

PLASMATRONICS SPSD-ENET

BROWSER BASED INTERFACE USER GUIDE

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1. Introduction

The SPSD-ENET is a factory fitted option for the Plasmatronics SPS solar charge controller. The SPSD-ENET option provides:

- standard Ethernet connection
- web based configuration using any standard web browser.

2. Connection

Use a standard Ethernet cable to connect the SPS solar charge controller to your network

To open the SPS solar charge controller web page, go to

<http://SPSD-ENET>

or

<http://192.168.1.100>

or

use the name or URL provided by your network administrator.

If you cannot connect to the SPS solar charge controller web page, contact your network administrator, or follow the instructions given below to configure your computer and network.

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3. Web pages

The SPS solar charge controller has four web pages:

Status (default)	*figure 1
Settings	*figure 2
History	*figure 3
Network	*figure 4

To navigate between web pages, click on the Status/Settings/History/Network links on each page, or use the page name with the web address:

<http://SPSD-ENET/status>

The web pages are displayed English, or in the language of your web browser if the SPSD-ENET board supports that language. To force the pages to display in English, use the alternate page names

en\Status
en\Settings
en\History

The first value displayed on the Status, Settings and History web pages will be a cached value. The page will automatically refresh with a current value after a few seconds. The web pages then go to a slow refresh cycle. Press refresh on your web browser to force a faster update.

The SPS solar charge controller user guide contains more information on SPS status and settings values.

The default username to change SPS settings is SPSD. The default Password is ENET. Both words must be uppercase. The user name and password may be changed on the network page (see below).

4. Network configuration default

The SPS solar charge controller with SPSD-ENET option has a standard 10.0Mbps Ethernet connection. Use a cross-over cable to connect directly to a PC, or a standard cable to connect to a hub or switch. Use a 10.0 Mbps switch or hub if available. Do not use a 100.0Mbps or 1Gbps switch or hub unless it is auto-sensing. Configure network cards to 10.0Mbps for direct connection (using a cross-over cable).

The SPSD-ENET option has default values

IP address	192.168.1.100
netmask	255.255.255.0
NetBios Name	SPSD-ENET
user name	SPSD
password	ENET

On a network without DHCP, the default values will be used. If there is a DHCP server, the DHCP server will provide the IP address, and may provide the following DHCP options:

1	Subnet Mask	("255.255.255.0")
12	Hostname	("SPSD-ENET")

The SPSD-ENET option supports NetBios Name Server requests. If the network is configured for

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NBNS requests, the SPS solar charge controller will reply to web requests to the configured Hostname. This is the common configuration for PCs and internal networks. If your Network or PC has NetBios turned off, you can contact the SPS solar charge controller by using its IP address.

You can also assign a different host name to the IP address of the SPS solar charge controller by using a DNS server, or by making an entry in the Hosts file on your PC.

The default IP address used by the SPS solar charge controller is not visible on the internet. It is not a routable IP address. In general, SPS solar charge controllers should not be directly connected to the internet. You should use a direct connection or a private network or a virtual private network to monitor and configure your SPS solar charge controller.

4. Network configuration management

You must login to change values on the Network page. You will be presented with a Login dialog when you try to change values on the Settings or Network pages. Values on the network pages will change when you push the "Send" button. If you change the IP Address, this will immediately disconnect you from the ENET board. You can reconnect using the new IP address.

After values have been sent to the Enet board, previous values may be restored by power-cycling the Enet board, or by using the Factory Reset jumper, or by pushing the Reload, Default, or BOOT buttons.

Press the Save button after the Send button to permanently set the new values. After the new values have been Saved, power-cycling or the Reload and BOOT buttons restore the Saved values. Factory Reset jumper and the Default button restore the factory default values.

If you use the Site Name, (the NetBios name), to connect to the Enet board, the Site Name with its Ethernet address will be cached on your PC for some time. If you change the Site Name, you can use the new name immediately, but the old name will also point to the same IP Address.

If you plan to change the Site Name and the IP Address, change the Site Name and the IP Address at the same time, then press "Send", so that the new Site Name points to the new IP Address immediately. Re-connect using the new Site Name, then press Save (you will need to login again) to make the new values the saved values.

IP address, Net Mask, and Gateway values must be entered as dotted decimal values. Changed password must be entered twice. If the password change is accepted, you will be presented with a login dialog when you press the "Save" button.

6. Activity Light

Normal configuration is Activity and Connection Status.

If the Connection Status is Off, the Activity light goes to a slow blink.

If the Reset jumper is connected, the Activity light is On.

7. Board Jumpers

Jumper A is the unlock jumper. Remove Jumper A to lock the network settings, SPS controller settings, or both. The lock options may be set on the network page while the unlock jumper is connected. Status of Jumper A may be seen on the Network page.

