JUICE GOOSE™

OWNER'S MANUAL

(Quickstart Section is on Page 2.)

iP-1

Piwi

WEB CONTROLLED
AC POWER DISTRIBUTION

10/13

INTRODUCTION

iP-1
WEB BASED REMOTE POWER CONTROL

The Juice Goose iP-1 is a microcontroller based power distribution device that can be accessed via intranet or internet communications using Ethernet connection. With this remote access, individual AC receptacles can be turned on and off and AC power receptacles can be monitored for electrical current flow.

The iP-1 has a 15 amp capacity .

SAFETY PRECAUTIONS

The iP-1 is to operate at 120 volts, 60 hertz. Operation with any voltage or frequency other than that can damage the equipment and create an unsafe situation.

CAUTION #1: This device must be grounded. Failure to ground the device could expose the user to dangerous electric shock.

CAUTION #2: This device should be installed only by qualified electrical technicians using appropriate mounting hardware and correct installation techniques. When installing make sure main power is off.

CAUTION #3: Do not expose the iP-1 to moisture or salty air. Doing so could cause significant damage and create an unsafe condition.

DISCLAIMER

Juice Goose shall under no circumstances be held responsible for any losses, damage, or injury resulting directly or indirectly from the use of the iP-1 device in a manner contrary to accepted safe operating methods or any instructions contained in this document. The user should determine prior to use whether this product is adequate, suitable and safe for the application intended. Since individual applications can be subject to extreme variation Juice Goose makes no representation or guarantee as to the suitability of the iP-1 for any generally described application.

QUICKSTART GUIDE

1. Unbox the unit. The box should contain: iP-1, a 3 gang electrical box , a manual, warranty card and Juice Goose promotional material. You will need a standard CAT5 network cable if attaching to a router, a CAT 5/6 crossover cable if connecting directly to a PC (cables are not provided with this unit).

2. Ensure your PC is on and booted up and the iP-1 has been installed by a qualified electrician and is connected to your network.

3. The iP-1 will take about 30 seconds to boot up and configure itself when power is restored after installation at which point the Network light on the front of the unit will illuminate, indicating network connectivity. If the Network light blinks or does not light at all check the cable connections.

5. Open up your web browser and type in the following default IP address to access the iP-1 on your network : http://juicegoose.

6. At this point you will be prompted to log into the iP-1.

Initial login will be:
Username: admin
Password: juicegoose

7. You will be presented with the control section where you can control the iP-1's PODS by clicking on the buttons or using the Sequence field by entering the value in seconds and clicking the Sequence UP button.

8. To setup a specific IP address, change passwords for the admin/user account or configure other advanced features of the iP-1 click on the 'In Wall IP Management' link at the top right of the displayed page. You will need to be logged in as **admin** to access this section. This section is described in more detail beginning on page 6.

See your system administrator, if you have one, for help with configuration.

DETAIL SPECIFICATIONS

CHASSIS……Metal 3 gang front panel. Two gang back box
DIMENSIONS (inches)……..4.5”H x 6.5”W x 3.75”D
WEIGHT (lbs)……1.0
AVAILABLE FRONT PLATE AND DUPLEX COLORS ……Black, Tan, White

TECHNICAL CURRENT RATING……12A
RELAY CURRENT RATING……16A
NUMBER OF CONTROLLABLE PODS……Two

POWER INPUT……Hardwired
POWER OUTPUT……Single NEMA 5/15R Duplex (Controlled)
VOLTAGE INPUT……120 VAC @ 60 Hz

SIGNAL CONNECTIONS……Ethernet (RJ45)
MONTIOR FEATURES……Local LED, Remote Graphical Interface (On/Off, Current)

FRONT PANEL FEATURES

NETWORK LED - This LED will light up solid when the iP-1 is connected to an Ethernet network connection. It will blink quickly when an Ethernet cable is attached but no network can be found. When no network cable is connected the light will blink slowly indicating the unit is powered up.

DUPLEX OUTPUT- There is 1 duplex receptacle on the front panel of the iP-1. This is split into 2 outlets, each is rated for a maximum 15 amp load and each is controllable to turn on or off independently of the other. When the on-board sequencing process is used outlet 1 will turn on first, followed by the 2nd outlet. They will turn off in reverse order using this same process.

CHASSIS FEATURES

NETWORK (Ethernet) PORT - This RJ45 connector is for connecting to your PC, router or local area network using a TCP/IP link.

