



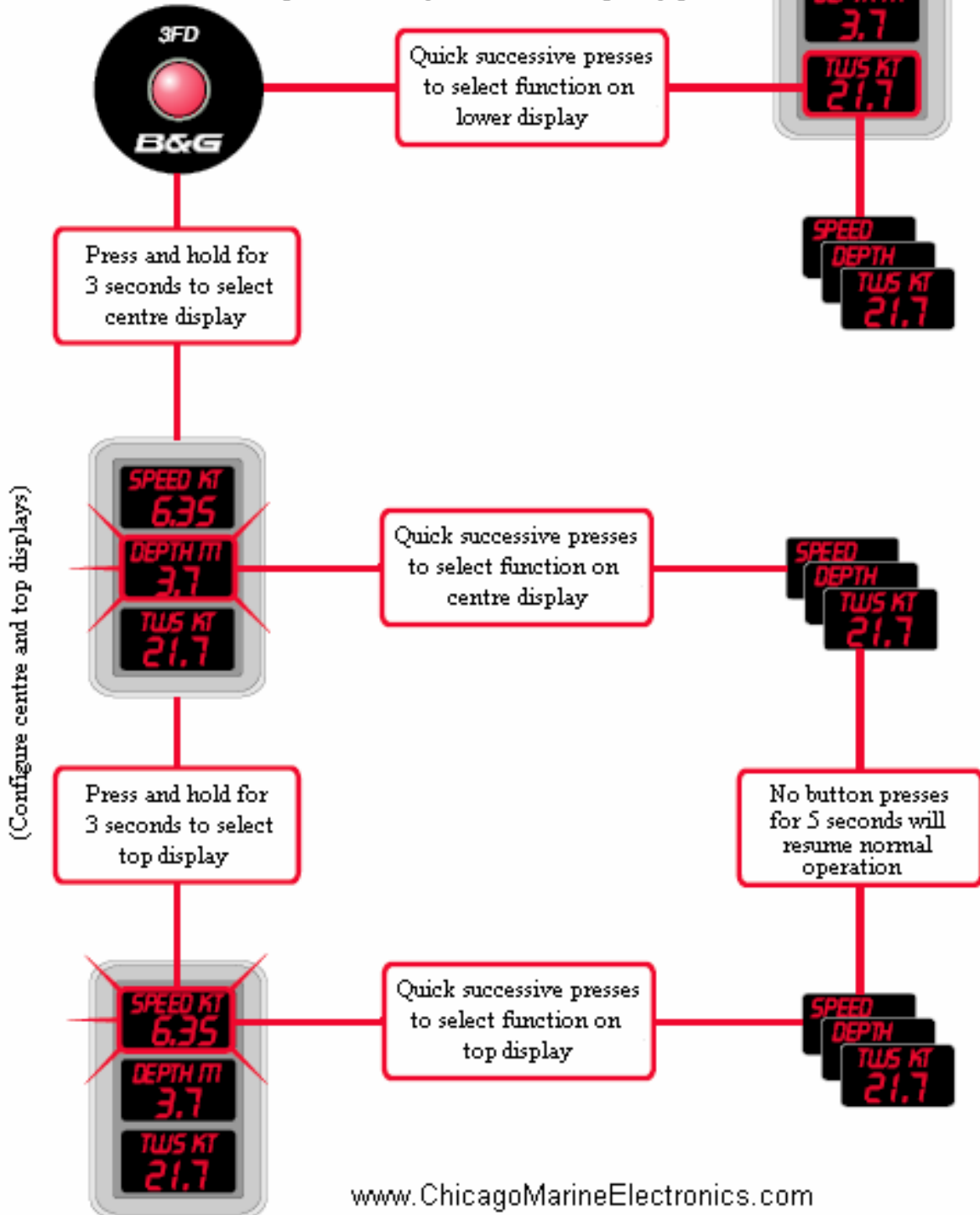
# Universal 3FD

Chicago Marine  
Hellas Marine Inc.  
Electronics

## Operation

Normal Operation

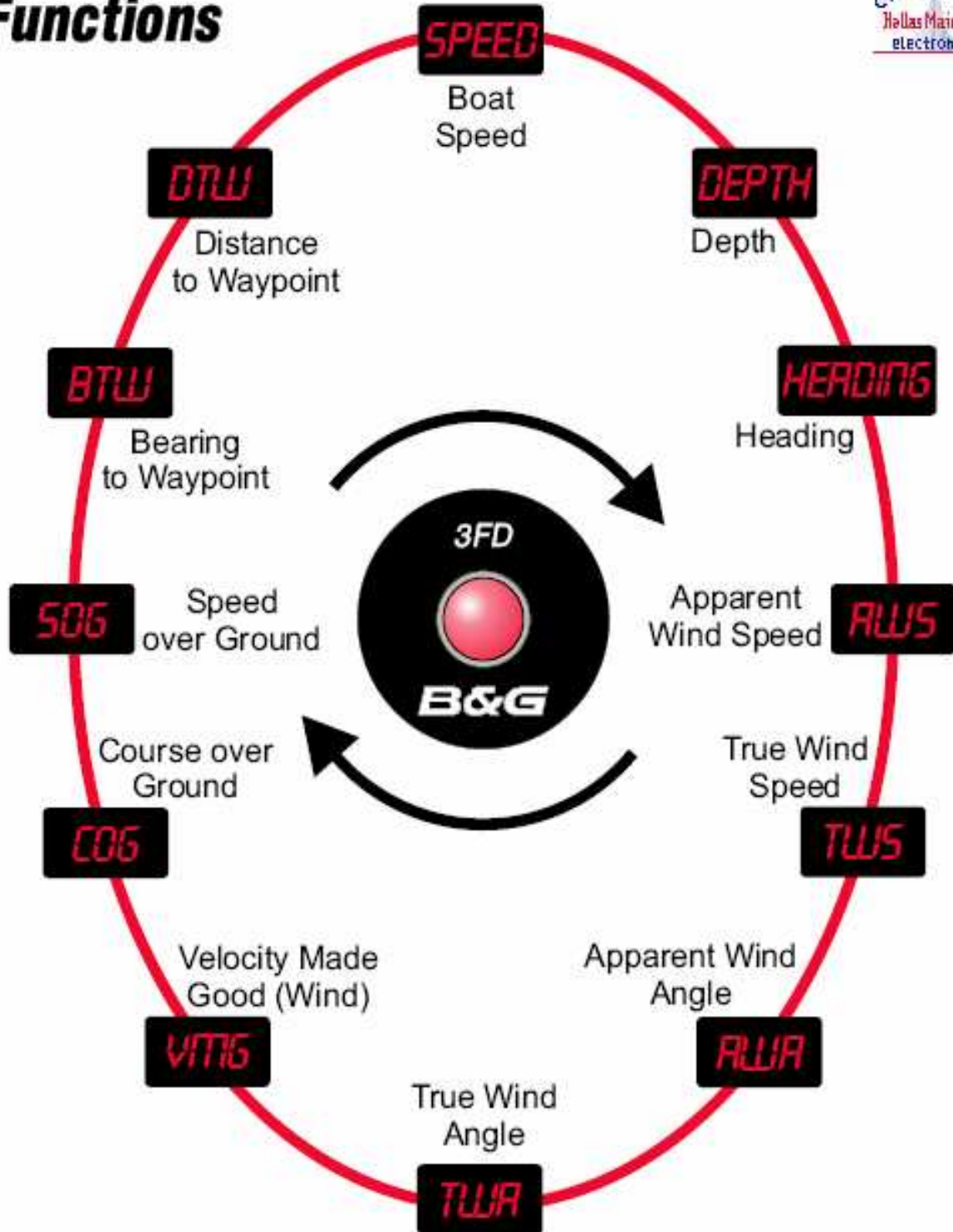
(Bottom line changes immediately when button is quickly pressed)





# Universal 3FD

## Functions





# Universal 3FD

Chicago Marine  
Hallas Marine, Inc.  
electronics

## Setup Mode



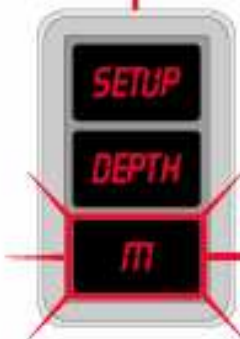
Press and hold for 8 seconds to select setup mode



Press and hold for 8 seconds to select function to configure



Quick successive presses to scroll through setup options



Quick successive presses to select desired units



SETUP OPTIONS	
SPD DIST:	nautical, statute, metric.
WIND SPEED:	knots, mph, kph, m/s.
DEPTH:	metres, feet, fathoms
BEARING:	magnetic, true

No button presses for 5 seconds to resume normal operation

Press and hold for 3 seconds to select another function to configure

[www.bandg.com](http://www.bandg.com)

[www.ChicagoMarineElectronics.com](http://www.ChicagoMarineElectronics.com)



