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# A12B SNMP V3 SCADA Interface Option 21X

## Setup Instructions

*This manual is only valid for A12B Chargers equipped with S2A-525C card with P525D1001 software and the S2A-389S communications board with P389S-21XA-03 software.*

## Default Settings

IP Address: 192.168.0.6
Subnet: 255.255.255.0
Gateway: 192.168.0.1
Traps: Disabled
Trap Receiver IP: 0.0.0.0

### Snmp V3 Default Settings

User #1
USM User: lamarche
Hash Type: MD5
Auth Password: auth12345
Privacy Type: AES128
Privacy Password: priv12345

User #2
USM User: SnmpAdmin
Hash Type: SHA1
Auth Password: DesPlaines
Privacy Type: None
Privacy Password: illinois

User #3
USM User: root
Hash Type: None
Auth Password: authAdmin
Privacy Type: None
Privacy Password: privAdmin

## Web Interface

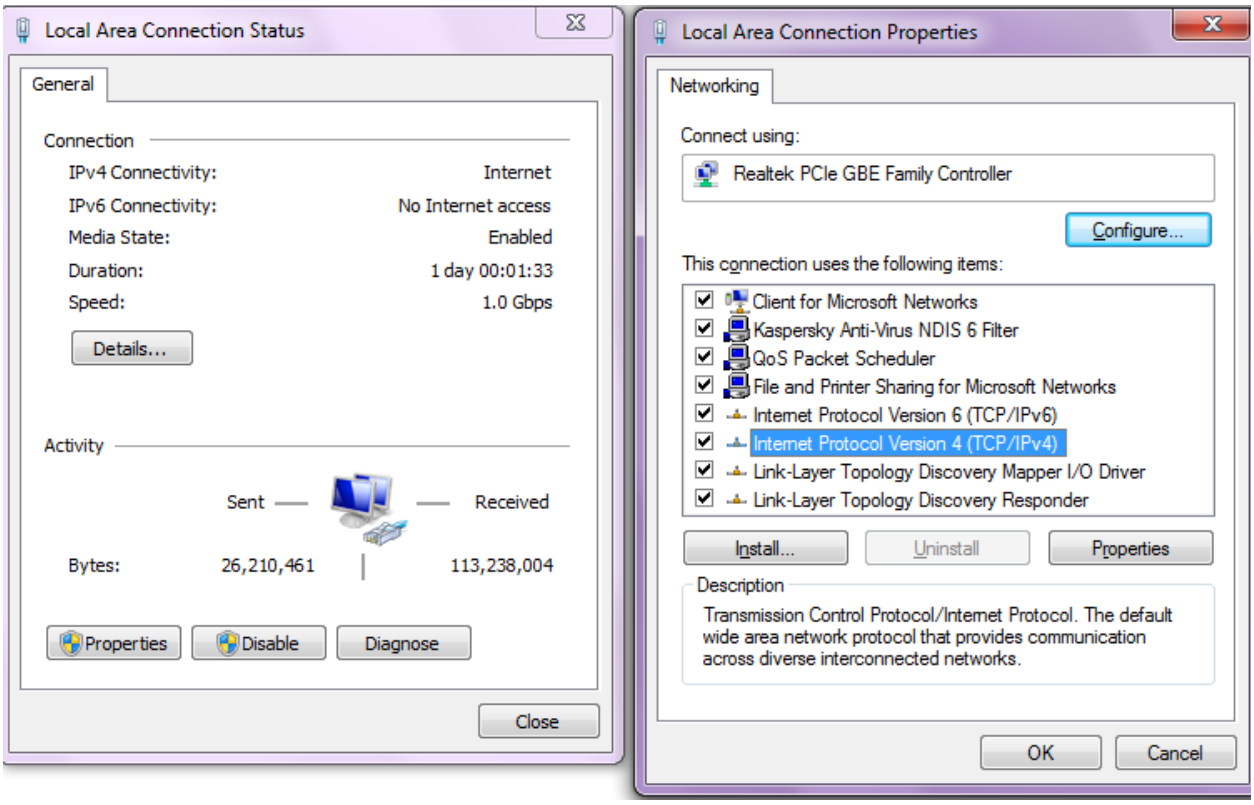
All settings are available through a web interface that may be accessed at;
http://192.168.0.6
Default Username: admin
Default Password: lamarche
IP Address: 192.168.0.6
Host Name: LMCBOARD