FACTORY RESET SWITCH - This switch located to the right of the RJ45 connector is used to reset the iP-1 back to factory settings. This process should only be attempted by a qualified electrician as it requires the unit to be powered during the reset process. Hold in for 10 seconds under power to reset to factory settings.

DETAILED INSTALLATION AND SETUP

Unbox the unit. The box contains: the iP-1 unit, a 3 gang electrical box, the iP-1 manual and a warranty card .

Have the 3 gang box supplied with the iP-1 (or an acceptable alternative), installed by a qualified electrician along with the iP-1. The wire harness from the IP-1 will be located within the empty portion of the 3 gang box and connected to the mains power supply using wire nuts.

A CAT5 network cable within wall will also be needed and should be connected to the RJ45 input on the iP-1 which is accessible from the outside of the 3 gang box.

Complete wire and network cable installation and mount the iP-1 securely before turning on power to the unit at the circuit breaker panel.

SET UP DETAIL

Connecting to the iP-1 to a router. (Singular units)

1. After installation of the iP-1 connect the free end of the RJ45 cable into your router.

2. The iP-1 will take a few seconds to boot up and configure itself once it receives power, at which point the Network light on the front of the unit should illuminate and remain on without blinking, indicating network connectivity. If the Network light blinks check the cable connections.

3. Open a web browser on a PC connected to the same network router as the iP-1 and type in the following address on the navigation bar to access the iP-1:
http://juicegoose
Be sure to type exactly as shown. **No domain such as .com should be added.**

4. You will be presented with the login box. Enter the following initial username and password (these can be changed later):

User: **admin**
Password: **juicegoose**

Setting up multiple iP-1's.

DHCP is automatically enabled on the iP-1 out of the box, as such plugging multiple units into a router without first assigning the Individual IP addresses may cause problems identifying each units actual IP address.

If you are setting up multiple iP-1s on the same network a different setup approach is advised, which can be accomplished in 2 ways.

1. Multiple iP-1 setup on a router.

1(a). When installing more than one iP-1 on a router each one needs to be assigned it's individual IP address before plugging/powering on the next unit to be added.
1(b). Connect the first iP-1's network cable to the router and follow the singular unit setup above.
1(c). Be sure to turn off DHCP in the configuration section of the IP-1's configuration page and assign the IP address you want the unit to use.
1(d) Once the IP address as been assigned click the save button to save and reboot the iP-1.
1(e) You now access the iP-1 you just configured by using it's assigned IP address rather than the http://juicegoose method.
1(f) Repeat steps (b) through (e) assigning a different IP address for each unit.
1(g) If remote operation of multiple units is desired you'll also need to choose a different port number for each unit, the default is port 80.

2. Bench setup.
2(a). Gather all the iP-1s you want to setup along with a computer, crossover cable and

2. The iP-1 Network LED on the front of the unit should illuminate and remain on without blinking, indicating network connectivity. If the Network light blinks check the cable connections.

4. In Windows go to your start menu and navigate to the control panel. Then choose the Network Connections" icon.

5. Open Network connections by double clicking on it, select the LAN or HIGH-SPEED icon, right click on this and select properties.

6. Click once on the Internet Protocol item that you will see at the bottom of the list and select the properties button which is at the mid right.

7. Check the "Use the following IP address" box and then change the IP address to: 192.168.1.1, then change the Default Gateway address also to: 192.168.1.1.

8. Click OK and then close the network box.

9. Open a web browser on your PC and type in the following address on the navigation bar to access the iP-1: **192.168.1.77**.

10. The iP-1 login box will appear, enter your login details and operate the iP-1.

The iP-1 Management section is accessible from the top right link named “iP Wall Management” and consists of 4 tabs;

