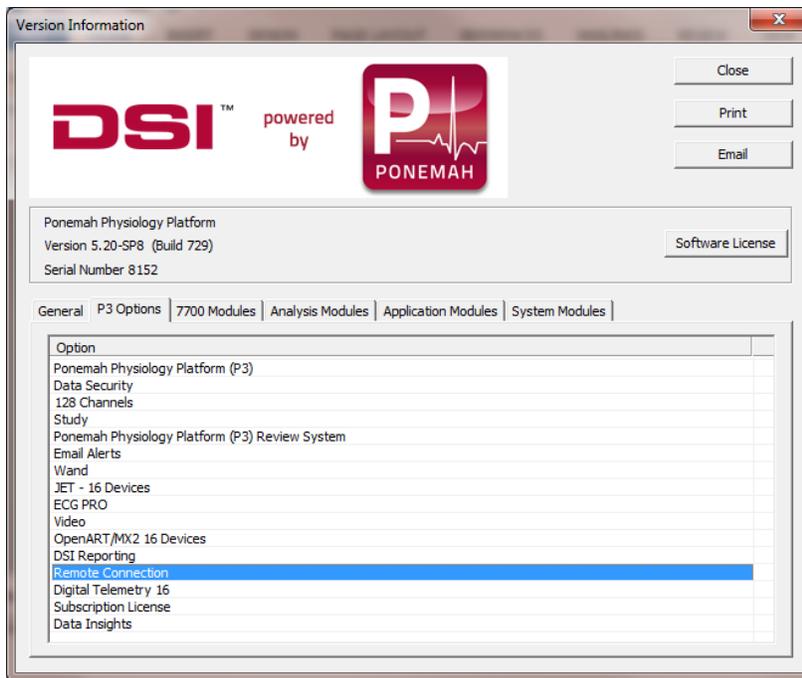


# PONEMAH REMOTE CONNECTION SETUP

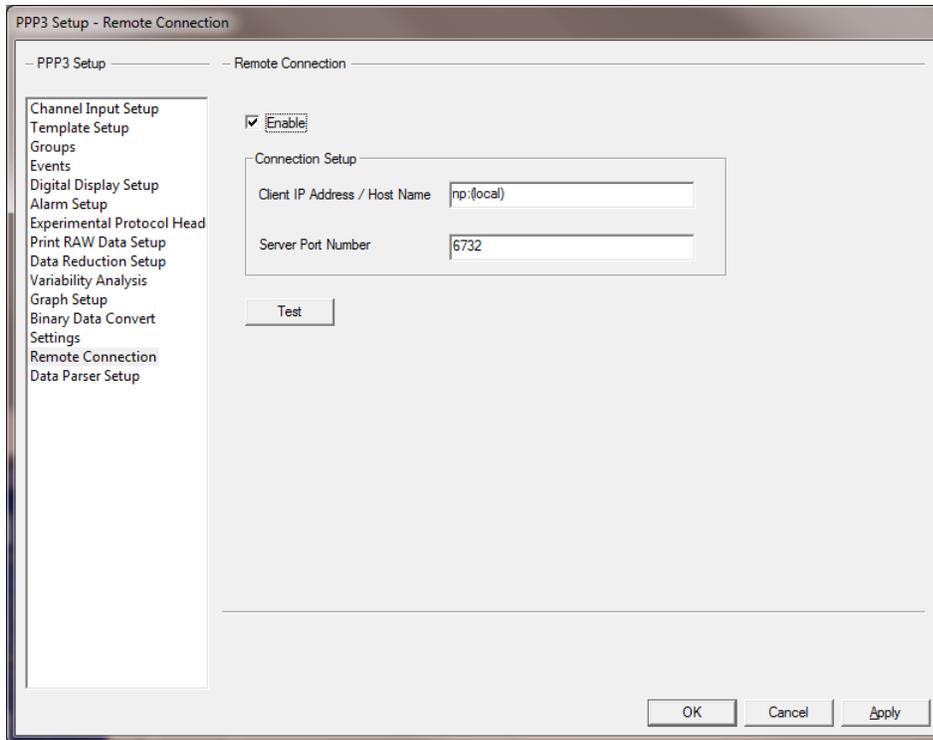
Ponemah Remote Connection allows an external application either on the same workstation or on a remote workstation to connection to a Ponemah acquisition system and receive parameter data at certain user defined intervals.

The following assumes that the Ponemah acquisition workstation has the Remote Connection license option enabled. The license option is displayed in the image below.



## CONFIGURING PONEMAH ACQUISITION WORKSTATION

In order for the remote connection to send parameter data, the application must be configured appropriately. From the Ponemah Setup menu, select P3 Setup and then click on Remote Connection. The following image will be displayed.



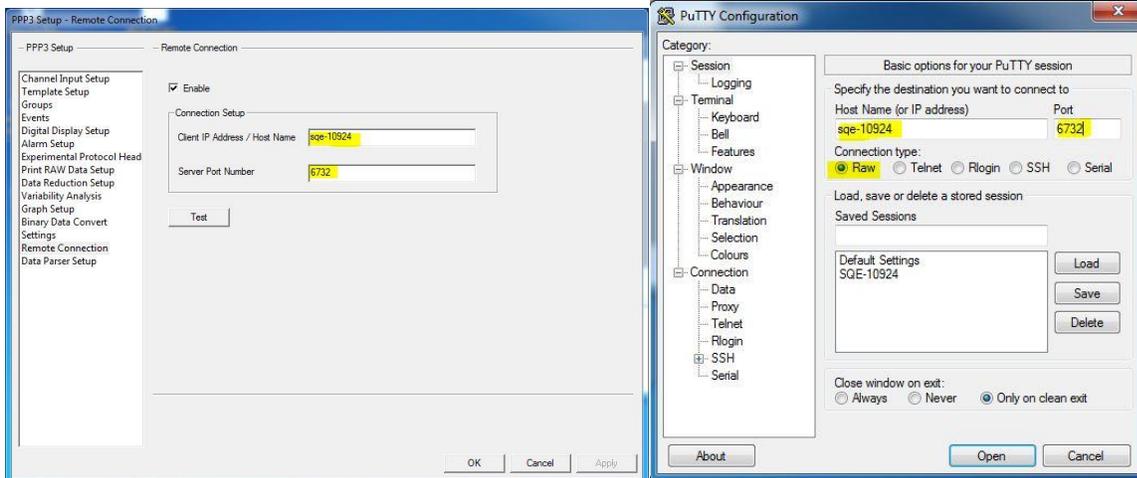
## TESTING REMOTE CONNECTION

In order to test the remote Connection and verify the Ponemah is logging data through the port, it is recommended to use the open source tool, Putty. Putty is a simple application that connects to the TPC/IP port to verify the operation.

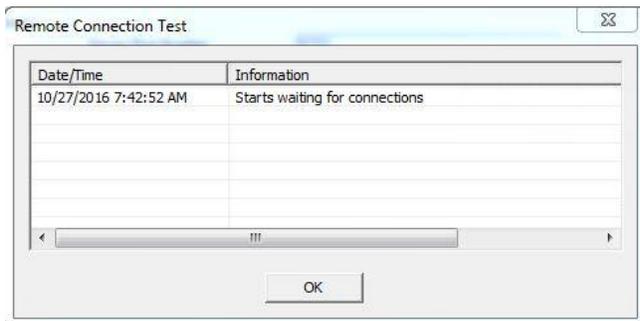
Putty is available at: <http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html> and select the Windows x86 version.

Once Putty has been downloaded, run the application on either the same local workstation that Ponemah is running on or on a remote workstation that will be used for the connection later. It is important to make sure that both workstations can be seen on the network and the appropriate firewall ports are open.

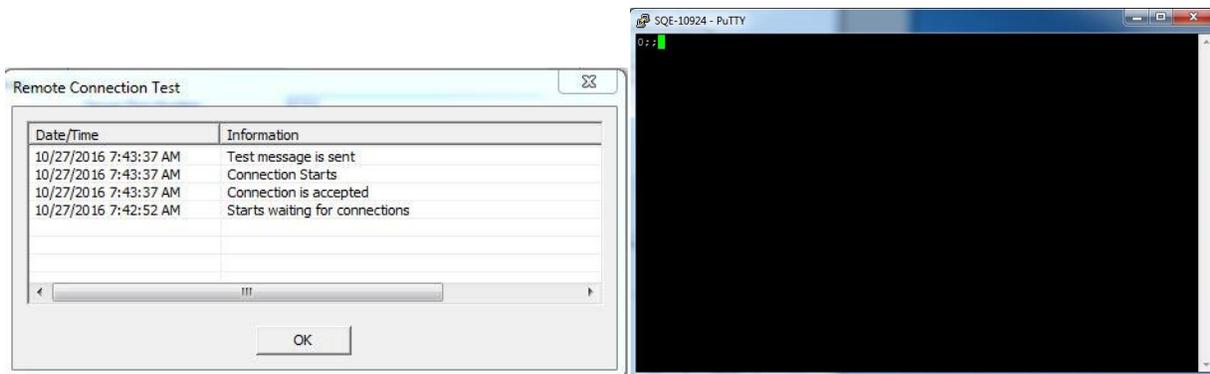
Once Putty has been started, a dialog will be displayed. Certain setting must be set in order to open the communication channel with Ponemah. In the example below the **Computer Name** must be entered into both Ponemah and the Putty application. The Connection type in Putty must also be set to **Raw**.



Once both Ponemah and Putty has been configured, enter the **Test** button in the Remote dialog. A window will appear as displayed below waiting for a connection to the port to occur.



In Putty select **Open**. When the Putty response window opens it will display a response from Ponemah and the Ponemah test window will display the connection status as displayed below.

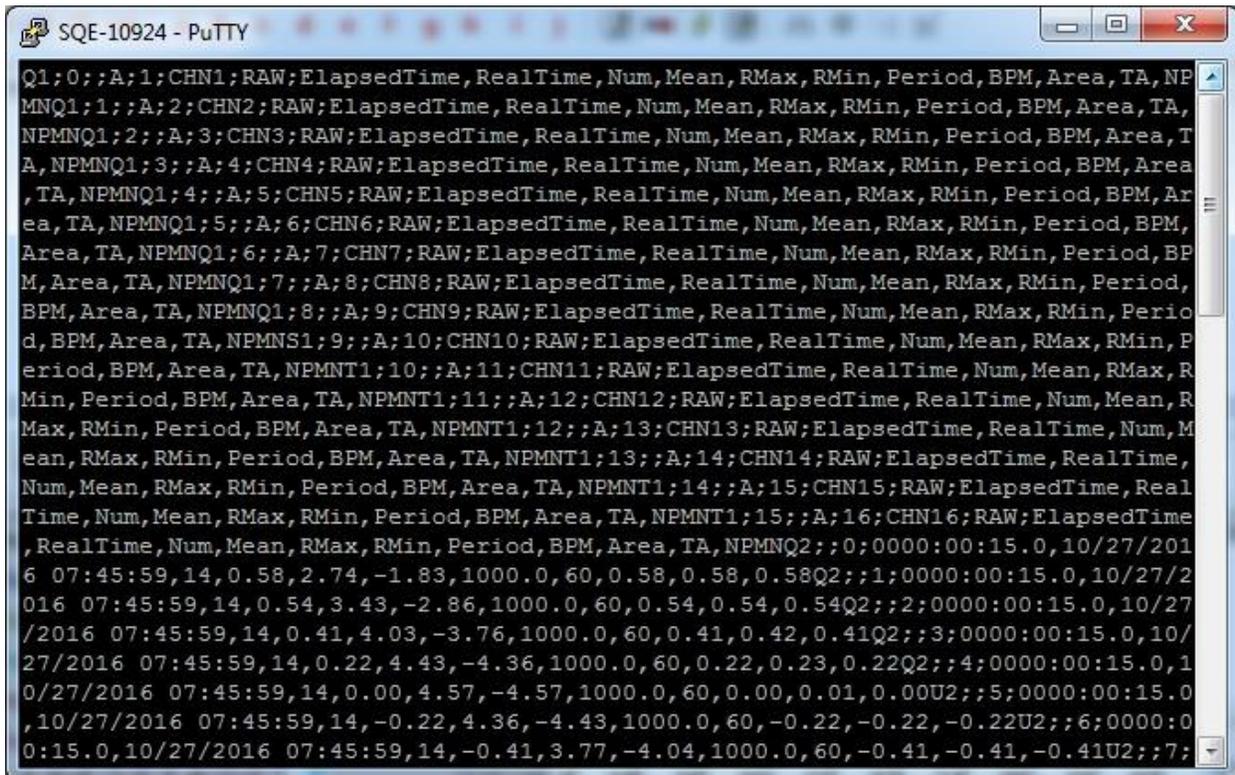


Once a connection has been established, the user can now verify that logging data can be sent through the connection.

Close the dialog and start an acquisition. Ponemah will respond by displaying a warning if the Logging Method and Logging Rate is not set to 1 Epoch. You can ignore this message since it is specific to a inhalation dosing application.



Restart Putty and select the connection parameters that were used in testing the connection and select **Open**. After a logged line of data is outputted, the Putty status window will display the information for that logged line of data from the network connection as displayed below.



## DATA OUTPUT FORMAT

The data that is logged has the following format:

### HEADING INFORMATION: ID 1

1041;1;;C;11;Impedanc;PAF;ElapsedTime,RealTime,Num,PIF,PEF,TV,MV,BPM,IT,ET,TT,AT,CaRaw,Phase,dT,Penh,RT,TVe

[message length is 104 bytes][this is a Meta Data for derived parameters];[Data Instance ID is 1];[Reference data instance is not specified];[Group is C];[Channel is 11];[Channel Label is Impedanc];[Channel Analysis is PAF];[Parameter sequence: ElapsedTime is the first data coming, RealTime is the second, then Num, PIF etc]

a. PAF is set up as channel 11 inPONEMAH Channel input Setup.

Input	Analysis	Label	Units	Group	Precision
11 - (A11:)	PAF	Impedanc	ohms	C	00.00
12 - (A12:)	RAw	Temperat	Celsius	C	00.00
13 - (A13:)	ECG	ECG	mV	C	00.00

2) Later Ponemah sends derived parameter data when it's available

### PARAMETER DATA: ID 2

1022;;1;0000:00:03.542;12/22/2009 14:28:25;2;14.35;14.35;9.13;274;30;1000;1000;2000;0;0;0;0;0.61;620;9.14

[message length is 102 bytes][this is a derived data];[Instance ID is not specified];[It references the data with instance ID 1];[according to Meta Data Instance ID 1, ElapsedTime is 0000:00:03.542];[RealTime is 12/22/2009 14:28:25]; [Num value is 2];[ PIF value is 14.35];etc.

a. Since this message refers to Meta Data with Instance ID 1, it also indicates this is Group C, channel 11 data.

b. Compare with the second row of data from excel files from the acquisition.

ElapsedTime	RealTime	I11Num	I11PIF	I11PEF	I11TV	I11MV	I11BPM	I11IT	I11ET	I11TT	I11AT	I11CaRaw	I11Phase	I11dT	I11PEnh	I11RT	I11TVe
0000:00:01.542	12/22/2009 14:28:23	1	14.3	14.35	4.28	171.4	40	500	1000	1500	0	0	0	0	1.64	380	9.14
0000:00:03.542	12/22/2009 14:28:25	2	14.35	14.35	9.13	274	30	1000	1000	2000	0	0	0	0	0.61	620	9.14
0000:00:05.542	12/22/2009 14:28:27	3	14.35	14.35	9.13	274	30	1000	1000	2000	0	0	0	0	0.61	620	9.14