## Setting up a Local Network Connection using Static IP or DHCP

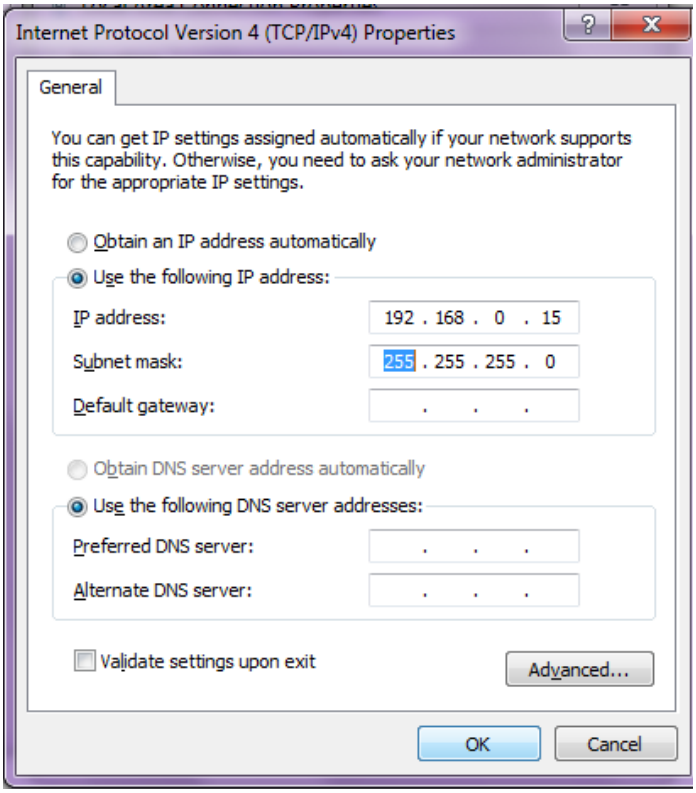
**Static IP Set Up:**


Connect an Ethernet Cable between the PC and the communications board labeled S2A-389S. Open the **Control Panel** through the Windows start menu. In Control Panel double click "**Network Connections**". In network connections, right click "**Local Area Connection**" and select "**Status**" from the drop-down menu.

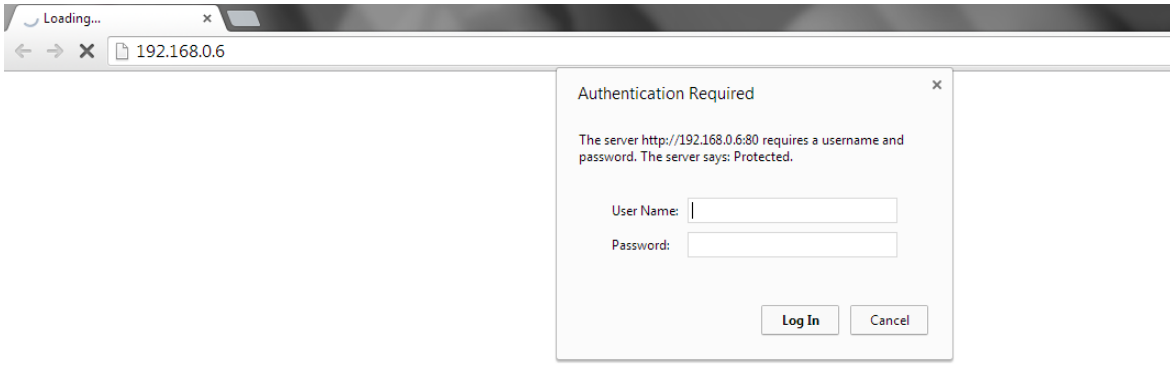
From Local Area Connection Status window, select "**Properties**" in the bottom left corner. From the properties menu, select "**Internet Protocol Version 4 (TCP/IPv4)**" and click **Properties**.