Jumper B is the Factory Reset jumper. While Jumper B is in place, an ENET board Factory Reset occurs once per second. There is no effect on SPS controller settings. Hold the Reset jumper until the Activity light comes on (up to 1 second may be required). Status may be seen on the Network page.

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8. Figures

1. Status



SPSD Solar Controller

[Status](#) [Settings](#) [History](#) [Network](#)

Battery Voltage	28.0 V
Controller Type	Negative Ground 24V 150-299A
Charge Current	64.4 A
Load Current	31.6 A
Day Charge Ah	216 Ah
Day Load Ah	58 Ah
Regulator State	0
Day Maximum V	30.8 V
Day Minimum V	24.4 V
Load disconnect	Normal
Low battery alarm	Normal
High battery alarm	Normal
Logic fail	Active
Load fail	Normal
Solar bank switch fail	Normal
Generator control	Normal
Alarm Inputs	1 2 3 4 5 6 7 Input Status = 1111111

2. Settings



SPSD Solar Controller

[Status](#) [Settings](#) [History](#) [Network](#)

Boost Maximum Voltage (V)	<input type="text" value="29.0"/>
Boost Taper Voltage (V)	<input type="text" value="28.0"/>
Number of Banks Used	<input type="text" value="4"/>
Float Maximum Voltage (V)	<input type="text" value="28.0"/>
Float Minimum Voltage (V)	<input type="text" value="27.0"/>
Boost Cut-in Voltage (V)	<input type="text" value="24.8"/>
Absolute Maximum Voltage (V)	<input type="text" value="30.4"/>
Temperature Compensation (mV/cell)	<input type="text" value="0"/>
State Change Delay (minutes)	<input type="text" value="1.0"/>
Display Temperature Setting (Deg C)	<input type="text" value="0"/>
Display Contrast	<input type="text" value="24"/>
Load Disconnect Voltage (V)	<input type="text" value="22.4"/>
Load Reconnect Voltage (V)	<input type="text" value="25.6"/>
Delay Before Disconnect (seconds)	<input type="text" value="200"/>
Low Battery Alarm (V)	<input type="text" value="23.0"/>

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3. History



SPSD Solar Controller

[Status](#) [Settings](#) [History](#) [Network](#)

Day	Charge (Ah)	Load (Ah)	Minimum V	Maximum V
1	180	72	23.2	29.6
2	72	90	23.4	28.8
3	70	87	23.0	28.6
4	306	93	24.8	30.6
5	296	67	24.4	30.2
6	276	85	23.8	30.6
7	220	69	24.0	30.0
8	80	55	26.0	28.0
9	90	50	26.0	28.0
10	276	40	25.8	30.2
11	210	57	25.0	30.8
12	306	70	24.8	30.6
13	266	128	25.0	29.4
14	256	79	24.4	30.6
15	220	77	24.4	30.0
16	266	68	24.0	30.0
17	180	72	23.8	29.6
18	110	92	23.4	28.8
19	130	97	24.8	28.8
20	190	115	24.4	29.6
21	296	67	24.4	30.2
22	180	85	23.8	30.6
23	50	49	26.0	28.0
24	80	30	26.0	28.0
25	90	20	26.0	28.0
26	276	40	25.8	30.2
27	210	57	25.0	30.8
28	306	100	24.8	30.6
29	296	67	24.4	30.2
30	276	79	24.4	30.6
31	220	69	24.0	30.0
32	266	68	24.0	30.0

Last Reset:923564

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4. Network

The screenshot displays the 'SPSD Solar Charge Controller Network Configuration' web page. The browser's address bar shows 'http://192.168.1.100/network'. The page features a navigation menu with links for 'Status', 'Settings', 'History', and 'Network'. The main content area contains a table of network configuration parameters:

IP addr:	<input type="text" value="192.168.1.100"/>	NetMask:	<input type="text" value="255.255.255.0"/>
Gateway:	<input type="text" value="192.168.1.1"/>	MAC:	<input type="text" value="00-60-35-09-B4-4E"/>
DHCP client:	<input type="text" value="enabled"/>	Site Name:	<input type="text" value="SPSD-ENET"/>
User Name:	<input type="text" value="SPSD"/>	Password:	<input type="password"/>
Version:	<input type="text" value="Dec 08 2008 16:27:19"/>	Password:	<input type="password"/>
Jumper A:	<input type="text" value="Closed"/>	Jumper B:	<input type="text" value="Open"/>
Open A:	<input type="text" value="Locks Network"/>	Closed B:	<input type="text" value="Factory Reset"/>

Below the table, there are two rows of control buttons: 'Send' and 'Reset' in the first row, and 'Save', 'Reload', 'Default', and 'BOOT' in the second row.