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**ENVIROMUX®**

# PWR-RMT-RBT-LC

## Low Cost Remote Power Reboot Switch Installation and Operation Manual

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**CHANGES**

The material in this guide is for information only and is subject to change without notice. Network Technologies Inc reserves the right to make changes in the product design without reservation and without notification to its users.

**WARRANTY INFORMATION**

The warranty period on this product (parts and labor) is two (2) years from the date of purchase. Please contact Network Technologies Inc at **(800) 742-8324** (800-RGB-TECH) or **(330) 562-7070** or visit our website at <http://www.networktechinc.com> for information regarding repairs and/or returns. A return authorization number is required for all repairs/returns.

Congratulations on purchasing the best network controlled power switch available. The PWR-RMT- RBT-LC provides you the ability to reboot crashed devices with the click of a mouse. Be sure to read up on all the features of the switch including:

- **Web Based** setup and control
- **Telnet** setup and control
- **Event Scheduling** for real-time power control.
- **AutoPing:** Automatic monitoring and action for failed equipment.
- **Management Utility:** Easy Setup, Firmware upgrades and Reset to Factory Default
- **Easy Software Integration:** Use the DxP Protocol to build your own custom applications.




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## 1. Table of Contents

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2. Important Safety Instructions..... 2	8. Command Line Interface..... 14
3. General Description..... 3	9. DxP Protocol..... 18
4. Hardware Installation..... 4	10. Firmware Upgrades..... 18
5. Initial Configuration..... 5	11. Troubleshooting..... 19
6. Web Browser Operation..... 8	12. Specifications..... 20
7. Web Setup..... 10	13. Technical Support and Warranty..... 21

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## 2. Important Safety Instructions

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**When using this product, basic safety precautions should always be followed to reduce the risk of fire, electric shock, and injury to persons, including the following:**

1. Read and understand all instructions.
2. Follow all warnings and marked on the product.
3. Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
4. Do not use this product in an outdoor environment or near water, for example, near a bath tub, wash bowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool.
5. Do not place this product on an unstable cart, stand, or table. The product may fall, causing serious damage to the product.
6. Slots and openings in this product and the back or bottom are provided for ventilation to protect it from overheating; these openings must not be blocked or covered. The openings should never be blocked by placing the product on the bed, sofa, rug, or other similar surface. This product should never be placed near or over a radiator or heat register. This product should not be placed in a built-in installation unless proper ventilation is provided.
7. This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your dealer or local power company.
8. This product is equipped with a three wire grounding type plug, a plug having a third (grounding) pin. This plug will only fit into a grounding type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding type plug. Do not use a 3-to-2 prong adapter at the receptacle; use of this type adapter may result in risk of electrical shock and/or damage to this product.
9. Do not allow anything to rest on the power cord. Do not locate this product where the cord will be abused by persons walking on it.
10. Do not overload wall outlets and extension cords as this can result in the risk of fire or electric shock.
11. Never push objects of any kind into this product through slots as they may touch dangerous voltage points or short out parts that could result in a risk of fire or electrical shock. Never spill liquid of any kind on the product.
12. To reduce the risk of electrical shock, do not disassemble this product, but take it to a qualified serviceman when some service or repair work is required. Opening or removing covers may expose you to dangerous voltages or other risks. Incorrect re-assembly can cause electric shock when the appliance is subsequently used.
13. Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
  - a) When the power supply cord or plug is damaged or frayed.
  - b) If liquid has been spilled into the product.
  - c) If the product has been exposed to rain or water.
  - d) If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions because improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to normal operation.
  - e) If the product has been dropped or has been damaged. If the product exhibits a distinct change in performance.
14. Avoid using a telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electric shock from lightning.
15. Do not use the telephone to report a gas leak in the vicinity of the leak.
16. Do not exceed the maximum output rating of the auxiliary power receptacle.

**Save These Instructions**

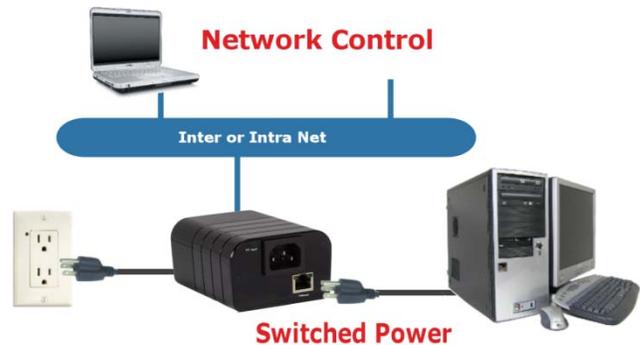
## 3. General Description

The PWR-RMT-RBT-LC is a network attached, IP addressed, web controlled AC power switch. Anyone with a web browser can access switch to perform power On, Off or Power Cycle (Reboot or Power Burst). PWR-RMT-RBT-LC uses two levels of password for security.

PWR-RMT-RBT-LC features international standard IEC320 connections and is compatible with power mains worldwide. A simple Web browser interface makes it easy to control power from anywhere in the world with a click of a mouse. PWR-RMT-RBT-LC also supports Telnet for text commands.