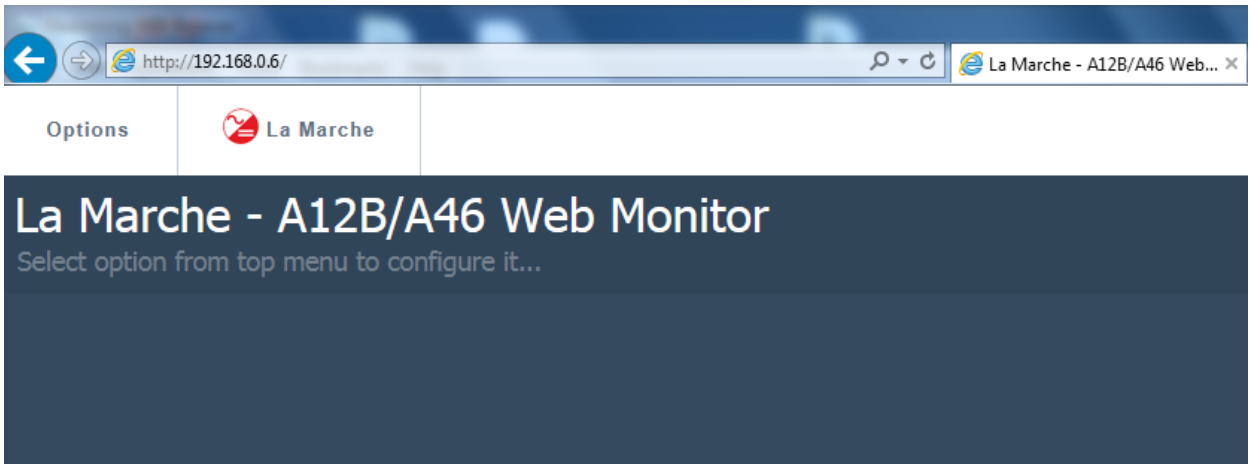

From this new window, enter the desired IP address (192.168.0.15 in the example below) other than the system IP address i.e. **192.168.0.6** and Subnet mask to "255.255.255.0". Click "**Ok**" to save the settings and exit out.



Open Internet Explorer (or any other browser) and enter the IP Address/Host Name of the system **192.168.0.6/** or **http://LMCBOARD** in the address bar. The La Marche A12B website will be loaded similar to the one below. The default username is "admin" and password is "lamarche".



