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# MUX100 - A really simple yet effective NMEA 0183 data multiplexer

With modern AIS receivers and transponders outputting high speed NMEA0183 data at 38400 baud, it is often difficult to connect AIS data and low speed GPS or instrument data at 4800 baud to some chart plotters and/or PCs that have just one NMEA 0183 input. With the MUX100, all data received on the two input ports is multiplexed and transmitted on output 1 at 38400 baud. It is pre-configured so that Input 1 accepts AIS data at 38400 baud and input 2 accepts GPS/instrument data at 4800 baud. Often low speed GPS data is required to give position information to a DSC VHF, but when an AIS transponder is fitted the GPS data is often only available at 38400 baud which will be ignored by the VHF. The MUX100 intelligently takes the GPS data from the AIS present on input 1 and re-transmits this on output 2 at 4800 baud – which can then be connected to the VHF. As a safety feature, should GPS data on input 1 be invalid or lost, the MUX100 will automatically switch to the GPS data on input 2 and transmit this on output 1 and output 2. To avoid duplicated data confusing other equipment, the MUX100 automatically blocks duplicated data on port 2.

Using intelligent priority switching, the MUX100 gives priority to input 1 but if GPS data is invalid or lost on input 1, it will automatically switch to input 2. When valid position data is received again on input 1, it will automatically revert.

Two LEDs on the face of the unit give indication of the data status, with a solid LED showing which port is currently providing GPS position and a flashing light on the other port to show that data is being received. If either LED is not lit or flashing it indicates no NMEA data present.

- Dual input/output NMEA 0183 multiplexer – simplifies NMEA integration and installation
- Accepts 38400 baud data on input 1 and 4800 baud data on input 2
- Combines all received data and transmits this data on output 1 at 38400 baud
- Extracts the GPS data from the high speed input 1 and re-transmits at low speed on output 2
- Important safety feature - gives priority to GPS on input 1 but switches to input 2 if position lost on input 1. Will switch back to input 1 when valid position fix data is received again
- Easy to install IP54 black box solution
- Opto isolated inputs and true NMEA differential output capable of driving several devices

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