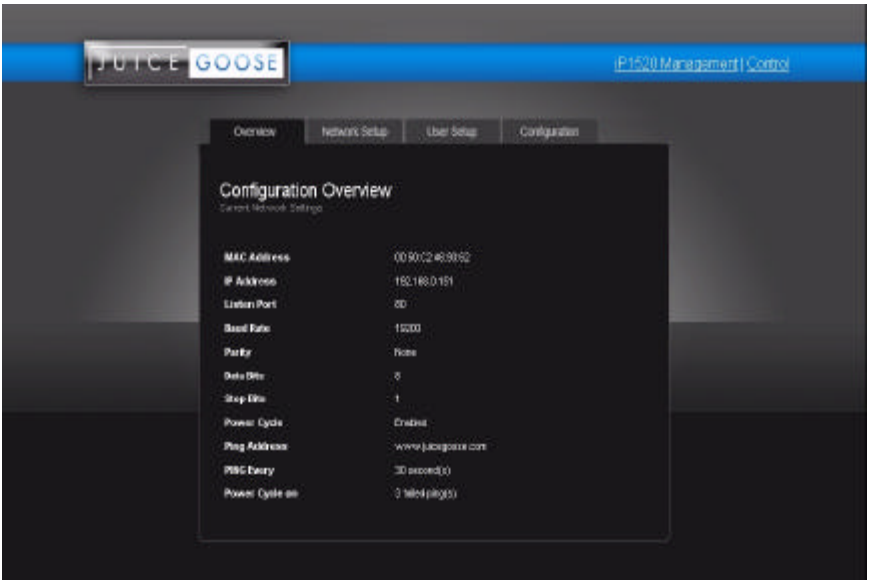
Overview—Which shows the current configuration of the iP-1

Network Setup– Where you can configure IP address and other required network settings dependant on your personal network

User Setup– Where you can set the username and password for both the admin account and user account

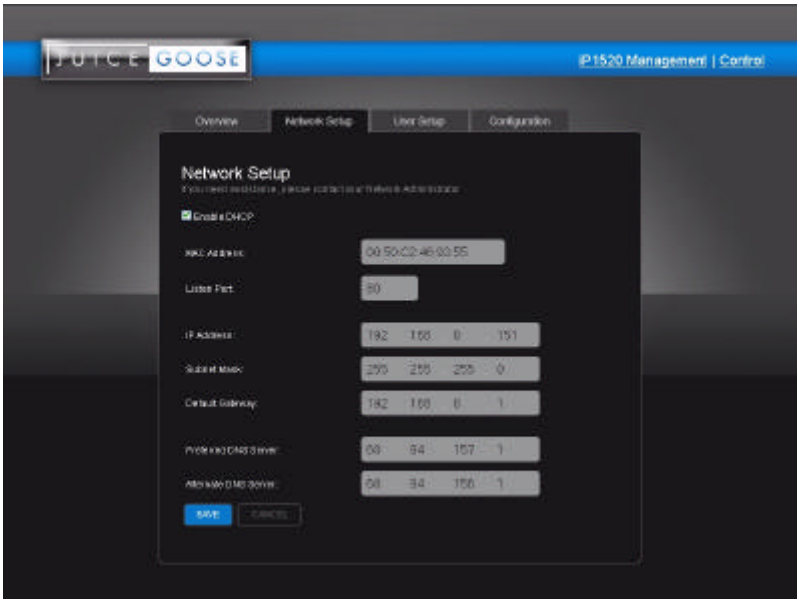
Configuration— Which allows you to configure he Power Cycle feature of POD1.

OVERVIEW



The Overview Tab displays the current settings of the unit and the MAC address. This page is useful for retrieving all the information you may need to set up the iP-1 on your network. If you have DHCP enabled, the IP address your router/DHCP server assigned can be viewed here.

NETWORK SETUP



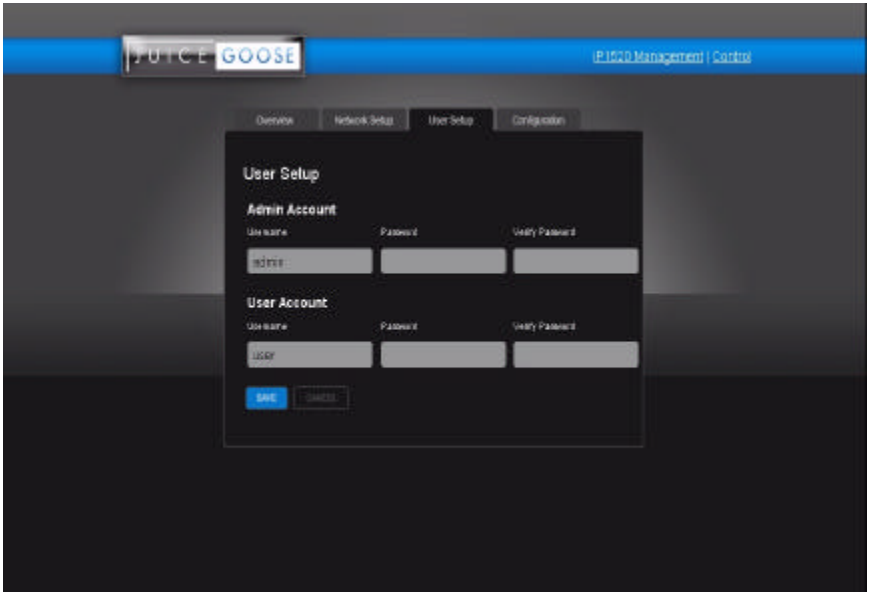
In the above screen capture you can see the network setup tab accessible when logged in as Admin.