### 3.1. Uses for PWR-RMT-RBT-LC

- Remote reboot of any device, routers, servers, kiosks, etc. The device to be rebooted need not be network attached.
- Secure sensitive devices by keeping them powered off when not in use. This prevents hackers from seeing them at all times.
- Power down equipment when not needed for power savings and to save on wear and tear.
- Power up alert devices like sirens, lamps, messages; or control environmental system like heaters, coolers pumps, etc.



### 3.2. Multiple Control Options

In addition to the Web control capabilities, PWR-RMT-RBT-LC features several other means to operate automatically or under computer control.

**AutoPing:** The AutoPing feature allows PWR-RMT-RBT-LC to automatically detect failed equipment and perform a timed reboot or other power control function (like turning on an indicator or siren). You set 1 or 2 IP addresses to be periodically pinged. When PWR-RMT-RBT-LC no longer detects a response from the address(es), the programmed power control function is actuated.

**Telnet:** the Command Line Interface (CLI) allows direct control and setup through Telnet.

## 4. Hardware Installation

### 4.1. Ethernet Connections

RMT-PWR-RB-LC supports 10/100 Ethernet using the cable supplied, or other suitable unshielded twisted pair (Cat 5) cabling. Link (amber) and Activity (green) LEDs on the network connector indicate when the network connection is properly established.

### 4.2. AC Power Connections

Connect the device to be powered ON and OFF to the IEC receptacle marked A/C Output. An IEC 320 to North American (NEMA 5-15) power cord is included for connecting the switch outlet to the device to be controlled.

If a cord with a different terminating receptacle is required, be sure it is properly rated and meets all the required local electrical standards. If the device to be powered uses an IEC320 receptacle and detachable power cord, an IEC to IEC extension cord can be used.

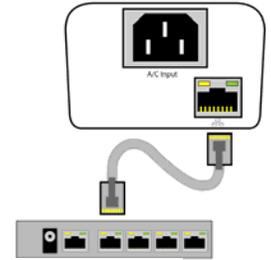
The PWR-RMT-RBT-LC can be connected to a power strip to allow simultaneous control of multiple devices.

Make sure that the combined load of all controlled devices does not exceed 12 Amps for 105-125VAC or 10 Amps for 210-240VAC.

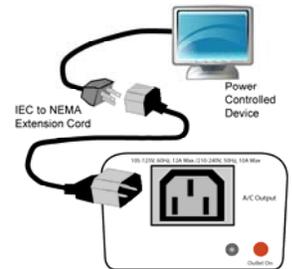
An LED Indicator next to the Switched Outlet will be On to indicate that the power is On at that outlet. This LED will turn Off to indicate that the power is Off to the outlet.

**Note: At power up, from the factory, the Switched Outlet will be On by default.**

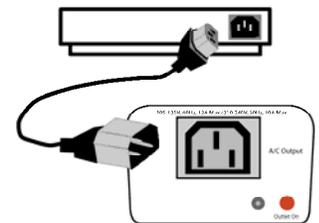
Connect the supplied power cord to the connector labeled A/C Input, and the other end to your AC source. If a power cord with a different terminating plug is required, be sure it is properly rated and meets all the required local electrical standards.



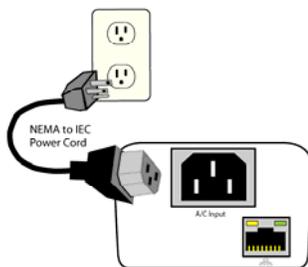
Connect 10/100 Ethernet



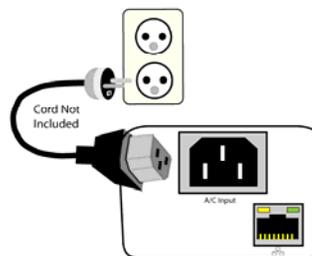
Outlet Cord for North America Included



Source Additional Power Cords Locally



Power Cord for North America Included



Source Additional Outlet Cables Locally

### 4.3. Mounting Options

PWR-RMT-RBT-LC is suitable for desktop or shelf mounting. A mounting kit for wall and DIN rail mounting is available. Order part:

MK-PWRRMTRBTLC Mounting Kit for PWR-RMT-RBT-LC

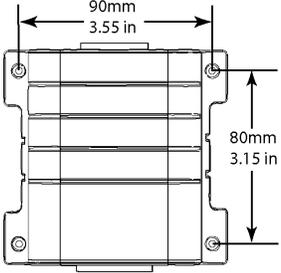


**Remove all cables from the unit prior to installing or removing any mounting hardware.**



Mounting Kit

Installing the Wall Mounting Kit

- Remove the four mounting screws from the underside of the unit.  
 Don't disassemble the unit.
 
- Install the wall mounting ears to the unit using the screws removed in Step 2.
 
- The unit is ready for wall mounting.
 
- Use M3 or #4 screws (not included) for attachment to suitable surface.
 

DIN Rail Mounting

- Install the DIN Rail Mounting Kit as shown.
 
- Install the DIN rail clips using the four screws provided.
 
- Ready for DIN rail mounting.
 

## 5. Initial Configuration

The Device Management Utility (DMU), available online at <http://networktechinc.com/control-power.html>, provides the easiest means to find and configure your switch for use. It can discover all the units on your network, display the current IP address of each, and allow setting of any valid IP address.

