

The RS-232 serial data uplink can be included when the 9plus is ordered, or the 9plus can be retrofitted (at the factory). The retrofit requires:

- Logic PCB that generates the 9plus control at the normal rate, but moves data onto the sea cable at twice the normal rate.
- Modem PCB (for 300 baud FSK modem channel for water sampler control) that also is able to accommodate the serial data input.
- Change to the backplane wiring.
- 4-pin JT4 connector on the top end cap for connection to the serial data output instrument.

These changes make the 9plus incompatible with 11plus V2 Deck Units set up for standard rate data transmission.

SBE 11plus V2 Deck Unit Requirements

Note:

The *Serial Data Uplink* connector (previously labeled *9600 Baud Uplink*) is included as standard on all 11plus V2 with serial number 637 and higher. For older units, the connector was included only if the user ordered the 11plus V2 with the serial data uplink option.

If already equipped with the 300 baud FSK modem channel for water sampler control and with the *Serial Data Uplink* connector, the 11plus V2 requires only a change in jumper positions to process the multiplexed data stream. Remove the 11plus V2 bottom cover, and set the following jumpers on the Receiver PCB (PCB with transformers on it; see drawing 40934C for the jumper locations):

Jumper	Position
J1	Pins 2-3
J2	Pins 2-3
J3	Pins 1-2
J4	Pins 1-2
J5	Short
J6	Pins 2 to 3

System Limitations

A 911plus system set up for serial data uplink has the following limitations:

- Sea cable length - The maximum sea cable length that will reliably maintain data transmission is 8000 meters.
- Autonomous water sampler operation - The 9plus cannot be used with an SBE 17plus V2 SEARAM, preventing water sampler operation on non-conducting cable.
- Water sampler - The 911plus cannot be used with a G.O. 1015 water sampler.
- Compatibility - A 9plus that includes the RS-232 serial data uplink is incompatible with an 11plus V2 set up for standard transmission.
- Tape recorder interface - An 11plus V2 with jumpers set for serial data uplink cannot output data through *Tape Recorder* on the 11plus V2 Back Panel.