The Enable DHCP is checked by default. This will result in the router or DHCP server assigning the IP address of the unit which will then be visible on the OVERVIEW tab.

If you wish to set the IP address manually to conform with your personal network the fields are provided to do this. You must first disable the DHCP check box and then enter the IP address, subnet mask, default gateway and preferred DNS values in compliance with your local network.

The Listen Port is used for remote access from outside your network. The default is set to 80. But this can be changed to any port you select that otherwise is not being used by any other attached system. See page 13 for further details on the port address and how it relates to remote access.

USER SETUP



The user setup tab is where you configure the Admin and User account passwords. You can change the username and password on both accounts by typing in the changes in the corresponding fields. There is a second password field for both accounts that verifies you typed the password in correctly. If you did not, an error message will be displayed when trying to save the changes.

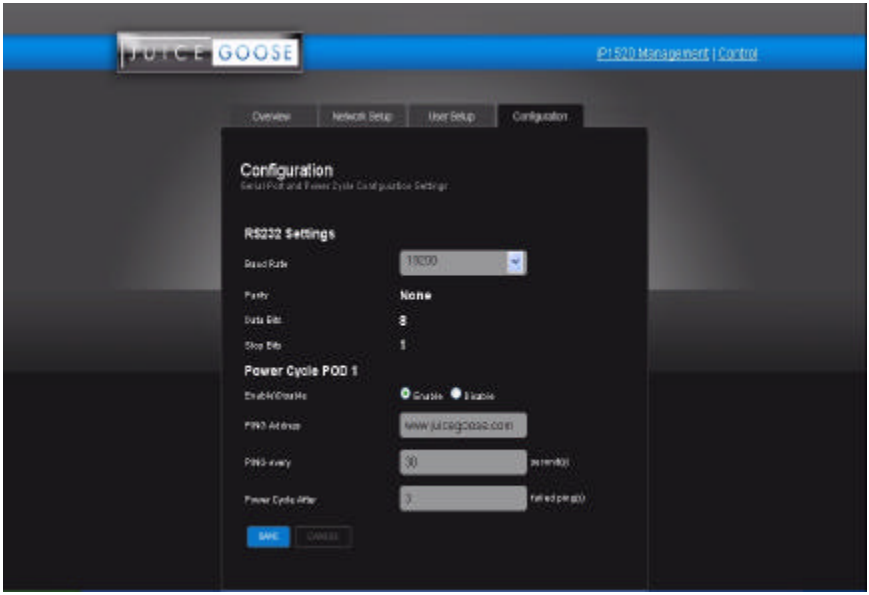
Once you have set the desired username/passwords hit the ‘SAVE’ button and the changes will be made and the unit will reboot. You may hit the Cancel button if you decide you don’t want the changes and the username/passwords will remain unchanged.

Only the Admin login has access to the setup and configuration page. This login should only be used by authorized people as changes can render the unit in an unusable state if the wrong data is entered. A factory reset would then have to be applied.

The User account has access to only the POD and Sequence control page.

Multiple Admins and Users can be logged into the device at the same time which allows uninterrupted operation from multiple locations without the need for other users to log out first. The commands are processed based on the last command issued.

CONFIGURATION



POWER CYCLE FEATURE

The Configuration tab contains the Power Cycle control feature. The Power Cycle feature is useful for rebooting routers should a connectivity issue arise. Simply plug the router into POD1. Should a router lock up occur the units will be rebooted via the power cycling of POD1 when your chosen domain cannot be PINGed by the iP-1. This feature ships disabled and can be enabled using the checkbox.

Before you enable this feature, be sure to configure the settings you require. After you enable the Power Cycle feature the settings cannot be changed unless you disable the feature again.

Please note: if you have a Dynamic IP address it is not advisable to plug your Cable/DSL modem into POD1 as a reboot of the modem could result in a new IP address being assigned to the modem and so could result in remote access issues if you do not know what the new IP address is. If you have a static IP address this is not an issue and the modem can also be plugged into POD1.

There are 3 user definable fields to this feature.