Install and run the Device Management Utility:

1. Download DMUSetup.exe
2. Run DMUSetup.exe
3. Run the DMU

Note: The IP address can only be set within the first two minutes of powering up the switch. The Setup Utility will only work with PWR-RMT-RBT-LC on the same local subnets as the PC.

Once the DMU is run, click on Device | Discover to display all the switches on your network. The DMU will display the Location Name of the switch, the product ID and Version Number, the current IP Address, and the MAC Address. Factory defaulted switches will display with the name **New iBoot-G2** and have either the factory default IP address of **192.168.1.254** or an IP address that was automatically assigned by the DHCP server on your network. If the IP address was assigned by a DHCP server, no changes to the IP Address are required.

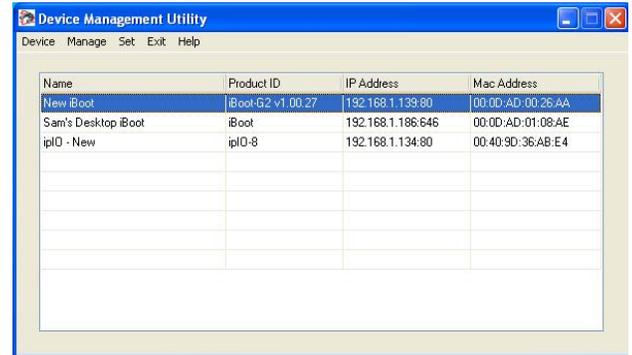
The IP address field also indicates the port for web access that is used by the switch. The standard port for web browser control is factory default Port 80.

Change the IP Address

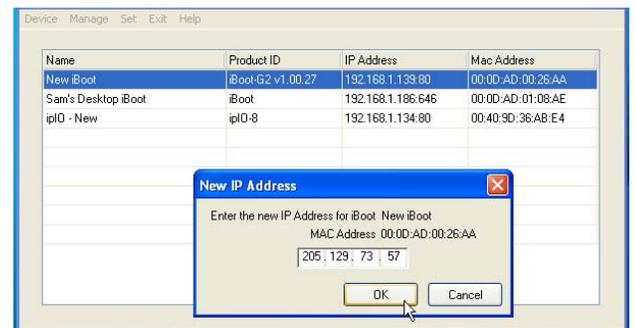
1. Click on the row containing the switch to be set. The row will become highlighted.
2. From the menu select Set | IP Address
3. Enter the new IP Address into the form. Click OK when done.
4. A confirmation box is displayed. Click OK to clear the box.

Once the IP Address is set, other all other operational features of the PWR-RMT-RBT-LC can be set up. Discover again to refresh the display, highlight the desired switch and click on Manage | Launch Browser. Follow the instructions on Page 14 to configure the PWR-RMT-RBT-LC.

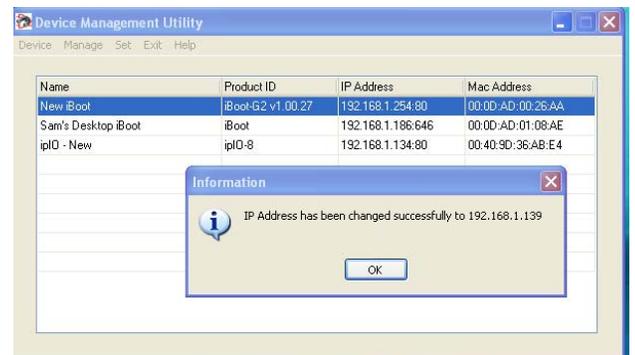
The DMU can also be used to return a switch to its Factory Default condition. This can be used to recover a switch with a lost password. Highlight a PWR-RMT-RBT-LC from the display and select Set | Factory Defaults. This must also be done within the first two minutes of powering up the unit.



*DMU Discovers Dataprobe Devices on your Network*



*Enter New IP Address for iBoot*



*IP Address Successfully Set*

Click on

## Other ways to set the IP Address

1. Automatically from a DHCP Server
2. Web Browser via the Set-up Page
3. CLI (Telnet & USB)

**PWR-RMT-RBT-LC comes with factory installed IP address 192.168.1.254.**

### Setting the IP address from a DHCP Server

A DHCP server will automatically assign an IP address (dynamic address) as well as Subnet Mask and Gateway to the switch. If you reboot the PWR-RMT-RBT-LC with the IP Mode set for DHCP (the default setting), the DHCP server will be able to assign an IP address. Once an IP address is assigned, you must check the DHCP server or use the Setup Utility to see what address is assigned to the switch. You can lock the switch to the current address, by selecting IP Mode = Static without changing the addresses. Set the IP Mode either by using the web setup page, or via Telnet commands.

If you set the IP address using another method, the address becomes static. To return PWR-RMT-RBT-LC to dynamic addressing using DHCP, select DHCP mode in Network Setup and reboot the unit.

### Setting the IP address using Web Browser

To set the IP address using a Web Browser, connect the Ethernet connection to your local network and apply power to the PWR-RMT-RBT-LC.

Open your browser and access PWR-RMT-RBT-LC by entering the default (192.168.1.254) or current IP address into your browser's Address window. Enter the administrator credentials, click on Setup and follow the instructions on Page 10.