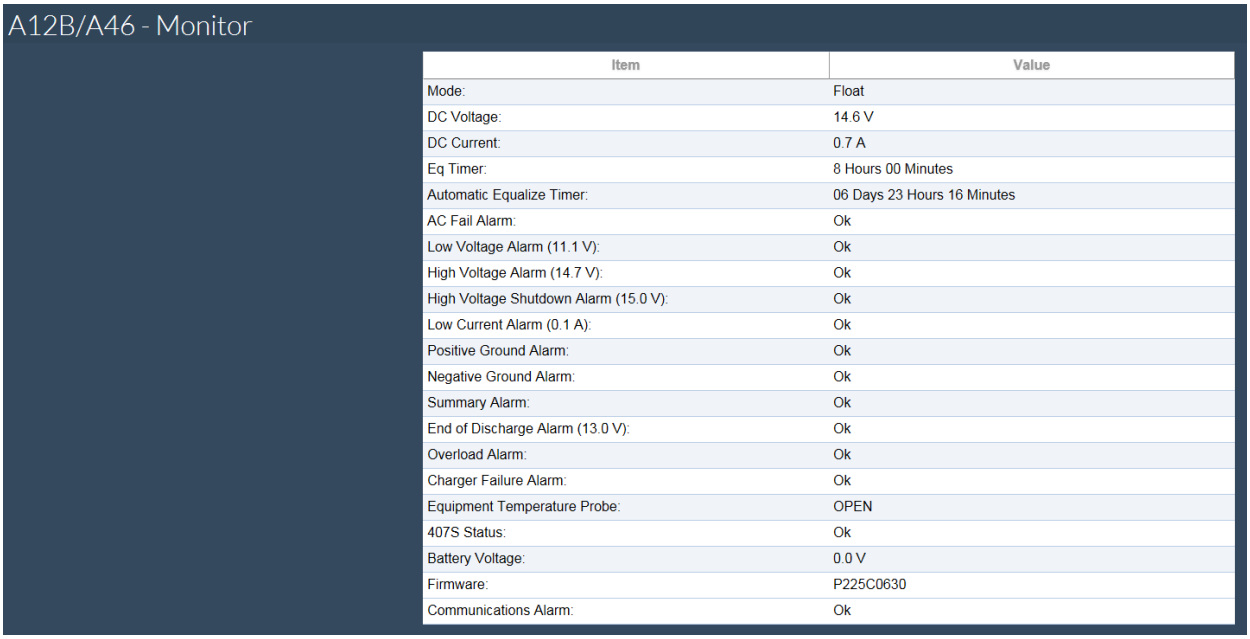

Once logged in, the webpage will look similar to one below.




**Options**

The Web Monitor allows charger monitoring and basic parameter control.
**Click on the Options to access a list of menus.**
**Note – The "UNDO" button restores the last saved setting. Clicking this button after the new settings have been "Submitted" will not revert back to previous saved settings.**

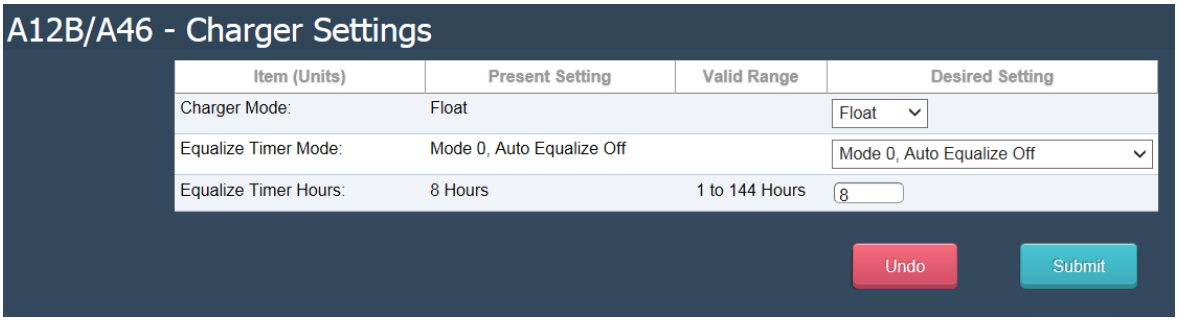
**Monitor** – the following parameters can be monitored live.



A12B/A46 - Monitor

| Item | Value |
|---|---|
| Mode: | Float |
| DC Voltage: | 14.6 V |
| DC Current: | 0.7 A |
| Eq Timer: | 8 Hours 00 Minutes |
| Automatic Equalize Timer: | 06 Days 23 Hours 16 Minutes |
| AC Fail Alarm: | Ok |
| Low Voltage Alarm (11.1 V): | Ok |
| High Voltage Alarm (14.7 V): | Ok |
| High Voltage Shutdown Alarm (15.0 V): | Ok |
| Low Current Alarm (0.1 A): | Ok |
| Positive Ground Alarm: | Ok |
| Negative Ground Alarm: | Ok |
| Summary Alarm: | Ok |
| End of Discharge Alarm (13.0 V): | Ok |
| Overload Alarm: | Ok |
| Charger Failure Alarm: | Ok |
| Equipment Temperature Probe: | OPEN |
| 407S Status: | Ok |
| Battery Voltage: | 0.0 V |
| Firmware: | P225C0630 |
| Communications Alarm: | Ok |