The 'PING Address' field is the internet address that the unit will use to check network connectivity. The default is our web domain (www.juicegoose.com) and can be left as is. If you wish to choose another domain simply type the address

in this field.

The ‘PING Every’ field is how often you want the iP-1 to check for connectivity. The default is 30 seconds and can be changed to any value (in seconds) you choose. It’s recommended that you don’t go below 30 seconds to allow any attached devices ‘boot up’ time.

The ‘Power Cycle After’ field is how many failed PING attempts the unit will carry out before rebooting POD1. The default is set to 2 tries but the user can define any value.

Once you have completed all setup fields as desired hit the save button at the bottom of the page to update the unit and reboot it.

REMOTE CONTROL AND MONITORING

Using the On Board Web Server

TURNING POWER ON AND OFF - On the Control page, both PODs has associated with it a virtual On/Off button (Activate) and an On/Off indicator (Status). Clicking an On/Off button turns the corresponding POD on or off. When a POD is on the Status indicator will be green as if on. When a POD is off, it's Status indicator will darken, as if off.

POWER MONITORING - The Current indicator will show the amount of electric current flowing through a particular POD. This meter is accurate to the nearest 0.1 amperes for levels between 0.2 and 20.0 amperes. Current measurement is RMS, averaged over a period of three seconds. Because the iP-1 only measures current in one direction, from the outlet to the load, applications that feed current back to the supply (for example inductive loads such as motors) will not be measured accurately.

SEQUENCING SETTINGS - Rather than turning each POD on and off individually, in applications where it is desired to turn the outlets on and off in a coordinated sequence, a macro program can be set to turn the PODS on (1-2) and off (2-1) in order with the click of a virtual button. Under the Sequence heading on the Control page enter a desired number of seconds for the delay of turning the PODS on and off. The default value is two seconds. Clicking the Activate button will turn the outlets on or off in the prescribed order. The status of the PODs is indicated below the Status heading on the Control page.

REMOTE OPERATION OF iP-1 - To access the iP-1 from a different network other than the one the iP-1 is using, you need to first assign the iP-1 with a PORT address on the Network setup page and then assign this on your router. Log in to your router and enable the PORT FORWARDING feature (Sometimes called Virtual Server) using the assigned iP-1 IP number you chose and the port number you assigned. Each router's port forwarding is different. So see your routers manual for help with configuring this. Once you have port forwarding setup you can access the iP-1 from a remote network by typing the IP address and PORT address into your browser bar. The PORT address is added to the end of the IP address separated by a colon.

Example 200.100.075.050:80 - In this example "80" is the port address.

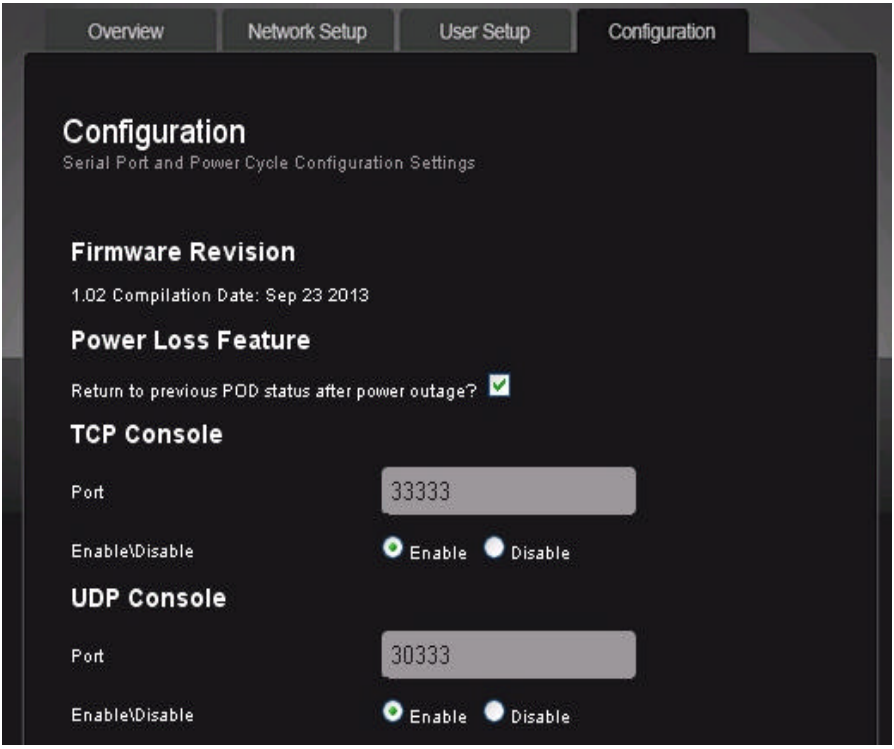
If you have enabled the port forwarding correctly on your router you will be able to access the iP-1 from any location in the world.