## 6. Web Browser Operation

### 6.1. Password Protection

PWR-RMT-RBT-LC uses two username/password credential sets, one for normal power control (User) and one that also provides access to the setup functions (Admin).

Default Credentials:

Role	Username (fixed)	Password (user set)
Administrator	admin	admin <last 3 MAC segments>
User	user	user <last 3 MAC segments>

For more information on the passwords, see "Passwords on page 13.



Enter Username and Password

Open your browser and enter the IP address of the unit into the address bar. If you have changed the IP address by any of the methods described or used DHCP, enter that address, otherwise, use the default IP address 192.168.1.254

Enter the username and password as prompted. When the proper username/password is received the Control and Status Page is displayed.

### 6.2. Control and Status Page

Once the user is validated, the Control and Status is displayed. (Only one person can be connected to the PWR-RMT-RBT-LC at a time.)

To control the power, click on the appropriate button. During power cycling, the Power Status bar will indicate the temporary status, with a blue background. Once the cycle is complete, the status bar will revert to its original condition. To abort a power cycle, click on either Power On or Power Off buttons. PWR-RMT-RBT-LC will assume the status selected.

**Note: In the event the PWR-RMT-RBT-LC loses power, the Power Status the switch was in when it lost power will be the status it is in when the power is restored.**



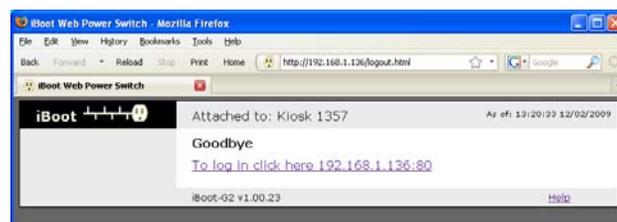
iBoot-G2 Status Page

Auto Ping			
	Status	Fail Counter	Trigger Counter
1	Ok	0	Reset
2	Failed	0	Reset

AutoPing Status

If the AutoPing features is in use, the page will also display the current status, OK or Failed, for each AutoPing used, with a counter of how many times it failed and how many times the Action was triggered. If connecting with the Admin credentials, reset buttons for the Fail and Trigger counters are provided.

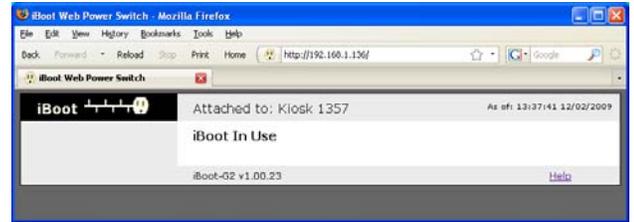
Use the Refresh button to obtain the latest status. Using your browser's refresh button can lead to inadvertent power switching. If an NTP server is being used, the time of the last refresh will be shown in the upper right corner.



Logout Page

To access the Setup page, the administrator credentials must be used for the initial login.

When you are finished with iBoot, click on Logout. A confirmation page will be displayed. If another user is logged into the switch, a In Use page will be displayed.



*iBoot in Use Message*

PWR-RMT-RBT-LC uses an inactivity timer for security. This timeout is user selectable from 0 to 99 minutes. Setting to zero disables the timeout feature. When there is no activity for the set time in minutes, the user is automatically logged out and the username and password will need to be entered again for access. This is to prevent accidental lockout by leaving the user logged in.



As the switch allows only one Web user logged in at any time, use caution when disabling the timeout feature, as it is possible to lock out other users by forgetting to logout. Closing the browser will not log the user out and will lock out web access. If you do become locked out, access the PWR-RMT-RBT-LC via Telnet and reboot the unit.

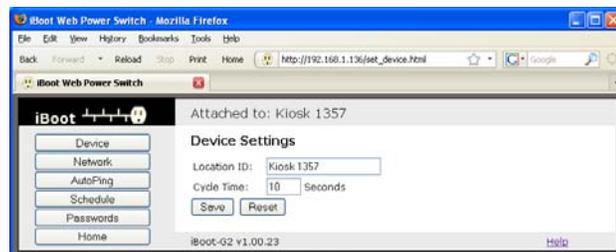
## 7. Web Setup

PWR-RMT-RBT-LC setup section consists of several pages. Access any page via the buttons on the left of the page. Each time a setting is changed click on the Save button for that page to save the changes before moving to the next page.

### 7.1. Device Settings

**Device Name:** Set a 20 Character name to be displayed on the top of the Home page. This assists in identifying which PWR-RMT-RBT-LC is being accessed.

**Cycle Time:** 0 to 999 seconds power cycle time. This is the length of time the power will be off during a reboot, or on during a power burst.



Device Setup Page

### 7.2. Network Settings

**IP Mode:** Select Static to set the IP address using the fields below, or DHCP to allow a DHCP server to set the IP Address.

**IP address:** Enter a static IP address. This will be automatically set if using DHCP

**Subnet Mask:** Enter the Subnet Mask. This will be automatically set if using DHCP

**Gateway:** Enter the Gateway. This will be automatically set if using DHCP



Network Setup Page

**HTTP Port:** This setting is used to allow access to PWR-RMT-RBT-LC on a port other than the Web standard Port 80. If the port is changed, you will need to identify the port number when you enter the unit's IP address into your browser. If the new port is 9105 then use the address <http://192.168.1.254:9105>.

