LED-Matrix Display

LED2 Matrix Display

User Manual

Version 2.0

www.generex.de

Revision	History	Date
-001	First Release.	09/2006

Legal Information

Contents

Introduction

Overview

The LED-Matrix Display is based on the CS121 Web Adapter. Please refer to the CS121 user manual for an explanation regarding the configuration of the network settings, event handling etc. The CS121 user manual is coming with the LED MATRIX or can be downloaded from GENEREX Website, Download Area, Documentation.

This document describes the special features that are unique to the LED Matrix that do not pertain to the standard CS121 and provides instructions on how to operate the LED Matrix.

The LED-Matrix Display is a remote display unit for relaying either UPS status and values or customized RCCMD messages that can be operated via the Ethernet. Any CS121 Web Adapter and other RCCMD 2 compatible products can send text messages or environmental data values to the LED-Matrix and can add sounding alarms for warnings that require immediate attention (optional, only with buzzer connected to AUX port).

Display

Depending on the length of the LED-Matrix-Display anywhere between 4 and 30 characters can be shown at once. If the intended message is too long for the number of displayable characters, the message is scrolled automatically through the display screen.

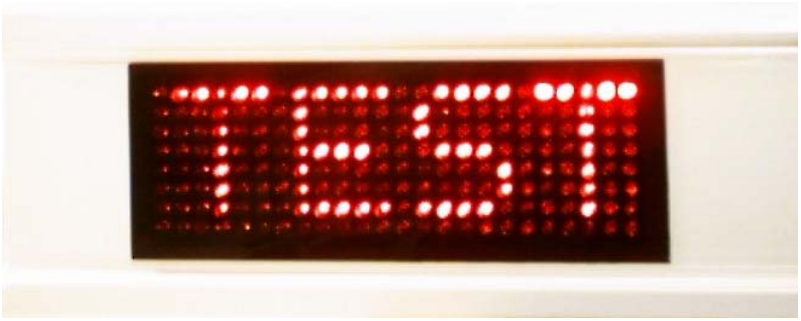


Figure: LED-Matrix Display, short version

Messages that are to be shown via the display of the LED-Matrix can be either input automatically by CS121 devices in the network or through the RCCMD sending mechanisms of other network enabled devices.

Configuration

LED-Matrix Configuration

The default configuration of the LED-Matrix has the ***RCCMD Listener*** enabled and its ***Port*** set to **6002**. It is strongly recommended to keep these settings. All other configuration parameters should be adjusted to the local network settings using either TELNET, a Terminal program, or using the simplest method, a Web browser. Simply activate a route to the default IP **10.10.10.10**. Steps for the initial setup are covered in the Quickstart instructions of the CS121 which is contained in the CS121 user manual.

All other settings and possibilities relating to the SNMP-WEB interface are explained in the CS121 user manual that has been included with the LED-Matrix.

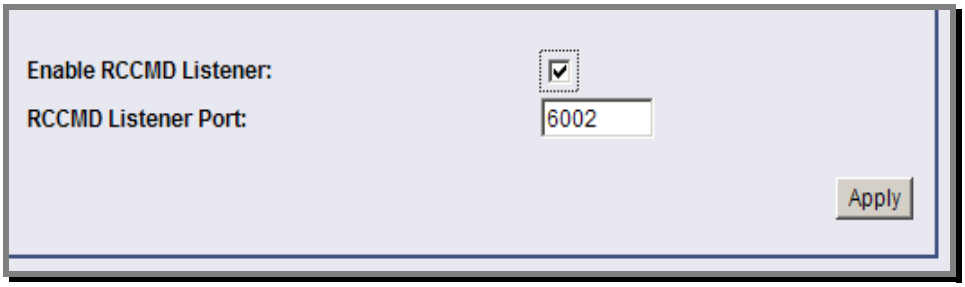


Figure: LED-Matrix Configuration Page

Configuring the Senders

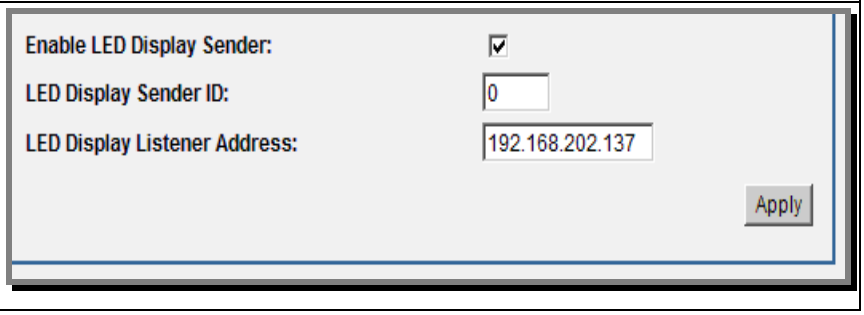
Please note that you have to decide between one of the two following modes.