# Universal 3FD

## Lights Operation



Normal display mode



Single press to select LIGHTS on lower display



Quick successive presses to select desired lighting level



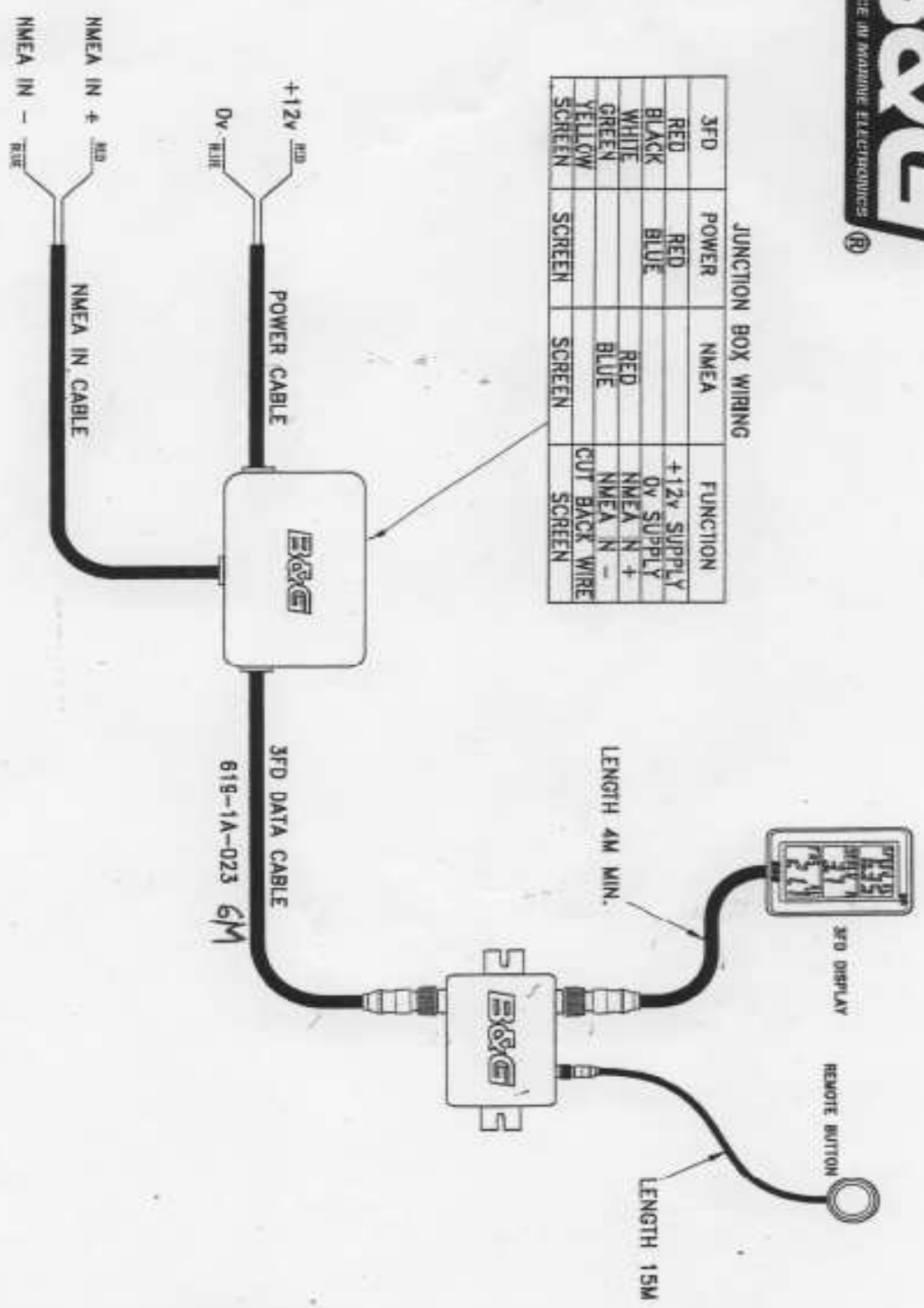
Wait 3 seconds for current lighting level to be shown on display



No button presses for 5 seconds to resume normal operation

JUNCTION BOX WIRING

3FD	POWER	NMEA	FUNCTION
RED	RED		+12v SUPPLY
BLACK	BLUE		0v SUPPLY
WHITE		RED	NMEA N +
GREEN		BLUE	NMEA N -
YELLOW			CUT BACK WIRE
SCREEN	SCREEN	SCREEN	SCREEN



## Specifications

### Supported NMEA Sentences

Speed	VHW, OSD
Depth	DBT, DPT
Heading	HDG, HDM, HDT VHW, OSD
Apparent Wind Speed	MWV, VWR
Apparent Wind Angle	MWV, VWR
True Wind Angle	MWV, VWT
True Wind Speed	MWV, VWT
VMG to Windward	VPW
Course over ground	RMC, VTG
Speed over ground	RMC, VTG
Bearing to Waypoint	BWR, BWC, RMB
Distance to Waypoint	BWR, BWC, RMB

In the event of data conflict being introduced by multiple source sentences the order as shown above will decide which data item is displayed.

### Technical specification

Construction	Full sealed assembly conforms to IP67 waterproofing
Size	165mm x 110mm x 43mm (6.5" x 4.25" x 1.5")
Weight	0.8kg (1.76lb) with 3m (16ft) of cable
Electrical Supply voltage	12v nominal (10v-16v)
Operating Current	10mA lights off, 90mA light on
Communications	NMEA 0183 version 1.5, 2.0 and 2.3 messages all handled by 3FD