**Charger Settings** – Allows the user to change the charger mode of operation and set Equalize mode settings.

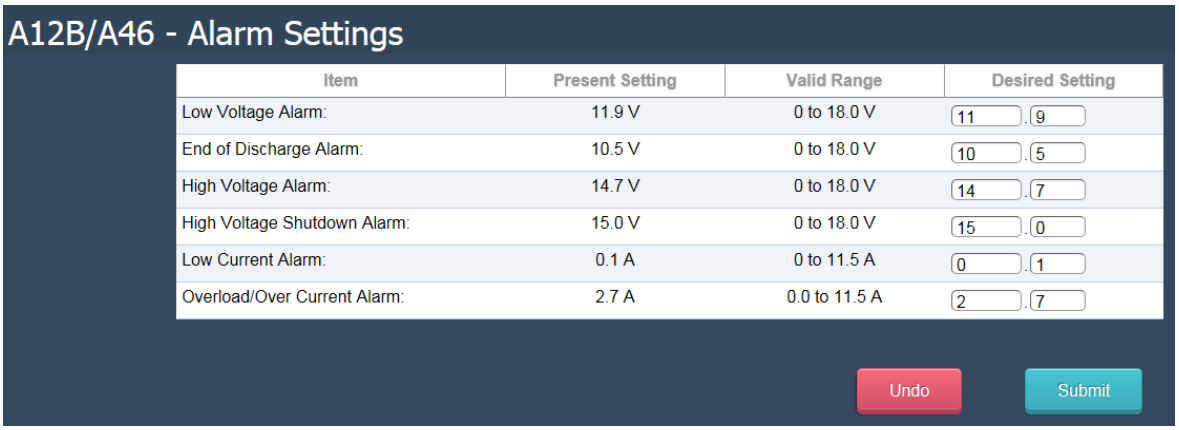


A12B/A46 - Charger Settings

| Item (Units) | Present Setting | Valid Range | Desired Setting |
|---|---|---|---|
| Charger Mode: | Float | | Float |
| Equalize Timer Mode: | Mode 0, Auto Equalize Off | | Mode 0, Auto Equalize Off |
| Equalize Timer Hours: | 8 Hours | 1 to 144 Hours | 8 |

