 Ohm Antenna cable monitoring channel (Earth Ground Reference, with fault detection). Using this input requires separate purchase of (2) 50 Ohm Bias Tees and a 50 Ohm Load. (Alternate: can monitor normally open contacts with 51 Ohm EOL)
- Programmable Alarm Levels (default setting at factory)
- Built-In Self-Test that simulates Fault, Normal, and Trouble conditions at Monitored Inputs.
- Combined System Fault Output, and Combined System Trouble Output
- Form C Fire Alarm Panel outputs with separate on-board EOL resistor connector (9).
- Audible Alarm, with internal Mute and Unmute buttons and programmable scheduled Unmute.
- Audible Alarm Disable.
- Internet Browser Viewable Status Page
- Configurable eMail Notifications and SNMP Alarms with User Password.
- Push-On Style connectors for all external alarm connections for easy installation.
- Wago® Connectors for AC input

DuraComm 3-Year Warranty

Firmware

- Web Ready / Web GUI
- Graphing of data for each analog input.
- Bar Graphs with Alarm settings and Alarm Status Color.
- HTTPS self-generated web page. Plug-and-Play. No downloads or additional software required.
- Email alerts and scheduled status emails.
- User configurable alarm thresholds and delays
- SMTP/POP3 – email alerts
- 2 User Levels with different permissions
- Admin Can Configure up to 8 Users with 2 Different Permission Levels.
- Manual or NTP Time Setting
- Log and Download Time stamped Readings and Alarms, stored on internal SD card and downloadable .CSV file
- SNMP Version 1, 2 and 3 compatible
- Configurable Labels and Buttons for Each Digital Output.
- Optional Analog Input Averaging.
- Configure Analog and Digital Alarm Delay Duration (Holdoff) before triggering to Avoid Transient Alarms.
- Remote reboot.

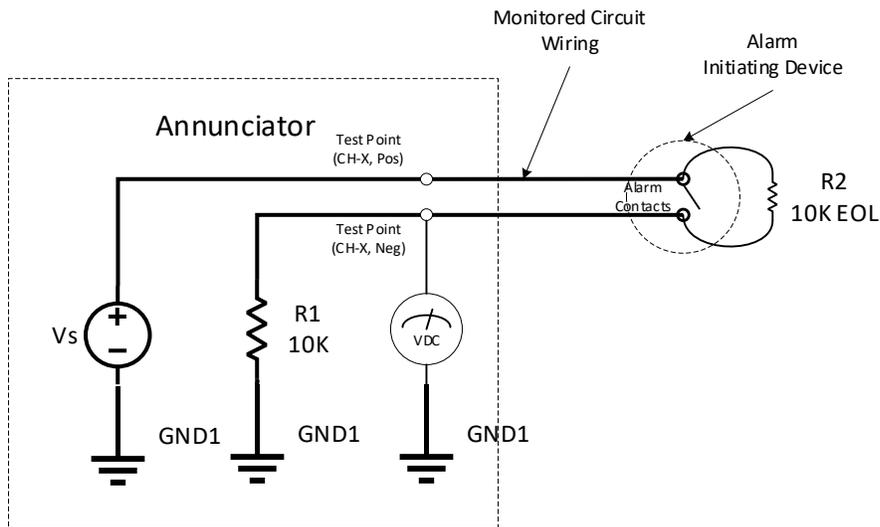# Simplified Theory of Managing an IDC Circuit

Figure 1: Simplified Circuit for IDC Management

The EOL Resistor must be placed at the Alarm Initiating Device to detect open circuits in the wiring.

A 'normal' circuit divides the test point positive voltage (Vs) in half since the test current passes through two 10K resistors in series. The test point voltage will be Vs *(R2/R1+R2) or Vs/2. This produces a GREEN LED.

A trouble alarm switch closure will short out the EOL resistor, and the full Vs voltage will be applied to the test point (across R1 only), so the test point voltage will be equal to Vs. This produces a RED LED.

A Single Fault (broken wire or one of the wires is shorted to GND1) will produce a test point voltage of Zero (0) volts.

Both wires shorted to GND1 will produce a Fault since the test point voltage will be Zero. Faults are reported with a BLUE LED.

If both wires are shorted to any other conductive material that is isolated from GND1, it will produce the same result as a Trouble alarm since this will short the alarm circuit wires together, and the test point voltage will be equal to Vs

DuraComm Annunciator Internal Operation Basics

The Full Test Point Voltage for the DuraComm Annunciator is reduced by the internal current limiter for each circuit (10ma for each channel CH1 to CH6). The voltage drop is minimal for a normal state, trouble alarm, open circuit fault, or test point short to GND1. If the test point positive wire is shorted to GND1, the current limiter drops all the Vs voltage across itself, and limits the current to 10ma to protect Vs.

For CH1 to CH6 the internal Vs is 12VDC, and the Test Point Positive voltage is approximately 11.5 VDC for normal operation, and the measured test point voltage is approximately 5.7 VDC.

Vs is 5 VDC for CH7 (Antenna). CH7 uses approximately 50 Ohms for R1 and EOL, so that it can detect faults and trouble through the 50 Ohm Coax to the antenna, using two bias tees and a 50 Ohm load. See Figure x for circuit. The internal 5 VDC current limiter is 100ma. This channel can be used to monitor a relay, but it still requires the 50 Ohm EOL.

The 12 VDC and 5 VDC supplies are isolated from each other and from earth ground. A single short to earth ground doesn't cause any faults because it will not interfere with any trouble alarms.

The Audible alarm automatically sounds at the same rate as the flashing RED or Blue LEDs (about once per second +/-). The audible alarm is automatically cancelled when no alarms or faults are active. The Audible alarm can be manually muted or unmuted by a button located inside the annunciator door for security. The audible alarm cannot be "muted" unless there is an active alarm or fault.

A self-test button is also located inside the door of the annunciator. An inspector should be prepared to note that channels 1 thru 7 should cycle BLUE flashing, to GREEN solid, to RED flashing, then back to the current system status. When the button is pressed, the outside managed wires are temporarily disconnected, and internal hardware simulates a short to internal common to simulate a Fault (BLUE LEDs), , a normal EOL condition (GREEN LEDs), and an alarm (short across managed lines – RED lights). The front panel lights will cycle thru the colors for these conditions, and the FormC relays that connect to the Fire Alarm Panel will cycle thru the proper states. **(NOTE: This will generate alarms at the Fire Alarm Panel. – Notify the responsible monitoring parties before preforming a test.)** The RED lights for alarms and the BLUE lights for faults will flash approximately once per second when they are active. The green lights (Normal) do not flash. The self test Once the self-test completes it will re-connect to the managed wires and show the current status of the wires.

DuraComm Annunciator Remote Monitoring Features

Monitor test point voltages and alarm levels for managed connections with bar graph display.

Monitor internal annunciator back-up battery voltage. Set alarm level and notifications.

Set user access

View alarm, fault, and normal status for all managed connections to BDA equipment.

Configure device and network settings

Log measurements and /or alarms to the on-board SD card by specifying number of minutes between samples, and "Log Alarms".

Set up email notifications.

Set up SNMP monitoring for larger systems.

The audible alarm can be muted manually. The mute can be cancelled manually, automatically at one or more specific times of the day by setting up a schedule. The mute is also cancelled automatically when the fault or alarm condition is corrected.

Adjust alarm settings to be closer or farther away from the normal test point value for each channel to change sensitivity to changes in the managed lines, or adjust for long wire resistance. The alarm is set for 7 volts for CH-1 to CH-6. This alarm value controls the alarm setpoint of the red alarm on the annunciator board. Each channel can be controlled independently. The Antenna channel is set at about 2 Volts.

Fault alarm levels (Blue lights) are set to a common value by digital-to-analog converter output #1 on the RMCU board, and this can also be programmed. This is set to 1 Volt at the factory. This controls the actual fault reference voltage used by the annunciator board. This is one voltage common to channels 1 thru 6.

The antenna channel (CH7) fault reference is fixed at about 0.7 volt by a diode junction on the annunciator board. The fault alarm threshold is also programmed to 0.7 volt for an approximate match for the sake of remote monitoring. This remote monitoring threshold can be reprogrammed for the sake of remote monitoring, but the behavior of the annunciator board is fixed to the diode junction voltage. This voltage must be isolated from the remote monitoring board to maintain isolation from CH1 thru CH-6 since the test point for this channel will most like be attached to the 50 Ohm shield, which will be earth ground.

Section 1 | Important Safety Instructions

These instructions are intended for use by a technician familiar with electronic products.

WARNING: There are no user serviceable parts inside. High voltage may be present. Service must be referred to a qualified factory personnel.

NOTE: The individual user should take care to determine prior to use or installation whether this device is suitable, adequate, and safe for the use intended. Since individual applications are subject to numerous variations, DuraComm makes no representation or warranty as to the merchantability, suitability, or fitness of these units for any specific application.

Section 2 | Installation

The outputs are NOT referenced to the chassis.

<u>IMPORTANT SAFETY INSTRUCTIONS</u>

1. SAVE THESE INSTRUCTIONS – This manual contains important safety and operating instructions for PSDA-MU1Annunciator.

2. CAUTION – Danger of explosion if battery is incorrectly replaced. Replace only with the same type recommended by the manufacturer. Dispose of used battery according to the manufacturer's instructions.

3. CAUTION – When making installation, route field wiring away from sharp projections, corners, and internal components.

4. This equipment covered in this document are intended to be installed in accordance with the following:

• NFPA 70 – National Electrical Code.

• NFPA 72 – National Fire Alarm and Signal Code.

• NFPA 1221 – Standard for the Installation, Maintenance, and Use of Emergency Services Communication Systems.

• In accordance with the Local Authority Having Jurisdiction (AHJ).

• Installation instructions described in this document.

