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IP Power Stone 3000 IP BASED AC POWER SWITCH

With Telco Out of Band Backup Control and RS-232 Control

The IP Power Stone 3000 is primarily a TCP/IP NETWORK Controlled AC power switch that allows you to turn the AC power ON/OFF/RESET on remote devices. It also has an out of band "ring reboot" feature as well as RS-232 and other methods to control it. These are primarily used as backup although they may be included in the primary application of the product. Any or all of the features may be used simultaneously to present a broad range of application possibilities.

The IP Power Stone 3000 uses internationally standard IEC 320 AC connectors and has a broad 110-250V/15 amp rating. This makes it easy to use on power mains anywhere in the world with locally available power cords. Simply connect the target devices to be controlled, to the switched AC 'OUT' connector on the IP Power Stone 3000, using the appropriate power cord adapters if required. The appropriate power cords should have been ordered with this unit.

Installation

1. Connect the AC power from the "target device" to the AC "OUT" jack on the IP Power Stone 3000. An adapter power cord may be required.
2. Connect a standard PC power cord to the "IN" AC jack. Keep the rocker switch OFF.
3. Connect the RJ-45 "NETWORK port" on the IP Power Stone 3000 to the network using the yellow cable or a wireless module. Use a cross cable if connecting directly to a NIC card (not supplied).
4. If a RS-232 serial connection is to be used, connect the RJ-11/DB9 adapter to the serial port of the PC and use the 6-w Telephone cable to connect to the RJ-11 "CONFIG" port on the IP Power Stone 3000.
5. If the Ring Reboot feature is to be used connect the telephone line to the "X-CTRL/TELCO" port, but that can be done later. The unit needs to be configured first.

RS-232 Configuration (see RS-232 Configuration + Control Chart)

1. Turn the power switch ON.
2. Set up the PC to use a terminal emulator such as HyperTerminal or Pro Com, etc.
3. Configure the serial port on the PC for 1200 BPS, 8 data bits, no parity, one stop bit and no flow control.
4. Begin sending the ASCII *Set Up Commands* from the *RS-232 Configuration - Control Chart* to the IP Power Stone 3000. .

The ping address for the Ring Reboot Feature can be configured later, if used.

Network Configuration

1. Start the browser and enter the IP address for the IP Power Stone 3000 address on the browser address bar The default address is <http://192.168.1.200>
2. Access to the unit will require *Username and Password*. The defaults values are **admin & admin** (lower case).
3. Click on the configuration page and complete the information.

Note: The IP Power Stone 3000 can be reached over a local network by entering the default *Unitname*: <http://CPS001> on the address bar. See "*Unit Name*" (*Unxxxx) on the chart.

DHCP

The IP Power Stone 3000 is shipped initially with DHCP enabled to allow easy access to the IP address without knowing a DHCP assigned IP. However, if the IP Power Stone 3000 is to be accessed from outside the local network, it is recommended that the DHCP should be disabled and a Static IP address used.

Here are some Suggested Step for Local Network Configuration Using DHCP

1. Using a NetBIOS based computer, enter the default "*Unit Name*" on the address bar <http://CPS001>.
2. Enter the Username (admin) and Password (admin) when requested and Click on the Configuration page.
3. Make the following entries:
IP Address = A static IP address that fits within your network

Gateway Address = The IP address of your gateway (usually your router's local network address)

DHCP = 0 (turns OFF the DHCP).

Adding a *Port Number* further secures access to the IP Power Stone 3000 (*PTx).

This port number should not confused t with the router's NAT table port number if applicable.

4. Click on Submit Changes.
5. Verify that the entry is correct and then click *Save and Restart*.
6. On the router's Port Forwarding/NAT table and assign a port number to the IP address that was just assigned to the IP Power Stone 3000. This will be the port number that is to be appended to your router's external IP address so that the IP Power Stone 3000 can be accessed from outside the local LAN, through the router. For example, if the router's external IP address is 172.168.2.100 and the assigned port number is 205, the IP Power Stone 3000 address will be <http://172.168.2.100:205>

Control and Username/Password

The IP Power Stone 3000 can be controlled through the RS-232 port and/or over the network in the same manner as was used to configure the unit (see the *Control and Inquiry Commands* on the RS-232 chart or click the *Control/Status Page* for network access. The major difference is in security. The Username and Password are required for network access to the IP Power Stone 3000 and that the *Factory Default settings* cannot be set over the network. The current Username and Password are also required before they can be changed over the network. If these are forgotten, RS-232 connection may be the only way to re-establish a password.

