![Stevens Water Monitoring Systems, Inc. logo]

Using the Stevens Shark RS232/RS485 Adapter with Bluetooth® Technology with the Campbell CR10(X) Data Logger

Introduction

The Stevens Shark Wireless *Bluetooth* Adapter can be used to connect a computer or PDA with a built-in radio using *Bluetooth* technology to a Campbell CR10 or CR10X data logger without a cable.

The Shark is an RS232/RS485 wireless cable replacement and emulator. This means that the Shark will operate seamlessly as if there was a cable connection between a computer and an instrument with a serial port.

Products Needed:

To connect the Shark to the Campbell CR10, you will need either the "Campbell Scientific Optically Isolated RS232 Interface, Model SC32A" or the "Campbell Scientific Optically Isolated RS-232 Interface 9 pin to 9 pin Interface, Model SC32B". The SC32B is the current model available, having replaced the SC32A.
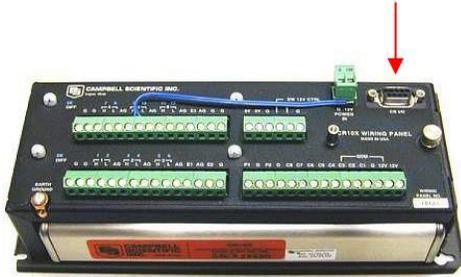

Figure 1: SC32A

Figure 2: SC32B

Step 1: Connect the Shark to the Campbell Logger

Connect the SC32A or SC32B to the CS I/O port on the Campbell CR10 or CR 10X, then connect the Shark to the SC32A or SC32B:

NOTE: If you are using the SC32A, a 9 pin male to 9 pin female straight-through serial cable between the CR10 and the SC32A will need to be utilized. Another 25 pin to 9 pin adapter will need to be placed between the SC32A and the shark, as the following picture illustrates (The SC32B does not need these converters):

9 pin male to 9 pin female straight-through serial cable

25 pin to 9 pin serial adapter

Once the Shark is connected, power the Shark, logger, and connect any instrumentation needed to the logger.

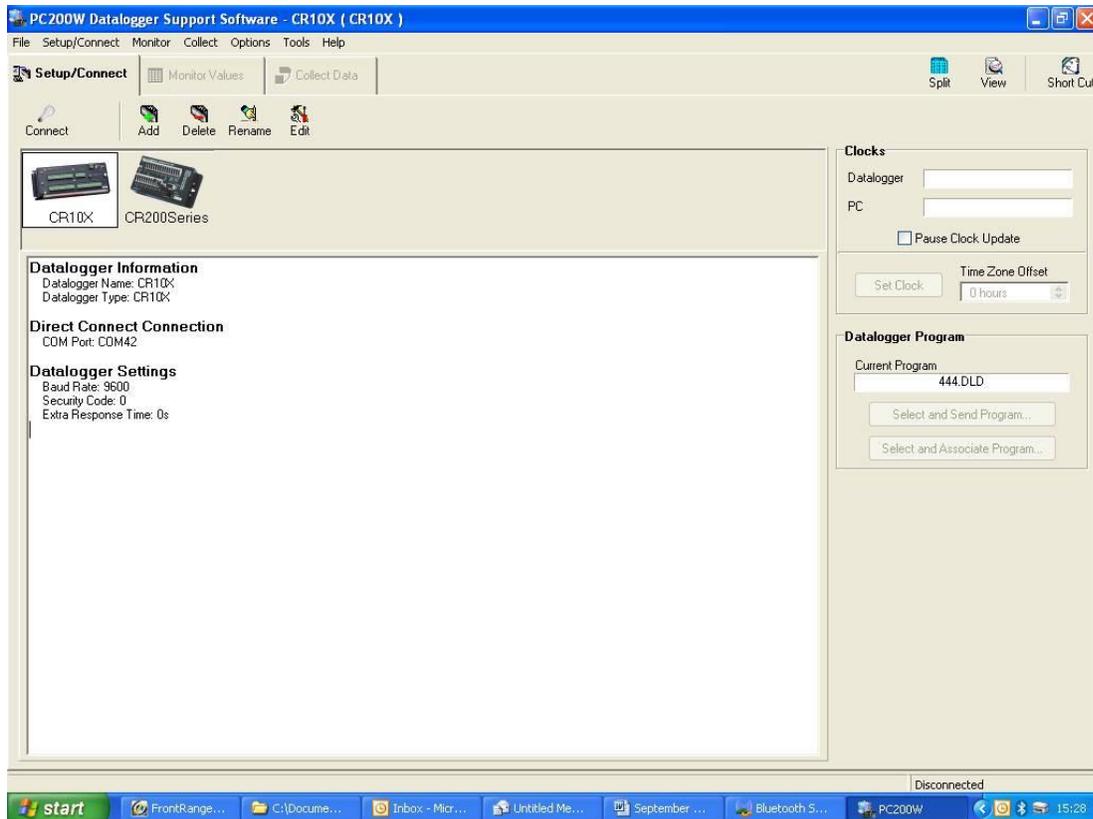# Step 2: Connecting Over Bluetooth to the Logger

