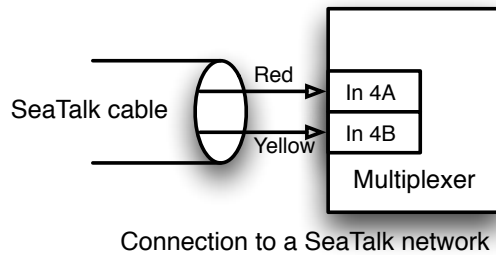


SeaTalk

SeaTalk® is a proprietary protocol developed by Raymarine®. This protocol is used for communication between Raymarine navigation instruments like the ST40, ST50 and ST60 series.

To be able to use these instruments with commonly available navigation programs or to feed their data into other non-Raymarine instruments, the SeaTalk data needs to be translated into NMEA. Even Raymarine's own navigation software, Raytech Navigator, needs this translation.

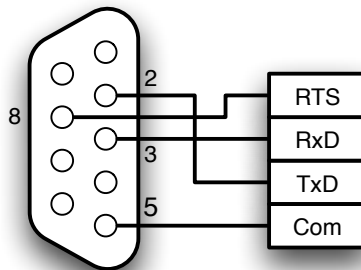
The MiniPlex can be directly connected to a SeaTalk network. It will translate all SeaTalk data required for navigation into NMEA sentences. Input **In 4** can be set to SeaTalk mode (**SeaTalk -> NMEA**) and should be connected as shown below:



Note that the **red** and **yellow** wires are used! The screen of the SeaTalk cable is not connected to the multiplexer.

RS-232 Serial Port

The RS-232 serial port can be used to connect the multiplexer to a computer as shown in the diagram below. The serial port is bi-directional: the multiplexer sends NMEA data to the computer and the computer can also send NMEA data back to the multiplexer. This data can be routed to **NMEA Out 1** and **NMEA Out2**.



The serial port is galvanically isolated from the multiplexer to prevent ground loops and excessive currents that could otherwise destroy the multiplexer or the serial port of the connected computer.

The default speed of the serial port is 38400 Baud. It can however be set to any speed in the range from 4800 to 115200 Baud using the MPX-Config utility.

The serial port and the Bluetooth interface support flow control, the serial port through its RTS connection, the Bluetooth interface virtualizes this signal. Flow control is needed when waypoints and routes are sent from the computer to a GPS through the multiplexer. While normal NMEA sentences are sent at regular intervals, waypoints and routes are sent 'in one go' without any pause between these NMEA sentences. This fills up the queue in the multiplexer almost immediately after which the multiplexer discards the remaining waypoints and routes. The GPS now only receives a few waypoints and partial routes.

Flow control prevents this from happening. When the queue in the multiplexer is almost filled, the multiplexer signals the computer to stop sending data. When the queue is sufficiently emptied, the multiplexer signals the computer to continue. This requires a special setting in your navigation software, which is mostly called 'Flow Control'. This setting can mostly be found in the port settings of your software. Set the Flow Control to Hardware or CTS/RTS. Do not use Xon/Xoff flow controls since this uses special characters instead of a (virtual) signal. These characters are not part of the NMEA standard and therefore ignored by the multiplexer.