

Serial Port Connection and Setup

This guide goes through the individual steps to setup your system to take in a Trittech head running Serial comms.

The first step is to make sure that the wiring is correct.

The second step is to make sure that Seanet is ready to take in a Serial connection.

Further debugging can be carried out if Seanet still does not show a connection. The logical next step is to check to see if there is data received on the comm port using a terminal program (in this case puTTY). If this fails then you can check to see if there is a valid signal on the channel using an Oscilloscope, this step is more difficult as additional hardware is required.

Equipment Required

- A cable to connect to the head
- A power supply
- Serial connection at PC e.g. USB to Serial

Additional For Debugging

- puTTY Software

<https://www.chiark.greenend.org.uk/~sgtatham/putty/latest.html>

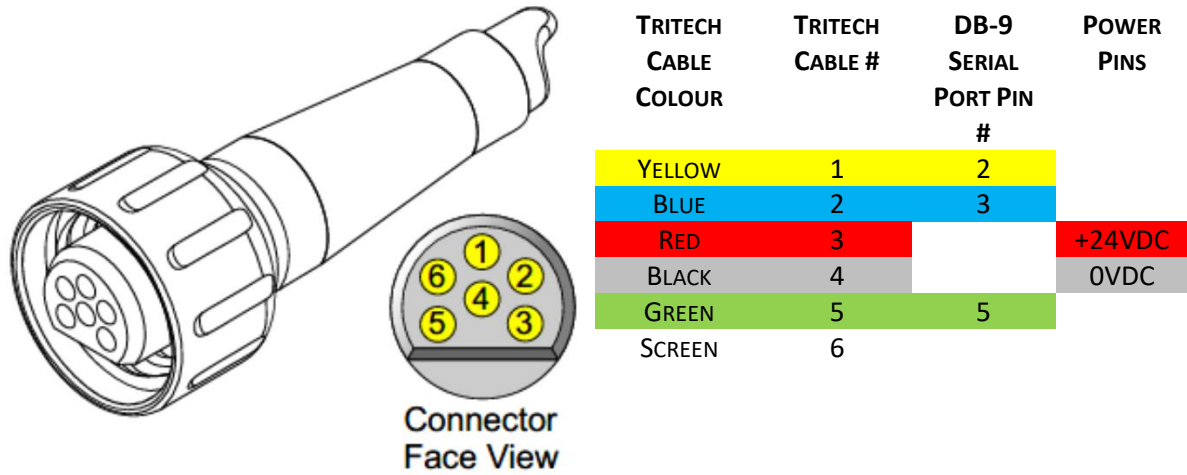
<https://www.putty.org/>

- Oscilloscope

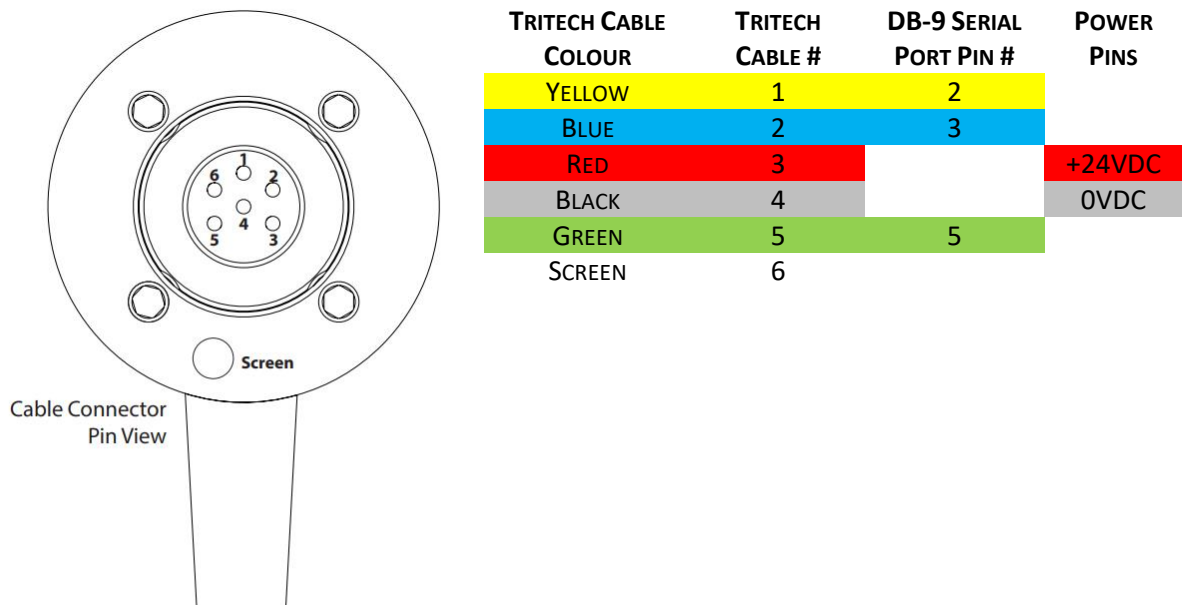
The First Step

Check the Wiring

The standard Micron Serial wiring is as follows



The standard Seaking Serial wiring is as follows



If you ever see the [Status] as [UNKNOWN] in the [Setup] page then this is nearly always an RS232 ground issue so double check the continuity on pin 5.

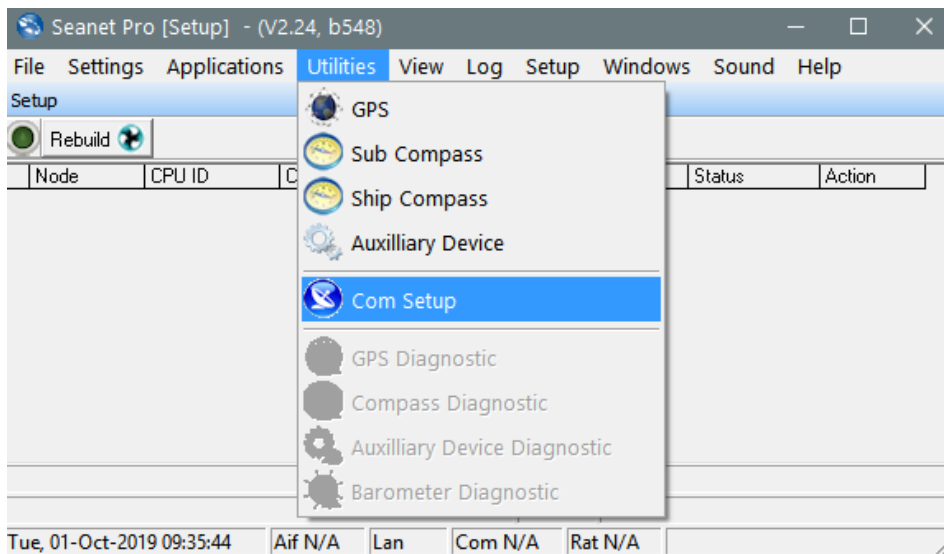
The Second Step

Setup Seanet

For RS232 and RS485 connections Seanet needs to be told to access the hardware comm port on the computer. To do this you need to do the following

Open up [Seanet Setup]

Select [Utilities] and then [Com Setup] from the dropdown menu



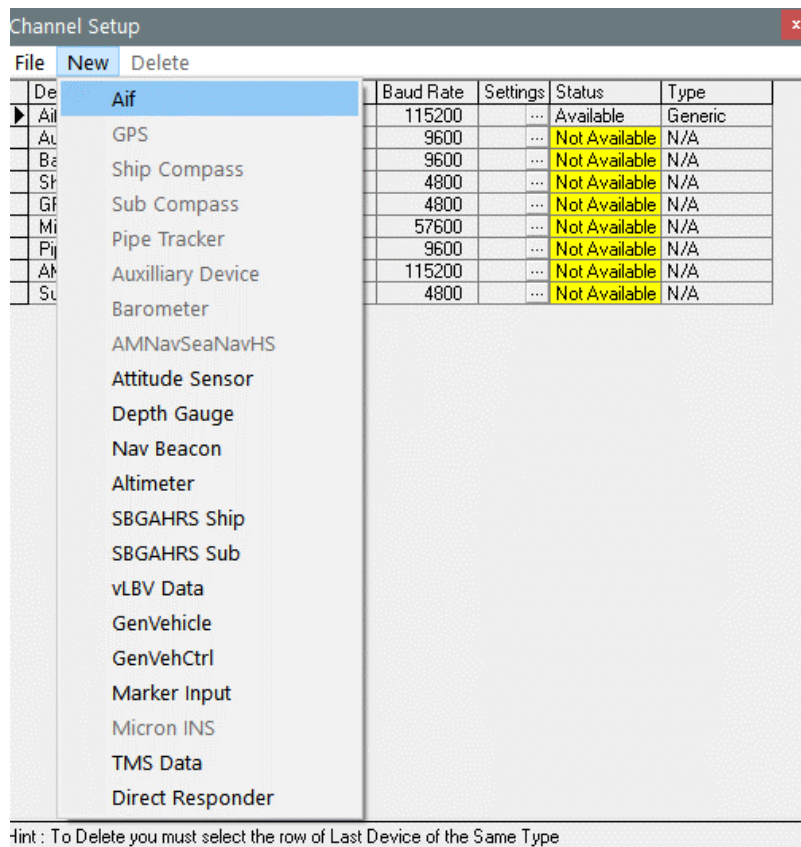
The following window will now appear. We need to setup the [AIF] device. AIF stands for Acoustic InterFace.