Once the Shark is connected to the logger and powered, a connection to the logger must be made from the computer.

Turn on the *Bluetooth* module on your computer or PDA, or if the computer lacks built-in *Bluetooth*, connect another Shark or USB *Bluetooth* adapter to the computer.

NOTE: read instructions for operating procedures of you Bluetooth radio built into your computer or PDA and how to pair two *Bluetooth* radios. If the computer does not have a build in Bluetooth radio, a separate Shark can be connected to the computers RS232 serial port or via a USB to RS232 adapter. Such Shark will need to be configured in "master mode" (see the Shark's operation manual).
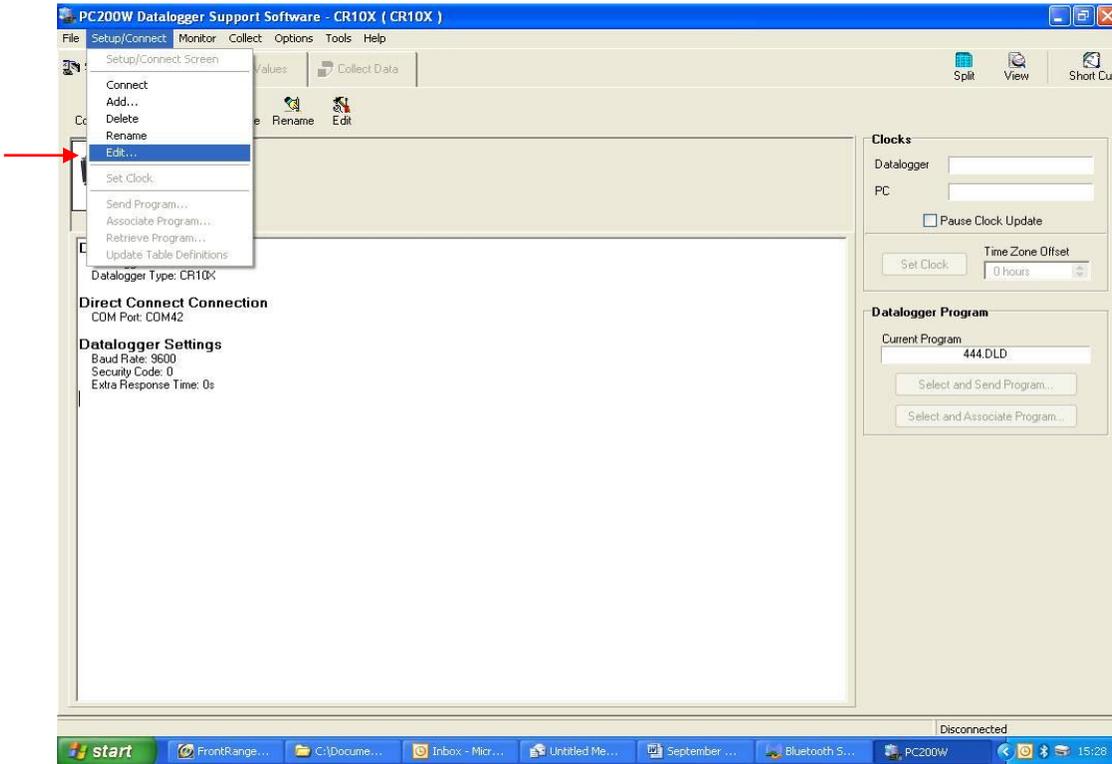
Many computers have slightly different methods of connecting to a *Bluetooth* device, depending on the computer manufacturer and operating system. However, on most Windows XP and Vista computers, there is software designed to easily walk you through the steps of connecting your computer to another Bluetooth devices, such as the Shark. For examples, in Windows Vista, the "Control Panel" window has a dedicated "*Bluetooth*" management program, which allows users to easily connect to *Bluetooth* radios.

