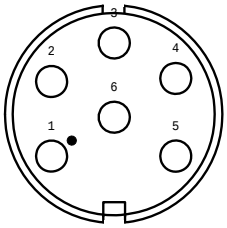
Masthead unit testing information

Network Wind connector wiring

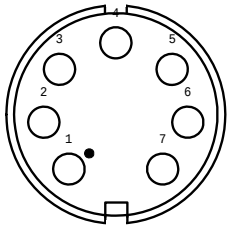
Due to new CE legislation introduced in 1996, it was necessary to change the connector on the rear of the Network Wind display from a 6-pin connector to a 7-pin connector. These changes are detailed below. Note that Pin 1 is indicated on the plug or socket by the adjacent dot. The mast cable wiring colours were changed in 1996. The different wiring colours and combinations are shown below:

Network 6-Pin connector



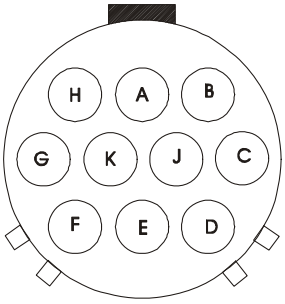
Pin 1	Black	0V supply
Pin 2	Orange	+12V supply
Pin 3	Violet	Wind speed
Pin 4	Green	Wind angle phase (Green)
Pin 5	Red	Wind angle phase (Red)
Pin 6	Blue	Wind angle phase (Blue)

Network 7-Pin connector (1996 onwards)



Pin 1	Black	0V supply
Pin 2	Orange	+12V supply
Pin 3	Violet	Wind speed
Pin 4	Screen	N/C
Pin 5	Red	Wind angle phase (Red)
Pin 6	Blue	Wind angle phase (Blue)
Pin 7	Green	Wind angle phase (Green)

213 Masthead unit connector wiring



A	Black	0V supply
B	Screen	Screen
C	Red	Wind angle phase (Red)
D	Orange	+6.5V supply
E	Screen	Screen
F	Green	Wind angle phase (Green)
G	Blue	Wind angle phase (Blue)
H	Violet	Wind speed signal
J	--	No connection
K	--	No connection

www.bandgservice.co.uk

repairs@bandgservice.co.uk

Phone: +44(0)1590 689699

B&G Service
235 Bentley Way
LYMINGTON
HAMPSHIRE
UK

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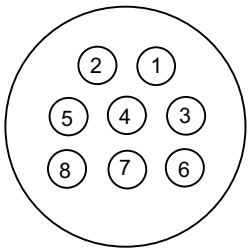
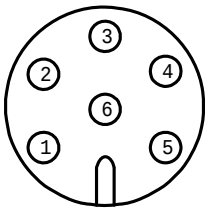
213 Vertical Masthead unit connector wiring



1	Black	0V Supply
2	Orange	+6.5V Supply
3	--	No connection
4	Violet	Wind speed signal
5	Blue	Wind angle phase (blue)
6	Red	Wind angle phase (red)
7	Green	Wind angle phase (green)
8	--	No connection

283/496 Masthead unit connector wiring



1	Violet	Wind speed signal
2	Orange	+12V supply
3	Blue	Wind angle phase (Blue)
4	Green	Wind angle phase (Green)
5	Red	Wind angle phase (Red)
6	Black	0V supply

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Mast cable colours, functions and terminals

Function	Pre-Feb 1996 Network Cable	Feb-Mar 1996 Network Cable	Post-Mar 1996 Network Cable	Hydra and Hercules Systems		h1000 Systems	
MHU Ground (0V)	Black	Green	Black	Black	(45)	Black	(6)
MHU Supply (12V)	Red	Red	Orange	Orange 6.5V	(43)	Orange	(7)
Wind Speed Signal	Violet	Blue	Violet	Violet	(44)	Violet	(5)
Wind Angle Phase (Red)	Yellow	Yellow	Red	Red	(48)	Red	(10)
Wind Angle Phase (Green)	Green	White	Green	Green	(47)	Green	(9)
Wind Angle Phase (Blue)	Blue	Black	Blue	Blue	(46)	Blue	(8)
Screen	N/A	Screen	Screen	Clamp Bar		---	

Tests

Wind speed

The following test can be used to simulate the windspeed readings from a masthead unit sensor.

1. Locate the masthead unit cable junction box at the base of the mast.
2. Disconnect the masthead unit wires in the junction box.
3. Identify which masthead unit cable goes back to the wind display or processor.
4. Carefully isolate the Windspeed wire (normally Violet) and the 0V supply wire (normally Black).
5. Quickly tap the windspeed wire to the 0V wire. This will now simulate windspeed. The faster the two wires are tapped together, the faster the windspeed reading will be.

If your display starts to show windspeed readings when this test is performed, the problem is located somewhere up the mast. The most likely cause is a faulty masthead sensor. If this is the case, the masthead unit should be returned to your local authorised B&G Dealer for further testing. Another possible cause for no windspeed readings is a broken or short-circuits in the sensor mast cable.

If your display does not show windspeed readings when this test is performed, then the problem is most likely with the display or control unit.

Wind angle

1. Locate the masthead unit cable junction box at the base of the mast.
2. With the system switched on, and using a Digital Volt Meter, measure the wind angle phase voltages, normally Red, Green and Blue, with respect to 0V (normally Black). The measured voltages can be anywhere between 0.1V and 6.4V and will vary dependent upon the wind angle.

   If any of the phases are “stuck” on one particular voltage, or the variation is minimal, then the problem is most likely to be a faulty masthead unit sensor. Alternatively, if the sensor proves to be OK, then a damaged mast cable may be the problem.

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Voltage measurements

Angle°	Red (V)	Green (V)	Blue (V)
0°	0.19	4.74	4.74
30°	0.53	3.24	5.89
60°	1.64	1.68	6.33
90°	3.25	0.47	5.93
120°	4.77	0.10	4.78
150°	5.87	0.53	3.25
180°	6.28	1.67	1.69
210°	5.87	3.25	0.53
240°	4.77	4.78	0.10
270°	3.25	5.93	0.47
300°	1.64	6.33	1.68
330°	0.53	5.89	3.24

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