Channel Setup

File New Delete

	Device	COM Port	Enabled	Baud Rate	Settings	Status	Type
▶	Aif	3	<input type="checkbox"/>	115200	...	Available	Generic
	Aux Device	2	<input type="checkbox"/>	9600	...	Not Available	N/A
	Barometer	2	<input type="checkbox"/>	9600	...	Not Available	N/A
	Ship Compass	2	<input type="checkbox"/>	4800	...	Not Available	N/A
	GPS	2	<input type="checkbox"/>	4800	...	Not Available	N/A
	Micron INS	1	<input type="checkbox"/>	57600	...	Not Available	N/A
	PipeTracker	2	<input type="checkbox"/>	9600	...	Not Available	N/A
	AMNavSeaNavHS	2	<input type="checkbox"/>	115200	...	Not Available	N/A
	Sub Compass	2	<input type="checkbox"/>	4800	...	Not Available	N/A

If and [AIF] device is not already listed then select [New] from the tool bar and then [AIF]



Once [AIF] is selectable use the [Left] and [Right] arrows under [COM Port] to select the serial port that you are connecting too.

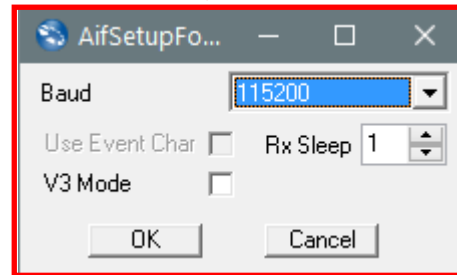
Device	COM Port	Enabled	Baud Rate	Settings	Status	Type
Aif	3	<input type="checkbox"/>	115200	...	Available	Generic

If the port is connected and available then the status will show as [Available]

Device	COM Port	Enabled	Baud Rate	Settings	Status	Type
Aif	3	<input type="checkbox"/>	115200	...	Available	Generic

If you need to change the baud rate on the port then this can be done using the [...] button under [Settings]

Device	COM Port	Enabled	Baud Rate	Settings	Status	Type
Aif	3	<input type="checkbox"/>	115200	...	Available	Generic



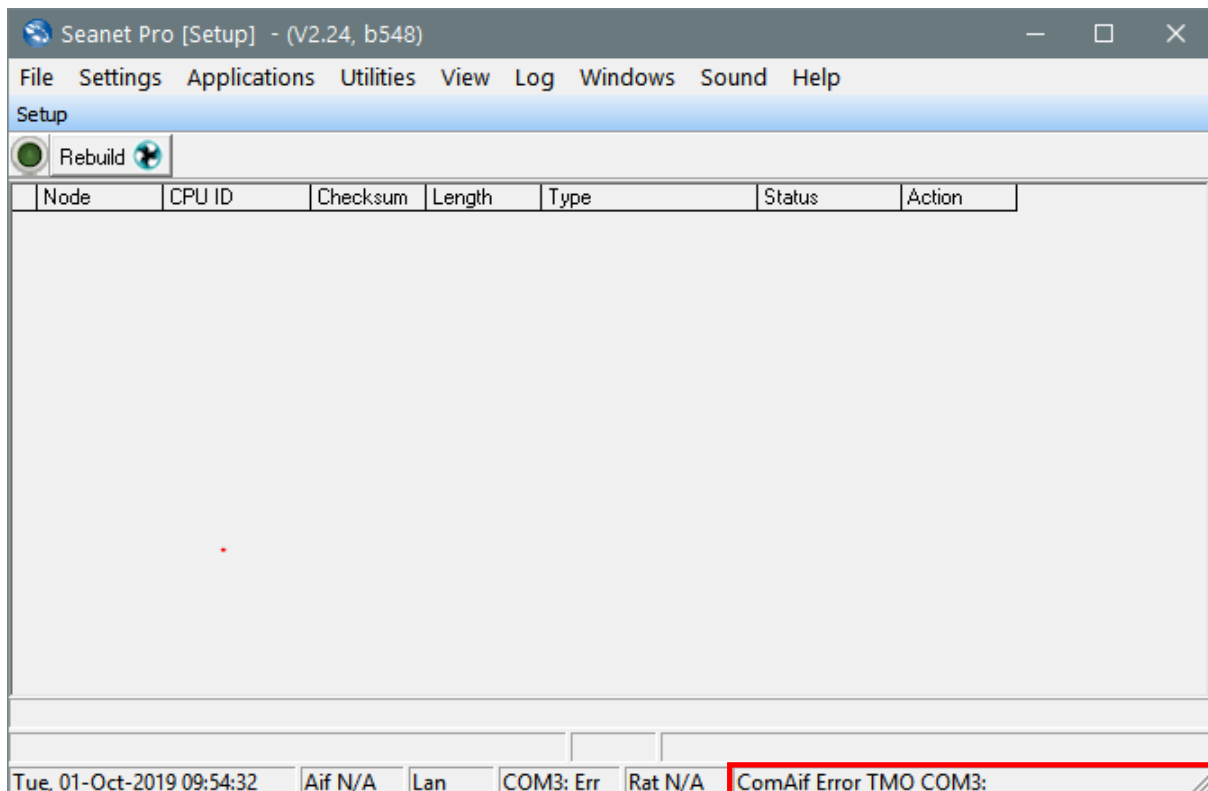
When the [COM Port], [Baud Rate] and [Status] are all set then selecting [Enabled] will activate the port in Seanet and allow Serial comms

Device	COM Port	Enabled	Baud Rate	Settings	Status	Type
Aif	3	<input checked="" type="checkbox"/>	115200	...	OK	Generic

Closing this Window and will bring you back to the setup page where the head should appear listed in the node table

TMO Errors mean that the com port listed is enable but there is no device connected.

SYNC Errors mean that the com port listed in enabled but the Seanet cannot decode the messages (usually a baud rate or communication protocol issue)



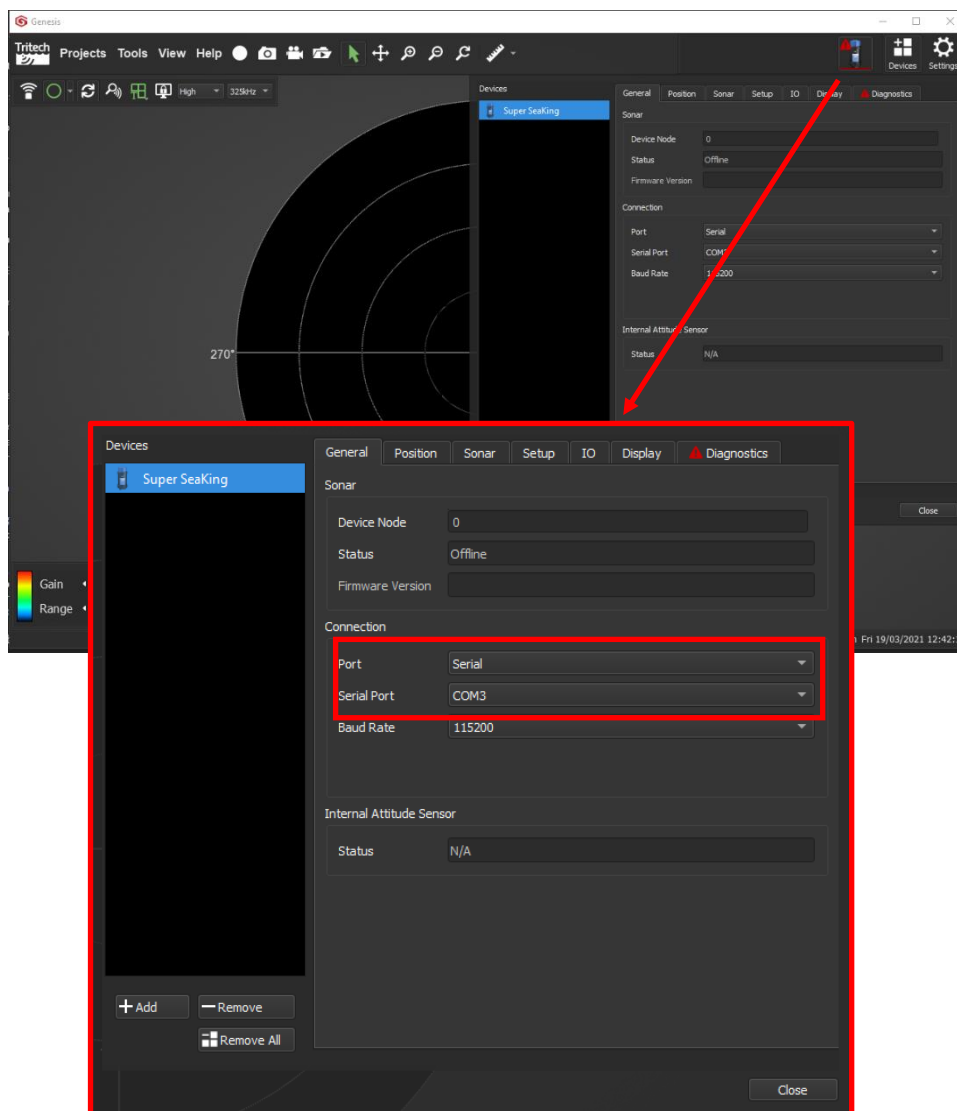
Setup Genesis

For RS232 and RS485 connections Genesis needs to be told to access the hardware comm port on the computer. To do this you need to do the following

Open [Genesis] and either left click on the head icon if this is visible or select [Devices] to add a device



The [General] tab should open but if not navigate to the [General] tab.



Make sure that the [Port] is set for serial and the [Serial Port] matches the port that the Head is connected too. The default baud rate for RS232 is [115200]

Debugging

puTTY RS232 Setup

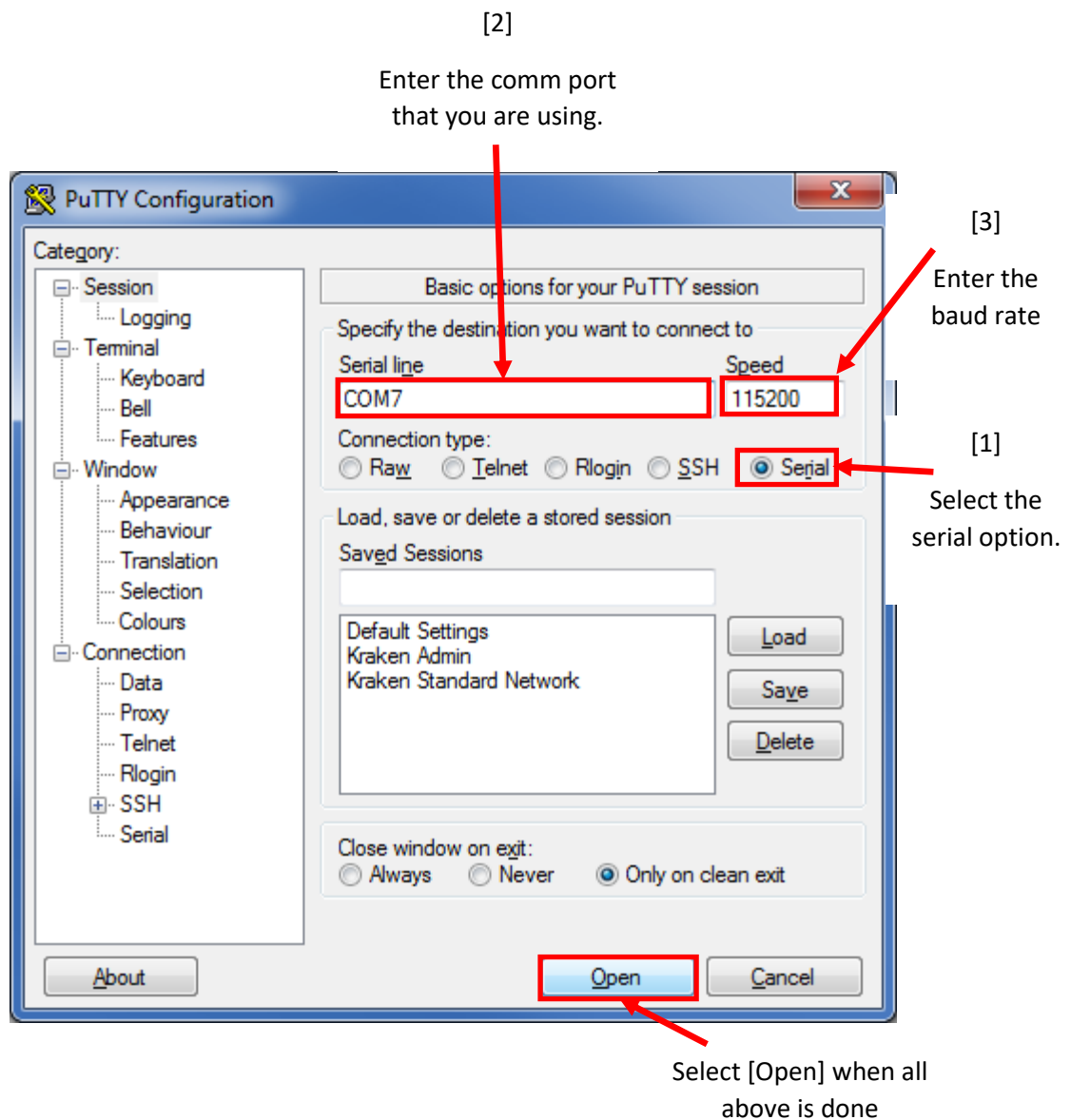
Open up the puTTY application by double right clicking on the icon.

AS PER A FACTORY DEFAULTS TRITECH SERIAL UNITS RUN AT 115200BAUD.

Now select the [Serial] option.

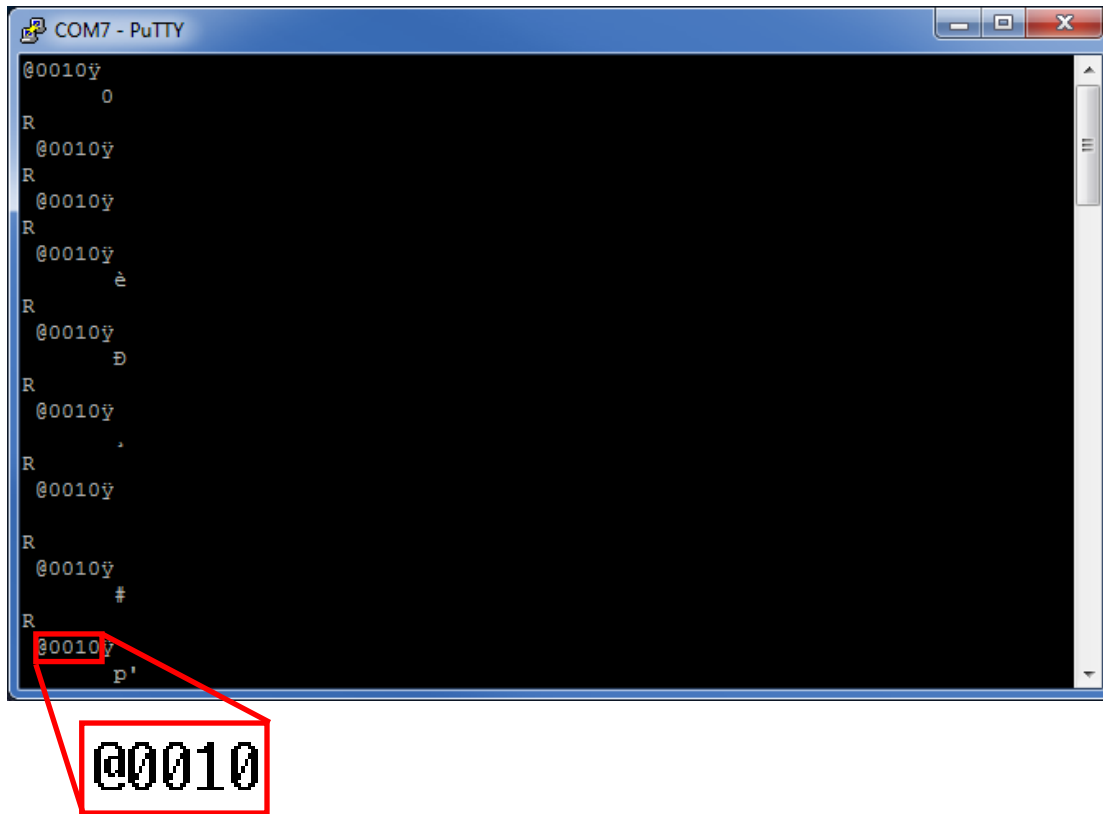
Then enter the com port that you are using in the [Serial line], in figure 1 [COM7] is used as an example. You can use Seagnet Pro or Device manager to find out the comm port you are using.

Finally enter the baud rate that you are using in the [Speed] box. In the example below is [115200]. Then select [Open]



After clicking [Open] the following screen will appear as per Figure 2

YOU WILL NEED TO SCROLL UP TO SEE THE DATA



Depending on the terminal program the output format will change. The important thing that you are looking for is the **@0010**, this is the alive message from the head.

Now you know that data is coming from the head to the comm port you can find it in Seanet Pro.

Scoping the RS232 Signal

This works for both RS232 and RS485 but below references RS232 as this is signal that is quoted in this document.

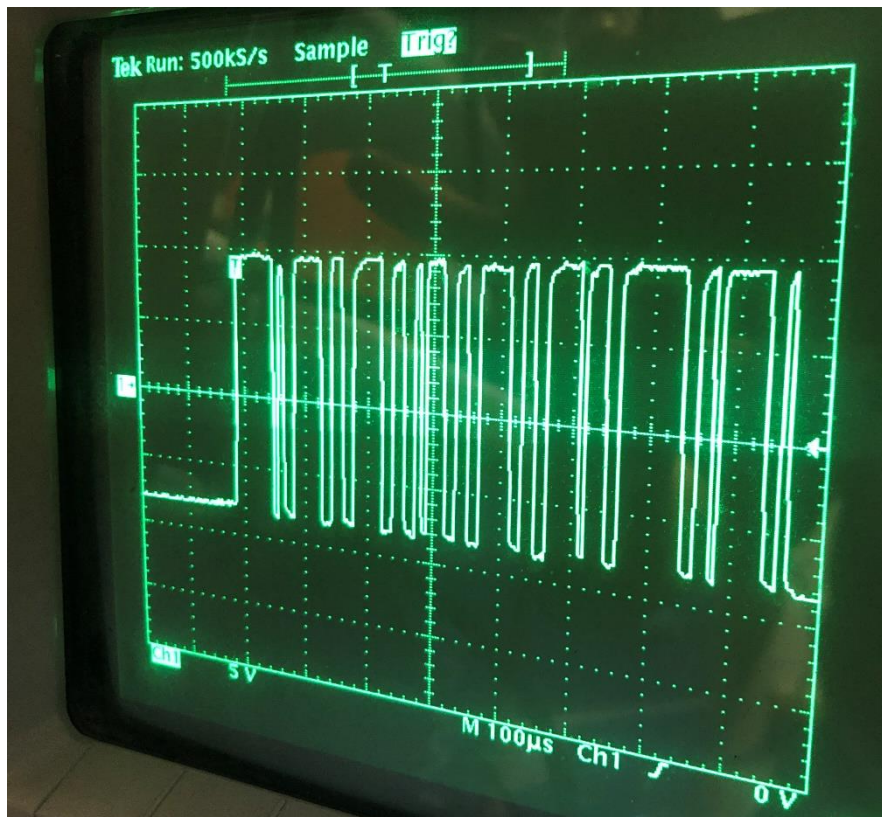
If you measure between

Pin 1 (Yellow) Head Tx
Pin 5 (Green) RS232 GND

You will see the signal below

Key setting are:

- 2V-5V per division
- 100 μ s timebase (for 115200 baud)



NOTE – This signal is 115200 baud which is the default settings for RS232.