Push Button control

There are two options available to control the IP Power Stone 3000 with the push button, *Normal and Alternate*. Select it from the Chart (*PBx). The Alternate is normally used with the extended cable option since the "OUT" LED is normally not able to be observed at the end of the long cable run.

Extended Cable Version

The push button on the extended cable version can be extended to over 3000' by splicing into the 6' cable that is supplied. The cable type is not important since no data is being transmitted. The two conductors simply present a shorted condition. You can use anything from an unused pair in a 10 BaseT cable to an old barbed wire fence.

Ring Control (out of band)

The IP Power Stone 3000 can be RESET with the rings from a standard phone line. To achieve this, the *Ring RESET feature* needs to be enabled either from the RS-232 chart or through a network connection. This is done by entering a number in the *Ring Reboot Count* (*RCx). When enabled the IP Power Stone 3000 would always listen for that number of unanswered rings on the phone line to cause a RESET.

To eliminate the possibility of random rings from arbitrarily resetting the IP Power Stone 3000, the *Auto Ring feature* may be enabled (*ARx). This enables the *Ring Reboot feature* only when a target device is hung. A ping algorithm determines if the selected device is hung and enables the *ring reboot function* only during that time.

Setting the Ping test Target

The IP address of the target device itself may be ping'ed (on the same subnet) or a ping can be sent to an outside address through the target device such as a modem or router. If the return ping is not seen it is assumed that the target device is not allowing the ping out or the return ping and the *Ring Reboot feature* will be enabled.

It is again disabled upon a successful ping sequence. Note that the ping target may also be unavailable thereby activating the *Auto Ring Reboot*

feature. Hence it is critical that the address chosen is available, for example, one of the large search engines. An internally used IP address also can be used to manipulate the condition for a specific internal application.

Once the selections are made, connect a standard analog phone line or the analog connection on a DSL line to the "Telco Port" on the IP Power Stone 3000. The phone line can be dedicated or shared with other analog telco devices. If it is a dedicated line, an initial test may involve testing the line with a standard phone to see if it rings.

Auto Reboot

The **Auto Reboot feature** uses the same pinging algorithm as the **Auto Ring feature**, except that, when selected, it will automatically Recycle the power when a valid ping sequence is not detected (*AC).

If it is not detected within the selected **delay time** after the power recycle, the **Auto Ring Reboot feature** is enabled if it was selected. Otherwise the IP Power Stone 3000 will turn OFF the "OUT" AC connector and simply wait for a valid pinging cycle to begin to turn it ON and resume normal operation. It can also be turned ON with the Push Button or the RS-232 control. A **Target Ping RESET Counter**, since last cleared, is displayed on the "Control Page". Maximum is 65,535.

The RS-232 Configuration Chart provides a number of other options. You might review it to see what you have to work with. It can also be used as a reference when configuring over the network.

LEDs

STATUS

Any state	= AC power is supplied to the IP Power Stone 3000 (IN)
Orange Fast Blink	= Checking network
Red Slow Blink	= Recycling AC power
Green ON	= Run mode
Green Fast Blink	= Telco port ringing.
<u>OUT</u>	AC power is supplied to the IP Power Stone 3000 OUT
<u>RJ-45</u> Orange	= good network connection
Green flash	= data

RS-232 Configuration + Control Chart

Each of the following commands should be followed by the **ENTER** key

RESET - Performs a software reset of the IP Power Stone 3000.

HELP - Displays the Help menu (these commands).

***FRT** - Restores the factory defaults.

This command does not change the MAC address

NETWORK CONFIGURATION

***IPxxx.xxx.xxx.xxx** - Sets the IP Power Stone 3000 IP address.

Default = 192.168.1.200.

*If DHCP is enabled on the IP Power Stone 3000 (See *DAX below) and the IP Power Stone 3000 is attached to DHCP network, the IP address entered via this command will be ignored (xxx.xxx.xxx.xxx = address).*

***GWxxx.xxx.xxx.xxx** - Sets the Gateway IP address

Default = 192.168.1.1.

*If DHCP is enabled on the IP Power Stone 3000 (See *DAX below) and the IP Power Stone 3000 is attached to DHCP network, the IP address entered via this command will be ignored (xxx.xxx.xxx.xxx = address).*

***SMxxx.xxx.xxx.xxx** - Sets the Subnet Mask.

Default = 255.255.255.0. (xxx.xxx.xxx.xxx = address).

