

Where to Buy Parts

Furuno USA	Tel: 360.834.9300 Fax: 360.833.5195
Gemeco (USA)	Tel: 843.394.3565 Fax: 843.394.3736 email: sales@gemeco.com
Airmar Europe	Tel: +45.45.81.04.18 Fax: +45.45.81.04.93 email: sales@airmareurope.com

Connecting a PB150 WeatherStation to a Furuno RD-30 Display and/or Combiner

This guide contains supplementary instructions for connecting an Airmar PB150 WeatherStation to a Furuno RD-30 display. Use these instructions along with the owner's guides that came with the WeatherStation and the RD-30.

There are three ways to connect a WeatherStation to an RD-30 display.

- Connect directly
- Connect through a Combiner
- Upgrade a direct connection with a Combiner

Connecting a Combiner enhances the RD-30 system making it a mini-display network. By adding a Smart™ Sensor, the system becomes a complete auxiliary navigation suite. With this advanced system, WeatherStation and Smart Sensor data can be displayed simultaneously at multiple stations. The user can communicate with the Weatherstation via the included WeatherCaster PC software. And the software can be customized to meet the user's need (see *NMEA 0183 Sentence Commands* on page 3).

Connecting Directly to an RD-30 Display

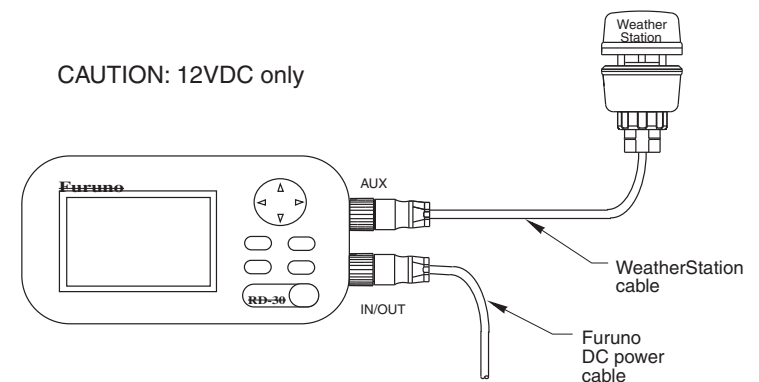
CAUTION: When powering PB150 directly from RD30, ONLY use 12VDC for RD30 Power! Do not operate the PB150 at voltages above 16VDC!!!!

The WeatherStation can be connected directly to the AUX port of the RD-30 using the cables supplied (see Figure A).

The WeatherStation will receive power from the RD-30 through the RD-30's AUX port. Power the RD-30 using its supplied data/power cable.

IMPORTANT: Before the WeatherStation will work, the RD-30's output power on the AUX port must be enabled. The keystrokes are [MENU] - [I/O SETUP] - [POWER OUT] - [ENT] - Select [ON].

Note: Multiple RD-30 displays can be daisy-chained together, as described in the Furuno operator's manual. In this case, the WeatherStation must be connected to the last RD-30 in the chain.



AIRMAR[®]
TECHNOLOGY CORPORATION

35 Meadowbrook Drive, Milford, New Hampshire 03055-4613, USA
www.airmar.com

Copyright © 2006, 2007 Airmar Technology Corp. All rights reserved.

Figure A. Connecting to an RD-30 17-443-01 rev. 04 08/22/07
Copyright © 2006 Airmar Technology Corp.

Connecting a WeatherStation to a Combiner

1. Purchase and install a PB150 WeatherStation and a Combiner (Part No. AIR-033-800) following the manufacturer's instructions.
2. Connect the adaptor cable that came with the Combiner between the WeatherStation and the Combiner (see Figure B).