RAW TCP CONTROL

It is possible to control and monitor iP-1 over Ethernet using raw TCP protocol. In this mode, any PC (Windows, Linux, Mac) can connect to the iP-1 over a TCP/IP connection using a suitable TCP/IP client program. Once the connection is made, the console commands (see page 15) are available to the user over TCP/IP as if the user was connected to IP-1 over the local serial connection.

By default, TCP feature is disabled due to security reasons. This can be enabled through the web interface. The default TCP port is 33333; this can also be changed through the web interface.

To enable TCP feature, click on the ***In Wall iP Management*** link on the web interface and then click on ***Configuration*** tab. Mark the button called ***Enable*** in the ***TCP*** section. Change the default TCP port, if needed.



To connect to IP-1 over TCP, simply start your TCP client program (such as Hercules or PuTTY) and specify the IP address of the iP-1 and the TCP port. Start the connection (many programs have a Connect button to start the connection) and type iP-1 console commands such as Help. You should see the reply to the command on the TCP client terminal window. See page 15 of this manual for a full list of the console commands available.

Instead of a dedicated client program, it is also possible to use Telnet command to establish the connection. For example, from Windows command prompt, type:

telnet <IP Address> <Port>

where **<IP Address>** is the address of the iP-1 to connect and **<Port>** is the TCP port to use.

Example: **telnet 192.168.1.22 33333**

Note: If there is no activity on the console for 10 minutes the TCP connection will be closed automatically.

UDP CONTROL

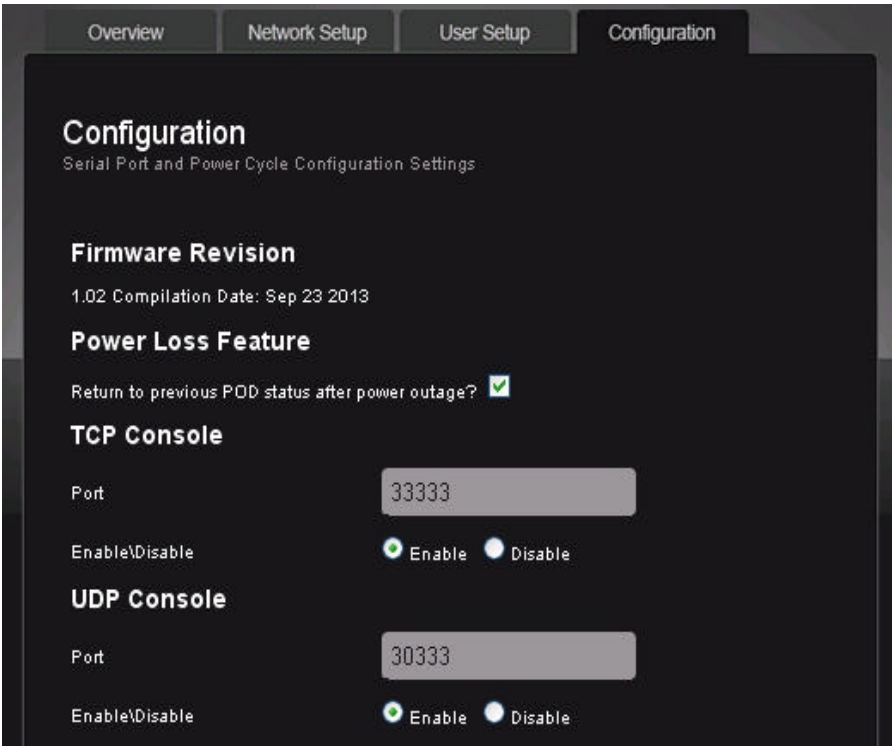
It is possible to control and monitor iP-1 over Ethernet using UDP protocol. In this mode, any PC (Windows, Linux, Mac) can connect to the iP-1 using a suitable UDP capable client program. Once the UDP port is opened, the serial port console and its commands are available to the user over UDP as if the user was connected to iP–1 over the local serial connection.

By default, UDP feature is disabled due to security reasons. This can be enabled through the web interface. The default UDP port is 30333; this can also be changed through the web interface.

To enable UDP feature, click on ***In Wall iP Management*** link on the web interface and then click on ***Configuration*** tab. Mark the button called ***Enable*** in the ***UDP*** section. Change the default UDP port, if needed.

Unlike TCP, UDP is a connectionless protocol. Also, unlike TCP, UDP does not guarantee delivery of messages. For simple console applications, this is not critical and the message can be retyped if there is a problem with transmission.

See page 15 of this manual for a full list of the console commands available.



CONSOLE COMMANDS AVAILABLE

Here is a list of the console commands available using UDP and RAW TCP.

POD1ON – Turns POD 1 on
POD1OFF – Turns POD 1 off
POD2ON – Turns POD 2 on
POD2OFF – Turns POD 2 off
ALLON—Turns all PODs on without sequence
ALLOFF – Turns all PODs off without sequence

SEQUP(X) – Sequences up all PODs from 1 to 2, where (X) is the number of seconds between sequence events (e.g. A 2 second sequence would be SEQUP2)
SEQDOWN(X) Sequences down all PODs from 2 to 1, where (X) is the number of seconds between sequence events (e.g. A 2 second sequence would be SEQDOWN2)

POD1CURRENT (Reports current draw on Pod 1)
POD2CURRENT (Reports current draw on Pod 2)

DHCPON - Enables DHCP on the iP-1
DHCPOFF - Disables the DHCP on the iP-1. You will want to disable DHCP before entering any new network settings or the changes will be lost when connecting the unit to a network.

SETIP XXX.XXX.XXX.XXX - Sets the IP address of the unit where 'X' represents your chosen numerals.
SETMASK XXX.XXX.XXX.XXX - Sets the subnet mask of the unit where 'X' represents your chosen numerals.
SETGATEIP XXX.XXX.XXX.XXX - Sets the gateway of the unit where 'X' represents your chosen numerals.
SETPDNS - Sets the primary DNS IP address.
SETSDNS - Sets the secondary DNS IP address.
INFO - Shows all current settings

RESTART - Restarts/Reboots the iP-1. Use this command after making your changes.

POWER LOSS FEATURE

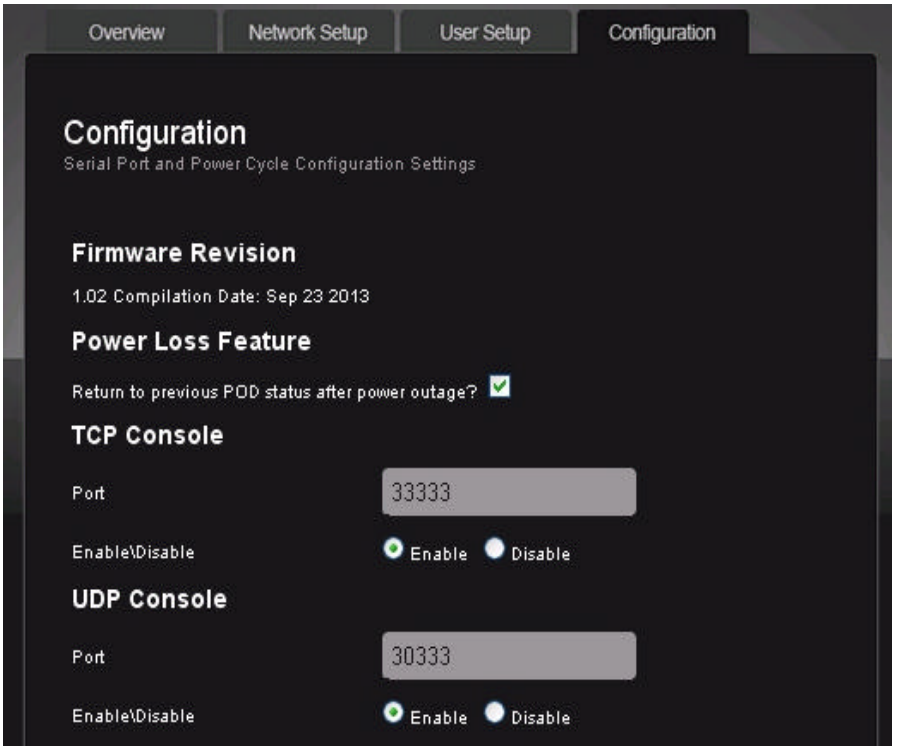
The power loss feature on the iP-1 ensures that in the event of a power outage the previous state is remembered when power is returned.

Effectively this means that if you have PODs in an activated state and the power fails, when power is restored the PODs that were previously activated will sequence back up in accordance with the sequence delay currently active.

To enable the power loss feature, click on ***iiP In Wall Management*** link on the web interface and then click on ***Configuration*** tab. You will see a check box under the Power Loss Feature section. Checking the box enables the feature.

NOTE:

Please note, a delay of up to 5 seconds can occur between issuing a command in the web server and the iP-1 storing the state. So if power is lost just after a command has been issued the state may not be remembered.



TROUBLESHOOTING

The Juice Goose iP-1 is ruggedly constructed and contains quality components. There are no user serviceable parts inside this device. Unauthorized service will void all existing warranties and may result in equipment damage and personal injury.

Should improper performance be observed consult the following guidelines for diagnosis.

THE iP01 WILL NOT POWER UP.

a. Check to see that main utility power is available and connected.
b. Check that the facility circuit breaker is not tripped.
c. Check the Network LED on the chassis. If it is not lit the iP device is probably not receiving power. Remove power from the iP device by flipping the mains circuit breaker then restore power.

THE iP-1 PODS WILL NOT POWER DOWN.

a. It is likely that when a unit fails to turn off the cause is similar to that which would cause a unit to fail to turn on.
b. Follow steps outlined in the power up solution above.

I CANNOT CONNECT TO THE iP1520 VIA MY NETWORK.

Ensure your router has DHCP enabled (see your router's user manual to enable this feature). Then type http://juicegoose to access the login screen.

Check you are using the correct cable, standard CAT5 cable for router connection, crossover cable for direct to PC connection.

If you are connecting directly to a PC you will have to configure your computer to have an IP address of 192.168.1.1. See your operating systems help file on how to do this. We recommend you setup the devices initially on a router.

Are you using the correct username and password? If you are accessing the login page and your login is failing you might need to reset to factory default and try again if you have forgotten the correct username/password combination.

If you are trying to connect from a remote network ensure you are trying to access using the correct IP address and PORT number which were assigned to the unit. Port forwarding may need to be enabled on the remote unit's network router (see your administrator).

POD 1 KEEPS REBOOTING.

The Power Cycle feature may be enabled and there is no connectivity to the selected domain. POD 1 will power cycle if the defined domain name to be PINGed is unreachable. This can happen if you're using the unit independently of a web enabled network. Disable the feature in this case.

a. Ensure you have chosen a valid web address to PING.
b. Ensure you have the PING set to at least 30 seconds and the retries to at least 2. If you have a router/modem on POD1, 60 seconds with 2 retries is recommended to allow time for the modem to boot up and reestablish connection.

THE iP-1 TURNS OFF UNEXPECTEDLY.

a. The unit may have encountered excessive current draw that caused the circuit breaker to trip. Examine the breaker. If it has tripped the button section of the breaker will be extended and can be reset by pushing it in after the unit has been off for a brief period.
b. Review the current requirement of the equipment plugged into the iP device and compare it to the amperage rating of the iP device in question. See the Detail Specification section of this manual on Page 3.

I'VE FORGOTTEN MY USERNAME/PASSWORD.

The only way to fix this issue is to do a factory reset of the unit as detailed below.

FACTORY RESET ALL VALUES.

The iP1520 can be returned to it's default firmware values by pressing the reset button on the side of the IP-1 to the right of the RJ45 input connector. This will also reset the IP and RS232 to their default settings of IP: 192.168.1.77 and Baud rate 19200 and enable the DHCP feature.

WARNING: The iP-1 needs to be powered on to perform the factory reset. Be careful to only touch the factory reset button and ideally use a pencil to press it. There is a risk of shock if you touch anything else inside the iP-1. This task should only be performed by a qualified Electrician.

To perform the factory reset, press the "Reset" button and hold it for 10 seconds and being careful not to touch anything else inside the iP-1. The network LED will be lit solid. When the LED goes out the reset is complete.

I'VE TRIED THESE SOLUTIONS AND STILL HAVE A PROBLEM.

If the problem can not be remedied, if the encountered problem is not listed here and particularly if any evidence of severe or hazardous performance is observed, immediately disconnect power to the iP device and contact your local Juice Goose dealer or Juice Goose directly.

SERVICE

Should your unit require service, contact Juice Goose to receive a service authorization number. This number will allow us to track your returned unit. Please note that no returns will be accepted without such a number.

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