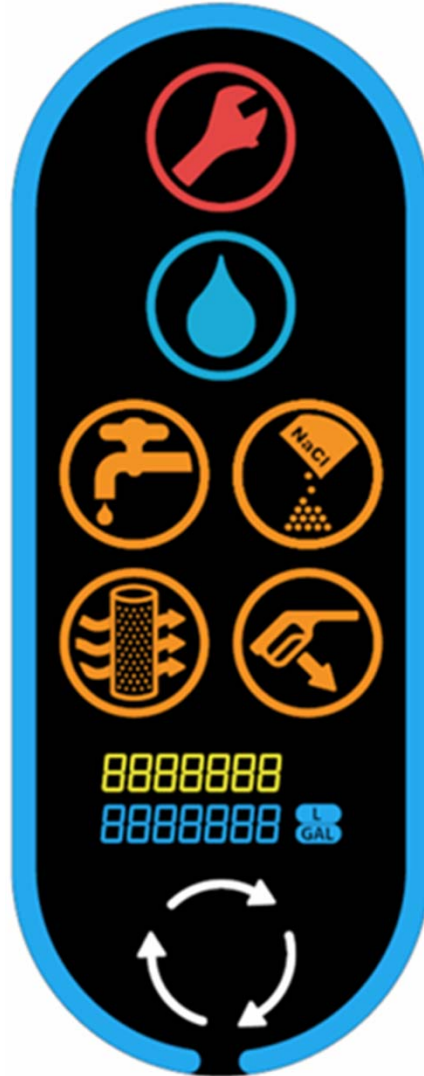


Connecting to the Orbio 5000-Sc LCD Interface Panel via an Ethernet Cable



Communicating with the Orbio 5000-Sc

The LCD Interface Panel has an Ethernet connection port that allows you to communicate with the Orbio 5000-Sc via a hard wire connection.



Connect the other end of the Ethernet Cat5e cable to your computer.



Connect a standard Ethernet Cat5e cable to the Orbio 5000-Sc LCD Interface Panel.



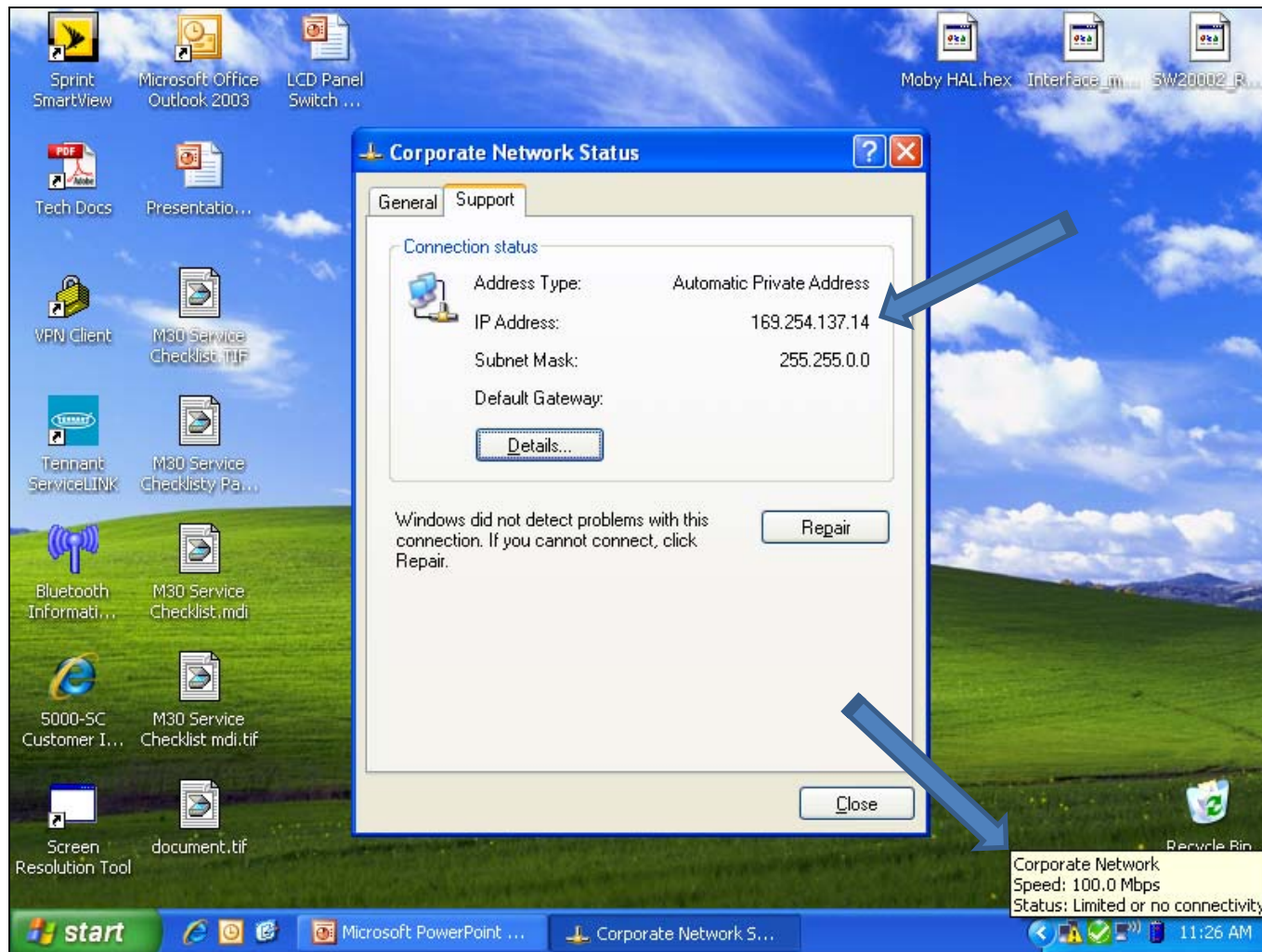
Note: It may take as long as three minutes for the computer to establish a connection to the Orbio 5000-Sc local NETWORK.

Communicating with the Orbio 5000-Sc

When a connection is established you'll see the IP Address change to a number other than 0.0.0.0.

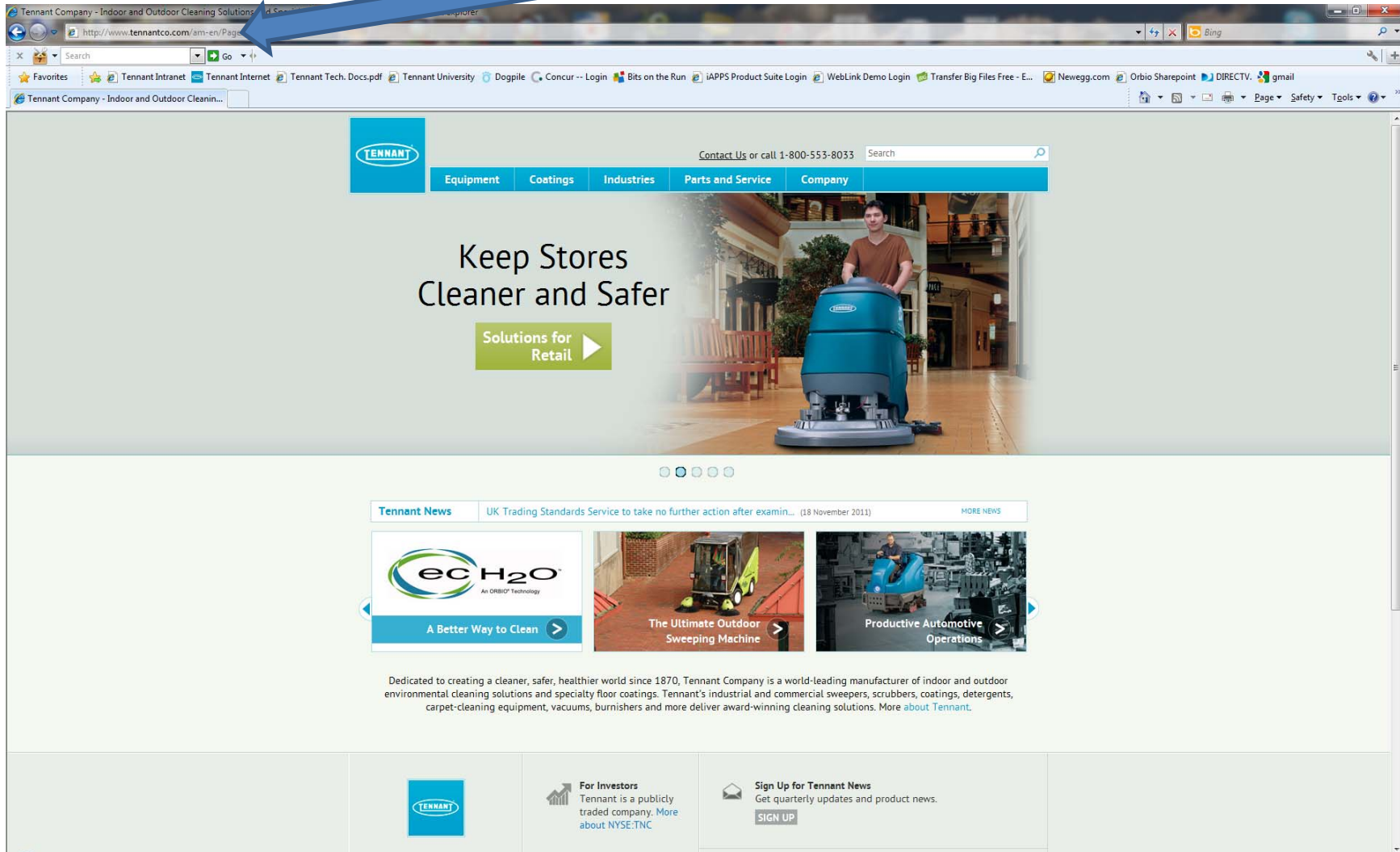
When you roll over the network icon in the task tray, you'll see the message 'Status: Limited or no connectivity'.

This is what you want to see!
You're ready to communicate with the Orbio 5000-Sc.



Start your Internet Browser.

In the address field type:
169.254.0.200 and press enter.



The Orbio 5000-Sc Web Interface Main Page will appear.

The screenshot shows a web browser window titled "5000-Sc Main Page - Windows Internet Explorer". The address bar displays the URL "http://169.254.0.200/index.cgi". The page content includes the Orbio Technologies logo, the title "Orbio Technologies 5000-Sc Browser Interface", and a header "Web Interface Main Page HTML Ver 02-14-12". Below this is a table with two columns: "Parameter" and "Value". The table lists various system parameters and their current values. At the bottom of the page, there are links for "Diagnostic Pages" and "Tools Page".

Parameter	Value
Minute meter	2041
Gallons	1531
Liters	5795
Controller Software Ver	08.19.11
Interface Software Version	SW20002_Rev_A
DC Supply Voltage	24.1
Cell Current	0.0
Errors	0x00
Warnings	0x00

[[Diagnostic Pages](#) | [Tools Page](#)]

Updating the Orbio 5000-Sc Firmware via an Ethernet Cable Connection.

You will need to download the latest firmware files prior to performing this function.

For this procedure it is assumed that you placed the files on the desktop of your computer.

Updating Interface & Control Board Firmware

Click on the 'Tools Page' link at the bottom of the window.

The screenshot shows a web browser window titled "5000-Sc Main Page - Windows Internet Explorer". The address bar shows the URL "http://169.254.0.200/index.cgi". The page content includes the Orbio Technologies logo and the title "5000-Sc Browser Interface". Below this, it says "Web Interface Main Page" and "HTML Ver 02-14-12". A table lists various system parameters and their values. At the bottom, there is a navigation menu with links for "Diagnostic Pages" and "Tools Page". A blue arrow points to the "Tools Page" link.

Parameter	Value
Minute meter	2041
Gallons	1531
Liters	5795
Controller Software Ver	08.19.11
Interface Software Version	SW20002_Rev_A
DC Supply Voltage	24.1
Cell Current	0.0
Errors	0x00
Warnings	0x00

[[Diagnostic Pages](#) | [Tools Page](#)]

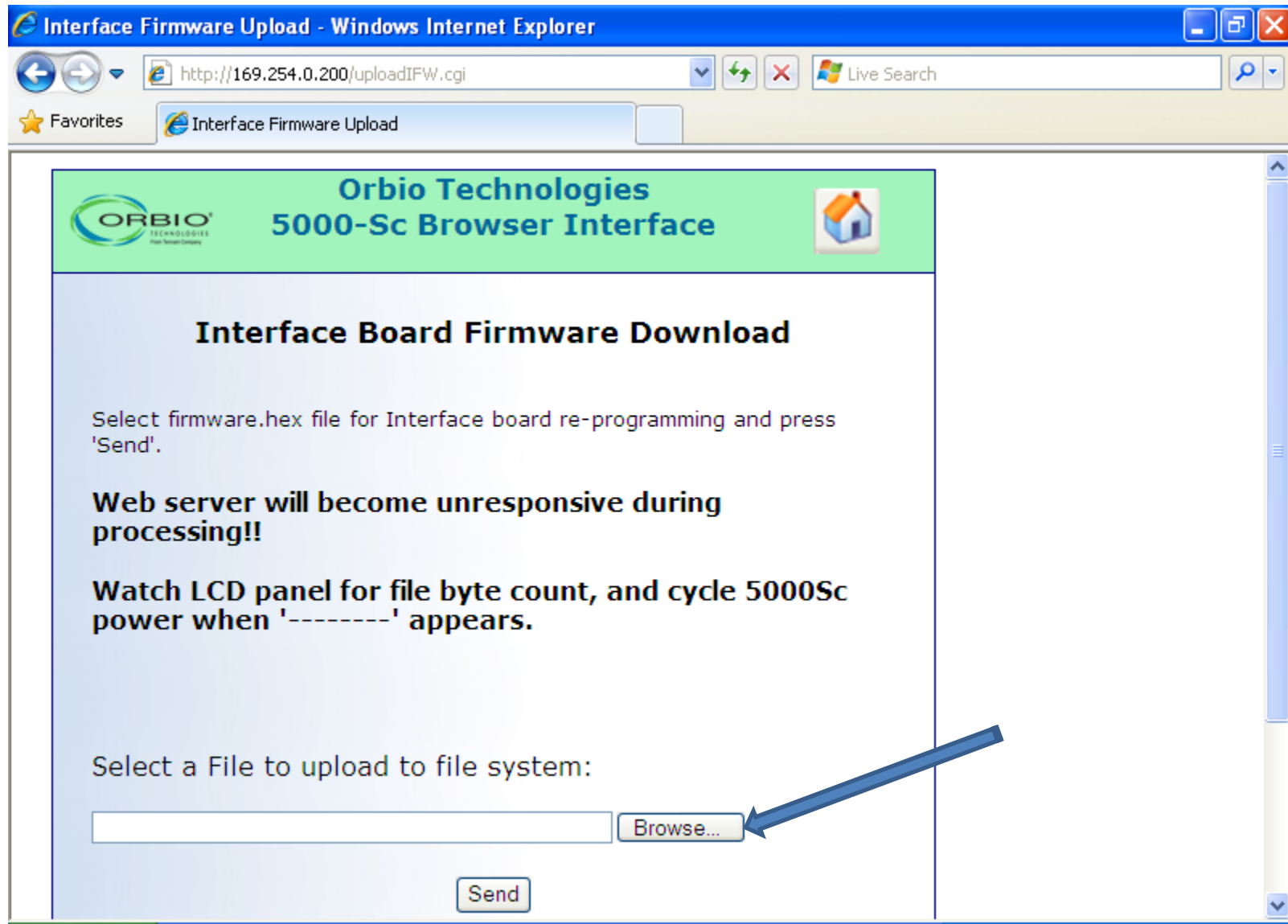
Updating the Interface Board Firmware

Once you have obtained the Firmware Update Files from Minneapolis Technical Support and placed them on your computer desktop, click on the 'Download Interface FW' link.



Updating the Interface Board Firmware

To find the Control Board Firmware file, click on the 'Browse' button.



The screenshot shows a web browser window titled "Interface Firmware Upload - Windows Internet Explorer". The address bar displays the URL "http://169.254.0.200/uploadIFW.cgi". The page header features the "ORBIO TECHNOLOGIES" logo and the text "5000-Sc Browser Interface". The main content area is titled "Interface Board Firmware Download" and contains the following instructions:

Select firmware.hex file for Interface board re-programming and press 'Send'.

Web server will become unresponsive during processing!!

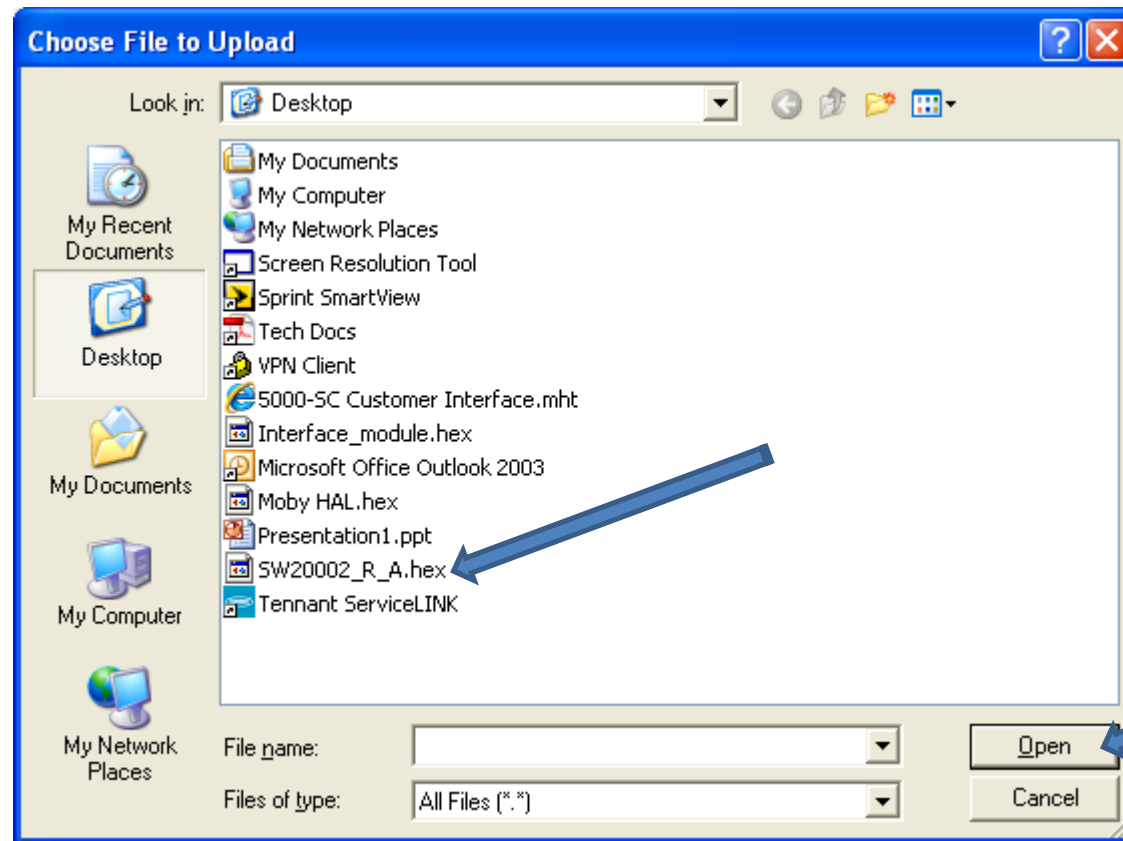
Watch LCD panel for file byte count, and cycle 5000Sc power when '-----' appears.

Select a File to upload to file system:

Below the instructions, there is a text input field and a "Browse..." button. A blue arrow points to the "Browse..." button. At the bottom of the form, there is a "Send" button.

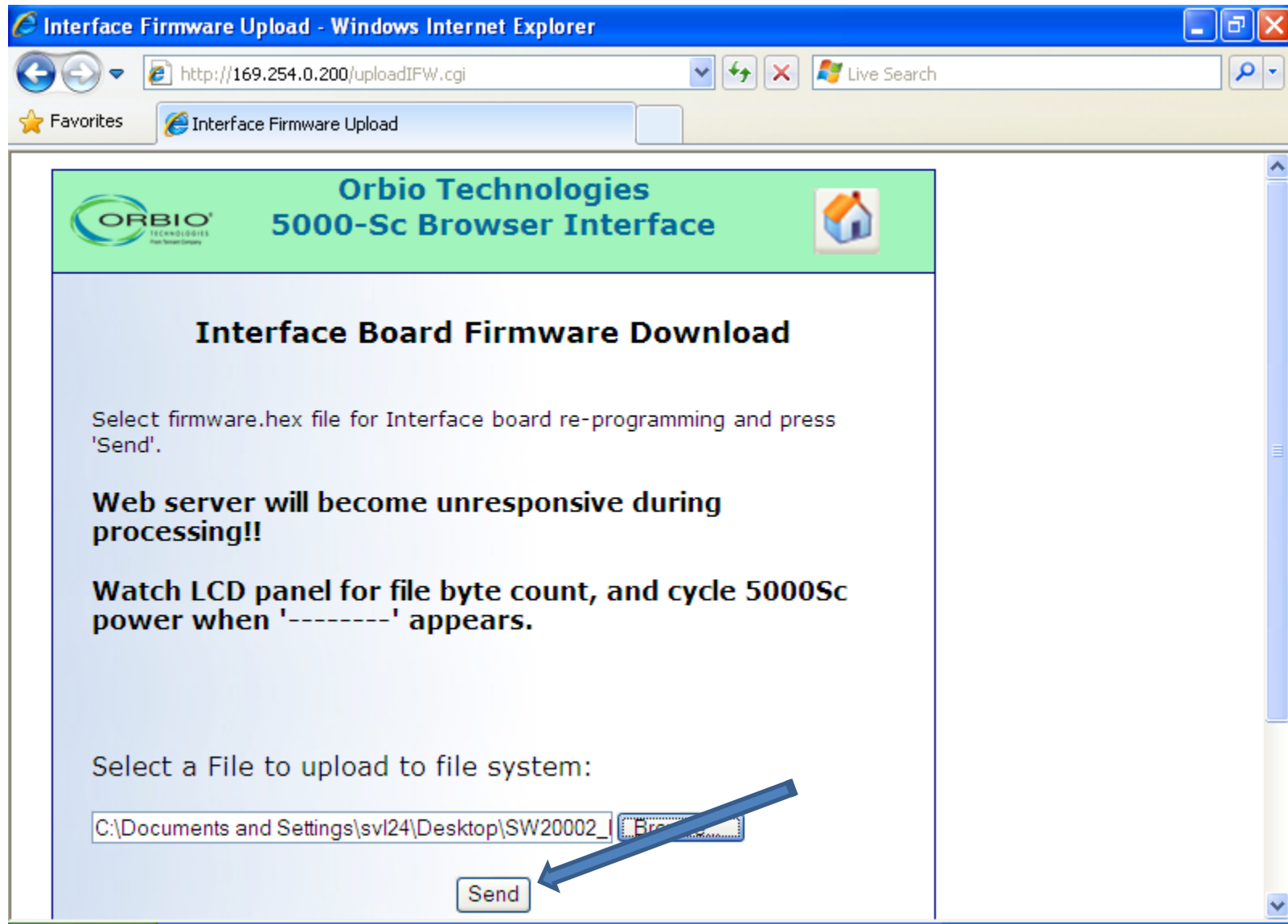
Updating the Interface Board Firmware

Navigate to the Desktop, choose the Interface Board Firmware file and click on the 'Open' button.



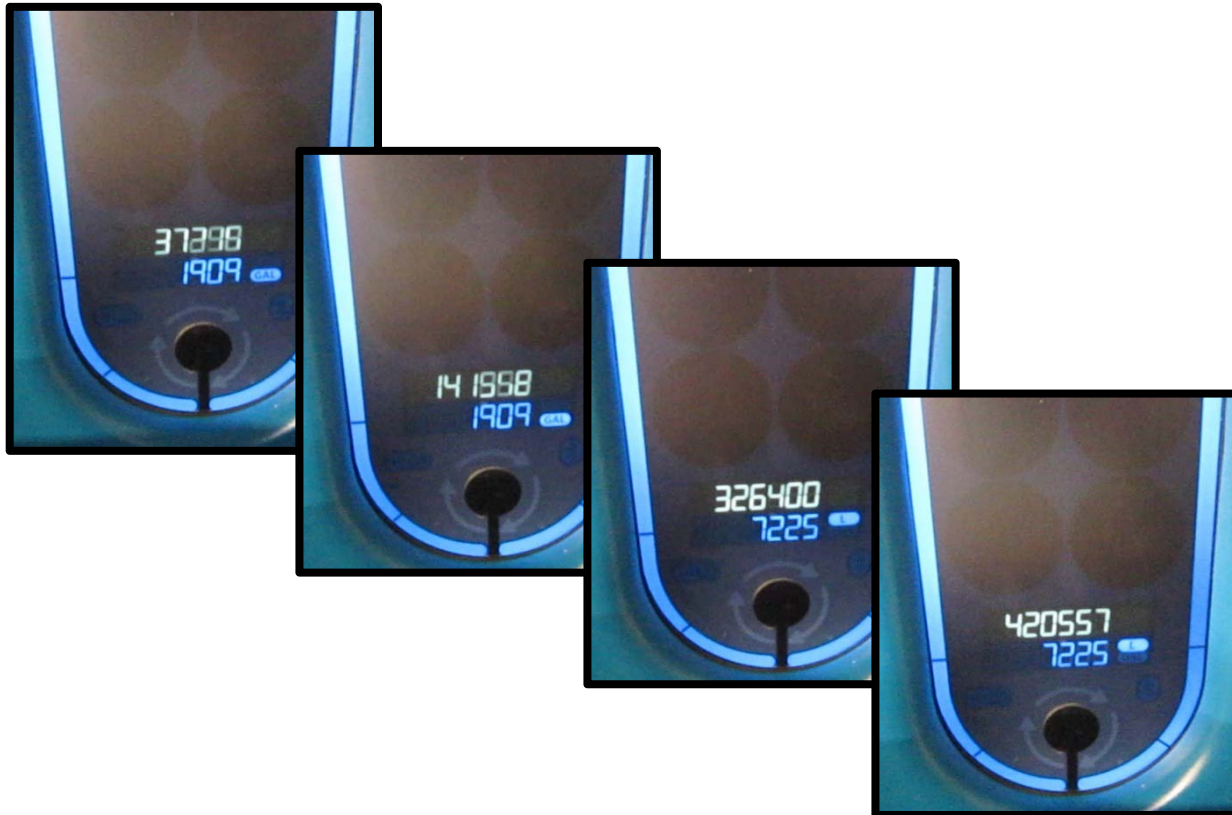
Updating the Interface Board Firmware

To send the Interface Board Firmware file, click on the 'Send' button.



Updating the Interface Board Firmware

Once you've pressed the send button, the Interface Firmware Upload will start.
You'll see a counter on the Interface Panel start counting up.



Updating the Interface Board Firmware

Once the number stops
climbing for more
than 15 seconds,
reboot the Orbio 5000-Sc
by disconnecting
and reconnecting the power.



When the counter stops
climbing another
counter will start
on the bottom line.

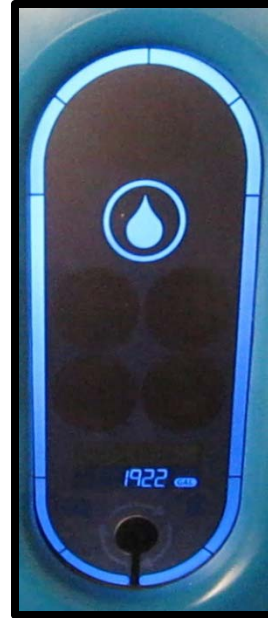


Updating the Interface Board Firmware

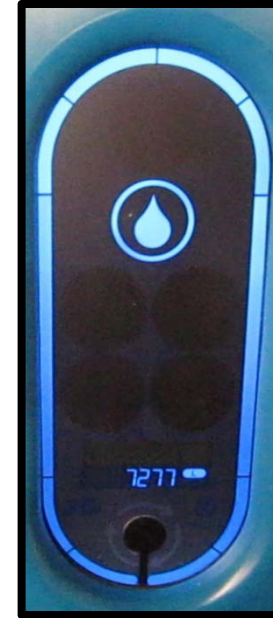
The system will reboot automatically and return to normal operation.



Rebooting



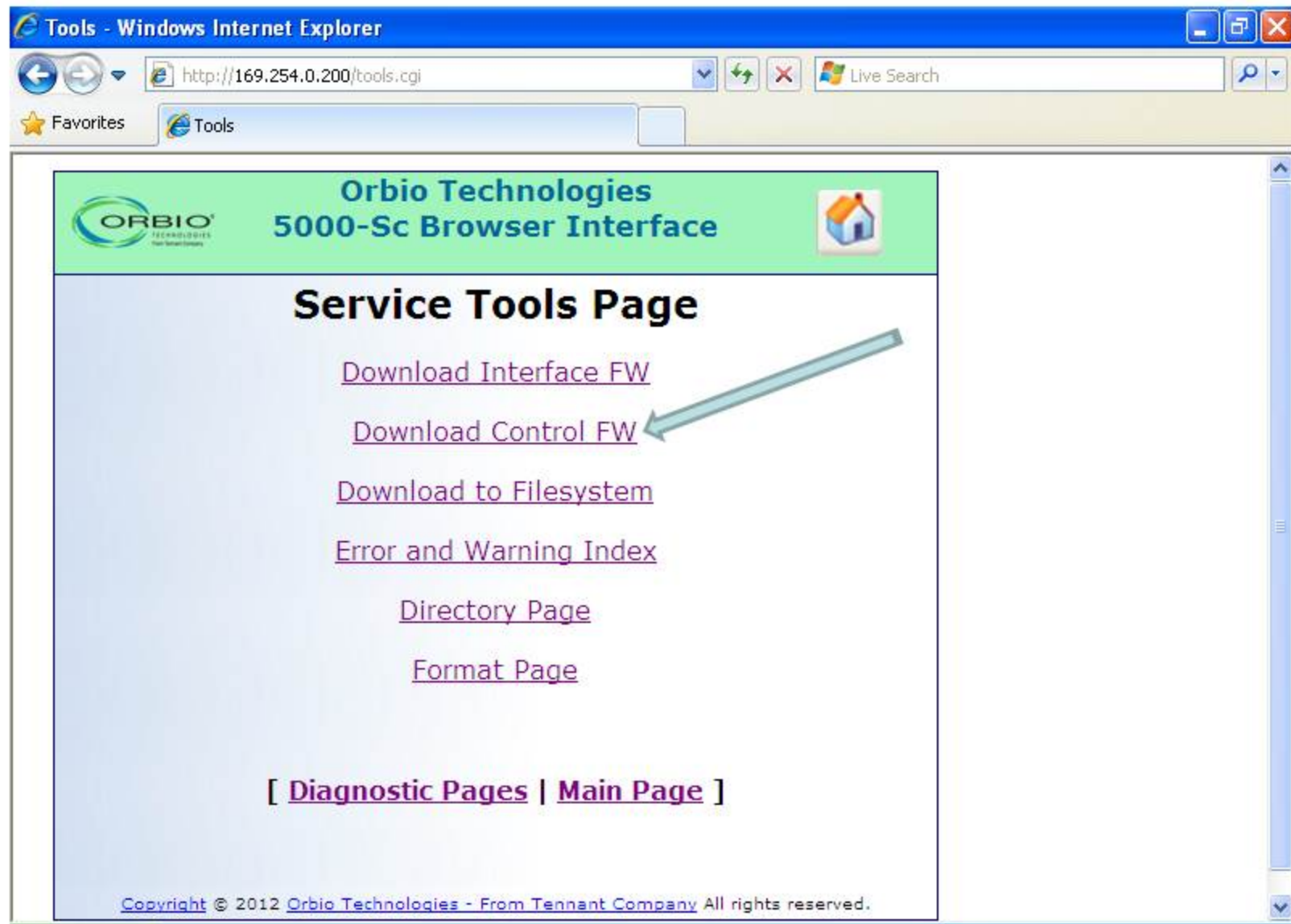
Indicating
Gallons Generated



Indicating
Liters Generated

**You have successfully updated
the Interface Panel Firmware!**

Updating the Control Board Firmware To update the Control Board Firmware, click on the 'Download Control FW' link.



To find the Control Board Firmware file, click on the 'Browse' button.

Controller Firmware Upload - Windows Internet Explorer

http://169.254.0.200/uploadCFW.cgi

Live Search

Controller Firmware Upload

Orbio Technologies
5000-Sc Browser Interface

Control Board Firmware Download

Select firmware.hex file for controller board re-programming and press 'Send'.

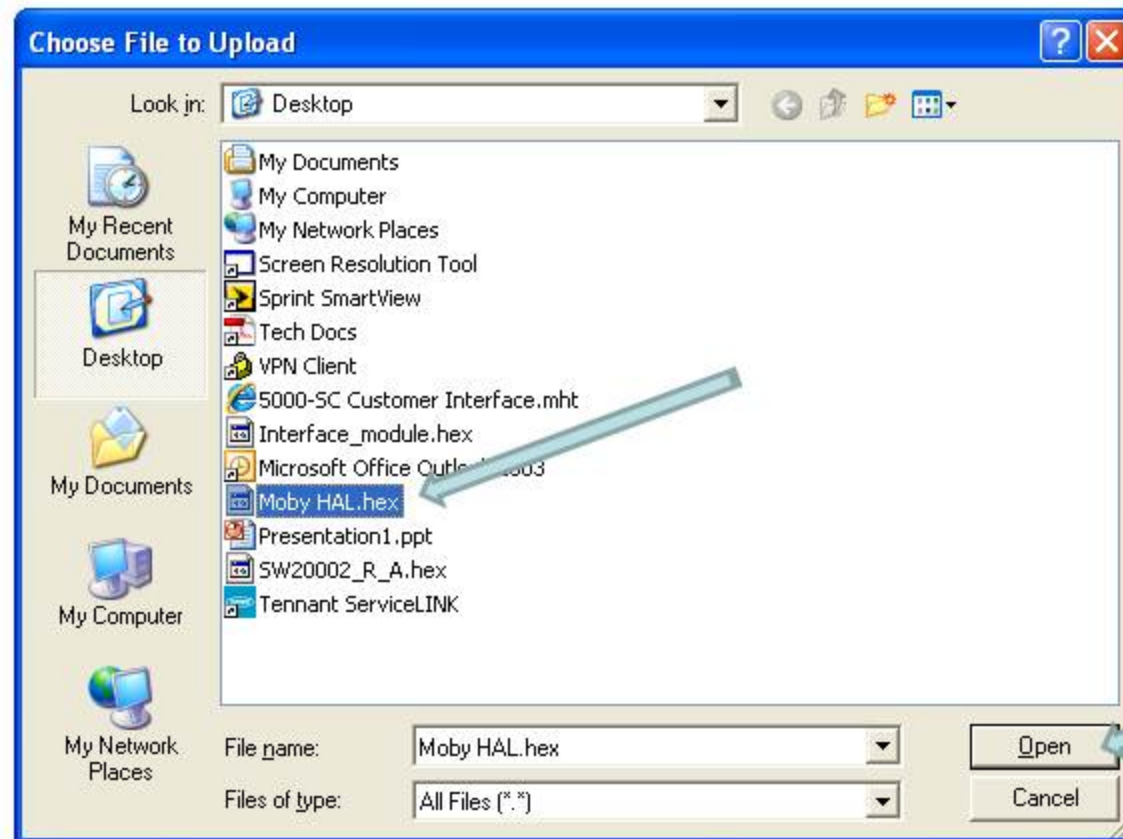
Web server will become unresponsive during processing!!

Select a File to upload to file system:

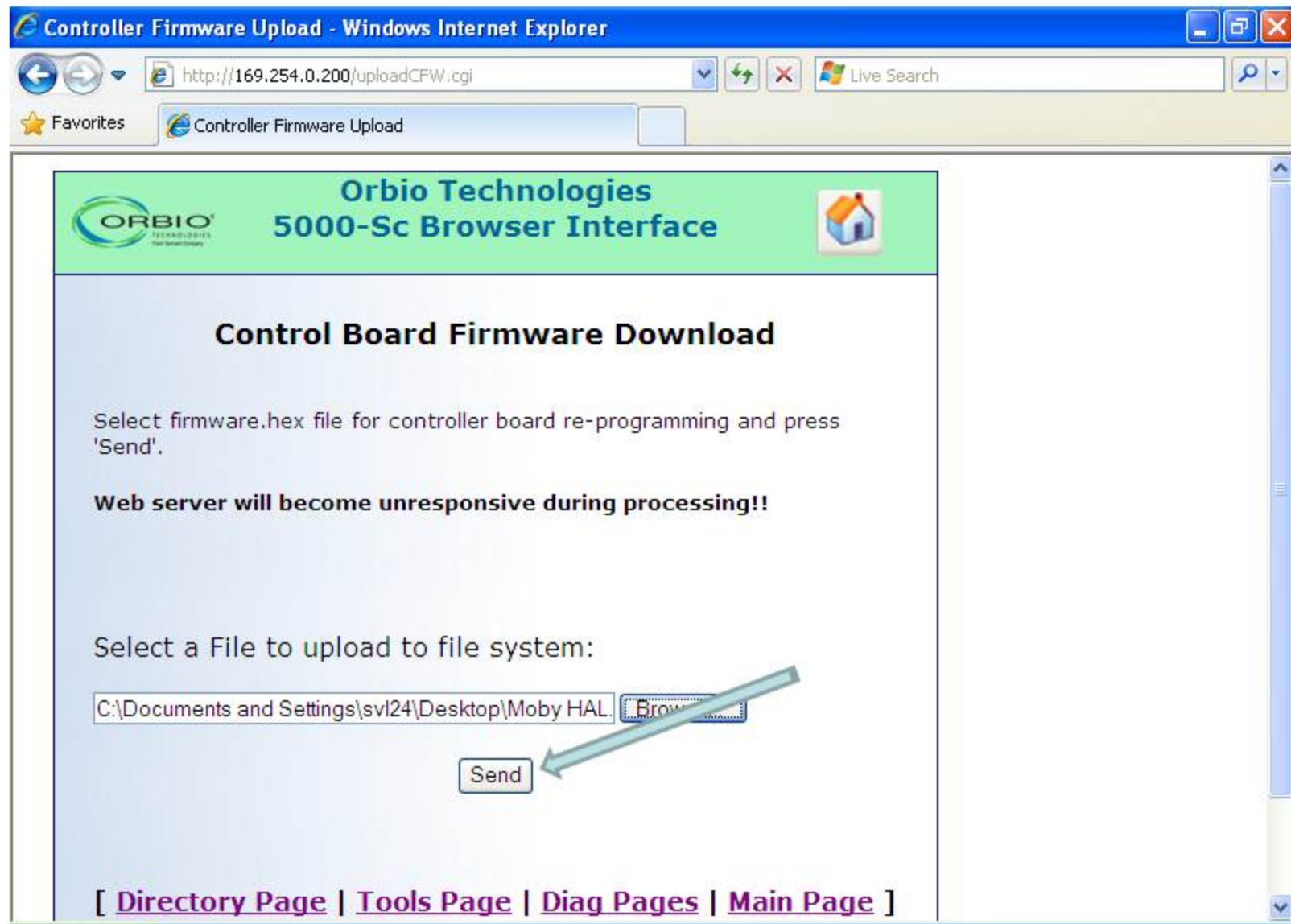
[[Directory Page](#) | [Tools Page](#) | [Diag Pages](#) | [Main Page](#)]

Updating the Control Board Firmware

Navigate to the Desktop, choose the Control Board Firmware file and click on the 'Open' button.



To send the Control Board Firmware file, click on the 'Send' button.



Updating the Control Board Firmware

To update the Control Board Firmware, click on the 'Download Control FW' link.



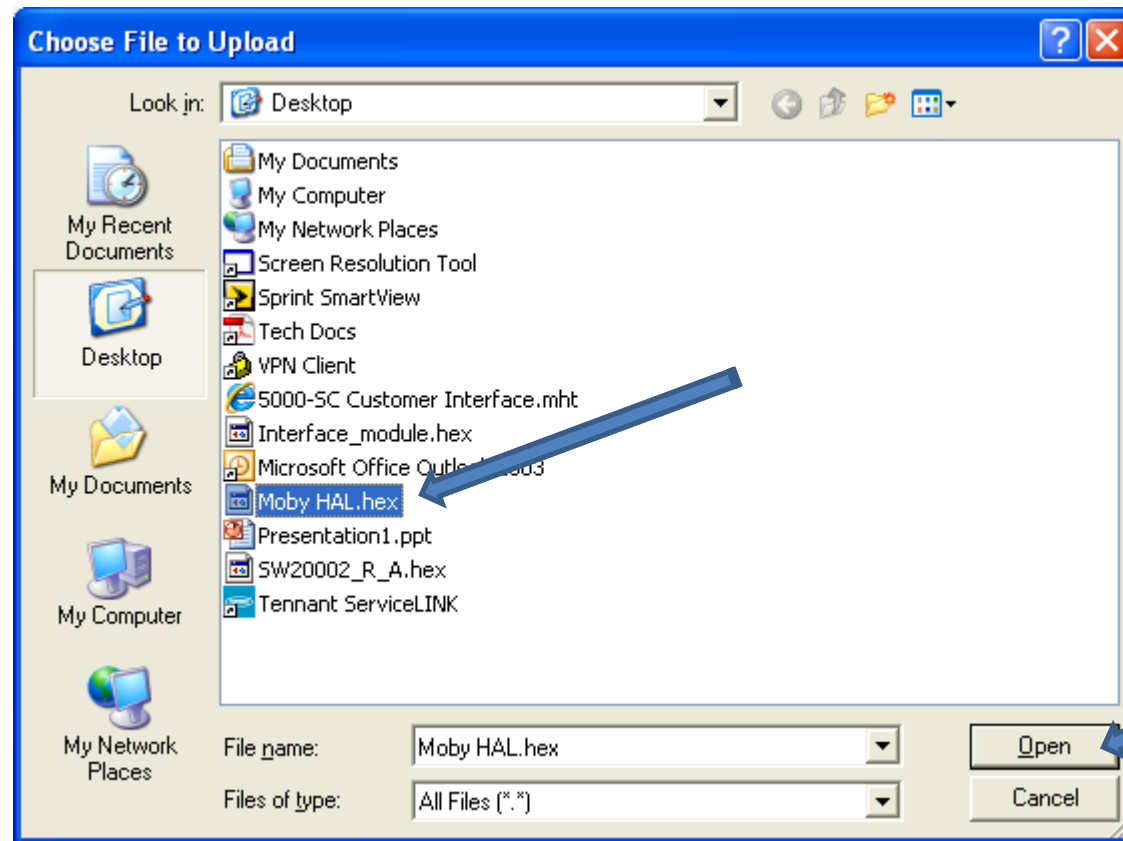
Updating the Control Board Firmware

To find the Control Board Firmware file, click on the 'Browse' button.

The screenshot shows a web browser window titled "Controller Firmware Upload - Windows Internet Explorer". The address bar displays the URL "http://169.254.0.200/uploadCFW.cgi". The page header features the "ORBIO TECHNOLOGIES" logo and the text "5000-Sc Browser Interface". The main heading is "Control Board Firmware Download". Below this, instructions state: "Select firmware.hex file for controller board re-programming and press 'Send'." A warning message reads: "Web server will become unresponsive during processing!!". The form prompts the user to "Select a File to upload to file system:" and includes a text input field, a "Browse..." button (highlighted by a blue arrow), and a "Send" button. At the bottom, a navigation bar contains links: "[[Directory Page](#) | [Tools Page](#) | [Diag Pages](#) | [Main Page](#)]".

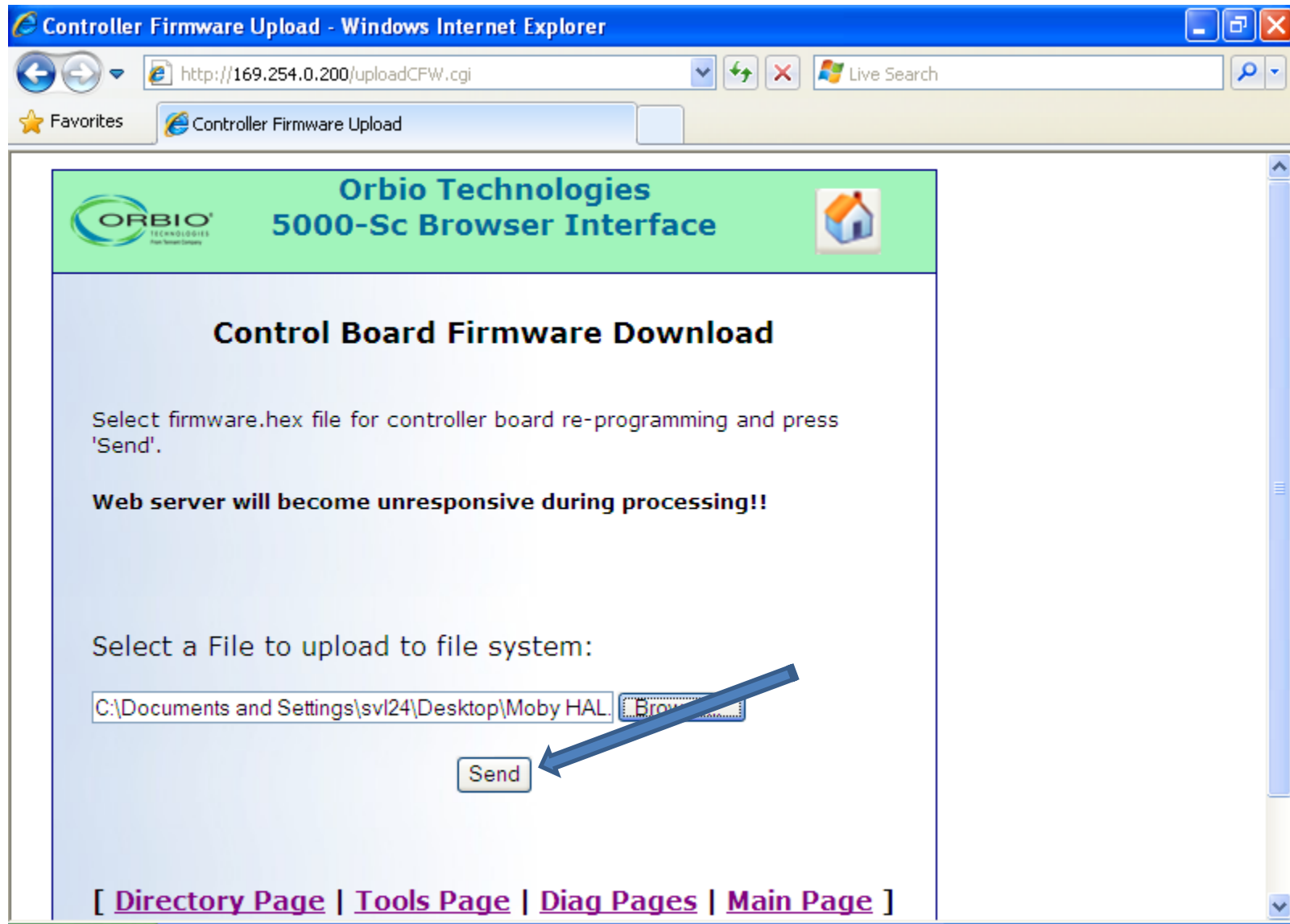
Updating the Control Board Firmware

Navigate to the Desktop, choose the Control Board Firmware file and click on the 'Open' button.



Updating the Control Board Firmware

To send the Control Board Firmware file, click on the 'Send' button.



Updating the Control Board Firmware

Once you've pressed the send button, the Control Firmware Upload will start.
You'll see a counter on the Interface Panel start counting up.



Updating the Control Board Firmware

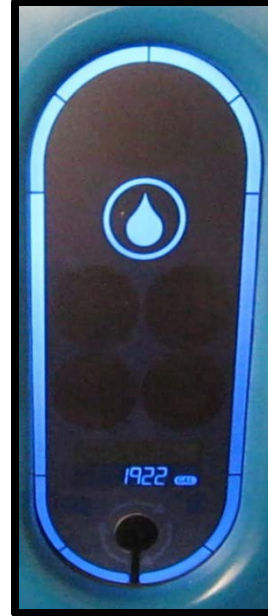
Once the number stops
climbing for more
than 15 seconds,
reboot the Orbio 5000-Sc
by disconnecting
and reconnecting the power.



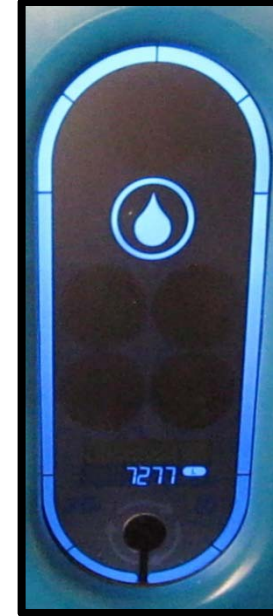
After a few minutes, the system will reboot automatically and return to normal operation.



Rebooting



Indicating
Gallons Generated



Indicating
Liters Generated

**You have successfully updated
the Control Firmware!**

Navigating to the Diagnostics Pages

Press the 'F5' key on the top row of your computer keyboard to 'Refresh' the screen.
For the next step, click on 'Diag Pages' link at the bottom of the page.



Confirming Successful Firmware Updates

Confirm the Controller and Interface Software Versions match the current files you downloaded.

The screenshot shows a web browser window titled 'Diagnostic 1 - Windows Internet Explorer'. The address bar displays 'http://169.254.0.200/Diagnostic1.cgi'. The page content is a diagnostic report with the following data:

Liters	3793
Controller Software Ver	08.19.11
Interface Software Ver	SW20002_Rev_A
DC Supply Voltage	24.2
Cell Current	0.0
Errors	0x00
Warnings	0x00
Flow SW	Open
Lg. FULL Switch	Full
Lg. EMPTY Switch	NOT Empty
Sm. EMPTY Switch	NOT Empty
Dispense	DOCKED
SPM	70
Air Temp	23.0
Controller Temp	22.0
Continued on	<a href='/Diagn

At the bottom of the page, there are links for [\[Main Page | Tools Page \]](#) and a copyright notice: [Copyright © 2012 Orbio Technologies - From Tennant Company](#) All rights reserved.

Two blue arrows point to the 'Controller Software Ver' and 'Interface Software Ver' fields, indicating the version information to be confirmed.

Friday, February 24, 2012