5. Ensure DC polarity when connecting battery in the unit.

6. Internal circuits can still be energized with power switches in the off position

7. Physically disconnect all external power sources and internal battery before attempting any service or installation activities.
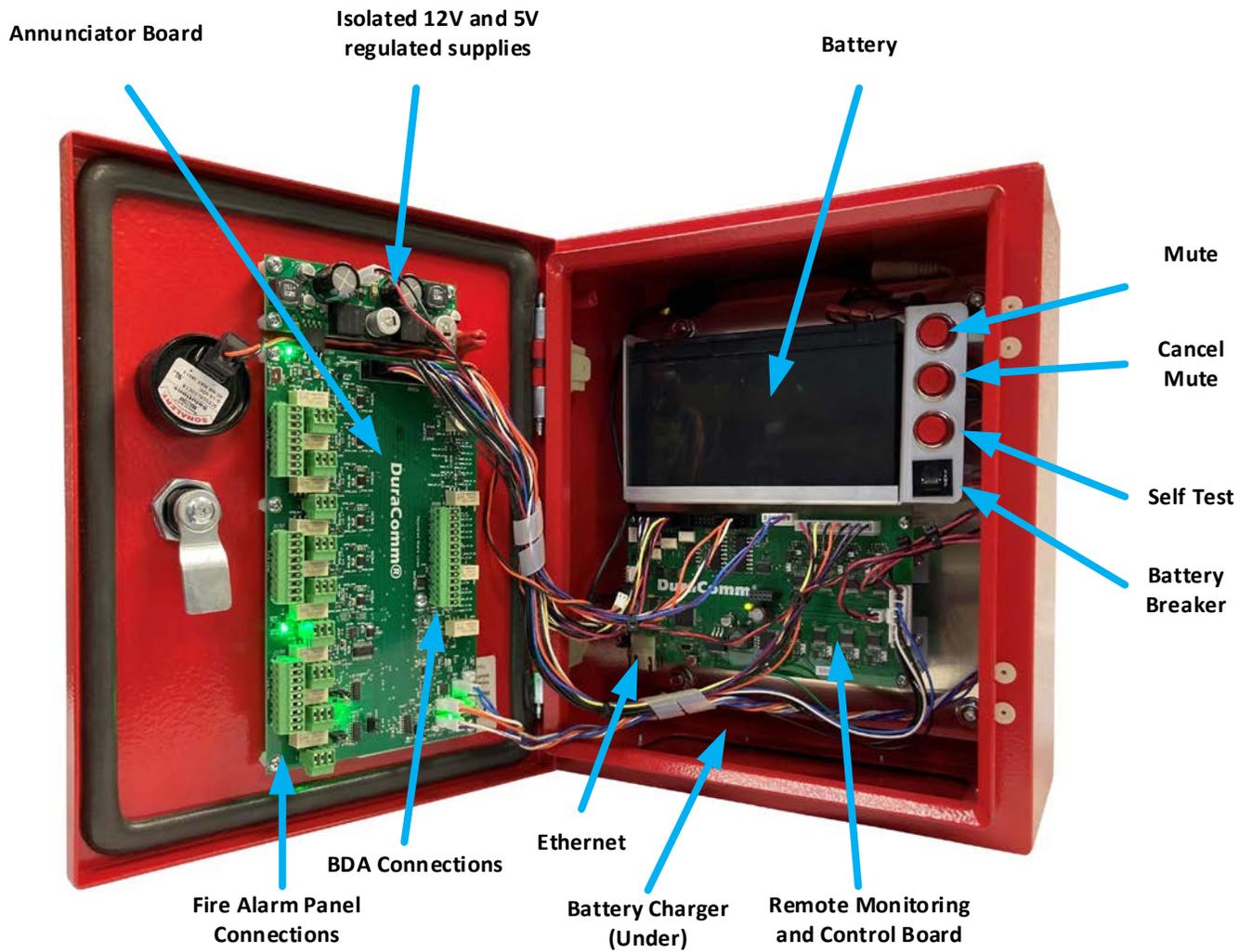
Overall Internal Layout

Figure 2: Overall Layout of PSDA-MU1Annunciator

Mounting the PSDA-MU1

Mounting Holes in Rear Corners (4)

Battery Charger AC Input Cord with Wago Connectors

Frame Ground Post on Right Side Bottom

Figure 3:Mounting Holes and AC Installation

Holes to mount the annunciator are located at the rear four corners of the box. Use appropriate mounting screws with rubber sealing washers to prevent water entry.

AC Power Connection

Figure 4: Field Wiring Access Panel on Bottom

See Figure 3 for AC wiring location. A removeable blank access panel is provided for wiring AC, Internet, BDA wiring and fire alarm panel cables through separate UL Type 4X Waterproof Conduit Hubs. Two Wago® connectors are provided on the Internal battery charger power cord for Line and Neutral connection. A frame ground post on the inside, right side bottom is provided for earth ground connection.

RMCU Ethernet Connection
See Figure 2 for Ethernet connection location.

Supervised Form C Contacts from Equipment

End User Connector Layout

J106
CH1-CH3
To Fire Alarm Panel

J107
CH4-CH6
To Fire Alarm Panel

J108
CH7
System Fault
System Trouble
To Fire Alarm Panel

J700_CH1 – EOL Resistor Mount

J700_CH2 – EOL Resistor Mount

J700_CH3 – EOL Resistor Mount

J700_CH4 – EOL Resistor Mount

J700_CH5 – EOL Resistor Mount

J700_CH6 – EOL Resistor Mount

J700_CH7 – EOL Resistor Mount

J109
CH1-CH7
Monitored Lines to BDA

J401_F – System Fault
EOL Resistor Mount

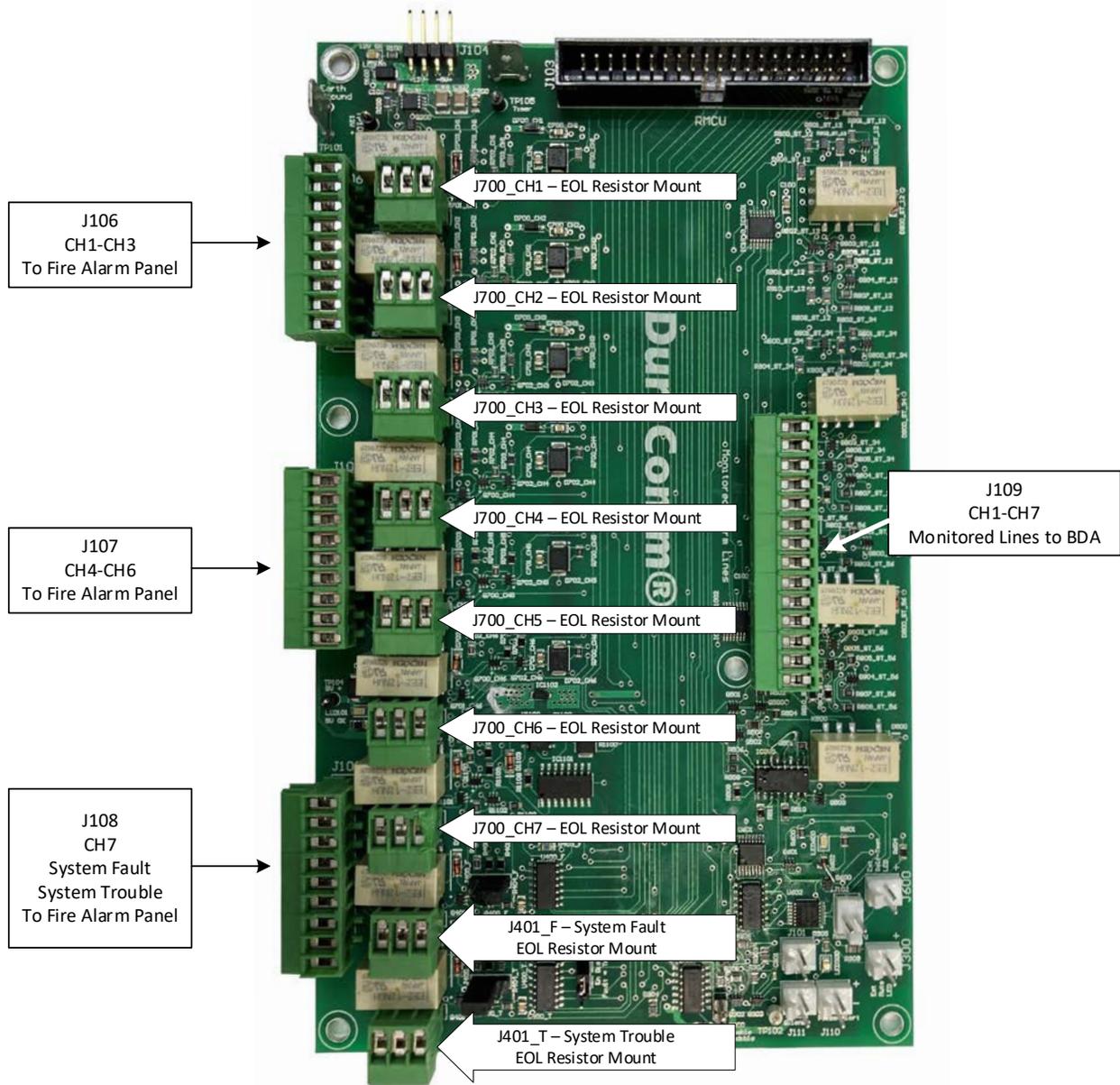J401_T – System Trouble
EOL Resistor Mount

Figure 5: Alarm Connection Layout

The left side connects to the Fire Alarm Panel (FAP). The separate EOL connector allows the FAP to detect when there is a bad connection to the annunciator board or when the connector is accidently not replaced. Full FORM C connections are available for 6 channels, 1 antenna channel (50 Ohms), a system fault channel and a system trouble channel.

The connector on the right has two positions for each of the 7 monitored lines to the BDA alarm contacts. The annunciator assumes the contacts are normally open for a non-trouble or non-alarm) situation. 10 Kohm EOL resistors (supplied mounted on the connector) should be used at the equipment termination end for channels 1-6, and a 50 Ohm EOL termination should be used for the antenna channel. A 51 ohm resistor is mounted on the connector for monitoring a relay contact instead of an antenna line, if desired. (**Bias tees, as well as connector and 50 ohm load must be purchased separately.)**

Channels 1 through 6 are floating relative to earth ground due to an isolated 12VDC power supply module, and normal operation is not affected when either the high or low side of any channel has a short to earth ground. If both lines (Supply voltage and test point) are shorted to earth ground, the result is a short across the wires, like an alarm contact, so it will show a Trouble alarm (red light). Multiple ground faults across multiple channels could cause unpredictable results.

If, for some strange reason the test point supply or test point are shorted to the internal ground, it will show a fault (blue light).

The antenna monitoring channel (channel 7) is also isolated from earth ground. The test point for the antenna channel is connected to earth ground when connected to the antenna coax shield. A short between the center conductor of the coax and the shield will create a trouble alarm.

The 5 V and 12 V internal power supplies are isolated from each other as well.

The SITEGUARD uses its fully Isolated analog channels to monitor the test point voltages and compare the reading to alarm values. IF the voltage is above the upper alarm limit, it will set a corresponding digital output which causes the annunciator board to report a trouble (red). These alarm levels are adjustable if required, but the default setting allows for a large amount of cable loss. Setting the alarm voltage too close to the normal test point voltage may cause false alarms due to electrical noise, temperature variations or other variables. Setting a higher measurement average on the Sensor Setup page, or alarm duration on the Alarm Setup page may help with the random effects, but this could have negative effects with alarm reporting, especially for self-test.