**Telnet Port:** This setting is used to allow access to the switch via telnet by ports other than standard 23.

**DxP Port:** This setting is used to allow access to the switch via Dataprobe Exchange Protocol (DxP) via ports other than standard 9100.

**Auto Logout:** This setting sets the automatic logout for inactivity on both the web and telnet users. It can be set from 0 to 99 minutes. 0 disables the Auto Logout feature. See caution on page 8.

**Note:** All of the TCP/IP Settings require a reboot of the switch, after clicking Save. A Reboot button will appear at the bottom of the page. The new settings will not take effect until the unit is rebooted. Reboot will not affect the power position of the switch. Upon Clicking Reboot, the Googbye page is displayed with a link to re-login.

### 7.3. AutoPing Introduction

The AutoPing feature allows PWR-RMT-RBT-LC automatically detect failed equipment and to perform a timed reboot or other power control function (like turning on an indicator or siren). You set one or two IP addresses to be periodically pinged. When switch no longer detects a response from these addresses, the programmed power control function is actuated. The two addresses can be AND or OR linked so that both (AND) or either (OR) need to fail in order to take the selected action.

Examples:

Use AutoPing as server monitor: PWR-RMT-RBT-LC is installed with the device it monitors and automatically reboots if there is no response. Ideal for: Kiosks & Servers

Use Auto-Ping as service monitor: PWR-RMT-RBT-LC is installed with the device to be rebooted, but pings a remote host to test the communication channel. Ideal for: DSL & Cable Modem Verification

PWR-RMT-RBT-LC monitors network devices and powers up alarm or a redundant system when there is no response. Ideal for: Hot Standby Servers, Environmental Control, Alert for any Network Failure.



### 7.4. AutoPing Settings

**IP Address 1 and 2:** Enter one or two IP addresses of the device(s) to be pinged.

**Ping Frequency:** Enter 1 to 999 seconds. The ping will go out to the selected device this often.

**Fail Counter:** Enter 1-999 times the ping needs to fail consecutively before the selected action is taken. When the fail count has been reached, the AutoPing action will be triggered.

**Mode:** Select from AND, OR or Single. With AND, both AutoPings need to exceed their fail count to trigger the Action. With OR, the Action will be triggered if either AutoPing fails. With Single, only AutoPing 1 is used.



AutoPing Setup Page

**Action:** Select from

None	AutoPing not used
Power On – Latch	Upon triggering, PWR-RMT-RBT-LC will power on and remain so until changed via the web, telnet, DXP, etc.
Power On – Follow	Upon triggering, PWR-RMT-RBT-LC will power on. When the ping response returns, PWR-RMT-RBT-LC will power off.
Power Off – Latch	Upon triggering, PWR-RMT-RBT-LC will power off and remain so until changed via the web, telnet, DXP, etc.
Power Off – Follow	Upon triggering, PWR-RMT-RBT-LC will power off. When the ping response returns, PWR-RMT-RBT-LC will power on.
Power Cycle	Upon triggering, PWR-RMT-RBT-LC will cycle the power. It will wait the Ping Frequency x Fail Count; if the response does not return, the power will be recycled again. This will continue until the ping response returns or Auto Ping is turned off. Make sure your Auto Ping frequency is longer than the time required to reboot your device.
Power Cycle Once	Upon triggering, PWR-RMT-RBT-LC will cycle power one time. It will not cycle again automatically until the ping response returns and is lost again.

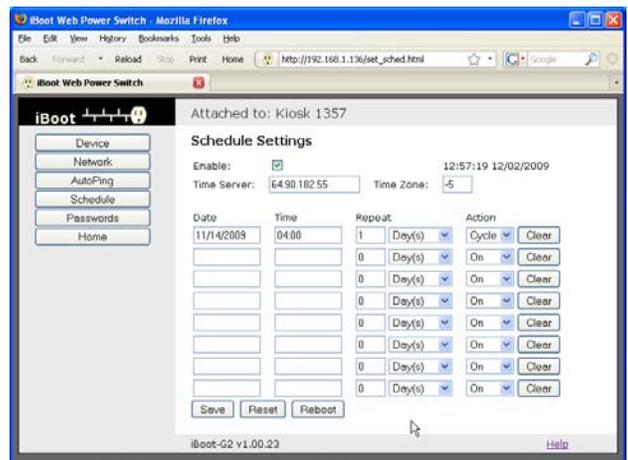
With AutoPing operational, the main switch page will display the current status of this feature. The status will be OK to indicate that PWR-RMT-RBT-LC is receiving responses to the ping, or that the fail counter has not yet been exceeded.

If the fail count has been exceeded, the status will change to FAIL. The Fail Counter will indicate the number of times the failure has occurred, and the Trigger Counter indicates the number of times the AutoPing action has been triggered. A counter reset button is provided when logging in with the Admin password.

**Note:** All of the AutoPing Settings require a reboot of the PWR-RMT-RBT-LC, after clicking Save. A Reboot button will appear at the bottom of the page. The new settings will not take effect until the unit is rebooted. Reboot will not affect the power position of the PWR-RMT-RBT-LC. Upon Clicking Reboot, the Googbye page is displayed with a link to re-login.