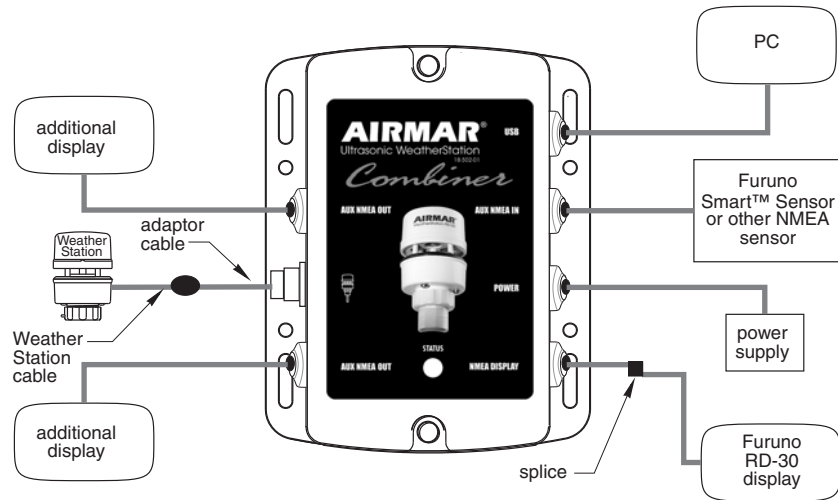


Figure B. Combiner installation
Copyright © 2006 Airmar Technology Corp.

3. To connect the RD-30 to the Combiner, splice the open wire end of the RD-30 power/data cable to the Combiner's NMEA Display Port cable. Splice the wires together following the colors specified (see Table below). Make a marine grade splice using solder and heat shrink tubing.

RD-30 Power Cable (connect to IN/OUT port)			WeatherStation Combiner (NMEA display port)	
Power V +	Red	to	Power V +	Red
Power GND -	Black	to	Power GND -	Black
NMEA Out +	White	to	NMEA Int +	White
NMEA Out -	Blue	to	NMEA In -	Blue
NMEA In +	Yellow	to	NMEA Out +	Yellow
NMEA In -	Green	to	NMEA Out -	Orange

4. After making all the connections, plug the connector end of the Furuno power cable into the RD-30 IN/OUT port.

Adding a Combiner to a Previously Installed RD-30/WeatherStation System

Disconnect the existing WeatherStation cable from the RD-30 (see Figure A). Connect the RD-30 to the Combiner as described in "Connecting a WeatherStation to a Combiner" on page 2.

NMEA 0183 Default Sentences

Sentence	Description	Enabled for Furuno
\$GPGGA	GPS Fix Data	Yes
\$GPGLL	Geographic Position–Latitude/Longitude	No
\$GPGSA	GNSS DOP and Active Satellites	No
\$GPGSV	GNSS Satellites in View	No
\$HCHDG	Heading, Deviation and Variation (must be enabled via PC software)	No
\$WIMDA	Barometric pressure, air temp wind direction, wind speed	Yes
\$WIMWD	Wind Direction and Speed, with respect to north	No
\$WIMWV(R)	Apparent Wind Speed and Angle, in relation to the vessel's bow/centerline (relative)	Yes
\$WIMWV(T)	True Wind Speed and Angle, in relation to the vessel's bow/centerline	No
\$GPRMC	Recommended Minimum Specific GNSS Data	No
\$GPVTG	Course Over Ground and Ground Speed	Yes
\$WIVWR	Relative Wind Speed and Angle	No
\$WIVWT	True Wind Speed and Angle	No
\$WIXDR	Transducer Measurements: wind chill	No
\$WIXDR(A)	Temperature/Pressure Transducer Measurements	No
\$WIXDR(B)	Attitude Transducer Measurement	No
PFEC G, Patt	Attitude (Furuno Pitch and Roll) Heading Field Null	Yes
\$GPZDA	Time and Date	Yes

True Wind Direction Note: The default output from the PB150 will show True Wind Direction-Relative to North, on the RD30 Display. If True Wind Direction-Relative to Ship's Bow is desired, please enable the NMEA 0183 sentence \$WIMWV(T) from the PB100 using the Airmar WeatherCaster™ software.