The Fault voltage reference is set for channels 1-6 by Digital-to-Analog (DAC) output 1 on the SITEGUARD and can be remotely programmed if needed. It is set to 1 V at the factory.
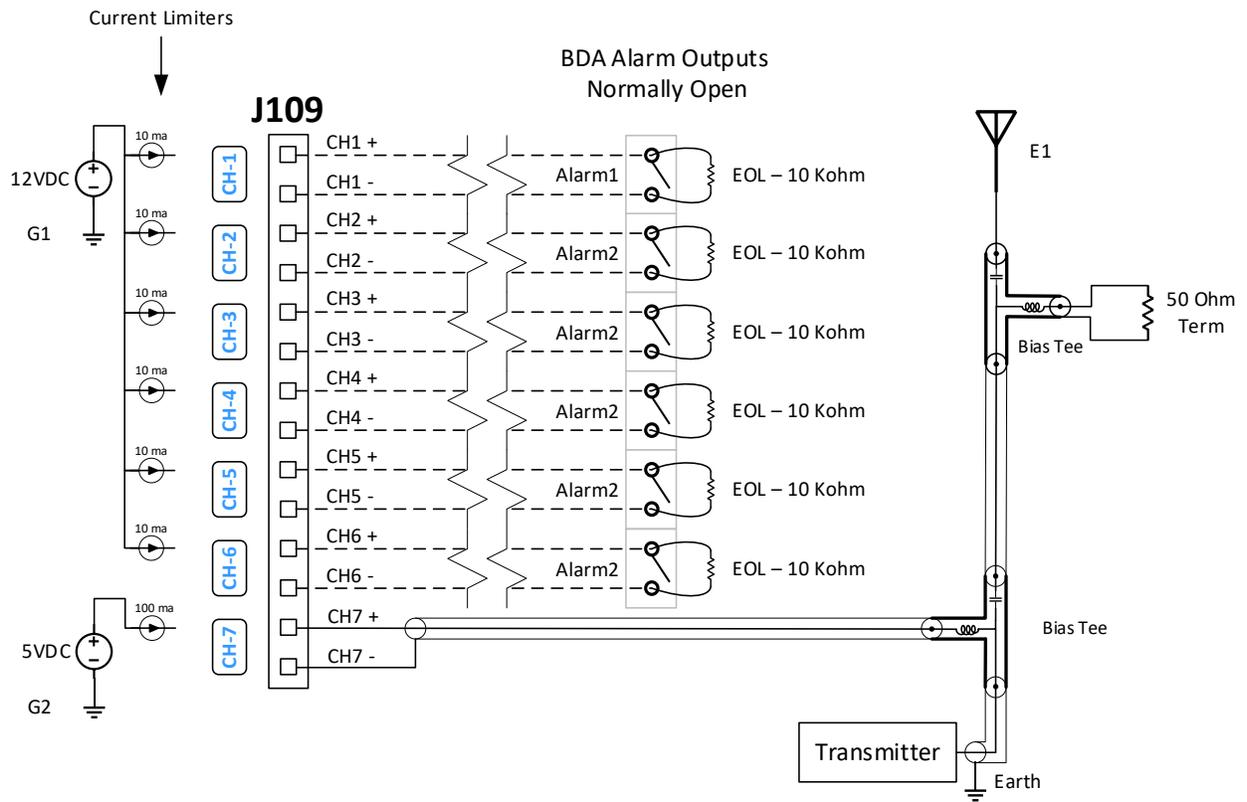
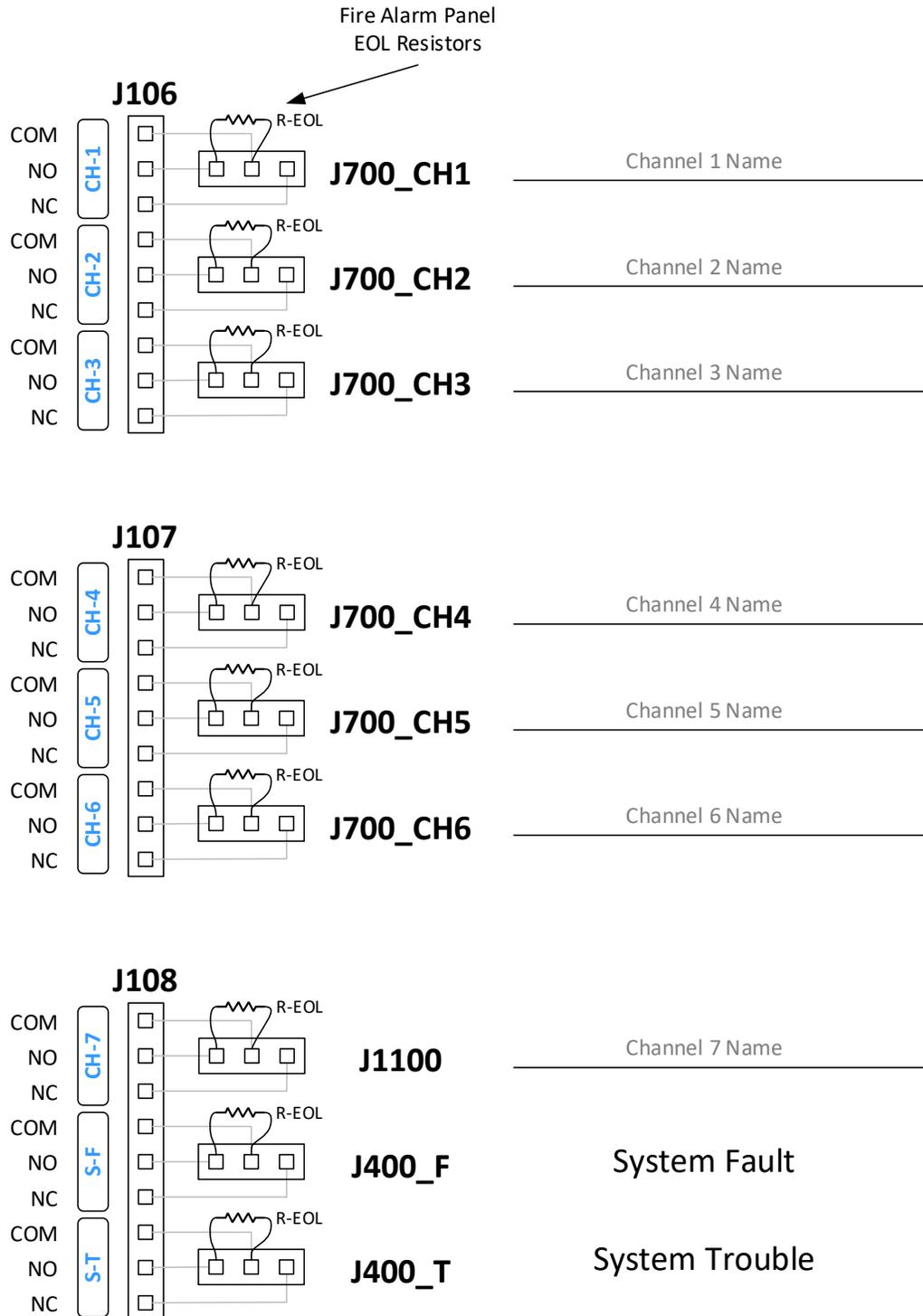*Figure 6: BDA Wiring Schematic*

Fire Alarm Panel Connections

Fire Alarm Panel
EOL Resistors

J106

COM	
NO	CH-1
NC	

R-EOL

J700_CH1 — Channel 1 Name

COM	
NO	CH-2
NC	

R-EOL

J700_CH2 — Channel 2 Name

COM	
NO	CH-3
NC	

R-EOL

J700_CH3 — Channel 3 Name

J107

COM	
NO	CH-4
NC	

R-EOL

J700_CH4 — Channel 4 Name

COM	
NO	CH-5
NC	

R-EOL

J700_CH5 — Channel 5 Name

COM	
NO	CH-6
NC	

R-EOL

J700_CH6 — Channel 6 Name

J108

COM	
NO	CH-7
NC	

R-EOL

J1100 — Channel 7 Name

COM	
NO	S-F
NC	

R-EOL

J400_F — System Fault

COM	
NO	S-T
NC	

R-EOL

J400_T — System Trouble

Figure 7: Fire Alarm Panel Connection WOrksheet

Audible Alarm

The Audible Alarm may be permanently disabled by removing the connector wire labeled "Audible) from J110 on the annunciator board, if it is not needed. Zip tie this to the cable harness to prevent it from contacting other exposed pins inside the PSDA-MU1when not connected.

Power Up The PSDA-MU

To power up the PSDA-MU, connect the battery using the quick connects provided: **Caution: Observe Polarity!**

Apply power to the AC input by turning the AC breaker "ON".

Section 3: Self Test

Note: Pressing the self test button will cause fire alarm panel outputs to close during the test. Notify monitoring personnel before performing self test.

To perform a self test, press the button marked "Self Test" (See **Figure 2** for location).

The PSDA-MU1will disconnect from the managed BDA connections and begin simulation of a Fault (short to internal test point common), a normal condition (internal EOL substitution), and an alarm (short across monitored pair. All channels will cycle at the same time.

Assuming all channels are GREEN to begin with, LEDs will change to BLUE and flash once, back to GREEN for a few seconds (no flash), to RED and flash once (alarm condition), then it will return to normal and connect to the external monitored connections.

Any channels that are not in the GREEN state when starting the test may show a purple light briefly when changing back to external connections until the RMCU synchronizes with the annunciator board.

Section 4: Remote Monitoring Configuration and Operation

SITEGUARD Description

The new SITEGUARD DC-Powered Remote Monitoring and Control Unit (RMCU) is flexible product for remote site monitoring and control, and Industrial Internet of Things (IIoT) applications. The SITEGUARD provides 8 voltmeters, digital inputs, digital outputs, and analog outputs that are dedicated to annunciator operation and monitoring. All of these channels are visible on the home page with alarm status, and all analog channels are displayed as bar graphs with alarm setting indicators, and alarm status color. Configuration is set at the factory with only a few setup changes required to install for a PSDA-MU1Application. **NOTE: Changes to other settings should only be considered if the factory settings do not perform correctly in your installation. Other changes may cause unpredictable or unsafe operation**.

- Internet Networking Addresses
- Usernames and Passwords
- Device Name
- Date & Time (and NTP)
- Channel Names (optional – factory configured)
- Alarms (Optional – factory configured)
- Email Notifications (optional)
- SNMP Monitoring (optional)
- Audible Alarm Mute Cancel Schedule (factory set to 13:40 every day of the week) This only applies if the mute has not been cancelled manually or by a non-alarm all normal condition.)

Admin and Control Users will be able to configure all of the input and output settings, and set the state of the digital outputs. Admin and Control users can set device settings for logging, time, and Site Name. Admin users have exclusive control of network configuration, including manual time setting or NTP, soft reboot of the SITEGUARD, factory reset of the entire configuration, and user passwords.

The SITEGUARD comes with the DuraComm three-year warranty.

CONNECTING TO THE SITEGUARD VIA THE INTERNET

Prerequisites

System administrators must decide whether the SITEGUARD will operate on the network with DHCP or a fixed IP address. The factory-set SITEGUARD will have these static addresses: **IP address: 192.168.100.220, gateway address: 192.168.100.1, netmask: 255.255.255.0, and DNS address: 192.168.100.1**.

If you configure it to use DHCP, the SITEGUARD will request an available IP address on your network. You will need to determine what address it has been given.

If DHCP is not used, system administrators must also choose an unused IP address, and other network settings to use in the Network Setup screen. System administrators will also need to choose an email service and address to use for notifications, if needed. These will be used in the Email Setup Screen.

DETERMINING THE IP ADDRESS OF THE SITEGUARD

Power up the SITEGUARD then connect the SITEGUARD to the network with an Ethernet cable. A 3 foot cable is provided.

Using DHCP

The SITEGUARD will attempt to connect to the network via DHCP when it is first connected, or when you perform a factory reset.

You will need to get the IP address in one of two ways. You can get the IP address from the DHCP server's client list, or you can use a PC on the same network to scan for the new IP address by using a software tool such as Angry IP Scanner. In Angry IP Scanner, you should add the MAC address "Fetcher" under "Tools > Fetchers". The DuraComm MAC addresses all start with a base address of **70-B3-D5-6B-3.** Write down the IP address of the SITEGUARD, then proceed to the section in this manual named "**Open a Web Connection to the SITEGUARD**".