Do not connect Senders in different modes to the same LED-Matrix!

Mode 1: Send UPS State and Data automatically

In order to show the UPS status and measurement values in the LED-Matrix-Display, the following configuration must be made in the CS121 ***Network & Security*** configuration page of the web browser interface:

- Check the ***Enable LED Display Sender*** box
- Enter a unique Number in the range from 0 to 9 in the field ***LED Display Sender ID***. This Number is used to identify this device on the LED-Matrix**.**
- Enter the IP Address of your LED-Matrix in the field ***LED Display Listener Address***".



NOTE: Remember to click the ***Apply*** button; only then will the changes be stored in the RAM of the CS121/LED MATRIX. Also, after all changes have been made be sure to save and restart the system by clicking the ***Save, Exit and Reboot*** on the ***Save Configuration page***. Only then will the new settings be activated in the current mode of operation and available for testing.

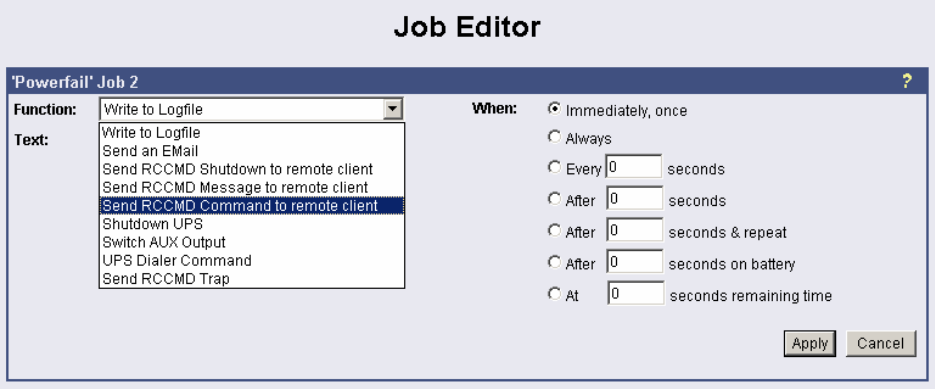
This mode will automatically display the status and UPS values of all CS121 in your network which have activated the LED mode. Usage of the automatic mode 1 requires a firmware version on the CS121 in the network of Version 3.45 or higher. Please update your CS121 via the GENEREX webpage if you want to use this mode 1.

Mode 2: Send RCCMD messages from UPS Events

Example: Configuring the CS121 to send Event messages to the LED-Matrix

In order to show the Battery Autonomy Time of the UPS in the LED-Matrix-Display for example, the following configuration must be made in the CS121 ***Events and Alarms*** configuration page of the web browser interface. Click on the event ***Powerfail*** in the Events and Alarm overview table.

Click the ***Add new job*** button and select ***Send RCCMD Command to remote client***.