Undo Submit

**Alarm Settings** – Allows the user to access and change the Alarm thresholds.



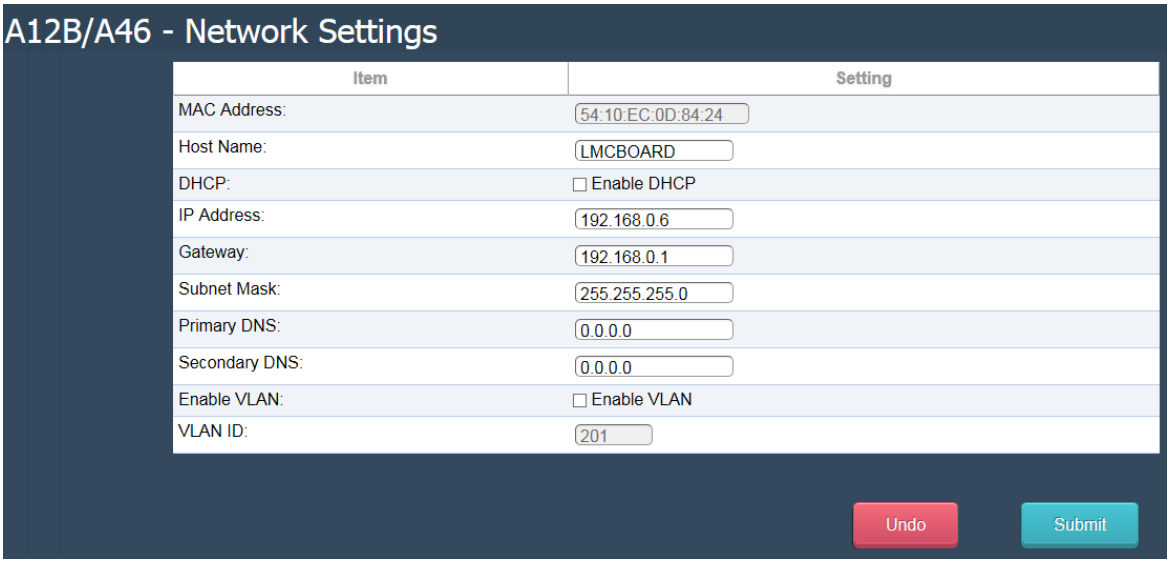
A12B/A46 - Alarm Settings

| Item | Present Setting | Valid Range | Desired Setting |
|---|---|---|---|
| Low Voltage Alarm: | 11.9 V | 0 to 18.0 V | 11 . 9 |
| End of Discharge Alarm: | 10.5 V | 0 to 18.0 V | 10 . 5 |
| High Voltage Alarm: | 14.7 V | 0 to 18.0 V | 14 . 7 |
| High Voltage Shutdown Alarm: | 15.0 V | 0 to 18.0 V | 15 . 0 |
| Low Current Alarm: | 0.1 A | 0 to 11.5 A | 0 . 1 |
| Overload/Over Current Alarm: | 2.7 A | 0.0 to 11.5 A | 2 . 7 |

Undo Submit

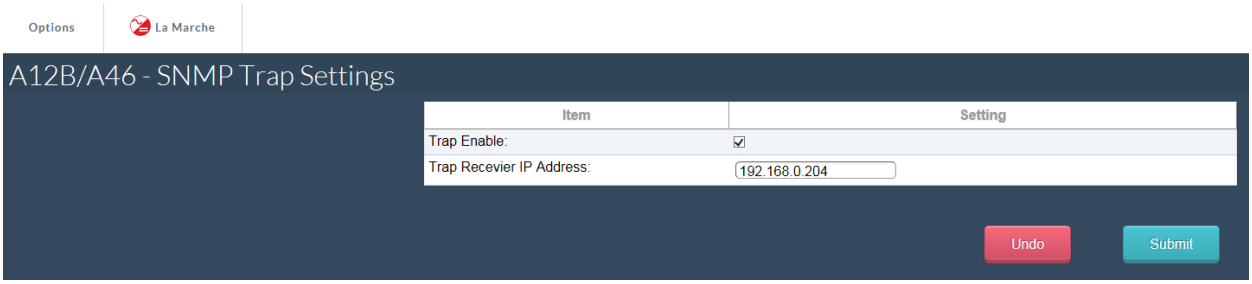
Note: The settings in above picture are for demonstration only.