## Using Static SITEGUARD IP and Network Configuration

If your network is not set up for DHCP, you will need to manually configure the settings to match the network it will be used on. Before you can do that, you will need to configure a computer to talk to the SITEGUARD at the default configuration settings shown above. We will use Windows 7 as an example. Other operating systems will vary, but the overall concept is the same.

1. Disconnect your PC from all networks.
2. Connect it directly to the SITEGUARD with an Ethernet cable (You may need to use an Ethernet crossover cable if the PC does not automatically detect this configuration).
3. Open the control panel on your PC and select "View Network Status and Tasks"
4. Click on "Change Adapter Settings" on the left side of the screen.
5. Right click on "Local Area Connection" and click on "Properties"
6. Click on "Internet Protocol Version 4 (TCP/IPv4)" to highlight it, then click the "Properties" button.
7. Before you make any changes, **record the existing settings**, so that you can change them back when you are finished setting up the SITEGUARD.
8. Enable "Use The Following IP Address"
9. Now enter 192.168.100.221 for the IP address.
10. Enter 255.255.255.0 Subnet mask
11. Click OK to save the network configuration.

12. Jump to the section in this owners guide named **"Open a Web Connection to the SITEGUARD"** to log in and enter the final network settings for the SITEGUARD.

Open a Web Connection to the SITEGUARD

Use your favorite device and browser (Chrome, Firefox, internet Explorer, etc.), and enter the IP address of the power supply on your network into the URL box on the browser (see the screenshot below). The SITEGUARD should respond with the "Status" screen.
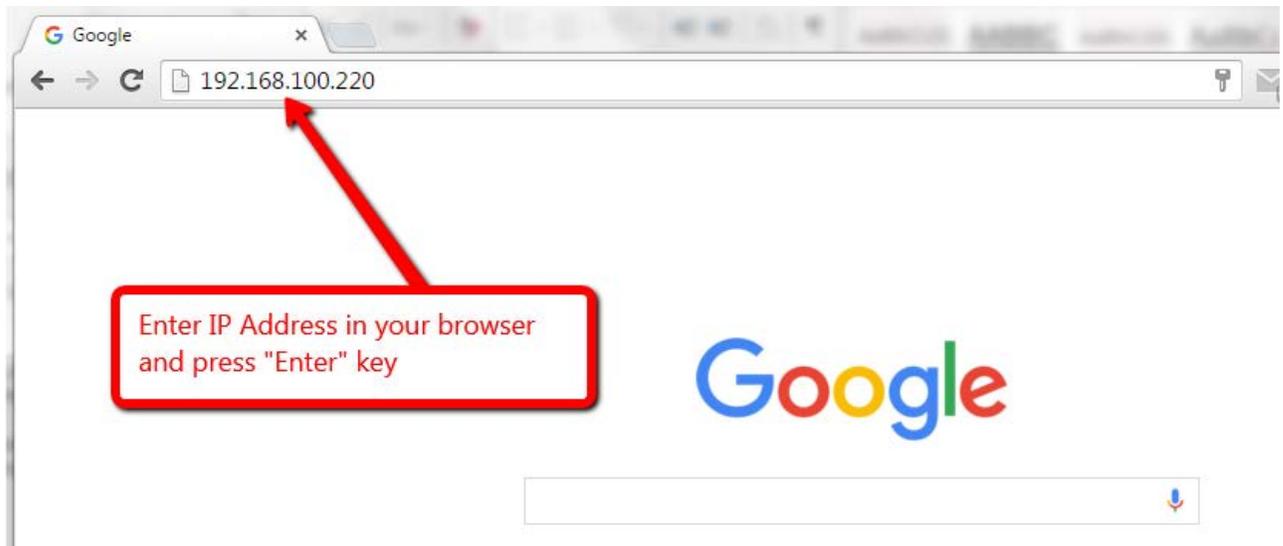
REMOTE MONITORING AND CONTROL SETUP

Click "Network Setup" in the menu at the top of the screen. All setup requires an administrative user to log into the SITEGUARD. See default passwords below.

User Login
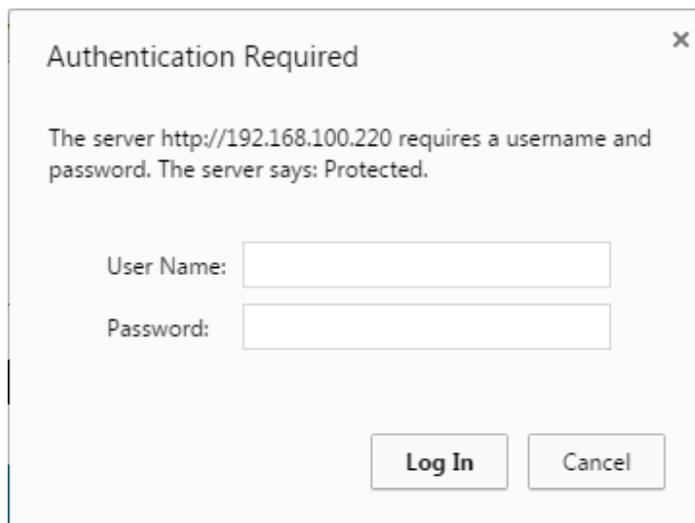
Enter the user name and password. Factory default usernames and passwords are as follows:

Admin Users have full control of the device.

  Username: admin
  Password: admin

Control users have limited control capability.

  Username: control
  Password: control

These two users are the only ones pre-configured in the SITEGUARD. "Control" users can access all screens except the User Setup screen. See the User Setup section for more information.

NETWORK SETUP

SiteGuard© - Annunciator RMCU #80008
Building 1, Floor 1, Room 1

Status	Device Setup	Sensor Setup	Alarm Setup
User Setup	Network Setup	E-Mail Setup	Logout (admin)

TCPIP Setup

MAC Address: 70:B3:D5:6B:38:88

Static IP Address: 192.168.0.36
Static IP address to use if DHCP client is disabled.

Static Gateway Address: 192.168.0.254
Static gateway address to use if DHCP client is disabled.

Static Netmask Address: 255.255.255.0
Static netmask address to use if DHCP client is disabled.

Static DNS Address: 8.8.8.8
Static DNS address to use if DHCP client is disabled.

Alternate DNS Address: 8.8.8.8
Alternate DNS address is used regardless if DHCP client is enabled or disabled.

DHCP Client: Off
If enabled, get IP configuration from DHCP server on the network.

SNMP Settings

Agent UDP port: 161
Set to 0 disable SNMP agent access

Agent access: SNMPv1 / SNMPv2 / SNMPv3

Public (read) community: public

Private (write) community: private

Trap UDP port: 163
Set to 0 to disable all traps

Trap Destination IP: 192.168.0.234

Leave blank to not send a trap

Send test trap now? No

HTTP server

HTTP port 80

These parameters require a power-cycle or reboot.

Changing any of these values may affect your ability to access the unit

[Submit Values] [Cancel Changes] [Reboot Device]

Network Setup Notes

A network administrator for your company must choose the settings for this page. The default HTTP port is **80**. If a different HTTP port is used, it will need to be added to the URL to access the SITEGUARD. For example: if the port is changed to **8080** then the address would be changed to http://192.168.0.253:8080.

NOTE: You must reboot the device for changes in these settings to take effect.

SNMP Traps Setup

This section is simplified, and meant for network administrators who already understand SNMP traps and how to configure capable equipment into their system. For those who want to understand the benefits of using SNMP traps, you can search for training material online under "SNMP Traps", "MIB Browsers", and "SNMP Monitoring".

The MIB file for the SITEGUARD can be downloaded from the SITEGUARD after you connect to it with your browser. Go to the Device Setup page and log in to the SITEGUARD. Halfway down the page there is a link to the MIB file. Right click on the link and click "Save Link As" to download the file.

After download, import the MIB file into your MIB browser or Monitoring software to configure it for use with the SITEGUARD.

When the MIB file has been loaded, complete the "SNMP Setup" section on the "Network Setup" page of the SITEGUARD to configure it for use with your monitoring solution. User-specific authentication for SNMPV3 can be set up on the "User Setup" page by users with Admin permissions.

The SITEGUARD will send traps for all configured alarm conditions including bootup, temperature, analog alarms, and digital alarms.

The MIB file is not compatible with previous versions of firmware. Please make sure you are using the MIB file downloaded from the "Device Setup" page in this firmware, if you are using SNMP monitoring.

NOTE: To hard reset your device back to factory network settings, press the red button on the SITEGUARD PCB and hold it for more than 20 seconds. You will need to re-connect to the SITEGUARD through your web browser by entering the factory supplied IP address and HTTP port (see Network Setup). Using the factory reset here or using the red button to reset will change the network settings back to the factory reset/default values shown in this manual on the network configuration page, even if your unit was custom set at the factory to a user IP address. If your unit was set to a custom IP address, it will be labeled underneath the product label on the side of the SITEGUARD. You will need to re-configure the network settings to your network.

EMAIL SETUP

Email setup

E-mail server:	
Server port:	0
Server username:	
Server password:	
E-mail to:	
E-mail from:	
Minimum interval:	1 Minutes

Device won't attempt to send e-mails faster than this, any alarms that happen will be queued and sent when this duration has expired.

Periodic interval:	Never ▾
Periodic start:	Enabled ▾
	00:00
Send e-mail on bootup?	☐ E-mail address #1
	☐ E-mail address #2
	☐ E-mail address #3
	☐ E-mail address #4
	☐ E-mail address #5
	☐ E-mail address #6
Send test e-mail now?	No ▾

Leave hostname blank or set port to 0 to disable e-mails.

Leave the username/password blank if your e-mail server doesn't require it.

[Submit Values] [Cancel Changes]

Email Setup Notes

Enter the required email setup parameters given to you by your System Administrator. You can also send a test email from this screen. An email relay service (such as smtp2go.com) may be needed if you have difficulty setting up your SSL mail connection, as with Gmail. There may additional requirements, since email security changes rapidly.

To send periodic "Heartbeat" emails to get status notifications, even when there is no alarm condition, select from a drop-down list of 1, 6, 12, or 24 hour intervals. Optionally you can set a start time by enabling it, and entering a start time in "HH:MM" 24-hour format.

DEVICE SETUP

SiteGuard© - Annunciator RMCU #80008
Building 1, Floor 1, Room 1

Status	Device Setup	Sensor Setup	Alarm Setup
User Setup	Network Setup	E-Mail Setup	Logout (factory)

Device Setup

Device Info

Site Name:	Annunciator RMCU #80008 Building 1, Floor
Model:	RMCU
Serial Number:	80008
Version:	HW: 3, FW: 3.21

Logging

Logging rate:	0 Minutes
Log start date:	Mon, 11 Apr 2022 14:02:34
Last log date:	Mon, 11 Apr 2022 14:02:34
Clear Log?	No ∨
Append Now?	No ∨
Log Alarms?	No ∨
Logging status:	Never used
Download log:	rmcu.csv
	Right click to save

Archive graphing

Archive logging rate:	1 Minute (24 hour chart) ∨
Clear:	Clear archived data

SNMP MIB File Download

Download MIB File:	SNMP MIB File - Right click to save

Date and time settings

Current system time:	Wed, 20 Apr 2022 16:02:34
NTP Servers:	pool.ntp.org
	Leave blank to disable NTP
NTP sync now?	No ∨
NTP status:	Success
Time Zone:	-5 Hours
Manually set time?	No ∨
Date (MM/DD/YY):	04/20/22
Time (HH:MM:SS):	16:02:13

Miscellaneous

Signficant digits:	1
Temperature units:	Fahrenheit ∨

Submit Values   Cancel Changes

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Device Info
A custom site name can be entered here, and the model number, serial number, software version, and hardware version are shown here.