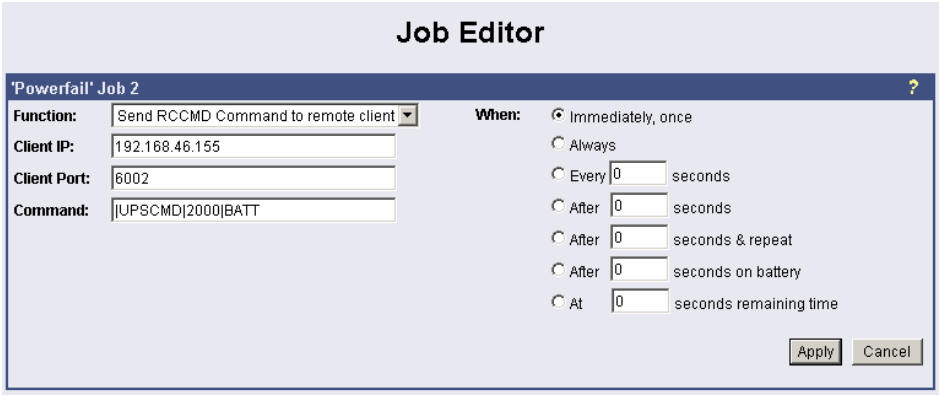


The parameters for this job must include the target IP Address of the LED-Matrix, and the Port 6002. *NOTE!* 6003 is the default port that is reserved for all other RCCMD commands. As explained earlier, Port 6002 is the default listening port of the LED-Matrix. In addition the desired text and display mode of the message are to be designated.

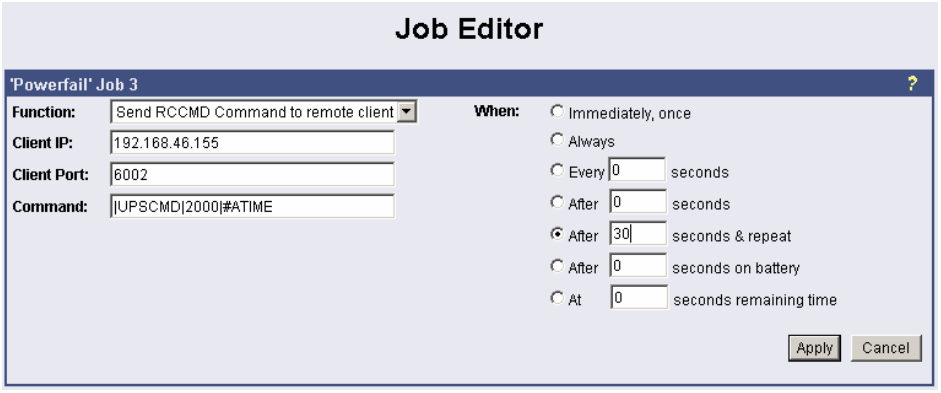
The command line syntax is as follows:

Examples:

1. "`|UPSCMD|2000|Continual-display`" : This causes the text „`Continual-display`“ to be shown continually without change and without scrolling until another display command has been received.
2. The following configuration will make the text `BATT` display immediately once in accordance with the selected stereo button after the UPS has gone into battery mode following a power outage.

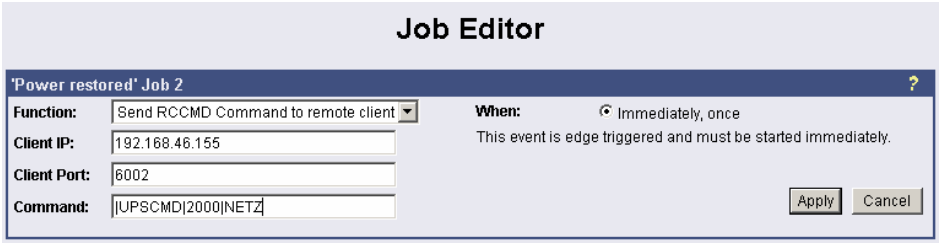


3. If you wish to add other text messages to be displayed in the LED-Matrix then commit the current job to the settings by pressing the apply button and return to the Event overview and click on an event. Then click the ***Add new job*** button.



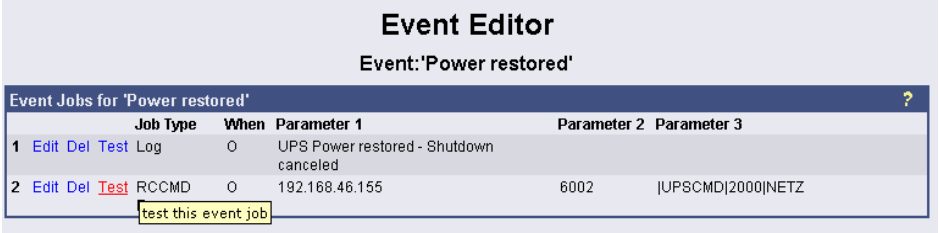
In the example above, the settings are similar to adding a plain text, but instead the system variable `#ATIME` (Battery rest time) is entered. The stereo button time settings cause the message to appear after a delay of 30 seconds which will also then be repeated every 30 seconds. The system variable `#ATIME` is the battery rest time or „Autonomy time in minutes“.

