HR12
NMEA 0183 Compliant
USB-Serial Adapter

This thumb-sized adapter is USB powered and fully compliant with NMEA 0183 but also compatible with RS-422 and RS-232 systems. The serial input is opto-isolated and the differential output will drive either single-ended (RS-232) or differential (RS-422) interfaces. Data rates up to 38.4 Kbaud are supported. A flashing LED indicates data activity. It works with Windows, MAC, and Linux hosts.
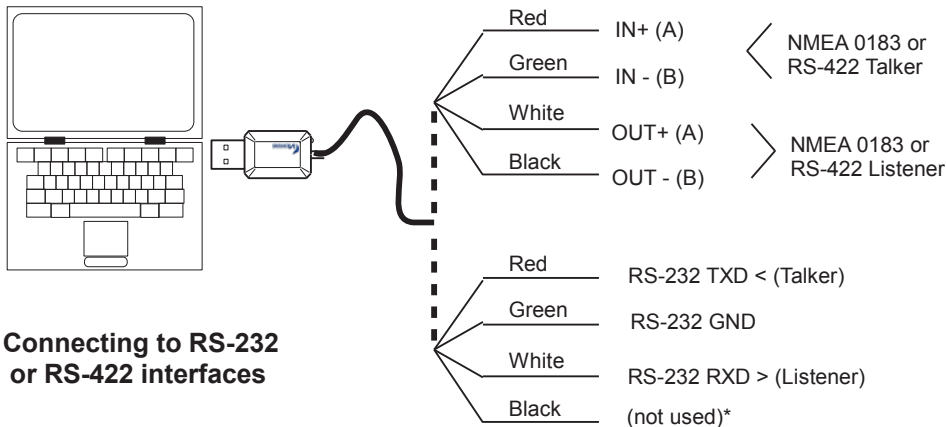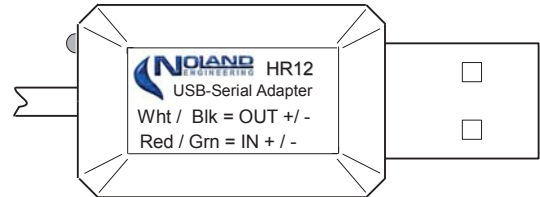
The accompanying figure shows the connection for both NMEA0183/RS-422(differential) and RS-232 (single-ended) systems. When connecting to a single-ended Listener, the Black wire is not normally needed unless the USB Host ground is isolated from the listener. In that case the Black wire is connected to the Listener ground.

PC USB drivers for Windows are contained on an included CD-ROM. Linux and MAC setup instructions are contained in the "readme.txt" file on the CD. A Windows Terminal program, "D-Port," is also included on the CD.

SPECIFICATIONS

Supply current	70ma max. (USB supplied)
Baud Rate (max)	38.4 Kbaud
IN+ IN− Sensitivity	2V (differential)
OUT+ OUT− Level	3V into 500 ohms
Cable length	18 in.
Size/weight	1.8 x 0.7 x 0.43 in. / 0.8 oz

Connecting to RS-232 or RS-422 interfaces

Wire	NMEA 0183 / RS-422	
Red	IN+ (A)	NMEA 0183 or RS-422 Talker
Green	IN - (B)	
White	OUT+ (A)	NMEA 0183 or RS-422 Listener
Black	OUT - (B)	

Wire	RS-232	
Red	RS-232 TXD < (Talker)	
Green	RS-232 GND	
White	RS-232 RXD > (Listener)	
Black	(not used)*	

* Note: if RS-232 RXD ground is isolated from PC USB ground, connect Black wire to RS-232 Listener ground.