Logging
The SITEGUARD will log all measurements and alarms to an SD card that is plugged into the SITEGUARD board. Users can set the rate here, as well as clear the card, or append new measurements. The CSV log file can be downloaded here, as well as the Status page. You can also examine the log file using a terminal connection through the USB port. If the SD card fills up, the oldest sample is discarded when a new one is stored. The SITEGUARD custom site name under Device Settings is stored with the logged data, so that the source of the card can be identified after it removed from the SITEGUARD.

A SITEGUARD connected to a battery backup power system can monitor and log information about AC mains power outages, as well as all the other measurements for as long as the battery backup lasts. When a log file reaches 5 MB, it is renamed, and a new one is started. **Download and save all log files to your computer before clearing the log or data will be permanently lost.**

The SITEGUARD has the ability to save log entries when an alarm occurs by choosing "Log Alarms" > "Yes". You can log alarms, log periodically by setting the "Logging Rate" minutes, log both, or log none by choosing "Log Alarms">"No" and setting the "Logging Rate" to "0". The Alarm log entry is identified with label entry before the data entry, as in this example:

```
Jan 20 14:53:44 2016, ALARM, Digital output #1 inactive
Jan 20 14:53:44 2016, RMCU, Temp, 70.2 F, AC Line, 120.160 Volts, Ammeter #1, 100.0 Amps,
Voltmeter #1, 0.0 Volts, Voltmeter #2, 0.0 Volts, Voltmeter #3, 0.0 Volts, Voltmeter #4, 0.0
Volts, Voltmeter #5, 0.0 Volts, Alarm contact #1, Open, Alarm contact #2, Open, Alarm contact #3,
Open, Alarm contact #4, Open, Output #1, OFF/HIGH, Output #2, OFF/HIGH, Output #3, OFF/HIGH,
Output #4, OFF/HIGH
```

Archive graphing
Set the archive graphing sample rate for all analog channels by selecting the sample rate from the dropdown list. With 1440 samples for each graph you can see the following time spans: 1 Min (1 Day), 2 Min (2 Days), 7 Min (1 Week), 14 Min (2 Weeks), 28 Min (4 Weeks). This does not change the "Live View" mode which samples as fast as the

Date and Time Settings
Configuration for all date and time settings. Date and time is battery backed up on the card, and the values are saved in the logged samples. The real-time-clock can synchronize it's time to the network through an NTP server, or it can be set manually if a network is not available.

NTP servers can be used by entering **0.north-america.pool.ntp.org,** or another NTP server address into the **NTP Server box. Your networking firewall must allow access to this server.** An alternate NTP server can be configured in the second box.

Miscellaneous Settings
The number of significant digits to the right of the decimal point for the analog channels can be configured here. You can select up to 5 digits to the right of the decimal point.

Temperature can be configured to read in Fahrenheit or Celsius.

SENSOR SETUP

Sensor Setup

	Analog Inputs	Alarm color		Averaging
#1	AC Power Fail	● 🔴 ○ 🟢		None ⌄
#2	Amplifier Fail	● 🔴 ○ 🟢		None ⌄
#3	Battery Charger Fail	● 🔴 ○ 🟢		None ⌄
#4	30% Battery Discharge	● 🔴 ○ 🟢		None ⌄
#5	70% Battery Discharge	● 🔴 ○ 🟢		None ⌄
#6	Spare CH 6	● 🔴 ○ 🟢		None ⌄
#7	Antenna Fail	● 🔴 ○ 🟢		None ⌄
#8	Annunciator Internal Battery Voltage -	● 🔴 ○ 🟢		5 samples ⌄

	Digital Inputs	Alarm / Open	Type	Averaging
#1	Fault	○ 🔴 ● 🟢	GPIO ⌄	None ⌄
#2	Self Test	○ 🔴 ● 🟢	GPIO ⌄	None ⌄
#3		○ 🔴 ● 🟢	GPIO ⌄	None ⌄
#4		● 🔴 ○ 🟢	GPIO ⌄	None ⌄
#5		● 🔴 ○ 🟢	GPIO ⌄	None ⌄
#6		● 🔴 ○ 🟢	GPIO ⌄	None ⌄
#7		● 🔴 ○ 🟢	GPIO ⌄	None ⌄
#8		● 🔴 ○ 🟢	GPIO ⌄	None ⌄
#9		● 🔴 ○ 🟢	GPIO ⌄	None ⌄
#10		● 🔴 ○ 🟢	GPIO ⌄	None ⌄

Frequency Range: 1KHz - 600KHz ⌄

Digital Outputs	1 ⌄
Name:	1
Inactive Label:	Normal
Inactive Color:	Green/Left ⌄
Active Label:	ALARM
Active Color:	Red/Right ⌄
Alarmed Color:	Red/Right ⌄
Pulse Config:	No pulsing ⌄
Pulse Duration:	0.5 seconds ⌄
PWM Frequency:	Disabled ⌄
PWM Duty (0-100%):	0

Sensor Setup (continued – DAC and Scheduling)

	Analog Outputs	Setting (Volts)
#1	Fault REF V CH1-6	1
#2		0
#3		0
#4		0

	Other Inputs	Averaging	Config
#1		None	Not connected

Scheduled Outputs

#		
#1	Silent Mode Cancel	Cancelling Silence
	Enabled - Single	13:40 to 00:00
	☑ Sunday ☑ Monday ☑ Tuesday ☑ Wednesday ☑ Thursday ☑ Friday ☑ Saturday	
#2	Silent Mode Cancel	-------
	Disabled	00:00 to 00:00
	☐ Sunday ☐ Monday ☐ Tuesday ☐ Wednesday ☐ Thursday ☐ Friday ☐ Saturday	
#3	Silent Mode Cancel	-------
	Disabled	00:00 to 00:00
	☐ Sunday ☐ Monday ☐ Tuesday ☐ Wednesday ☐ Thursday ☐ Friday ☐ Saturday	
#4	Silent Mode Cancel	-------
	Disabled	00:00 to 00:00
	☐ Sunday ☐ Monday ☐ Tuesday ☐ Wednesday ☐ Thursday ☐ Friday ☐ Saturday	
#5	Silent Mode Cancel	-------
	Disabled	00:00 to 00:00
	☐ Sunday ☐ Monday ☐ Tuesday ☐ Wednesday ☐ Thursday ☐ Friday ☐ Saturday	
#6	Silent Mode Cancel	-------
	Disabled	00:00 to 00:00
	☐ Sunday ☐ Monday ☐ Tuesday ☐ Wednesday ☐ Thursday ☐ Friday ☐ Saturday	
#7	Silent Mode Cancel	-------
	Disabled	00:00 to 00:00
	☐ Sunday ☐ Monday ☐ Tuesday ☐ Wednesday ☐ Thursday ☐ Friday ☐ Saturday	
#8	Silent Mode Cancel	-------
	Disabled	00:00 to 00:00
	☐ Sunday ☐ Monday ☐ Tuesday ☐ Wednesday ☐ Thursday ☐ Friday ☐ Saturday	
#9	Silent Mode Cancel	-------
	Disabled	00:00 to 00:00
	☐ Sunday ☐ Monday ☐ Tuesday ☐ Wednesday ☐ Thursday ☐ Friday ☐ Saturday	
#10	Silent Mode Cancel	-------
	Disabled	00:00 to 00:00
	☐ Sunday ☐ Monday ☐ Tuesday ☐ Wednesday ☐ Thursday ☐ Friday ☐ Saturday	
#11	Silent Mode Cancel	-------
	Disabled	00:00 to 00:00
	☐ Sunday ☐ Monday ☐ Tuesday ☐ Wednesday ☐ Thursday ☐ Friday ☐ Saturday	
#12	Silent Mode Cancel	-------
	Disabled	00:00 to 00:00
	☐ Sunday ☐ Monday ☐ Tuesday ☐ Wednesday ☐ Thursday ☐ Friday ☐ Saturday	
#13	Silent Mode Cancel	-------
	Disabled	00:00 to 00:00
	☐ Sunday ☐ Monday ☐ Tuesday ☐ Wednesday ☐ Thursday ☐ Friday ☐ Saturday	
#14	Silent Mode Cancel	-------
	Disabled	00:00 to 00:00
	☐ Sunday ☐ Monday ☐ Tuesday ☐ Wednesday ☐ Thursday ☐ Friday ☐ Saturday	
#15	Silent Mode Cancel	-------
	Disabled	00:00 to 00:00
	☐ Sunday ☐ Monday ☐ Tuesday ☐ Wednesday ☐ Thursday ☐ Friday ☐ Saturday	
#16	Silent Mode Cancel	-------
	Disabled	00:00 to 00:00
	☐ Sunday ☐ Monday ☐ Tuesday ☐ Wednesday ☐ Thursday ☐ Friday ☐ Saturday	

Logging schedule

Disabled	00:00 to 00:00
☐ Sunday ☐ Monday ☐ Tuesday ☐ Wednesday ☐ Thursday ☐ Friday ☐ Saturday	

If set to **Disabled**, then the unit will always log sensor values and check for new alarms. If set to **Enabled**, then specified time is the only time it will log sensor values, log alarms, transmit alarms (SNMP or e-mail) or set digital outputs because of alarms. Regardless of this setting or schedule, alarms will always be cleared when the alarm condition has passed.

Submit Values   Cancel Changes

Sensor Setup Notes

The admin user can set custom names for each input or output. Factory set names will be supplied, but they can be re-written to be more descriptive, or to manage larger systems. Alarm colors should not be changed for the annunciator. If any of the name fields on the left are left blank, the channel will be hidden on the status screen.

A running average can be specified for any of the analog channels, including the AC voltage and Temperature monitors. The number of averages is selected from a dropdown list for each channel. This can be used to quiet any noise or false alarms due to transients. This could interfere with alarm reporting or the self test timing, so use this sparingly when configuring your system.

Digital Outputs are factory-configured for integrated operation with the annunciator board, and must not be changed.

Analog and digital alarms are set up in the "Alarm Setup" screen. See the "Alarm Setup" section for more information. These levels are for general use. Do not change them before consulting with factory.

Up to 16 "Scheduled Outputs" can be configured based on the built-in Real Time Clock. This allows the Audible alarm mute to be cancelled one or more times per day. Only change the time for Output #8. Do not change other outputs or settings. More times can be added by copying the settings of the first one, and entering a different time.

Logging can also be scheduled to start and stop at specified times and days of the week. If this is disabled, logging is off or continuous as specified on the Device Setup Page.