4. To send an all-clear message to cancel the alarm such as a „Power restored“ message after a „Powerfail“ alarm, simply select the event „Power restored“ in the event overview and enter a suitable text like „NETZ“ or „GRID OK“ for example.



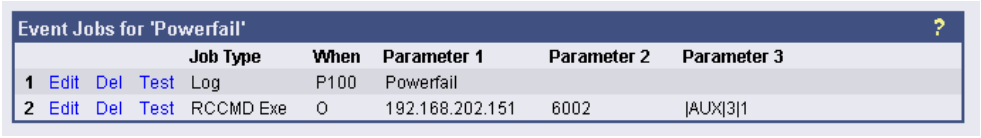
NOTE: Remember to click the apply button; only then will the changes be stored in the RAM of the CS121/LED-Matrix. Also, after all changes have been made be sure to save and restart the system by clicking the ***Save, Exit and Reboot*** button on the ***Save Configuration*** page. Only then will the new settings be activated in the current mode of operation and available for testing.

Tests: After the CS121 that is connected to the UPS has been restarted and the green LED is blinking and the web browser is indicating measurement values, tests can be conducted by either putting the UPS directly into battery mode or by sending test signals in the Alarm and Events section of the Web browser interface of the CS121. Information: When conducting test using the Web browser, trying to send system variables like „ATIME“ will only result in sending the variable name to the LED-Matrix display.

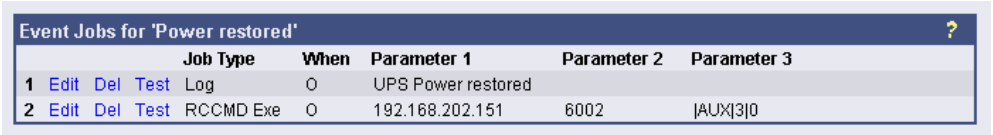


5. ALARMBUZZER: To toggle the ALARMBUZZER in the LED Matrix, you have to send an RCCMD EXECUTE from your CS121 sender to the IP Address of your LED MATRIX, Port 6002. The syntax for the command is: “|AUX|3|1” to switch on, “|AUX|3|0 “ to switch off.

Buzzer ON:



Buzzer OFF:



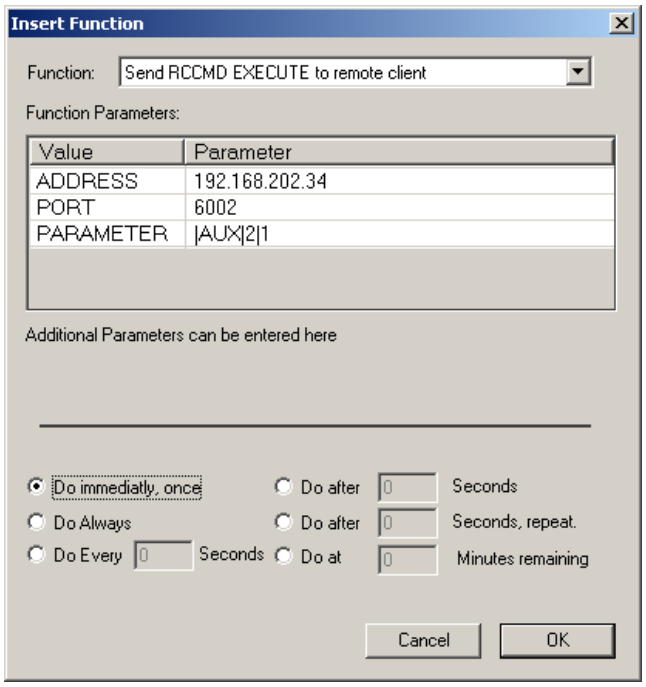
If you use a UPSMAN software or a RCCMD commandline as sender for your LED-Matrix, it works accordingly.

Example:

To switch the buzzer off via a RCCMD command enter:

```
“rccmd -s -a <your LED MATRIX IP adress> -p 6002 -
se "EXECUTE |AUX|1|0"
```

To switch the buzzer on via a UPSMAN software for Windows



Please note that any command has to start with „|“.

6. You may test your buzzer using the button in the ***AUX & TEMPMAN STATUS*** page of your CS121 sender: