InfinityQS®
Quality Re-imagined

User Manual:

Branson X-Port Module

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- Menu bar selection options are in **boldface** and are abbreviated as **Menu | Selection.** For example, **File | New Form** means select **New Form** from the **File** drop-down menu.
- Start menu selections are in **boldface** and are abbreviated as **Start | Programs | InfinityQS | Documents.**
- File and directory references are in *italics,* such as *c:\pfp\samples\prdorder.*
- Drop down choices, names of tables within database manager, charts, and project names are in *italics.* For example, *Turning Center.*
- Dialog box names and field names are in **boldface.** For example, in the **Field Properties** dialog box, double click **Customer Last Name.**
- Buttons appear in UPPER CASE and in **boldface.** For example, click **OK**
- Keystrokes appear in UPPER CASE. For example, press ENTER
- Notes and warnings appear in ruled boxes:

Note: This is an example of a note.

- Characters you are required to enter into a field using the keyboard appear in `Courier New`. For example, in the data entry field, type `MyData`.
- Ribbon bar buttons, toolbar buttons and chart bar buttons are in **boldface.** For example, **Drawing** toolbar button.

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Branson X-Port Overview

From a single location, you can use Branson X-Port to connect to one or more Branson 2000 and 2000X Power Supplies on the shop floor or in the global network. This allows you to track and correct issues in your welding process real-time, and it provides you with visual displays of critical welding attributes, equipment error codes, and other summary information.

Data Logging

You can configure Branson X-Port to log weld attributes and error codes into a tab-delimited text file, which can be used by other reporting and analytical software to drill down into the welding data.

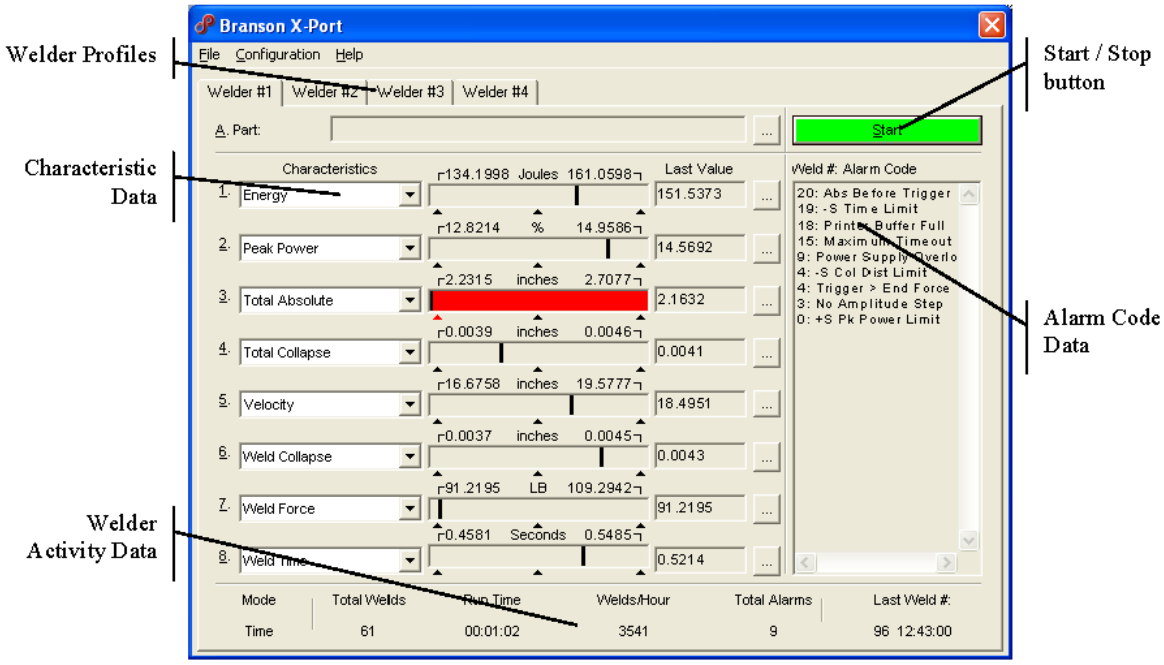
SPC Integration

You can integrate Branson X-Port with ProFicient SPC, which means:

- Branson X-Port can highlight specification limit and warning limit violations through color-coding, notifying an operator of an alarm condition.
- Branson X-Port can upload data samples into the ProFicient database, allowing you to run ProFicient's real-time SPC charts and reports and compare new welding data with historical welding data.
- ProFicient SPC can trigger real-time alarms, and send notifications to specific individuals on certain violations.
- ProFicient SPC can require users to provide the cause and corrective action for these violations, which can then be grouped into a report to track the most common problems and solutions. This ensures action will be taken when alarms occur and the collected information can be used as a proactive tool for improving welder performance.

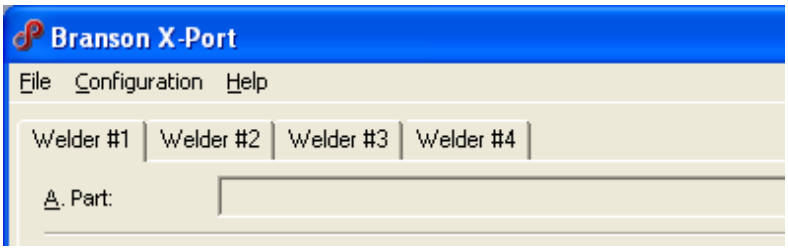
Understanding the Interface

Interface Overview



Interface Elements

Welder Profiles

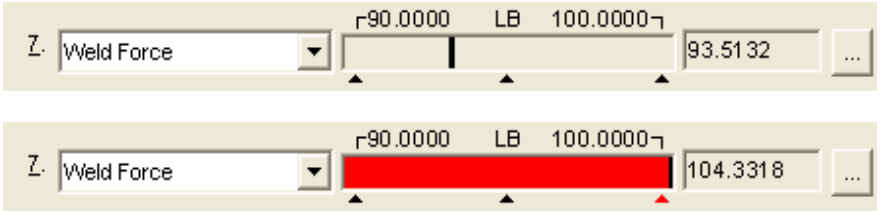


You can create a data collection profile for each Branson 2000 and 2000X Power Supply. By clicking on a tab, you can configure and monitor the data collection for that specific power supply.

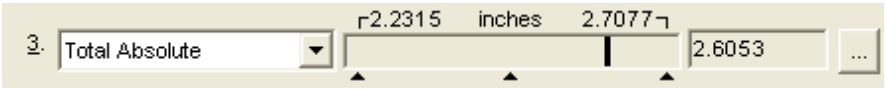
Characteristic Data

In each row, you can view information about the selected characteristic, which will depend on whether you have enabled SPC Sampling.

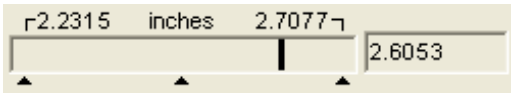
- **SPC Sampling Enabled.** If SPC Sampling is enabled, Branson X-Port displays lower and upper specification limits, average value, last captured value, and color indicators about status of last captured value.



- **SPC Sampling Disabled.** If SPC Sampling is disabled, Branson X-Port displays minimum and maximum values, average value, and last captured values.



Characteristic Data Layout

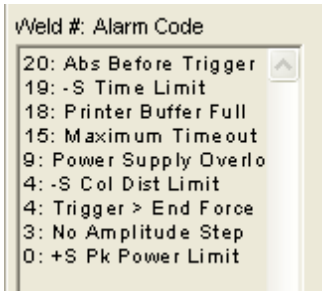


- **Top of Bar:** The numbers are the lower and upper specification limits or the minimum and maximum values.

  (For SPC Sampling) If the lower specification limit is not defined, Branson X-Port displays the minimum value. If the upper specification limit is not defined, Branson X-Port displays the maximum value.

- **Bottom of Bar:** The triangle pointers indicate the lower and upper specification limits or the minimum and maximum values, as well as the average value of the two. If a reported value violates a specification limit or a value, the corresponding triangle changes from black to red.
- **Inside the Bar:** The thick line inside the bar represents location within the range of the most recently collected value.
- **Color of Bar:** Depending on the status of the last value collected, the bar changes color: red indicates a specification limit or value violation, yellow indicates a warning limit violation (if warning limits are defined in ProFicient).
- **Right of Bar:** To the right of the bar, Branson X-Port displays the most recently collected value.

Alarm Code Data



On the right side of the window, Branson X-Port displays a list of all alarm codes received since data collection started. Each row in the list shows the Weld Cycle number that generated the alarm condition.

Welder Activity Data

At the bottom of the screen, Branson X-Port displays welder activity data since data collection started.

Mode	Total Welds	Run Time	Welds/Hour	Total Alarms	Last Weld #:
Time	61	00:01:02	3541	9	96 12:43:00

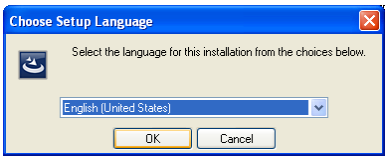
- **Mode.** Welder's mode of operation.
- **Welds.** Total number of welds acquired.
- **Run Time.** Total length of time the welder has run.
- **Welds/Hour.** Maximum welds per hour calculated from **Welds** and **Run Time**.
- **Alarms.** Total number of welding alarms.
- **Last Weld Number.** Weld cycle number submitted by equipment and time when last weld occurred.

Installing Branson X-Port

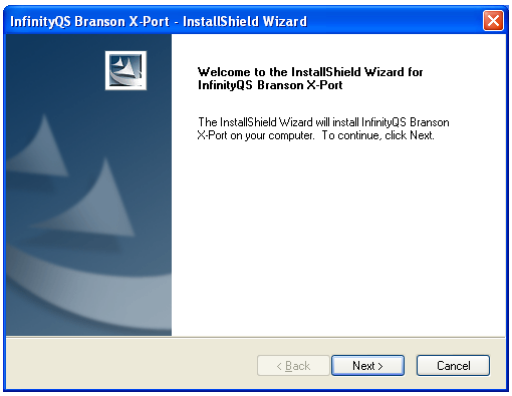
1. On the server, locate the Branson X-Port setup file:
   - **CD.** Insert the Branson X-Port installation CD. If the installation does not automatically start, double click the installation file from the CD.
   - **Download.** From the Branson X-Port downloads site (http://www.infinityqs.com/branson), download the installation file and then double click the installation file.

Note: Your InfinityQS representative will provide the Branson X-Port installation executable.

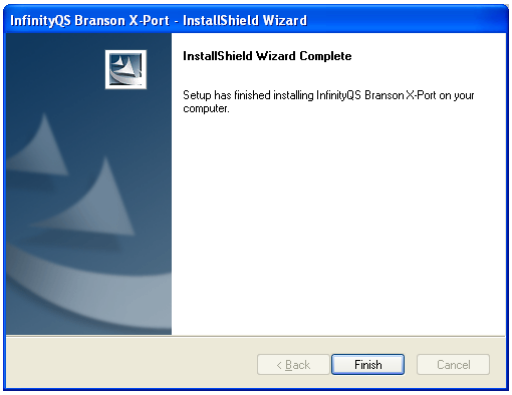
2. After double clicking the installation file, the **Choose Setup Language** prompt opens.



3. In the **Choose Setup Language** data field, click the drop-down list and then click the desired language.
4. When finished, click **OK**. The **InfinityQS Branson X-Port – InstallShield Wizard Welcome** screen opens.



5. In the **Welcome** screen, click **Next**. The wizard installs the Branson X-Port.
6. When finished, the wizard displays the finish screen.



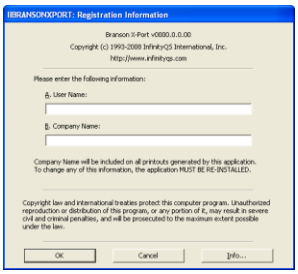
7. Click **Finish**. The install wizard closes.

Licensing Branson X-Port

Using the following instructions, you can register your purchased copy for unrestricted use. Type the registration number included with your installation package. You can locate the registration number on the Branson X-Port CD jacket.

1. After installing, open Branson X-Port by doing the following:
   - On the desktop, click the **Branson X-Port** link.
   - On the workstation, click **Start | Programs | InfinityQS | Branson | Branson X-Port**.

   Branson X-Port opens, prompting you for registration information.



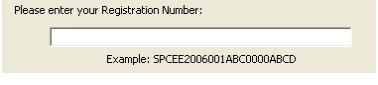
Note: To manually open the Branson X-Port License Utility, click **Start | Programs | InfinityQS | Shared | Utilities | License Utility**.

2. In the **Registration Information** dialog box, type or verify your **User Name** and **Company Name**, and then click **OK**. The **Registration** dialog box opens.

3. In the **Registration** dialog box, click the **Register Purchased Copy** radio button, and then click **OK**. The **Registration Number** dialog box opens.

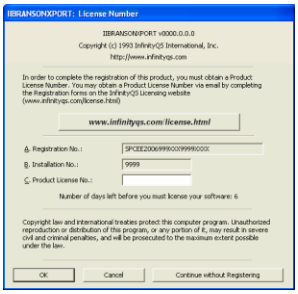
4. In the **Registration Number** dialog box, click in the data field and type your registration number.

Note: Locate your registration number on your Branson X-Port CD case.

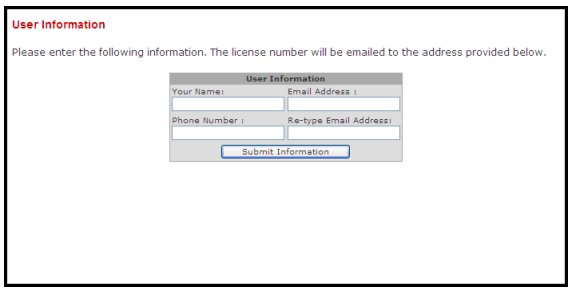


Note: If you do not have your registration number, click the **Request Support Online** button. On the **Licensing** page, locate the **Permanent Licenses** section, click the link and then fill out and submit the form.

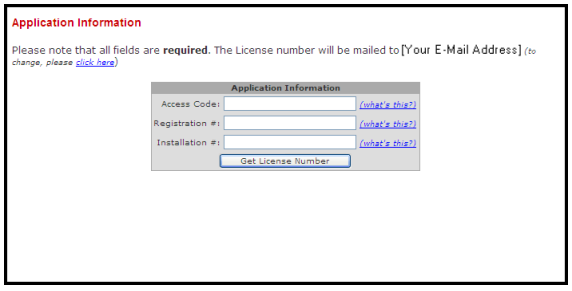
5. Click **OK**. The **License Number** dialog box opens.



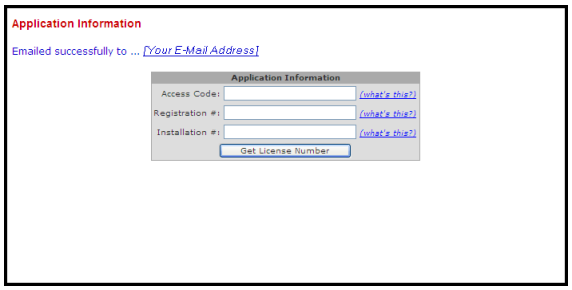
6. In the **License Number** dialog box, click the **www.infinityqs.com/license.html** button. The **User Information** page opens.



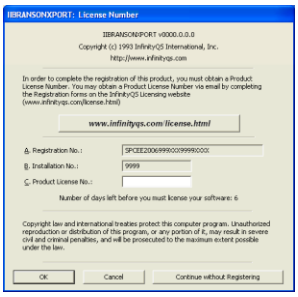
7. In the **User Information** page, type the following:
   - **Your Name:** Your Name
   - **Phone Number:** Your Phone Number
   - **Email Address:** Your E-mail Address
   - **Re-type Email Address:** Retype Your E-mail Address
8. When finished, click the **Submit Information** button. The **Application Information** page opens.



9. In the **Application Information** page, type or verify the following:
   - **Access Code:** Access Code from the CD jacket
   - **Registration #:** Software Registration # (should be pre-filled)
   - **Installation #:** Installation Number (should be pre-filled)
10. When finished, click the **Get License Number** button. The **Application Information** e-mail confirmation page opens.



11. In your mail box, locate the e-mail from *InfinityQS Licensing Center*, which includes the **Registration #**, **Install #**, and **License #**, and then return to the **License Number** dialog box.



12. In the **License Number** dialog box, click in the **Product License No.** data field and type your product license number.

13. Click **OK**. The **License Number** dialog box closes.

Configuring Branson Power Supply

Configuring Branson 2000X Power Supply

1. On the 2000X Power Supply touch screen, press the **Main Menu** button. The **MAIN MENU** screen opens.
2. In the **MAIN MENU** screen, press the **System Configuration** button. The **SYSTEM CONFIGURATION** screen opens.
3. In the **SYSTEM CONFIGURATION** screen, press the following:
   - **RS 232**
   - **Host and Save**.
4. In the **Welder Addr** data field, press **OFF**.
5. When finished, save the changes, and then close the **SYSTEM CONFIGURATION** screen.

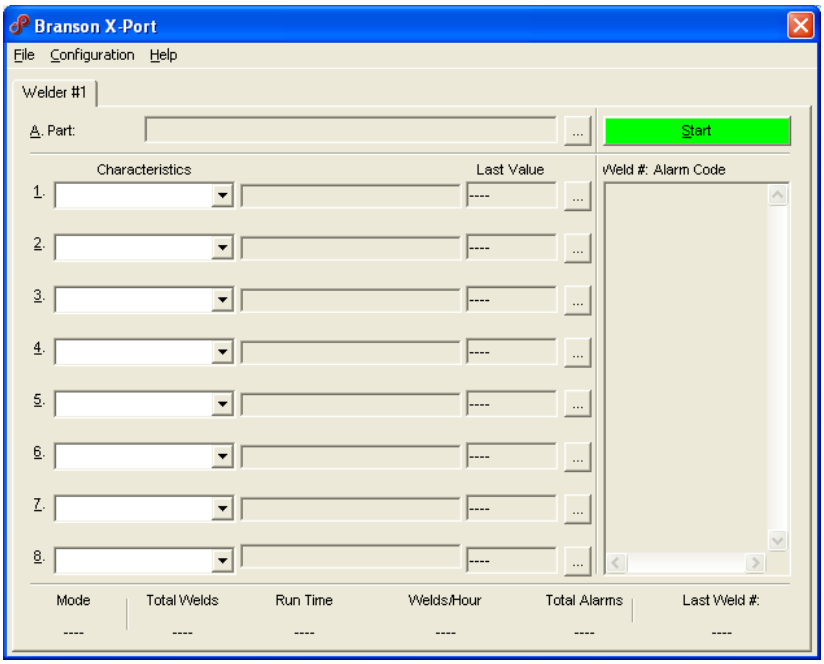
Configuring Branson 2000 Power Supply

1. In the **MAIN MENU** screen, press the **SYSTEM CONFIGURATION** button. The **SYSTEM CONFIGURATION** screen opens.
2. In the **SYSTEM CONFIGURATION** screen, press the following:
   - **RS 232**
   - **Compuweld or Host and Enter**.
3. In the **Welder Addr** data field, press **OFF**.
4. When finished, press ESC.

Opening and Closing Branson X-Port

Opening Branson X-Port

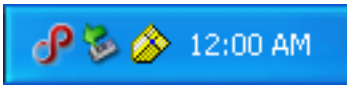
1. On the ProFicient computer, click **Start | Programs | InfinityQS | Branson | Branson X-Port**.
2. Branson X-Port opens.



Note: If you haven't previously configured Branson X-Port, the **Equipment Settings** dialog box automatically opens. For instructions on using the **Equipment Settings** dialog box, see "Configuring Branson X-Port".

Minimizing Branson X-Port

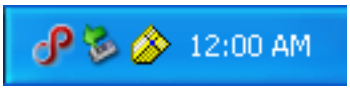
1. In the Branson X-Port menu bar, click **File | Close Window**.
   OR
   Click the X in the upper right hand corner of Branson X-Port.
2. Branson X-Port minimizes to the Windows task tray, allowing it to continue processing welding information.



3. To restore Branson X-Port, double click the minimized icon in the task tray.
   OR
   In the Windows task tray, right click the Branson X-Port icon, and then click **Open**. Branson X-Port opens.

Closing Branson X-Port

1. In the Branson X-Port menu bar, click **File | Shut Down**.
   OR
   In the Windows task tray, right click the Branson X-Port icon, and then click **Shut Down**.



2. Branson X-Port closes.

Configuring Branson X-Port

Using this section, you can do the following:

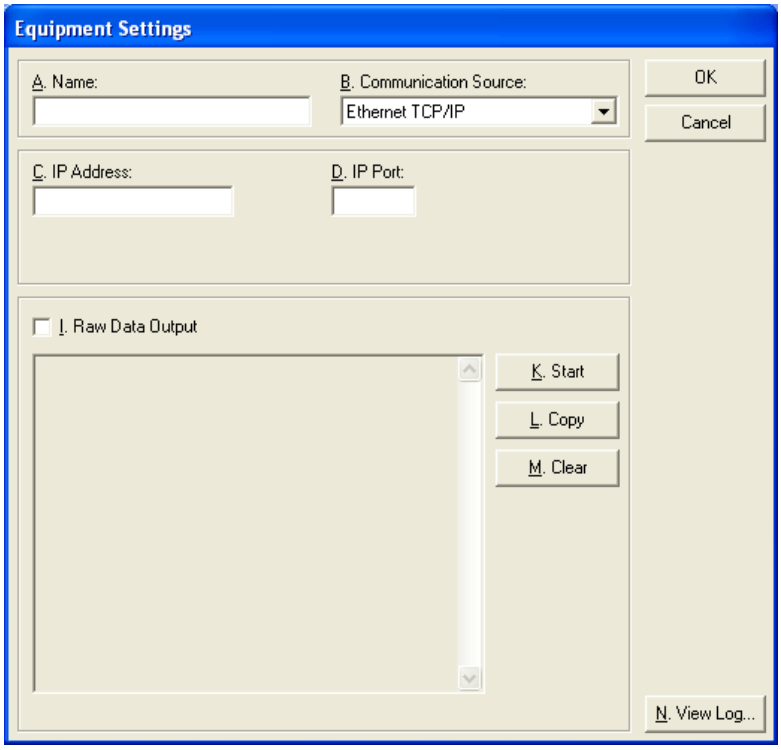
- Defining Branson X-Port Equipment Settings
- Defining Branson X-Port Welder Characteristics
- Logging Branson X-Port Data

Defining Branson X-Port Equipment Settings

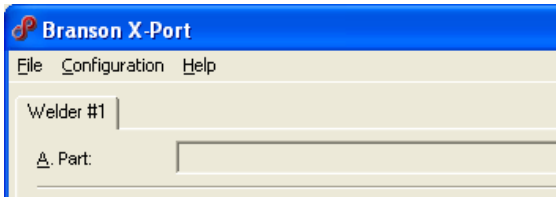
Note: If the equipment settings have not been configured, the **Equipment Settings** dialog box automatically opens.

To change existing equipment settings, click **Configuration | Equipment Settings** in the Branson X-Port menu bar.

1. Stop the data collection. For instructions on stopping the data collection, see "Stopping Branson X-Port Data Collection".
2. The **Equipment Settings** dialog box opens.



3. In the **Name** data field, type the equipment settings name. This name appears on the tab in Branson X-Port.



4. Under **Communication Source**, click the drop-down list and then click the desired connection method, *Ethernet TCP/IP* or *Serial Port*.

Ethernet TCP/IP (2000X Power Supply)	Serial Port (2000 Power Supply)
› In the **IP Address** data field, type the IP Address of the 2000X Power Supply. To get the IP Address, do one of the following: Press the **System Information** button on the 2000X Power Supply's **MAIN MENU** screen, and then press the **View IP Address** button. OR Press the **Window Setup** button on the 2000X Power Supply's **MAIN MENU** screen, and then double click the Ethernet icon in the task tray near the clock. › In the **ID Port** data field, type `4000`.	› In the serial port drop-down lists (**Port**, **Baud Rate**, **Parity**, **Data Bits**, **Stop Bits**, and **Flow Control**), click the values for the workstation's RS232 output. › Using a null model cable, connect the workstation to the 2000 Power Supply.

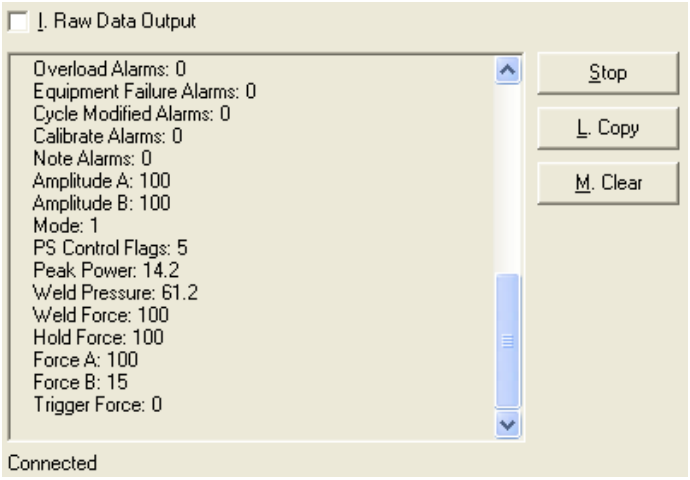
5. To test the connection (IP address or serial port), click the **Start** button.

- **Successful Connection.** If the connection is successful, the **Equipment Settings** dialog box displays **Connected** in the status bar and displays weld information in the information box.

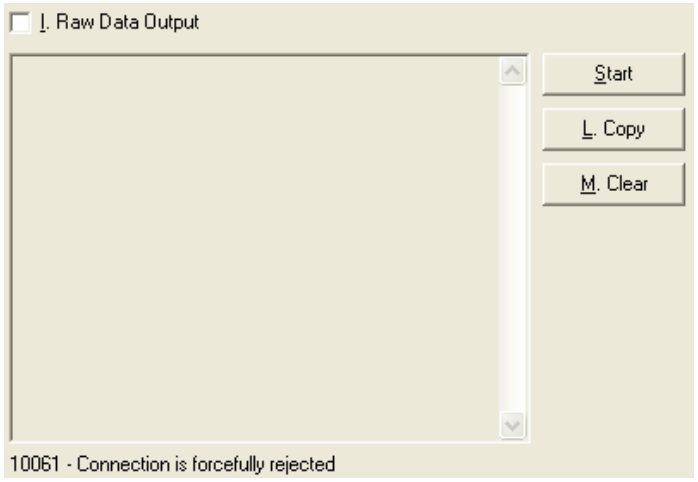
Note: While connected and collecting test weld information, the **Start** button changes to a **Stop** button.

To disconnect and stop collecting test weld information, click the **Stop** button.

- To view the raw data output from the welder, click the **Raw Data Output** checkbox.
- To copy the weld information in the information box onto the workstation's clipboard, click the **Copy** button.
- To clear the weld information in the information box, click the **Clear** button.



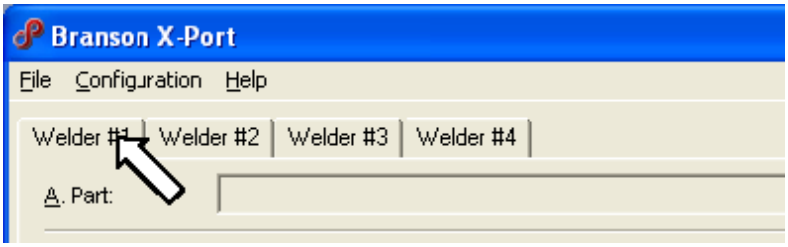
- **Unsuccessful Connection.** If the connection is unsuccessful, the **Equipment Settings** dialog box displays the error code in the status bar (for example, *10060 – The attempt to connect timed out*, *10061 – Connection is forcefully rejected*, etc.). For instructions on troubleshooting the connection, see "Testing Connection".



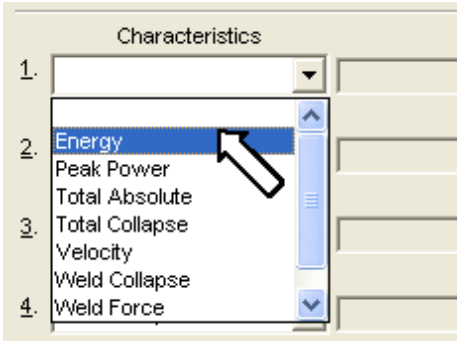
6. Examine the results of the test connection.

Defining Branson X-Port Welder Characteristics

1. Stop the data collection. For instructions on stopping the data collection, see "Stopping Branson X-Port Data Collection".
2. Click the desired welder tab.



3. Under **Characteristics**, click the drop-down list and then click the desired characteristic:



- **Energy.** Total energy applied to part during the weld, in joules.
- **Peak Power.** Maximum power draw during weld, in percent of peak power.
- **Total Absolute.** Distance from home position upper limit to end of weld, in inches.
- **Total Collapse.** Distance from trigger to end of hold, in inches.

- **Velocity.** Actuator speed before touching the part, in inches per second.
- **Weld Collapse.** Distance from trigger to end of weld, in inches.
- **Weld Force.** Force at end of weld, in pounds.
- **Weld Time.** Total time from trigger to end of weld, in seconds.

4. Repeat the above step, adding up to eight characteristics.
5. When finished, start the data collection. For instructions on starting the data collection, see "Starting Branson X-Port Data Collection".

Logging Branson X-Port Data

Understanding Data Logging

Branson X-Port can record information about each weld performed, adding lines to the bottom of the logging file. To start logging data, you must enable data logging and also start data collection by clicking the **Start** button. If unable to write to the logging file, Branson X-Port records the error to the *iibransonxport.log* file, which is typically located in the ProFicient *Private* folder.

Below is an example of the logging file.

```
Acquired Time  Cycle Count Hour  ...   Weld Force  Hold Force
    Total Cycle Time
0/00/0000 0:00:00 PM 00    00    ...   100   100   65536.15
```

Note that:

- The first row is the header, containing each column label in the logging file.
- Each weld is on a separate line, and the lines are separated with a carriage return (ASCII 13) and line feed (ASCII 10).
- Each attribute value in a row is separated with a tab (ASCII 9).

Log File Details

Below is a description of each column saved to the log file.

Column	Description
Acquired Time	The computer's time when the weld was performed.
Cycle Count	Sequential weld number. This number comes from the welder and is not reset by Branson X-Port.
Hour	Hour when the weld occurred.
Minute	Minute within the Hour when the weld occurred.
Second	Second within the Minute when the weld occurred.
Year	Year when the weld occurred.
Month	Month within the Year when the weld occurred.
Day	Day within the Month when the weld occurred.

Column	Description
Weld Time	Time from trigger to the end of weld in seconds.
Energy	Energy applied to the part in Joules.
Distance	Distance from the upper limit home position to the end of weld in inches.
Weld Collapse	Distance from trigger to the end of weld in inches.
Total Collapse	Distance from trigger to the end of hold in inches.
Start Frequency	Frequency of the power supply at the start of weld in Hertz.
End Frequency	Frequency of the power supply at the end of weld in Hertz.
Frequency Change	Delta between start and end frequency in Hertz.
Frequency Minimum	Minimum frequency of the power supply during a weld in Hertz.
Frequency Maximum	Maximum frequency of the power supply during a weld in Hertz.
Velocity	Speed of the actuator before touching the part in Inches per second.
Trigger Distance	Distance from upper limit home position to trigger in inches.
Reject Part Alarms	See Reject Alarm Values
Suspect Part Alarms	See Suspect Part Alarm Values
No Cycle Alarms	See No Cycle Alarm Values
Overload Alarms	See Overload Alarm Values
Equipment Failure Alarms	See Equipment Failure Alarm Values
Cycle Modified Alarms	See Cycle Modified Alarm Values
Preset #	Welder's current preset number.
Note Alarms	See Note Alarms Values
Amplitude A	Step amplitude profiling start amplitude in percent.
Amplitude B	Step amplitude profiling end amplitude in percent.
Weld Mode	See Weld Mode Values
PS Control Flags	<undefined>
Peak Power	Maximum power draw during weld in percent.
Weld Pressure	Regulator pressure in PSI.

Column	Description
Weld Force	Force at end of weld in pounds.
Hold Force	Force at end of hold in pounds.
Total Cycle Time	Total elapsed time from the beginning to the end of a weld cycle.

Reject Part Alarm Values

In the data file the Reject Alarm value can represent one or more codes based on its bit-wise value.

Bit Assignment	Alarm Text
Bit00	-R Energy Limit
Bit01	+R Energy Limit
Bit02	-R Pk Power Limit
Bit03	+R Pk Power Limit
Bit04	-R Col Dist Limit
Bit05	+R Col Dist Limit
Bit06	-R Abs Dist Limit
Bit07	+R Abs Dist Limit
Bit08	-R Trig Dist Limit
Bit09	+R Trig Dist Limit
Bit10	-R Weld Force Limit
Bit11	+R Weld Force Limit
Bit12	-R Time Limit
Bit13	+R Time Limit
Bit14-16	<undefined>
Bit17	LL Not Reached
Bit18-31	<undefined>

Suspect Part Alarms Values

In the data file the Suspect Alarm value can represent one or more codes based on its bit-wise value.

Bit Assignment	Alarm Text
Bit00	-S Energy Limit
Bit01	+S Energy Limit
Bit02	-S Pk Power Limit
Bit03	+S Pk Power Limit
Bit04	-S Col Dist Limit
Bit05	+S Col Dist Limit

Bit Assignment	Alarm Text
Bit06	-S Abs Dist Limit
Bit07	+S Abs Dist Limit
Bit08	-S Trig Dist Limit
Bit09	+S Trig Dist Limit
Bit10	-S Weld Force Limit
Bit11	+S Weld Force Limit
Bit12	-S Time Limit
Bit13	+S Time Limit
Bit14-31	<undefined>

No Cycle Alarms

In the data file the No Cycle Alarm value can represent one or more codes based on its bit-wise value.

Bit Assignment	Alarm Text
Bit00	Upper Limit Timeout
Bit01	<undefined>
Bit02	Trigger Before Pretrigger
Bit03	Trigger Timeout
Bit04	<undefined>
Bit05	LLS abort before TRS
Bit06	External Cycle Abort
Bit07	Missing Part Abort
Bit08	Abs Before Trigger
Bit09	Amp Step before Trigger
Bit10	F Step before Trigger
Bit11	Ground Detect Cutoff
Bit12-31	<undefined>

Overload Alarms Values

In the data file the Overload Alarm value can represent one or more codes based on its bit-wise value.

Bit Assignment	Alarm Text
Bit00	Test Overload
Bit01	Pretrigger Overload
Bit02	Seek Overload
Bit03	Power Supply Overload
Bit04	Cont Power Limit

Bit Assignment	Alarm Text
Bit05	Afterburst Overload
Bit06	Pre-Weld Seek Overload
Bit07	Post Weld Seek Overload
Bit08-31	<undefined>

Equipment Failure Alarms Values

In the data file the Equipment Failure Alarm value can represent one or more codes based on its bit-wise value.

Bit Assignment	Alarm Text
Bit00	Encoder Failed
Bit01	Upper Limit Switch
Bit02	Upper Limit Switch
Bit03	Door Sw Fail
Bit04	<undefined>
Bit05	Solenoid Drive Fail
Bit06	Thermal Overload
Bit07	Preset Data/BBR
Bit08	Horn Return Timeout
Bit09	Actuator NovRam
Bit10	P/S NovRam
Bit11	Start Sw Time
Bit12	MPS Switch Failed
Bit13	Wrong Actuator
Bit14	Ultrasonic P/S
Bit15	Printer Buffer Full
Bit16	Start Switch Closed
Bit17	Pretrigger Timeout
Bit18	<undefined>
Bit19	Recalibrate Actuator
Bit20	Act Clear Function
Bit21	Stack
Bit22	Start Switches Lost
Bit23	Actuator Type
Bit24	Sys. Pres. Incorrect
Bit25-31	<undefined>

Cycle Modified Alarms Values

In the data file the Cycle Modified Alarm value can represent one or more codes based on its bit-wise value.

Bit Assignment	Alarm Text
Bit00	Trigger Lost in Hold
Bit01	Ground Detect Cutoff
Bit02	Maximum Timeout
Bit03	No Amplitude Step
Bit04	No Force Step
Bit05	No Amplitude Step
Bit06	No Force Step
Bit07	No Amplitude Step
Bit08	No Amplitude Step
Bit09	No Force Step
Bit10	No Amplitude Step
Bit11	No Amplitude Step
Bit12	No Force Step
Bit13	Trigger Lost in Weld
Bit14	External Cycle Abort
Bit15	Amp B Not Reached
Bit16	Amp Not Reached
Bit17	Amp A Not Reached
Bit18	Amp B Not Reached
Bit19	Amp Exceeded
Bit20	Energy Not Reached
Bit21	Trigger > End Force
Bit22	No Force Step
Bit23-31	<undefined>

Note Alarms Values

In the data file the Note Alarm value can represent one or more codes based on its bit-wise value.

Bit Assignment	Alarm Text
Bit00	Act Clr Not Reached
Bit01	Max Energy Reached
Bit02	Printer Buffer 80%
Bit03	Cont Power Limit

Bit Assignment	Alarm Text
Bit04	Peak Power Cutoff
Bit05	Absolute Cutoff
Bit06	Time Extended
Bit07	Act Recal Suggested
Bit08	Collapse Cutoff
Bit09	Act Clr Not Reached
Bit10-31	<undefined>

Opening Logging File

1. Stop the data collection. For instructions on stopping the data collection, see "Stopping Branson X-Port Data Collection".
2. Using a text editor, locate and open the logging file.

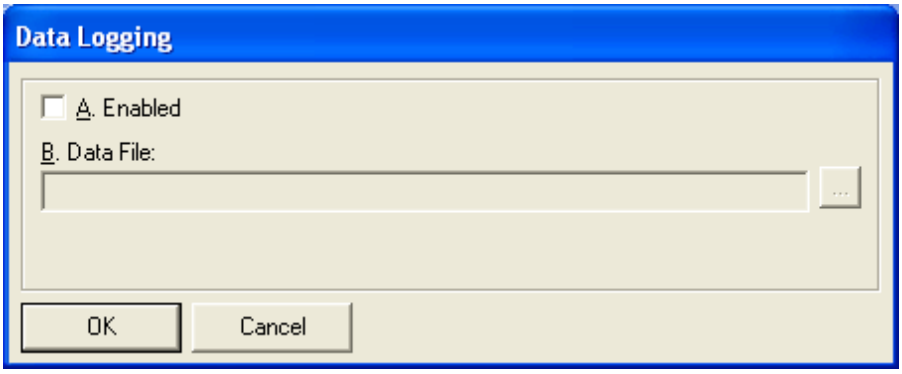
Note: InfinityQS recommends that you create a copy of the logging file and open the copy, so you will not interrupt the weld information logging.

If you open the logging file while Branson X-Port is running, Branson X-Port will continue to run normally, but will not log weld information.

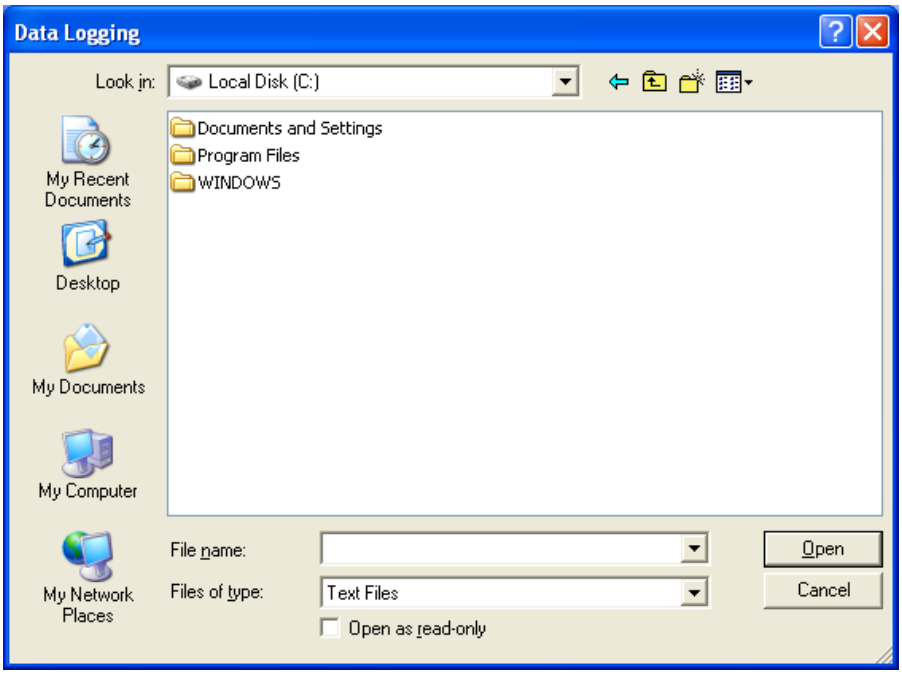
3. When finished, start the data collection. For instructions on starting the data collection, see "Starting Branson X-Port Data Collection".

Enabling Data Logging

1. Stop the data collection. For instructions on stopping the data collection, see "Stopping Branson X-Port Data Collection".
2. In the Branson X-Port menu bar, click **Configuration | Data Logging**. The **Data Logging** dialog box opens.

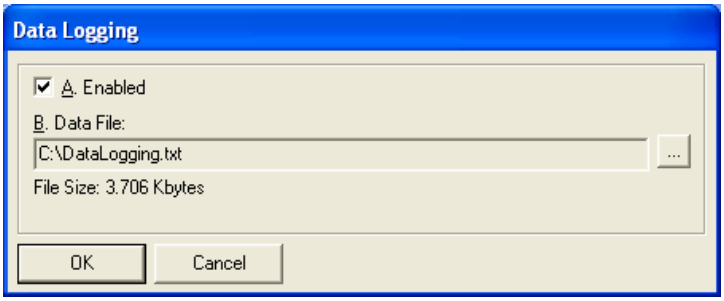


3. In the **Data Logging** dialog box, click the **Enabled** checkbox.
4. Under **Data File**, click the ellipsis button (**…**). The **Data Logging** browse dialog box opens.



5. In the **Data Logging** browse dialog box, browse to the desired location of the data logging file.
6. In the **File name** data field, type the name of the logging file. For example, type `DataLogging.txt`.
7. In the **Data Logging** browse dialog box, click the **Open** button. The **Data Logging** browse dialog box closes.

Note: Branson X-Port displays the size of the logging file under **Data File** in the **Data Logging** dialog box.



8. In the **Data Logging** dialog box, click **OK**. The **Data Logging** dialog box closes.
9. When finished, start the data collection. For instructions on starting the data collection, see "Starting Branson X-Port Data Collection".

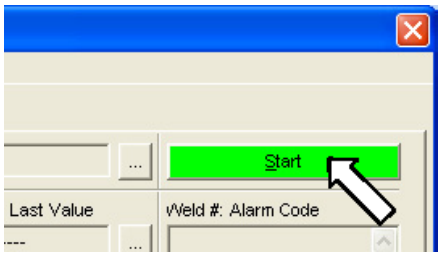
Using Branson X-Port

Using this section, you can do the following:

- Starting Branson X-Port Data Collection
- Viewing Branson X-Port Characteristic Distribution
- Integrating Branson X-Port with ProFicient SPC
- Stopping Branson X-Port Data Collection

Starting Branson X-Port Data Collection

1. In Branson X-Port, click the **Start** button.
2. Branson X-Port collects characteristic data and welder activity data.

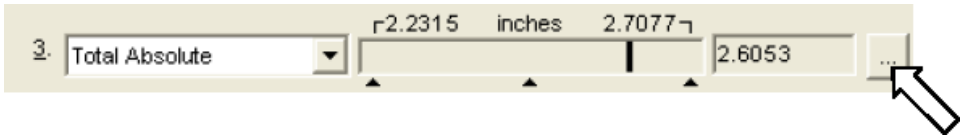


Note: Every time you click the **Start** button, Branson X-Port resets alarm codes and welder activity data.

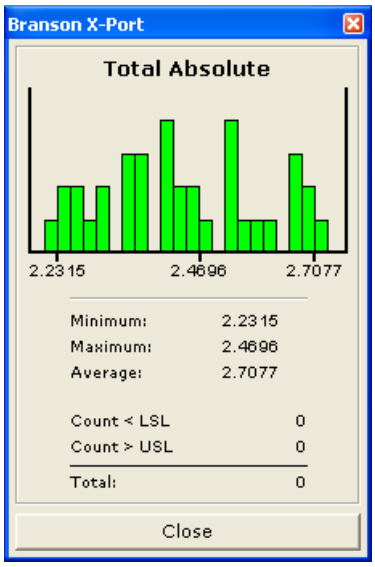
Viewing Branson X-Port Characteristic Distribution

During data collection, you can view the value distribution for a characteristic, as well as other statistics, since data collection started in the current welder profile.

1. To view the distribution, click the ellipsis button (**…**) in the desired characteristic row.



2. The characteristic distribution dialog box opens.



3. When finished, click the **Close** button. The characteristic distribution dialog box closes.

Integrating Branson X-Port with ProFicient SPC

By integrating with ProFicient SPC, Branson X-Port enhances its screen display with specification limits and color-coding (red for specification limit violations, yellow for a warning limit violations), and also Branson X-Port can compile weld information into data samples and save them into the ProFicient SPC system.

Note: InfinityQS recommends that you involve members of the quality team when configuring an SPC sampling strategy.

For more information about ProFicient SPC, please contact your InfinityQS representative, refer to the ProFicient reference material, or browse to the http://www.infinityqs.com.

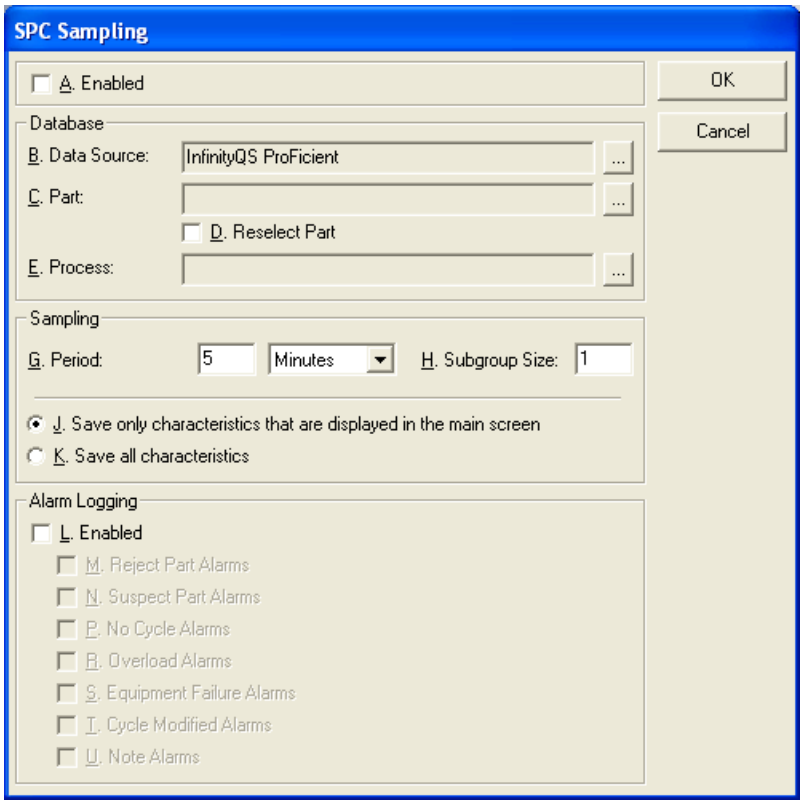
Enabling SPC Sampling

1. Stop the data collection. For instructions on stopping the data collection, see "Stopping Branson X-Port Data Collection".
2. In the Branson X-Port menu bar, click **Configuration | SPC Sampling**.

Note: If the **Select InfinityQS Data Source** dialog box opens, click the *ProFicient* Data Source Name, click **OK**.

In the **User Sign In** dialog box, type your ProFicient **Sign In Name** and your ProFicient **Password**, and then click **OK**.

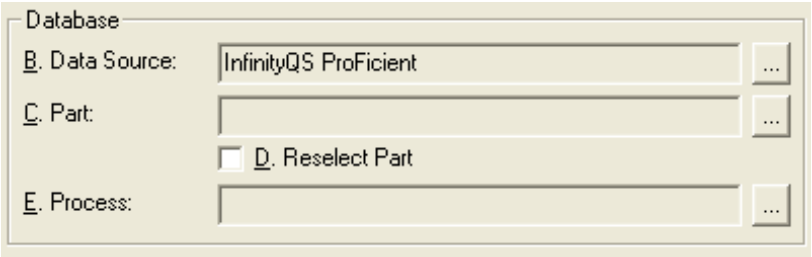
The **SPC Sampling** dialog box opens.



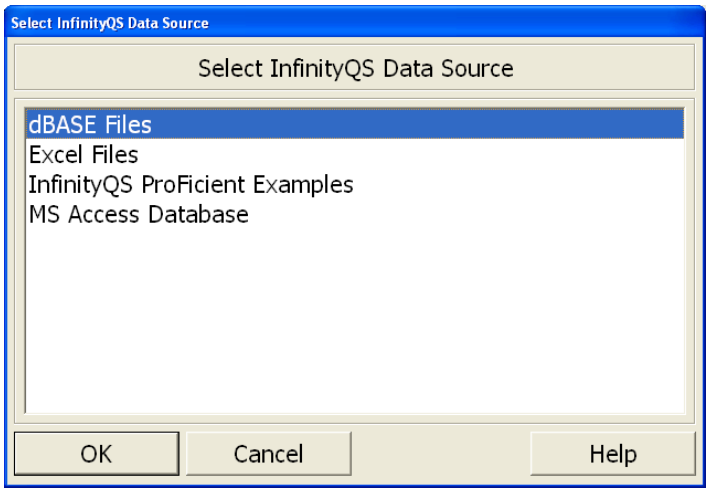
3. In the **SPC Sampling** dialog box, click the **Enabled** checkbox.

Setting Data Source (DSN)

1. In the **SPC Sampling** dialog box, locate the **Database** section.



2. In **Data Source**, click the ellipsis button (**…**). The **Select InfinityQS Data Source** dialog box opens.



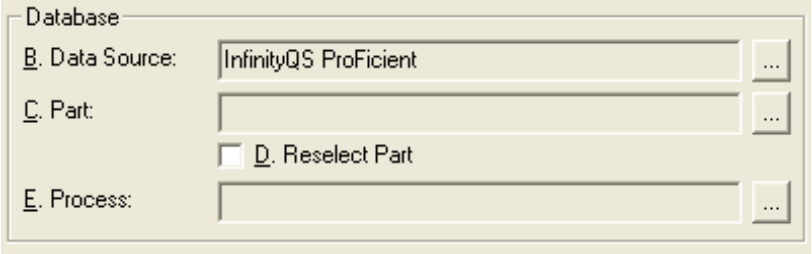
3. In the list of available DSNs, click the *ProFicient* Data Source Name, and then click **OK**. The user sign in dialog box opens.

4. In the **User Sign In** dialog box, type your ProFicient **Sign In Name** and your ProFicient **Password**, and then click **OK**. The **Select InfinityQS Data Source** dialog box closes.

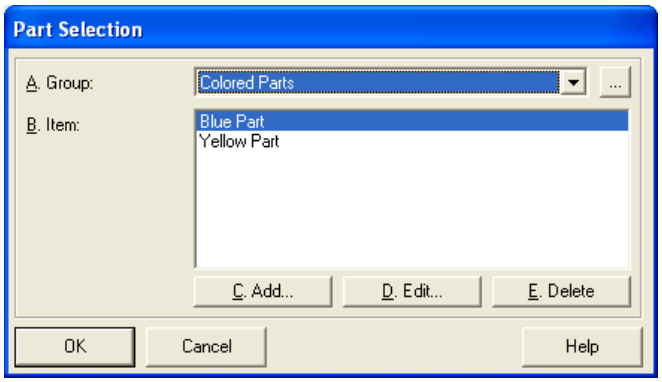
Setting Part

When using SPC sampling, you must define the part being welded. When Branson X-Port saves results to InfinityQS ProFicient SPC, the values are associated with the part name, allowing you to group similar weld data based on the part in ProFicient SPC.

1. In the **SPC Sampling** dialog box, locate the **Database** section.



2. In **Part**, click the ellipsis button (**…**). The **Part Selection** dialog box opens.



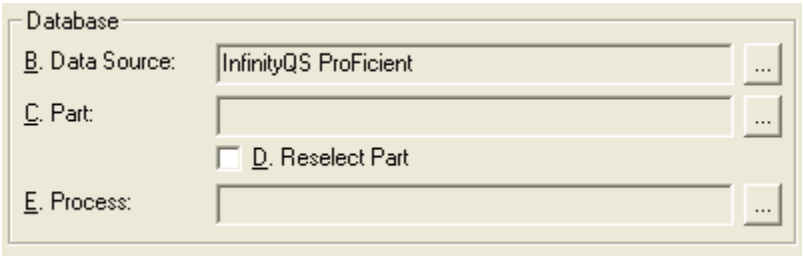
3. In the **Part Selection** dialog box opens, select the desired group and part in the database by doing the following:
   - In the **Group** data field, click the drop-down list and then click the desired group.
   - In the **Item** data field, click the desired part.
4. When finished, click **OK**. The **Part Selection** dialog box closes.
5. To allow users to change parts from the Branson X-Port screen, click the **Reselect Part** checkbox.

Note: Use the **Reselect Part** option when you run multiple parts on the same welder.

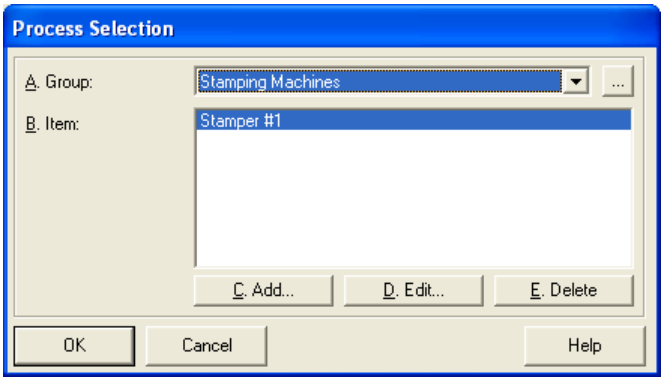
Setting Process

When using SPC sampling, you must define the process being used. When Branson X-Port saves results to InfinityQS ProFicient SPC, the values are associated with the process name (for example, *Welder #1*, *Welder #2*, etc.), allowing you to create different control charts within ProFicient SPC to monitor the processes.

1. In the **SPC Sampling** dialog box, locate the **Database** section.



2. In **Process**, click the ellipsis button (**…**). The **Process Selection** dialog box opens.



3. In the **Process Selection** dialog box opens, select the desired group and process in the database by doing the following:

- In the **Group** data field, click the drop-down list and then click the desired group.
- In the **Item** data field, click the desired process.

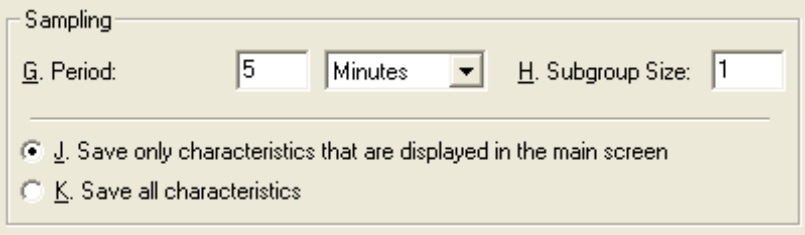
4. When finished, click **OK**. The **Process Selection** dialog box closes.

Setting Sampling Period

From a statistical standpoint, you only need to collect periodic samples from the continuous data stream, which reduces the quantity of information the quality team must review while providing adequate detail on the current state of the process (welder).

Please consult with your quality team to determine your optimum collection strategy.

1. In the **SPC Sampling** dialog box, locate the **Sampling** section.



2. In **Period**, type the length of the interval in the data field, click the drop-down list and then click the units (*Seconds*, *Minutes*, *Hours*). This defines how frequently Branson X-Port stores quality samples.
3. In **Subgroup Size**, type the maximum number of successive weld values that Branson X-Port will compile from the continuous data stream.
4. To only save weld attribute characteristics that are displayed, click the **Save only characteristics that are displayed in the main screen** radio button.

   To save all weld attribute characteristics, click the **Save all characteristics** radio button.

Enabling Alarm Logging

If you enable alarm logging, Branson X-Port will save alarm notifications reported by the welder to ProFicient SPC.

1. In the **SPC Sampling** dialog box, locate the **Sampling** section.

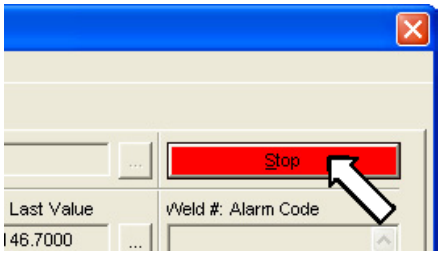
2. Under **Alarm Logging**, click the **Enabled** checkbox.
3. Under the **Enabled** checkbox, click the checkboxes of the alarm categories you want to store.

Closing SPC Sampling Dialog Box

1. In the **SPC Sampling** dialog box, click **OK**.
2. The **SPC Sampling** dialog box closes.

Stopping Branson X-Port Data Collection

1. In Branson X-Port, click the **Stop** button.
2. Branson X-Port stops collecting characteristic data and welder activity data.



Troubleshooting

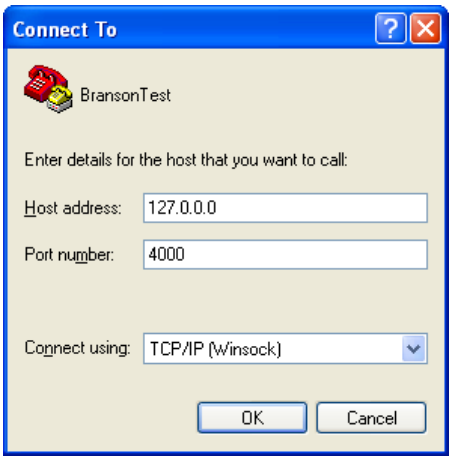
Testing Connection

Using this section, you can verify the IP connection to the Branson 2000 or 2000X Power Supply.

> **Note:** In the example below, we use Microsoft HyperTerminal to test the connection, which is no longer available in the latest versions of Windows. Please use these instructions as a guide with any third party monitoring software (for example, PuTTy) when testing your connection. For assistance, please contact your IT department.

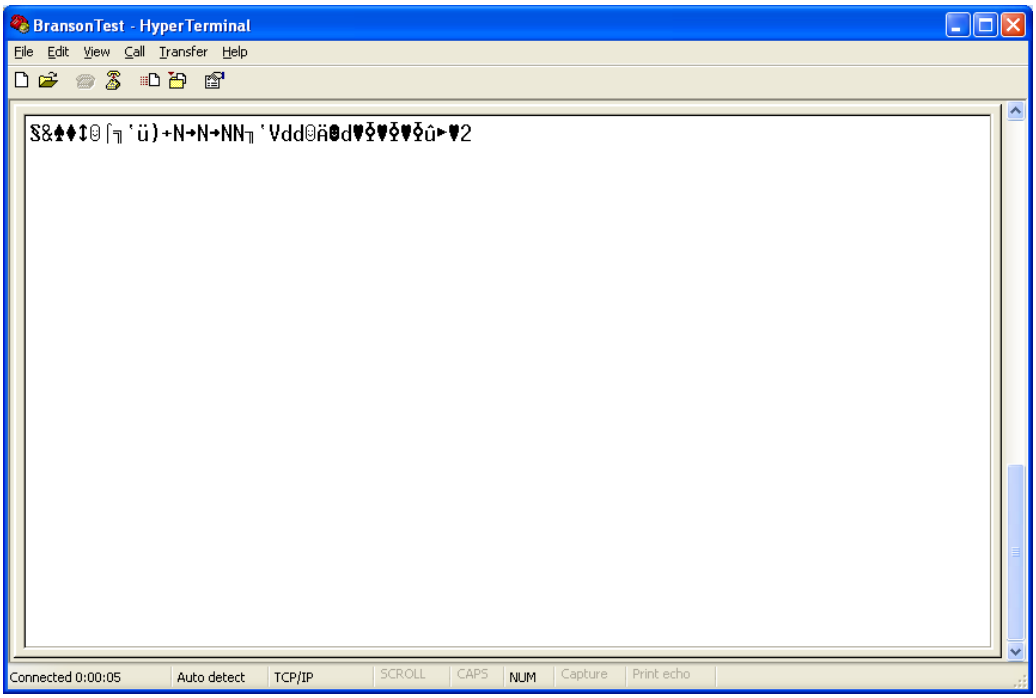
1. On the Branson X-Port workstation, click **Start | Programs | Accessories | Communications | HyperTerminal**. The **New Connection – HyperTerminal** opens.
2. In the **Connection Description** dialog box, type the following:
   `BransonTest`

   and then click **OK**. The **Connect To** dialog box opens.
3. In the **Connect To** dialog box, click the **Connect using** drop-down, and then click *TCP/IP (Winsock)*. The **Connect To** dialog box changes to allow entry of TCP/IP connection information.
4. In the **Host address** data field, type the IP Address of the Branson 2000X Power Supply.
5. In the **Port number** data field, type `4000`.



> **Note:** The **Host address** and **Port number** is the same as the **IP Address** and the **ID Port** that you entered in the **Equipment Settings** dialog box above.

6. In the **Connect To** dialog box, click **OK**. If successful, the HyperTerminal session shows the data stream from the Branson 2000X Power Supply.



If unsuccessful, please contact your IT department or Branson technical support for assistance with connecting to the Branson 2000X Power Supply.

7. In the **BransonTest – HyperTerminal** menu bar, click **File | Exit**. The **HyperTerminal** save prompt opens.
8. In the **HyperTerminal** save prompt, click **No**. The **BransonTest – HyperTerminal** closes.

Error: Unable to resolve End of Transmission

If you are receiving the following error:

```
DATE: 00/00/00
TIME: 00:00:00
PROCEDURE: BransonUsw.Winsock1_DataArrival
ERROR CODE: 80040000
ERROR DESCRIPTION: Unable to resolve End of Transmission
ERROR DETAILS:
BransonUsw.ProcessDataStream
BransonParser.GetFunction
BransonParser.ProcessBlock
iiBransonXPort
```

Perform the following procedures:

1. Shut down the Branson X-Port, and then restart the Branson X-Port. For instructions on stopping and starting Branson X-Port, see "Opening and Closing Branson X-Port".
2. In the configuration screen of the welder's main menu, set the welder address to **OFF**.