Once your computer or PDA *Bluetooth* radio is on and paired with the Shark, launch the Campbell PC200W software and select the logger you'd like to make a connection to:
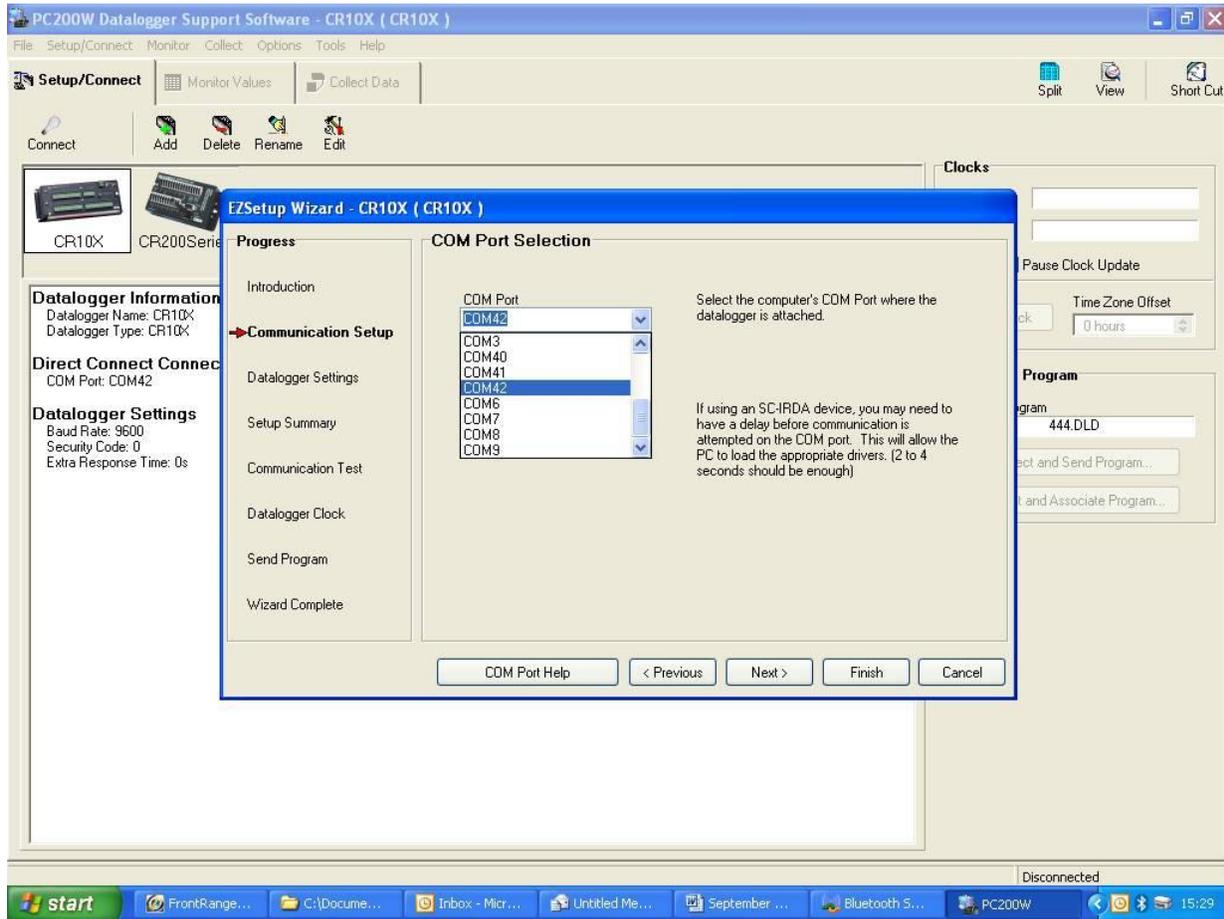
Please be aware that the COM Port shown on the screen under "Direct Connect Connection" may not be the correct port that is going to be used to communicate with the logger, either using a Shark connected to the computer or the computer's built-in *Bluetooth*.

To configure the software to use the desired port, select "Setup/Connect" from the top menu bar then select "edit":
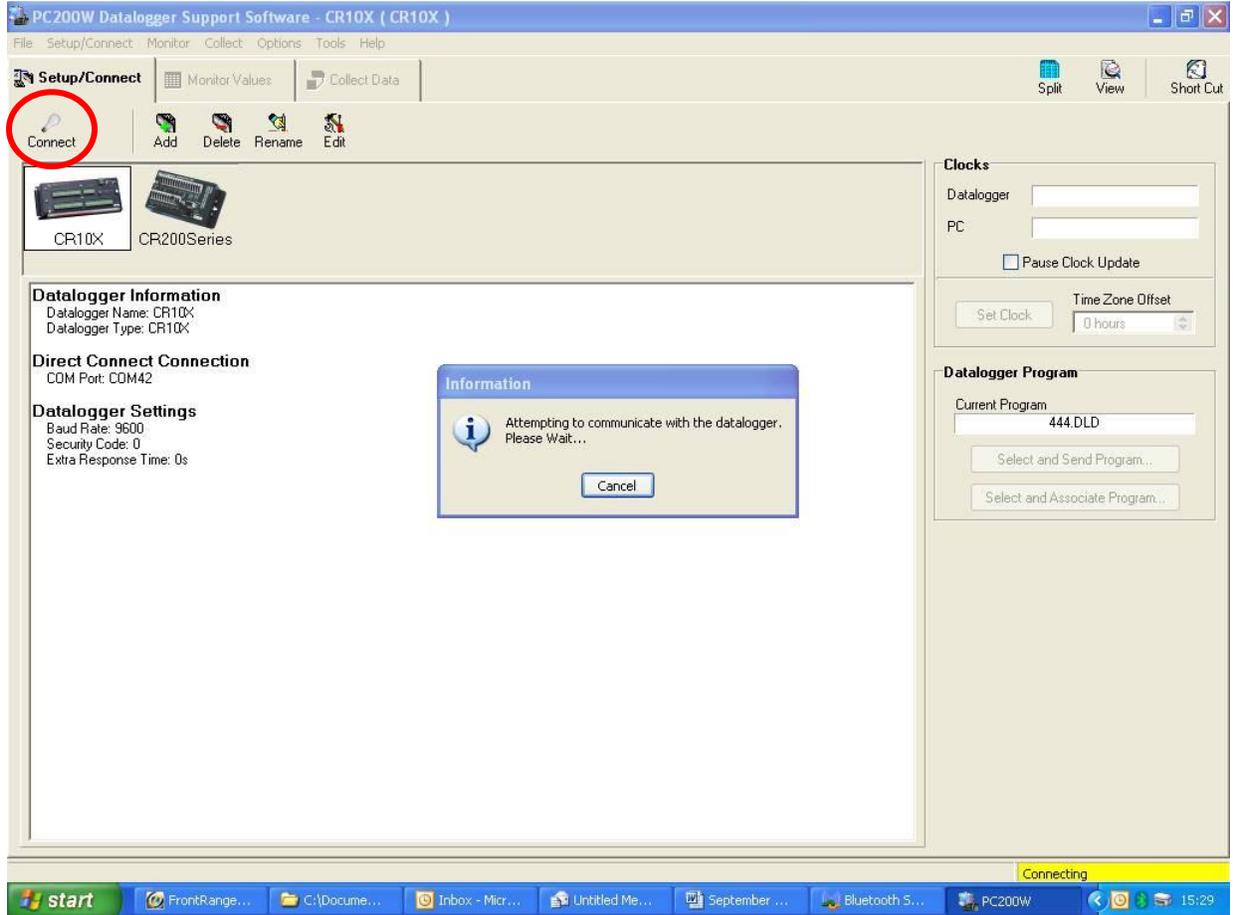
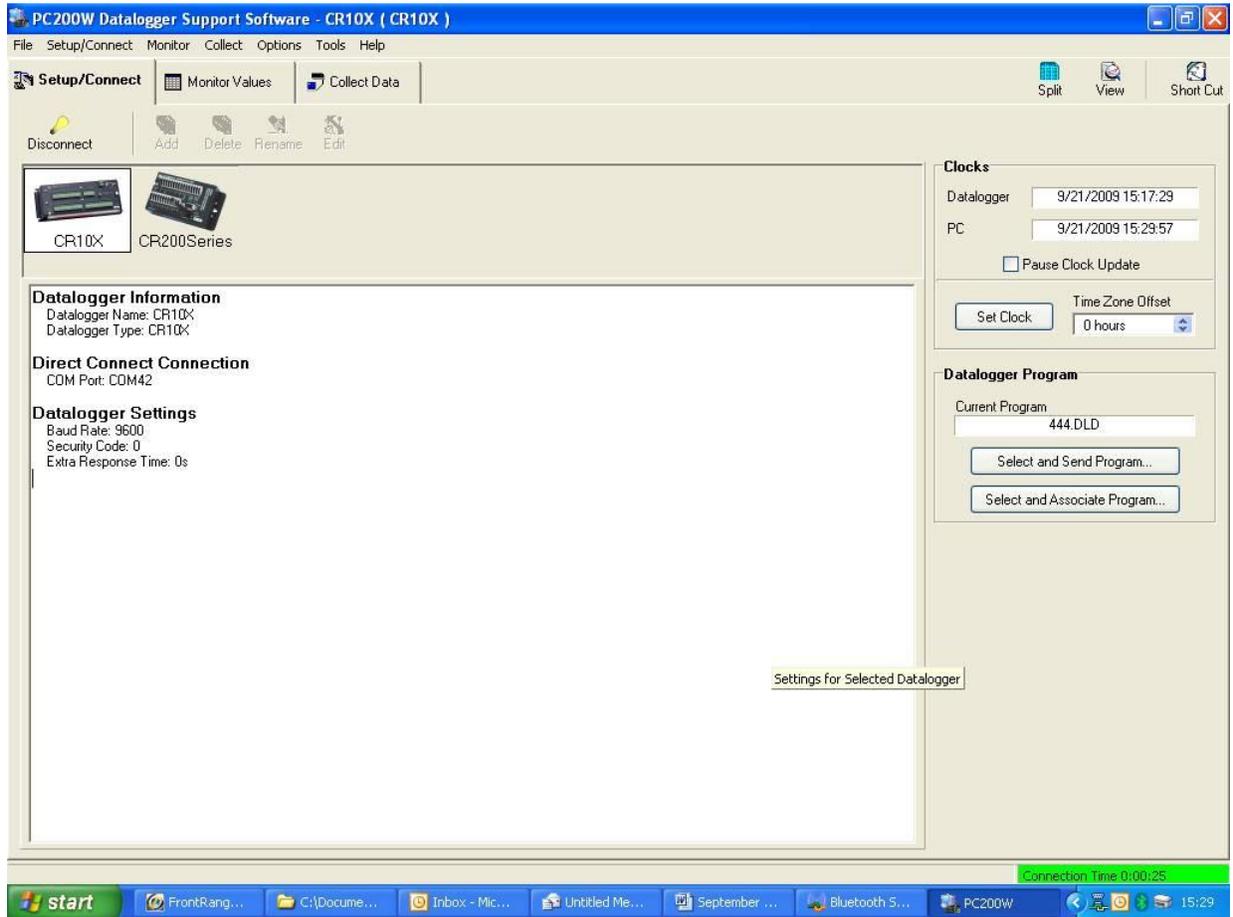Under "Communication Setup", the proper COM Port can be selected:

If you have a Shark configured as a "Master" connected to the computer which is being used to communicate with the other Shark connected to the Campbell logger, the COM Port that the Shark is using can be found under Control Panel > System > Device Manager > Ports (COM & LPT) or under your computer's "*Bluetooth*" settings screen.

After setting the proper COM Port, return to the main screen and select the "Connect" option near the upper left-hand side of the screen:

Once a connection has been established, the indication area in the lower right-hand side of the screen will turn green:

The Campbell logger can now be communicated with wirelessly as if there was a standard cable connection.