**Network Settings-** Access and change the Network Parameters in this window.

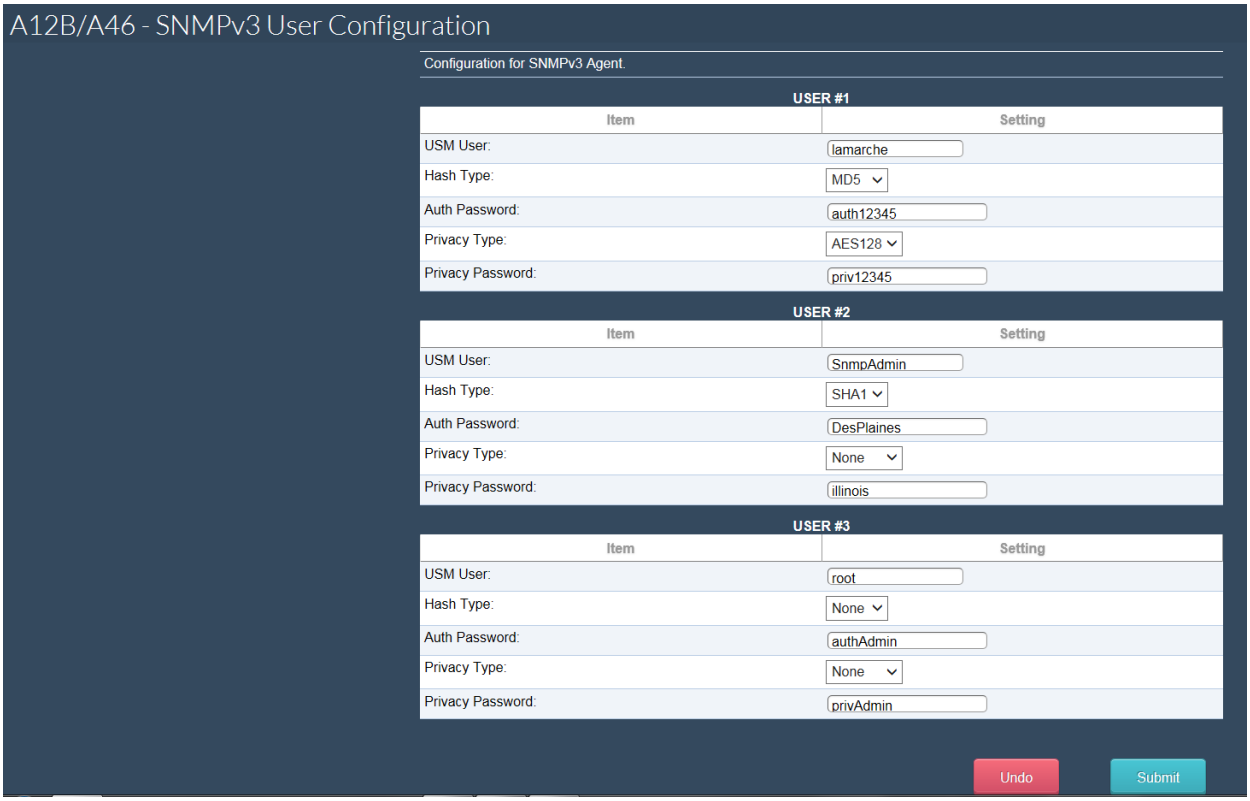



If any changes are made to the system settings and **Submit** is clicked, the connection to the system will be lost. The webpage can be restored with the new saved settings.

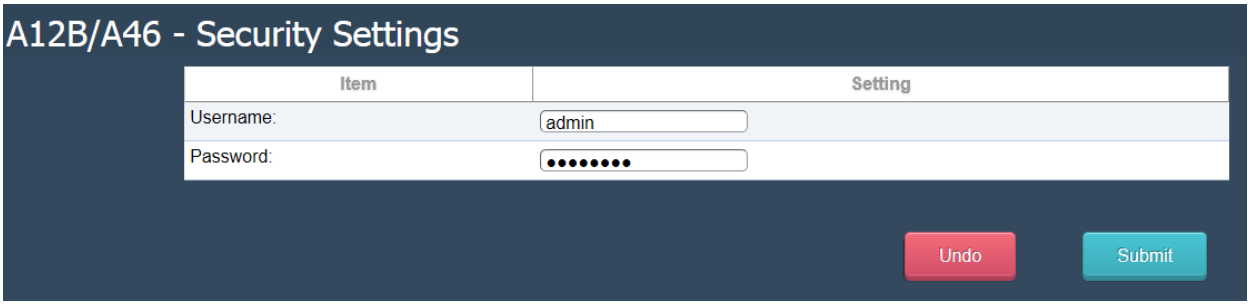
**SNMP TRAP Setting** – Allows the user to set up to two SNMP TRAP Receivers.



**SNMP V3 User Configuration**




**Security Settings –** Allows changing the Username and Password.



# Simple Network Management Protocol Version 3 (SNMP)

Simple Network Management Protocol (SNMP) is a network protocol designed to manage devices over an IP network. "It was defined by the Internet Architecture Board (IAB) in RFC1157 for exchanging management information between network devices. It is a part of Transmission Control Protocol/Internet Protocol (TCP/IP) protocol suite."

SNMP consists of four major components:

1. SNMP Manager
2. An Agent
3. Managed Devices
4. Management Information Databases

SNMP Manager is installed on a computer that already has management software. This management console simply monitors, responds and manages any query that is being sent from the Agent. It will decide whether it needs to send email notifications or ignore them. This is a computer that is used to run one or more network management systems.

An Agent is a piece of software installed on the devices that is connected to the management console. It reads any information on the device and sends it back to the management console.

The commonly shared database between the Agent and the Manager is called Management Information Base (MIB). In short, MIB files are the set of questions that the SNMP Manager can ask the Agent. The Agent collects this data locally and stores it, as defined in the MIB.

The primary protocols that SNMP implements are the User Datagram Protocol (UDP) and the Internet Protocol (IP). SNMP also requires Data Link Layer protocols such as Ethernet or Token Ring to implement the communication channel from the management to the managed Agent.

SNMP's simplicity and connectionless communication also produce a degree of robustness. Neither the Manager nor the Agent relies on the other for its operation. Thus, a Manager may continue to function even if a remote agent fails. When the Agent resumes functioning, it can send a trap to the Manager, notifying it of its change in operational status. The connectionless nature of SNMP leaves the recovery and error detection up to the Manager computer and even up to the Agent.

**MIB FILE.**
The SNMP V3 MIB file can be downloaded directly from the La Marche website. Under "Products", go to the "A12B" model, scroll down to the "Documents" tab.

**Scale Factor.**
The Settings, Alarms and Status will appear on the right pane window. The scaling factor of all the settings is 0.1 (i.e. 60.5V will appear as 605V).

**Traps.**
The following Traps can be sent by the A12 / A46 unit.

| EVENT - TRAPS | Description |
|---|---|
| CHARGER_MODE, | Float / Equalize Mode Change |
| AC_ALARM_STATUS, | AC Fail Alarm |
| LV_ALARM_STATUS, | Low Voltage Alarm |
| HV_ALARM_STATUS, | High Voltage Alarm |
| HVSD_ALARM_STATUS, | High Voltage Shut Down Alarm |
| LC_ALARM_STATUS, | Low DC Current Alarm |
| GD_ENABLE, | Ground Detection Enable / Disable - Setting Change |
| PG_ALARM_STATUS, | Positive Ground Fault Alarm |
| NG_ALARM_STATUS, | Negative Ground Fault Alarm |
| SUM_ALARM_STATUS, | Summary Alarm |
| EOD_ALARM_STATUS, | End of Discharge Alarm |
| OL_ALARM_STATUS, | Overload / Over Current Alarm |
| CF_ALARM_STATUS, | Charger Fail Alarm |
| OT_ALARM_STATUS, | Over Temperature Alarm |
| COMMS_ALARM_STATUS, | Communications Failure |
| AC_LOW_ALARM_STATUS | AC Voltage Low Alarm<br>Note: Only available with optional AC sensing board. |
| AC_HIGH_ALARM_STATUS | AC Voltage High Alarm<br>Note: Only available with optional AC sensing board. |

**Document Control and Revision History**

Part Number: 147218

Instruction Number: P25-LOPT21X-A12B-52E-03

Issue ECN: 23197 – 07/22

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| **23197 – 07/22** | | | |
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