***MACxx:xx:xx:xx:xx** - Sets the units MAC address

Use this command if the IP Power Stone 3000 MAC address matches the MAC address of a unit currently in the network (xx:xx:xx:xx:xx = address).

***PTx** - Sets the port number by which the browser can access the

Web pages of the IP Power Stone 3000. Default = 80.

Any port number used, other than 80, will need to be appended to the IP address (1-65535). For example, if the new Port number is 103, then the address will be http://192.168.1.200:103.

This further increases secure access even if someone has your Username & Password.

***DAX** - Enables or Disables the DHCP Addressing.

x = 0 = Disabled

1 = Enabled (Default)

Secure Access Configuration

***USxxxx** - Sets the Username to xxxx. *The Username is 4 to 10 characters long. Default = admin. (lower case)*

***PWxxxx** - Sets the Password to xxxx. *The Password is 4 to 10 characters long. Default = admin. (lower case)*

IP Power Stone 3000 Preferences

***PRx** - Sets the Recycle Hold time.

x = 0 = 5 seconds (Default)

1 to 9 = * 10 seconds

The Off time during a power cycle.

***PBx** - Sets the Push Button type.

x = 0 Normal (Default)

= 1 Alternate

Normal - Press and Immediate release, toggles the AC power state. Press and hold for more than 3 seconds, resets the power for the Hold Time specified in (*PRx).

Alternate - Press Once, turns the power ON.

Press Twice, turns the power OFF.

Press and hold for more than 3 seconds, resets the power for the Hold Time specified in (*PRx).

***Unxxxx** - Sets the Unit/NetBIOS name. Default = CPS001

Use this as a method to access the unit from a machine on a local network that can handle NetBIOS. Instead of using the IP address, you can use the name as the address. Example, http://CPS001.

***%xx** - Sets the APC Box Address

x = 00 - 99 (Default 00)

The Box Address is used when accessing multiple IP Power Stone 3000's in a Daisy Chained fashion using an external Remote Control (See Remote Controller/Daisy Chain Control).

Ring Control Configuration

***ARx** - Set the Auto Ring Reboot.

x = 0 Disabled - 1 = Enabled (Default)

*If enabled, the unit will count rings and reboot (See *RCx) if a network failure occurs (See *TP).*

***RCx** - Sets the Ring Reboot Count.

x = 0 = Disable - 1 to 9 (Default = 6)

The number of unanswered rings that will cause a power cycle.

***RDx** - Sets the Ring Reboot Repetitive Delay

x = 0 = 1 minute (Default) - 1 to 9 = * 2 minutes

The time that the IP Power Stone 3000 waits before another ring will be recognized. Gives the attached device a chance to boot up without second ring interference.

***ACx** - Set the Auto Reboot.

x = 0 Disabled (Default) - 1 = Enabled

*If enabled, the unit will reboot upon a network failure (See *TP). If Auto Ring Reboot is also enabled, rings will be counted upon continued network failure.*

***PC1** - Clears the Ping RESET counters

PING ADDRESS CONFIGURATION

TPxxx.xxx.xxx.xxx - Sets the Target IP ping address that the

IP Power Stone 3000 will use to test the network

Default = 0.0.0.0 (Disabled)

***Ixx** - Sets the Ping Interval.

xx = 01 to 99 minutes (Default = 02)

This is the time in minutes between each Ping attempt. This includes valid and failed responses.

***Txx** - Sets the Ping Response Timeout.

xx = 01 to 99 * .1s (Default = 40)

Wait time in tenths of sec. for each Ping response.

***RTx** - Sets the Ping Retry Count.

x = 2 to 9 (Default = 3)

Number of consecutive failed Ping responses before action is taken.

AC POWER COMANDS

***PON** - Applies power to the AC OUT connector.

***POF** - Removes power from the AC OUT connector.

***PRC** - Removes power from the AC OUT connector for the specified Recycle Hold Time (See *PRx) and then reapplies power to the AC OUT connector.

INQUIRY DISPLAY COMANDS

***?PS** - Displays the IP Power Stone 3000 Configuration.

***?P1** - Displays the AC power status

***?PC** - Displays the Target Ping RESET Counter

Your comments on this product and/or instructions are invited.
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