## 7.5. Event Scheduling

PWR-RMT-RBT-LC can schedule up to eight recurring power events. Set the starting date and time, plus the action to be taken and any repeat cycle for each.



*Schedule Setup Page*

To enable the time scheduling function:

Enter an accessible Network Time Server and check the Enable box. A list of public time servers is available at <http://www.ntp.org/>. Set your local time zone relative to GMT.

Once the time server is active, scheduled events can occur. Up to eight independent scheduled events can be programmed.

**Date:** Set the initial date for the event. The format for the date is mm/dd/yyyy.

**Time:** Set the initial time for the event. The format for the time is hh:mm:ss with hours in 24 hour format.

**Repeat:** Set the increment of the repeat, if desired. Set the number from 0 to 999 and either Days, Hours or Minutes. Enter 0 for a one-time event.

**Action:** Set the event Action; On, Off or Cycle.

Click "Save" to save the current settings. Click "Reset" to delete any current schedule.

**Note:** All of the Schedule Settings require a reboot of the switch, after clicking "Save". A Reboot button will appear at the bottom of the page. The new settings will not take effect until the unit is rebooted. Reboot will not affect the power position of the switch. Upon Clicking Reboot, the Googbye page is displayed with a link to re-login.



Passwords Setup Page

## 7.6. Passwords

Two passwords are used by PWR-RMT-RBT-LC. The User Password allows access to the control of switch, but not the Setup functions. When this password is used, the main screen will not have a link to Setup. The Administrator Password allows access to both the Main Screen and the Setup Screen. Passwords can be up to 20 characters long and are case sensitive.

Enter the current password then the new password twice to confirm.

### Default Credentials

Role	Username (fixed)	Password (user set)
Administrator	admin	admin<last 3 MAC segments>
User	user	user <last 3 MAC segments>

The default passwords are unique and based on the last 3 segments of the MAC address of the unit. The MAC address can be found on the bottom of the unit. Typical 00-0D-AD-xx-xx-xx.

**Example:** If your MAC address is 00-0D-AD-AA-BB-CC, then the admin password is **adminaabbcc** and the user password is **useraabbcc**.

## 8. Command Line Interface

The Command Line Interface (CLI) provides a text based method for communicating with the PWR-RMT-RBT-LC. The syntax of the CLI uses a basic Set (change a variable) and Get (retrieve a variable). The CLI is accessed through the Telnet protocol and requires a Telnet client program.

### 8.1. To access the CLI

Open the Telnet client and connect to the IP address set for the PWR-RMT-RBT-LC.

Once the connection is made the User: login prompt is presented.

Enter user or admin and press Enter. The prompt will change to Password:.

Enter the admin or user password and press Enter. The prompt will change to iBoot>. This indicates successful login. Enter commands as needed. When done, enter the logout command.

### 8.2. PWR-RMT-RBT-LC CLI Syntax

Command	Description	Factory Default
---------	-------------	-----------------

<u>Control Commands</u>	These commands are used to monitor and control the outlet.	
set outlet <on   off   cycle>	This command controls the outlet.	ON
get outlet	This command returns the current status of the outlet.	

<u>Device Commands</u>	These commands are available to the administrator only	
get location	This command returns the switch's location ID.	New Boot
set location <20 char. max>	This command is used to set the location ID.	
set cycle <1-999>	This command is used to set the cycle time, in seconds	10
get cycle	This command returns the current cycle time	
set upgrade enable <yes   no>	Enables or disables the ability to upload new firmware	
get upgrade enable	This command displays the upload enable status.	
logout	Terminates the session	
reboot	This command reboots the PWR-RMT-RBT-LC.	

<u>Network Commands</u>	All set commands require a reboot before they take effect. These commands are only available to the administrator.	
get network	This command will return all the network settings as shown below:  Mode: static IP Address: 192.168.1.254 Subnet Mask: 255.255.255.0 Gateway: 192.168.1.1 HTTP Port: 80 Telnet Port: 23 DxP Port: 9100 Timeout: 2	
set ipmode <static   dhcp>	This command sets the IP address setting mode. Static mode locks the address as set, dhcp mode allows DHCP server to assign address.	
set ipaddress <dotted decimal>	This command is used to set the PWR-RMT-RBT-LC's IP address.	192.168.1.254
set subnet <dotted decimal>	This command is used to set the switch's subnet mask.	255.255.255.0
set gateway <dotted decimal>	This command is used to set the Gateway	192.168.1.1
set http port <0-65535>	This command sets the port that the switch's web server listens for incoming connections on. When set to 0 the web server is disabled.	80
set telnet port <0-65535>	This command sets the port that the switch's Telnet server listens for incoming connections on. When set to 0 the Telnet server is disabled	23
set dxp port <0-65535>	This command sets the port that the switch's DxP protocol service listens for incoming connections on. When set to 0 the Protocol service is disabled. Note: At least one of the above MUST NOT be 0. The CLI will protect against all 3 from being set to 0.	9100
set time server <dotted decimal>	This command is used to set the IP Address of a network time server.	69.90.182.55
set timeout <0-999>	This command sets the automatic network timeout in minutes	2