ALARM SETUP – ANALOG CHANNELS

Alarm Setup

Analogs	AC Power Fail ⌄

Under alarm

Threshold: < [1] Volts
Allow auto Recovery: [Yes ⌄]
Recovery: [1.5] Volts
Send e-mail: Alarm Recovery

Alarm	Recovery	
☐	☐	E-mail address #1
☐	☐	E-mail address #2
☐	☐	E-mail address #3
☐	☐	E-mail address #4
☐	☐	E-mail address #5
☐	☐	E-mail address #6

Alarm contacts:
☐ 1
☐ 2
☐ 3
☐ 4
☐ 5
☐ 6
☐ 7
☐ Silent Mode Cancel

Over alarm

Threshold: > [7] Volts
Allow auto Recovery: [Yes ⌄]
Recovery: [6] Volts
Send e-mail: Alarm Recovery

Alarm	Recovery	
☐	☐	E-mail address #1
☐	☐	E-mail address #2
☐	☐	E-mail address #3
☐	☐	E-mail address #4
☐	☐	E-mail address #5
☐	☐	E-mail address #6

Alarm contacts:
☑ 1
☐ 2
☐ 3
☐ 4
☐ 5
☐ 6
☐ 7
☐ Silent Mode Cancel

Duration required: [0.5 seconds ⌄]

Display Range: [-1] to [12] Volts

ALARM SETUP – TEMPERATURE

External Temperature

Under alarm

Threshold: < `32` F

Allow auto Recovery: `Yes ▾`

Recovery: `32` F

Send e-mail: Alarm Recovery

☐	☐	E-mail address #1
☐	☐	E-mail address #2
☐	☐	E-mail address #3
☐	☐	E-mail address #4
☐	☐	E-mail address #5
☐	☐	E-mail address #6

Alarm contacts: ☐ 1
☐ 2
☐ 3
☐ 4
☐ 5
☐ 6
☐ 7
☐ Silent Mode Cancel

Over alarm

Threshold: > `200` F

Allow auto Recovery: `Yes ▾`

Recovery: `180` F

Send e-mail: Alarm Recovery

☐	☐	E-mail address #1
☐	☐	E-mail address #2
☐	☐	E-mail address #3
☐	☐	E-mail address #4
☐	☐	E-mail address #5
☐	☐	E-mail address #6

Alarm contacts: ☐ 1
☐ 2
☐ 3
☐ 4
☐ 5
☐ 6
☐ 7
☐ Silent Mode Cancel

Duration required: `Instant (0 seconds) ▾`

Display Range: `0` to `200` F

Internal Temperature

Display Range: `0` to `200` F

Internal Humidity

Display Range: `0` to `100` %

Digital Inputs	`Fault ▾`

Alarm Condition: `Never Alarm ▾`

Email: `No ▾`

Duration required: `Instant (0 seconds) ▾`

ALARM SETUP – DIGITAL CHANNELS

Digital Inputs — Alarm contact #1 ▾

Alarm Condition: Never Alarm ▾
Email: No ▾
Duration required: Instant (0 seconds) ▾

Digital Outputs

Output #1: Never alarm ▾ Never e-mail ▾
On alarm, go to Active ▾

Output #2: Never alarm ▾ Never e-mail ▾
On alarm, go to Active ▾

Output #3: Never alarm ▾ Never e-mail ▾
On alarm, go to Active ▾

Output #4: Never alarm ▾ Never e-mail ▾
On alarm, go to Active ▾

Output #5: Never alarm ▾ Never e-mail ▾
On alarm, go to Active ▾

Output #6: Never alarm ▾ Never e-mail ▾
On alarm, go to Active ▾

Output #7: Never alarm ▾ Never e-mail ▾
On alarm, go to Active ▾

Output #8: Never alarm ▾ Never e-mail ▾
On alarm, go to Active ▾

Global settings

Log all alarms: No ▾

[Submit Values] [Cancel Changes]

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ALARM SETUP – SCHEDULING

Digital Outputs

1: [Never alarm ▼]

[On alarm, go to ALARM ▼]

- ☐ E-mail address #1 on alarm
- ☐ E-mail address #2 on alarm
- ☐ E-mail address #3 on alarm
- ☐ E-mail address #4 on alarm
- ☐ E-mail address #5 on alarm
- ☐ E-mail address #6 on alarm

2: [Never alarm ▼]

[On alarm, go to ALARM ▼]

- ☐ E-mail address #1 on alarm
- ☐ E-mail address #2 on alarm
- ☐ E-mail address #3 on alarm
- ☐ E-mail address #4 on alarm
- ☐ E-mail address #5 on alarm
- ☐ E-mail address #6 on alarm

3: [Never alarm ▼]

[On alarm, go to ALARM ▼]

- ☐ E-mail address #1 on alarm
- ☐ E-mail address #2 on alarm
- ☐ E-mail address #3 on alarm
- ☐ E-mail address #4 on alarm
- ☐ E-mail address #5 on alarm
- ☐ E-mail address #6 on alarm

4: [Never alarm ▼]

[On alarm, go to ALARM ▼]

- ☐ E-mail address #1 on alarm
- ☐ E-mail address #2 on alarm
- ☐ E-mail address #3 on alarm
- ☐ E-mail address #4 on alarm
- ☐ E-mail address #5 on alarm
- ☐ E-mail address #6 on alarm

5: [Never alarm ▼]

[On alarm, go to ALARM ▼]

- ☐ E-mail address #1 on alarm
- ☐ E-mail address #2 on alarm
- ☐ E-mail address #3 on alarm
- ☐ E-mail address #4 on alarm
- ☐ E-mail address #5 on alarm
- ☐ E-mail address #6 on alarm

6: [Never alarm ▼]

[On alarm, go to ALARM ▼]

- ☐ E-mail address #1 on alarm
- ☐ E-mail address #2 on alarm
- ☐ E-mail address #3 on alarm
- ☐ E-mail address #4 on alarm
- ☐ E-mail address #5 on alarm
- ☐ E-mail address #6 on alarm

7: [Never alarm ▼]

[On alarm, go to ALARM ▼]

- ☐ E-mail address #1 on alarm
- ☐ E-mail address #2 on alarm
- ☐ E-mail address #3 on alarm
- ☐ E-mail address #4 on alarm
- ☐ E-mail address #5 on alarm
- ☐ E-mail address #6 on alarm

Silent Mode Cancel: [Alarm on Cancelling Silence ▼]

[On alarm, go to Cancelling Silence ▼]

- ☐ E-mail address #1 on alarm
- ☐ E-mail address #2 on alarm
- ☐ E-mail address #3 on alarm
- ☐ E-mail address #4 on alarm
- ☐ E-mail address #5 on alarm
- ☐ E-mail address #6 on alarm

Global settings

Log all alarms: [No ▼]

[Submit Values] [Cancel Changes]

ALARM SETUP EXAMPLE FOR BAR GRAPH

The following is an example to set up alarms and bar graph limits for the status page.
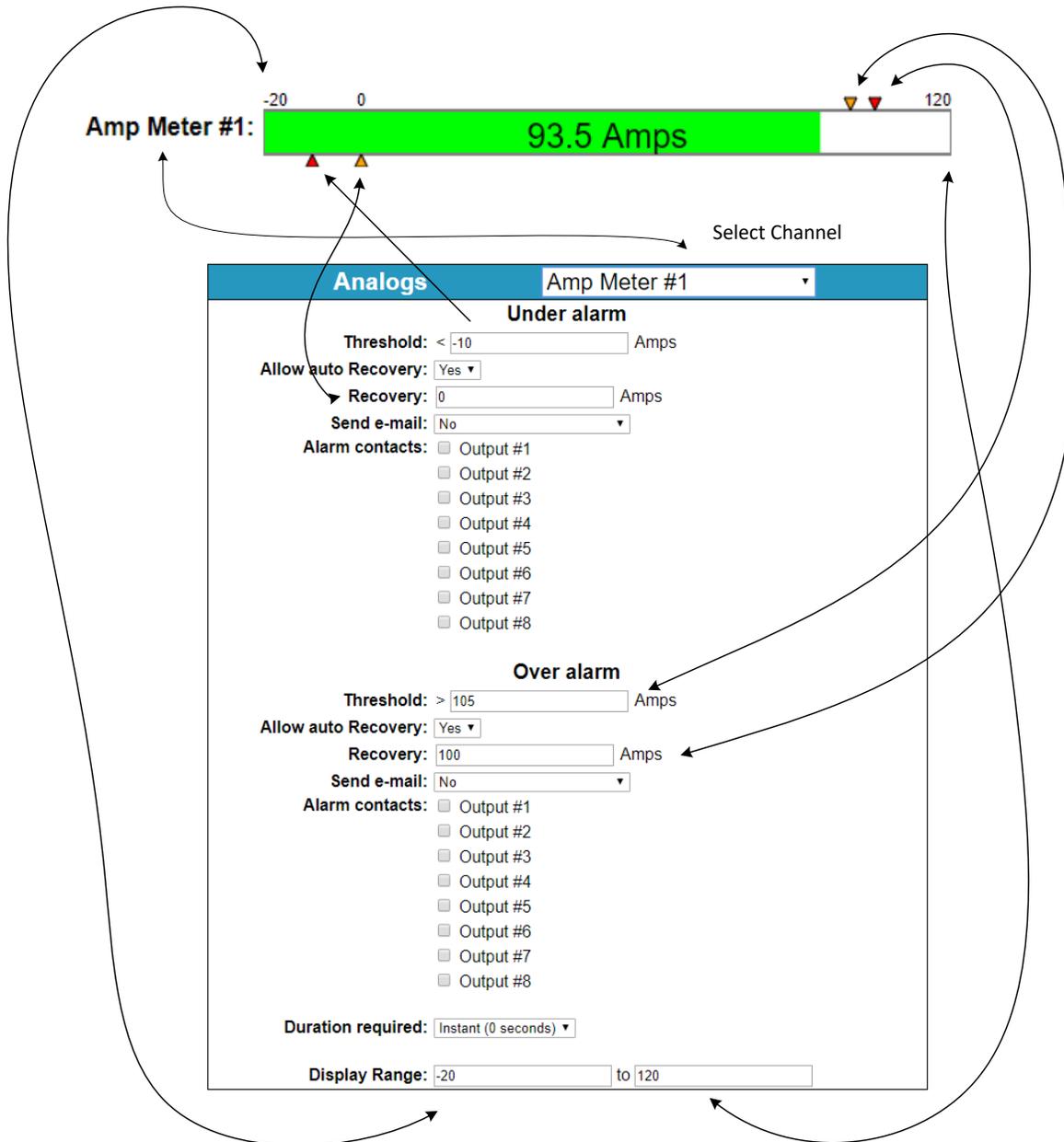
Alarm Setup Notes

To set up analog alarms, first you must select the alarm channel to set. This is accomplished by selecting the custom name of the channel in the dropdown box next to the "Analogs" label. For example, we are looking at the settings for the "Amp Meter #1" channel in the screen above. "Ammeter #1" is the name given to this channel in the Sensor Setup screen. AC Monitor and Temperature channels have their own section.

Do not change the "Alarm Contacts" factory setting for any channel or improper operation will result.

Note: The maximum temperature of the temperature sensor is +300 F. The low range of the sensor is about +36 F. The operating temperature range of the SITEGUARD is -22 F to + 140 F

This screen is where thresholds are set to define alarm conditions for the analog channels. You can choose to set an email notification when the alarm conditions are met, and you can assign the alarm to one of four alarm contacts.

<u>Factory Default Alarm Settings</u>

MEASUREMENT	UNITS	OVER ALARM	OVER ALARM RECOVER	UNDER ALARM	UNDER ALARM RECOVER
AC Power Fail	Volts	7	6	1	1.5
Amplifier Fail	Volts	7	6	1	1.5
Battery Charger Fail	Volts	7	6	1	1.5
30% Battery Discharge	Volts	7	6	1	1.5
70% Battery Discharge	Volts	7	6	1	1.5
Spare CH6	Volts	7	6	1	1.5
Antenna Fail	Volts	2.5	2.2	0.7	1
Annunciator Internal Battery Voltage	Volts	14.5	15	10	10.5

Digital alarms for inputs and outputs as well as the email notifications for them are also configured in this screen. Digital input alarm conditions can be set to "Never alarm", "Alarm on close", Alarm on open", or "Alarm on open or close". Digital output alarm conditions can be set to "Never Alarm", "Alarm on <user name for inactive state>", "Alarm on <user name for active state>", "Alarm on (both states)".

E-mail notifications can be set for each analog alarm threshold, the recovery, as well as digital alarm conditions.

Global Settings" "Log all alarms" is the same as "Log Alarms" on the "device Setup" screen.

You can also set a duration for the analog and digital input alarms. Selecting a duration from the dropdown list means that the alarm condition must be sustained for this length of time before the alarm is triggered. This applies to alarms shown on the status screen, email notifications, and traps when the alarm is set, and when it is cleared.

USER SETUP

Users

#1	**Username:** control	**Access:** Control ▾	
	Web password:	**Reenter password:**	
	SNMPv3: Disabled ▾ **Auth:**	**Privacy:**	
#2	**Username:** admin	**Access:** Admin ▾	
	Web password:	**Reenter password:**	
	SNMPv3: Disabled ▾ **Auth:**	**Privacy:**	
#3	**Username:**	**Access:** Disabled ▾	
	Web password:	**Reenter password:**	
	SNMPv3: Disabled ▾ **Auth:**	**Privacy:**	
#4	**Username:**	**Access:** Disabled ▾	
	Web password:	**Reenter password:**	
	SNMPv3: Disabled ▾ **Auth:**	**Privacy:**	
#5	**Username:**	**Access:** Disabled ▾	
	Web password:	**Reenter password:**	
	SNMPv3: Disabled ▾ **Auth:**	**Privacy:**	
#6	**Username:**	**Access:** Disabled ▾	
	Web password:	**Reenter password:**	
	SNMPv3: Disabled ▾ **Auth:**	**Privacy:**	
#7	**Username:**	**Access:** Disabled ▾	
	Web password:	**Reenter password:**	
	SNMPv3: Disabled ▾ **Auth:**	**Privacy:**	
#8	**Username:**	**Access:** Disabled ▾	
	Web password:	**Reenter password:**	
	SNMPv3: Disabled ▾ **Auth:**	**Privacy:**	

Leave password/keys blank to not change them.

It can take several minutes after changing SNMPv3 keys before they take affect. Device supports AES (128bit, CFB) for privacy protocol and MD5 for auth protocol.

[Update Users] [Cancel Changes]

User Setup – Continued

Miscellaneous

MIB URL: /snmpr3v3.mib

[Submit Values] [Cancel Changes]

Factory Reset

This will restore ALL settings to original factory default values, including the password.
Remote communications may be lost.
On-site reconfiguration may be required.
Some settings require a power-cylce/reboot to take effect

Type the current password for the 'admin' user to confirm

Password: [   ] [Restore]

Network Reset

Pressing and holding down the button on the unit for over 20 seconds will reset all the network settings and passwords to factory default. The button is located on the PCB.

User Setup Notes

Only Admin level users have access to this page. Up to 8 Users can be configured.

Password changes and SITEGUARD hard resets are performed by using this page. Care should be taken when changing any of these settings.

SNMPV3 Security settings for each user are also on this page. To enable SNMPV3, see the Device Setup page.

NOTE: To hard reset your device back to factory network settings, press the red button on the SITEGUARD PCB and hold it for more than 20 seconds. You will need to re-connect to the SITEGUARD through your web browser by entering the factory supplied IP address and HTTP port (see Network Setup).

NOTE: Using the factory reset here or will erase all annunciator settings, and they must be restored by the factory, and the product must be reconfigured for your system.

REMOTE MONITORING AND CONTROL STATUS PAGE

Status screen

This screen shows the status of all analog and digital inputs, as well as analog and digital outputs. A user can also download the Log file from this page. This example shows the factory settings

CHARTS SCREEN – DEFAULT (ARCHIVE DATA)

CHARTS SCREEN – (LIVE DATA)

SiteGuard© - Annunciator RMCU #80008
Building 1, Floor 1, Room 1

Status	Device Setup	Sensor Setup	Alarm Setup
User Setup	Network Setup	E-Mail Setup	Logout (factory)

SiteGuard© Status
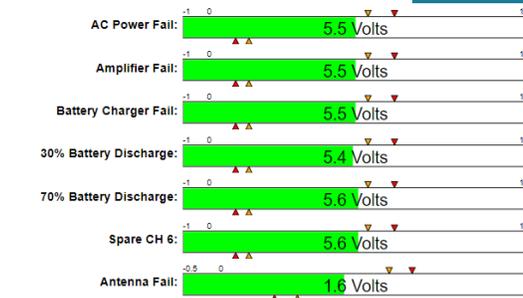
AC Power Fail: 5.5 Volts

Amplifier Fail: 5.5 Volts

Battery Charger Fail: 5.5 Volts

30% Battery Discharge: 5.4 Volts

70% Battery Discharge: 5.6 Volts

Spare CH 6: 5.6 Volts

Antenna Fail: 1.6 Volts

Annunciator Internal Battery Voltage - : 12.7 Volts
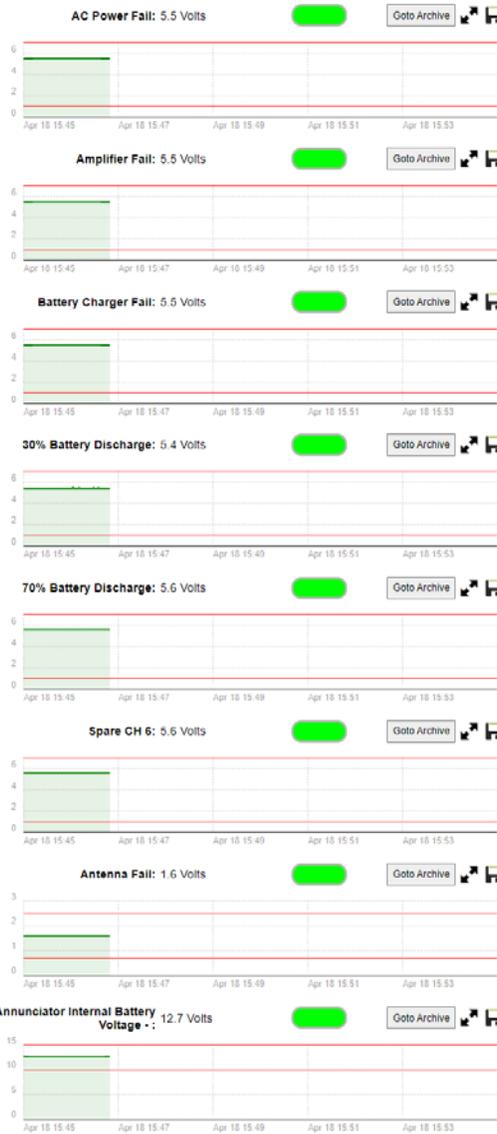
Internal Temperature: 84 F
Internal Humidity: 23.72 %

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Status screen Notes

The default screen after clicking the "See Charts" button shows the archived data for each channel. It may take 30 seconds or so to load the data and display the channels. After initial loading the samples will be displayed as taken.

NOTE: If you just started the SITEGUARD and no data has been sampled, you will have to wait for the archive sample period to pass before seeing the first data point. Archive data always grows from the right. The internal Real Time Clock must be set properly before archive data will appear. Archive data can be downloaded as a CSV file (each channel) by right-clicking the disc symbol. Left click will show the data on screen.

Clicking the "Goto Live" button for each channel will show data samples at the fastest rate, approximately 0.5 second, and the live data always grows from the left, with the chart data shifting left when the chart is filled.

Each channel can be expanded or contracted vertically for better viewing by clicking the ⬈ symbol.

SITEGUARD MAINTENANCE

Battery

The battery (CR2032) on the SITEGUARD board is used to back up the real time clock for logging purposes. Logged in users can see the current system time on the Device Setup page under Date and Time settings.

If logging is enabled, download and save the data periodically, then clear the log files. If you just let it run, you will end up with Gigabytes of data broken up into 5 MB files that must be downloaded individually and this will take a very long time.

You can also remove the card and work with it on the PC using a card reader. Replace the card when finished.

.

Section 6: Internal Information

Annunciator Board Internal Connector Layout

J104
To Annunciator
Power Supply

J103
To SiteGraph

J600
Self Test LED
(For External LED)

J300
Mute LED
(For External LED)

J102 Self Test Start

J101 Mute

J111 Cancel Mute

J110 Sonalert Connector
(Disconnect to Disable)
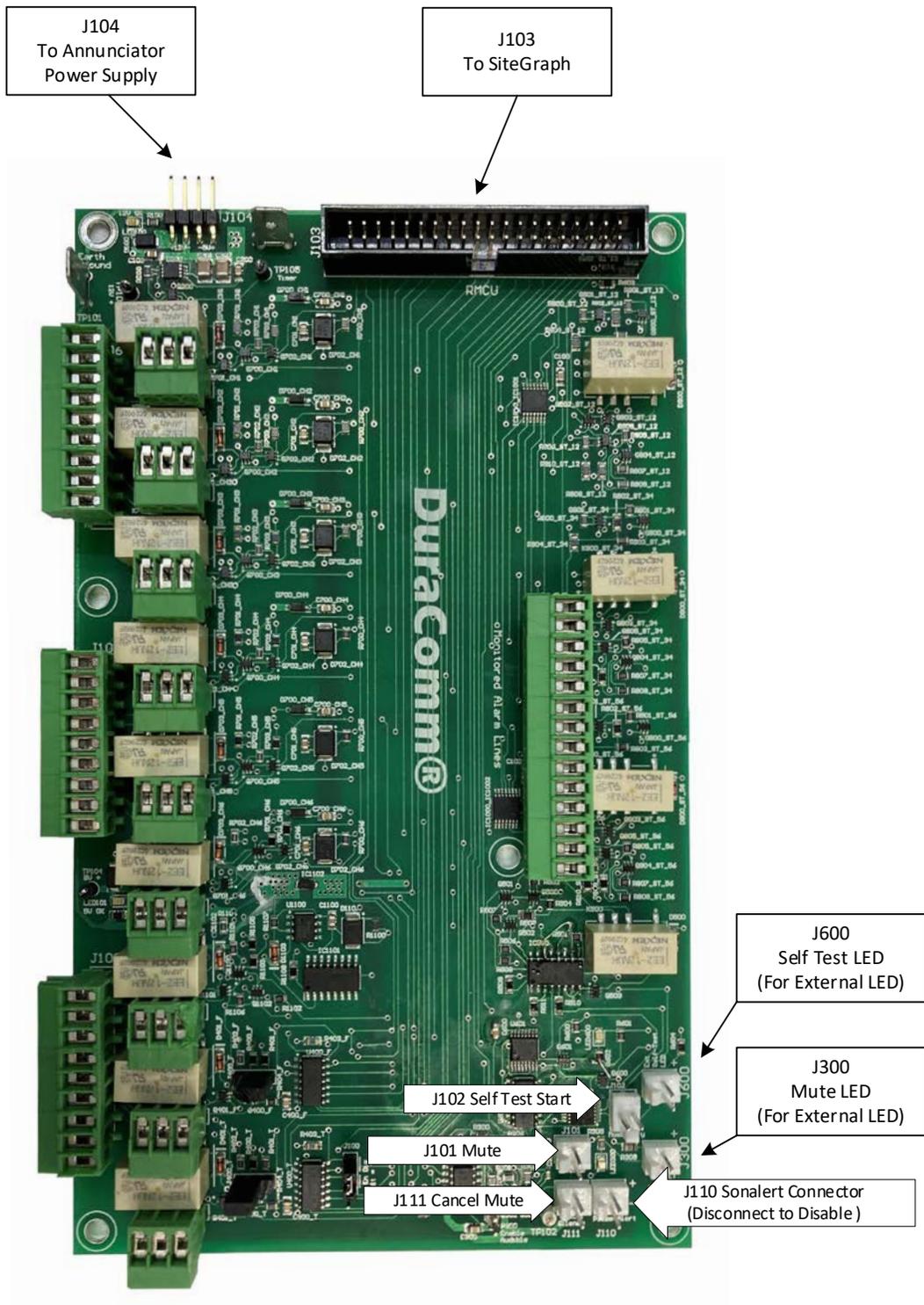
Figure 8:Annunciator Board Internal Connections

Annunciator
RMCU Connector
J103

	1	2		
V1+	□	□	V1-	Channel 1 Test Point
V2+	□	□	V2-	Channel 2 Test Point
V3+	□	□	V3-	Channel 3 Test Point
V4+	□	□	V4-	Channel 4 Test Point
V5+	□	□	V5-	Channel 5 Test Point
V6+	□	□	V6-	Channel 6 Test Point
V7+	□	□	V7-	Channel 7 Test Point
NC	□	□	NC	
DO1	□	□	GO1	Channel 1 Trouble Control
DO2	□	□	GO2	Channel 2 Trouble Control
DO3	□	□	GO3	Channel 3 Trouble Control
DO4	□	□	GO4	Channel 4 Trouble Control
DO5	□	□	GO5	Channel 5 Trouble Control
DO6	□	□	GO6	Channel 6 Trouble Control
DO7	□	□	GO7	Channel 7 Trouble Control
DO8	□	□	GO8	Audible Alarm Cancel Control
DI1	□	□	GI1	System Fault
DI2	□	□	GI2	Self Test
DA1	□	□	DA2	DA1 = CH1-6 Fault V, DA2 unused
	□	□		
	39	40		

Figure 9: J103 Connector Pinout

Annunciator Board Jumper Options (Only Change for Non-Standard Installation)

Default Configuration Shown

Figure 10: Annunciator Board Jumper Configuration

Annunciator Board Test Points and LEDs

Green LED
+12V

TP100
12V GND Quick Connect

TP101
5V GND2 Quick Connect

TP103 +12V Test Point
Referenced to GND at TP100

TP105 Timer Signal
Referenced to GND at TP100

TP104 +5V Test Point
Referenced to GND2 at TP101

Green LED
+5V

Blue LED
Self Test

Green LED
Muted

TP102
Audible Alarm Enable
Referenced to GND at TP100
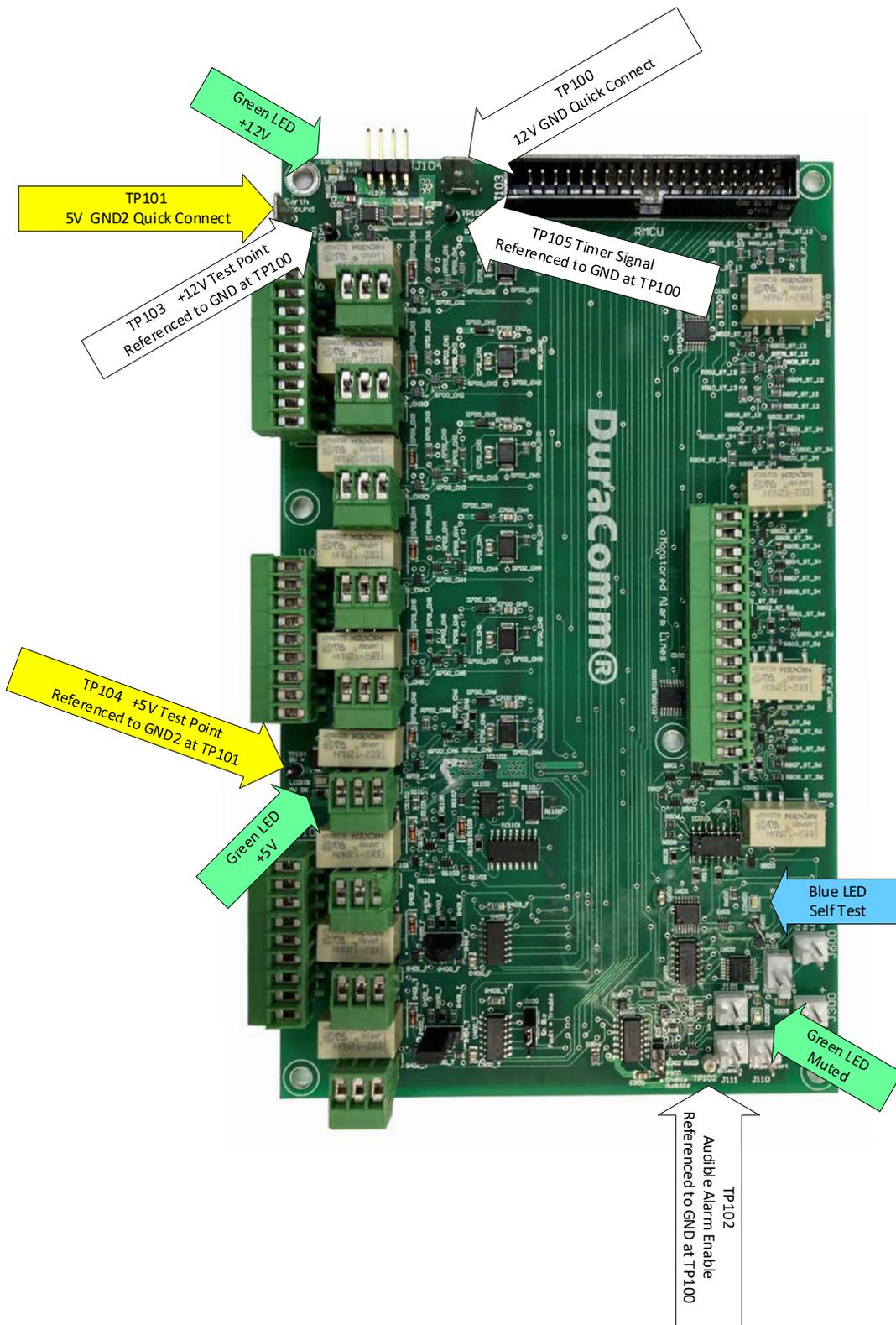
Figure 11: Annunciator Board LEDs and Test Points

Section 7 | Specifications

Model	PSDA-MU
AC Input Voltage	90-264 VAC Auto-Ranging, 47-63 HZ
AC Input Amperage MAX	0.7A /100VAC; 0.35A/230VAC
AC Inrush Current	40A/230VAC
Load Regulation	± 0.5 %
Typical Efficiency	78 %
Working Temperature Range	32 to 122F (0 C to 50 C)
Storage Temperature Range	-4 to 185 F (-20 C to 85 C)
Withstand Voltage	I/P-O/P: 3KVAC
Enclosure	NEMA 4, UL Listed Enclosure E333443
Product Dimensions	10 W x 12 H x 6.5 D
Shipping Weight	12 lbs.
Battery	MK Battery ES7-12 T2
Network Connector	RJ-45 (10/100 Ethernet) with activity LEDs
Backup Battery (for Real Time Clock)	CR2032
Memory Card	Micro SD
Alarm Notifications	Email and/or SNMP
Logging Rate	1 minute resolution, 1 minute to 1 hour
Log Download Format	Comma Separated Values (CSV) File
Line Chart Archive Sample Rate (Minutes) = chart width (1440 samples)	1 Min=1 Day, 2 Min=2 Days, 7 Min=1 Week, 14 Min=2 Weeks, 28 Min=4 Weeks

NOTE: Specifications are subject to change without notice.

ACCESSORY KIT (INCLUDED)

Ethernet Cable.. 3 feet
10K EOL resistors 6
51 Ohm EOL resistor.. 1

Section 8 | LIMITED WARRANTY

DuraComm warrants to the initial end user, each power supply manufactured by DuraComm to be free from defects in material and workmanship, when in normal use and service for a period of three years from the date of purchase, from an authorized DuraComm dealer.

Should a product manufactured by DuraComm fail or malfunction due to manufacturing defect, or faulty component, DuraComm, at its option, will repair or replace the faulty product or parts thereof, which, after examination by DuraComm, prove to be defective or not operational according to specifications in effect at the time of sale to the initial end user. The product that is replaced or repaired under the provisions of this warranty, will be warranted for the remainder of the original warranty period, only, and will not extend into a new three year warranty period.

The limited warranty does not extend to any DuraComm product which has been subject to misuse, accidental damage, neglect, incorrect wiring not associated with manufacture, improper charging voltages, or any product which has had the serial number removed, altered, defaced, or changed in any way.

DuraComm reserves the right to change, alter, or improve the specifications of its products at any time, and by so doing, incurs no obligation to install or retrofit any such changes or improvements in or on products manufactured prior to inclusion of such changes.

DuraComm requires any product needing in or out of warranty service to be returned to DuraComm. All requests for warranty service must be accompanied by proof of purchase, such as bill of sale with purchase date identified. DuraComm is not responsible for any expenses or payments incurred for the removal of the product from its place of use, transportation or shipping expenses to the place of repair, or return expenses of a repaired or replacement product to its place of use.

The implied warranties which the law imposes on the sale of this product are expressly LIMITED, in duration, to the three (3) year time period specified herein. DuraComm will not be liable for damages, consequential or otherwise, resulting from the use and operation of this product, or from the breach of this LIMITED WARRANTY.

Some states do not allow limitations on the duration of the implied warranty or exclusions or limitations of incidental or consequential damages, so said limitations or exclusions may not apply to you. This warranty gives you specific legal rights which vary from state to state.

This warranty is given in lieu of all other warranties, whether expressed, implied, or by law. All other warranties, including WITHOUT LIMITATION, warranties of merchantability and fitness or suitability for a particular purpose, are specifically excluded. DuraComm reserves the right to change or modify its warranty and service programs without prior notice.

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