<u>Autoping Commands</u>	These commands require a reboot before they will take effect. These commands are available to the administrator only.	
get autoping	This command returns all of the AutoPing settings as shown below.  <pre> AutoPing 1      AutoPing 2 IP Address: 192.168.233.254 192.168.233.154 Frequency: 10             10 Fail Count: 3             3 ----- Mode: Single Action: Cycle Once </pre>	
set autoping <1   2> ipaddress <dotted decimal>	This command is used to set the IP address of AutoPing 1 or AutoPing 2	0.0.0.0
set autoping <1   2> frequency <1-999>	This command is used to set the frequency (how often the PWR-RMT-RBT-LC sends the ping) for each of the AutoPings.	10
set autoping <1   2> failcount <1-999>	This command is used to set the number of consecutive failures the AutoPings must detect before the AutoPing	3

	considers the pinged device to be failed.	
set autoping mode <single   and   or>	Sets single AutoPing (AutoPing 1) or two AutoPing relationship And or Or.	Single
set autoping action <none   on-latch   on-follow   off-latch   off-follow   cycle   cycle-once>	This command is used to set the action that the switch will perform when the autoping triggers.	None

<u>User Commands</u>	These commands are only available to the administrator.	
set password <user   admin> <old> <new> <repeat>	This command is used to set the password of either the user or administrator.	user admin

<u>Event Commands</u>	These commands are only available to the administrator.																																																							
get events	This command displays all scheduled events as shown below. Example:  <table border="1"> <thead> <tr> <th></th> <th>Name</th> <th>Date</th> <th>Time</th> <th>Repeats</th> <th>Action</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Event Name</td> <td>mm/dd/yyyy</td> <td>hh:mm</td> <td>Annual ly</td> <td>Power On</td> </tr> <tr> <td>2.</td> <td>Event Name</td> <td>mm/dd/yyyy</td> <td>hh:mm</td> <td>Annual ly</td> <td>Power On</td> </tr> <tr> <td>3.</td> <td>Event Name</td> <td>mm/dd/yyyy</td> <td>hh:mm</td> <td>Annual ly</td> <td>Power On</td> </tr> <tr> <td>4.</td> <td>Event Name</td> <td>mm/dd/yyyy</td> <td>hh:mm</td> <td>Annual ly</td> <td>Power On</td> </tr> <tr> <td>5.</td> <td>Event Name</td> <td>mm/dd/yyyy</td> <td>hh:mm</td> <td>Annual ly</td> <td>Power On</td> </tr> <tr> <td>6.</td> <td>Event Name</td> <td>mm/dd/yyyy</td> <td>hh:mm</td> <td>Annual ly</td> <td>Power On</td> </tr> <tr> <td>7.</td> <td>Event Name</td> <td>mm/dd/yyyy</td> <td>hh:mm</td> <td>Annual ly</td> <td>Power On</td> </tr> <tr> <td>8.</td> <td>Event Name</td> <td>mm/dd/yyyy</td> <td>hh:mm</td> <td>Annual ly</td> <td>Power On</td> </tr> </tbody> </table>			Name	Date	Time	Repeats	Action	1.	Event Name	mm/dd/yyyy	hh:mm	Annual ly	Power On	2.	Event Name	mm/dd/yyyy	hh:mm	Annual ly	Power On	3.	Event Name	mm/dd/yyyy	hh:mm	Annual ly	Power On	4.	Event Name	mm/dd/yyyy	hh:mm	Annual ly	Power On	5.	Event Name	mm/dd/yyyy	hh:mm	Annual ly	Power On	6.	Event Name	mm/dd/yyyy	hh:mm	Annual ly	Power On	7.	Event Name	mm/dd/yyyy	hh:mm	Annual ly	Power On	8.	Event Name	mm/dd/yyyy	hh:mm	Annual ly	Power On
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8.	Event Name	mm/dd/yyyy	hh:mm	Annual ly	Power On																																																			
set time enable <yes   no>	This command enables or disables the use of the time server and scheduled events.  <b>Note:</b> When Adding new events through the CLI. Set this to no to prevent unintended power switching	No																																																						
get time	Displays the current time and time server  Current Time: 16:10:41 01/27/2010 Server: 64.90.182.55																																																							
set event <1-8> date <mm/dd/yyyy>	This command is used to set the scheduled action's start date.																																																							
set event <1-8> time <hh:mm>	This command is used to set the time the scheduled action will occur in 24 hour format.																																																							
set event <1-8> action <on   off   cycle>	This command is used to set the scheduled action.																																																							
set event <1-8> repeat <day   hour   minute>	This command is used to set how often the scheduled action will repeat.																																																							
set event <1-8> mult <0-999>	This command sets the repeat multiplier.																																																							
del event <1-8>	This command deletes the specified event																																																							

<u>Prompts</u>	The CLI will use the following prompts:	
User>	This prompts the user to enter his user name (user or admin). This is the first prompt that the user is presented with.	
Password>	This prompts the user to enter his password.	
iBoot >	This is the prompt that will be displayed after the user has successfully logged in.	
iBoot Reboot Required>	This is the prompt that will be displayed whenever there have been changes made that require a reboot. This prompt will remain the active prompt until the switch has been rebooted.	

## 9. DxP Protocol

PWR-RMT-RBT-LC supports the Dataprobe Exchange Protocol (DxP) for inter device communications and to allow software developers to integrate Dataprobe product into custom applications. Through the DxP protocol, the developer can:

- Turn on and off power to the Outlet
- Read the status of the Outlet

The DxP Protocol is available at <http://networktechinc.com/control-power.html>

## 10. Firmware Upgrades

The PWR-RMT-RBT-LC can be field upgraded. Find the latest version or special purpose versions at <http://networktechinc.com/control-power.html>



Upgrading the firmware with a minor upgrade (i.e. 1.01.xx to 1.01.yy) will not alter the user defined settings. Major upgrades may or may not reset the PWR-RMT-RBT-LC to factory defaults. Check the release notes for the upgrade before making changes to your unit.

- 1) Insure that the Upgrade Enable checkbox is checked in the Network Setup web page of the PWR-RMT-RBT-LC
- 2) Run the Device Management Utility, available at the link above. If the PWR-RMT-RBT-LC you would like to upgrade is not visible in the list box, either

Select Device | Discover from the menu to locate PWR-RMT-RBT-LC units on the local network, or Select Device | Add from the menu to add the IP address of the PWR-RMT-RBT-LC.

Once the device is displayed in the list, highlight it

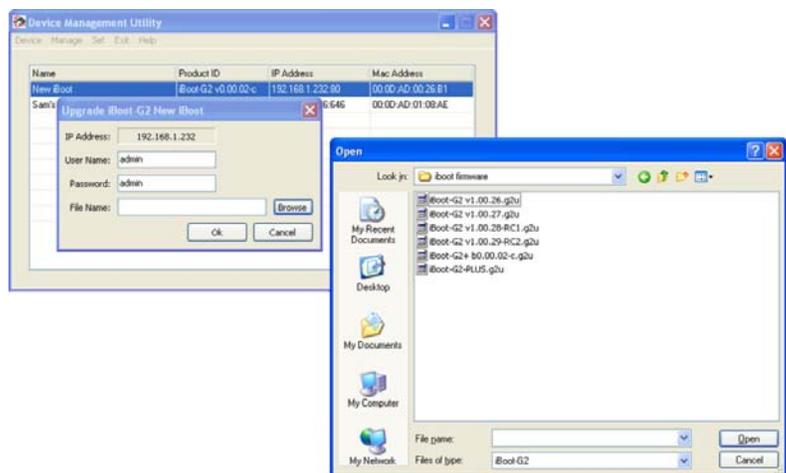
- 3) Select Manage | Upgrade Firmware

Enter User Name admin and the Password for the Administrator.

Enter the filename of the firmware, or click Browse and find the file of the firmware file to be used. Switch firmware uses the extension **.g2u**. If you don't see any files of that type, make sure the 'Files of type' box is set for iBoot-G2 or All Files.

Click OK when all the details are entered.

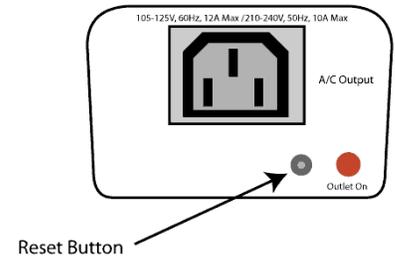
- 4) The upload will begin, and a progress bar will be displayed.
- 5) When the firmware upload is completed, the PWR-RMT-RBT-LC will automatically reset and be ready for use.



## 11. Troubleshooting

The PWR-RMT-RBT-LC has a recessed pushbutton switch in the event the unit is not performing as expected. Use the pushbutton as follows:

Action	Result
Momentary	Soft Reset. Will not change outlet status.
5 Seconds push	Reset to Factory Defaults. Hold the button in until the Outlet LED is blinking, then release.
Hold in while and Power up the switch	Recovery Mode. Allows upload of new firmware to Factory default IP Address 192.168.1.254



## 12. Specifications

### 12.1. Physical

Height	2.0" 60mm
Width	3.2" 82mm
Depth	4.2" 107mm
Weight	8.6 oz 244g
MTBF	360,000 hours
Temperature	0 – 50 degrees C

### 12.2. AC

Input	IEC 320 C14
Input Cord	16AWGX3C 10A 250 UL/CSA/VDE Rated (1.25mm2X3C)
Voltage Range	Auto Sensing 105-240 VAC
Switched Receptacle	IEC 320 C13
Capacity	12 A Max at 105-125 VAC, 10 A Max at 210-240 VAC

### 12.3. Compliance

UL/cUL	UL60950 Listed I.T.E File No. E188922
CE	Directives 89/336/EEC, 92/31/EEC and 93/68/EEC EN 60950: 3rd Edition EN 55022: 1998 Class B
FCC	Part 15 Class B



### 12.4. Network

Dual 10/100 Unshielded Twisted Pair Ethernet Jacks.
IP Addressed, DHCP assigned or Static
Internal HTTP Web Server
Forms Processing Browser required
Telnet Server

### User Settings Record your Setup here for reference

Location:		HTTP Port:	
MAC Address:		Auto-Ping Address:	
IP Address:		Auto-Ping Port:	
Subnet Mask:		Heartbeat Port:	
Gateway:			