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GoFree Wireless Technology
Product Brief for:

WiFi-1 hardware module
GoFree Apps
GoFree Toolkit

October 2012

External Version

Revision 1.0

Product Manager:

Robert Langford-Wood

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WIFI-1 hardware module

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WIFI-1 hardware module



- The WIFI-1 hardware module creates a WiFi hotspot on your boat
- Simply connect to an MFD via the yellow-plug Network port
- Data from the navigation system is bridged onto Wifi via the MFD
- Install in suitable location for best Wifi coverage
- View and edit WIFI-1 SSID and Passphrase from MFD



WIFI-1 hardware module



WIFI-1 features	
Marinised Construction	IPX5
Wireless standards	802.11 b/g
Network Ports	x2
Configuration	Automatic
View and edit Wifi SSID and Passphrase from MFD	Yes
Power supply	12V, 200mA

WIFI-1 hardware module



One SKU – All brands

BOX CONTENTS GoFree WIFI-1 Module 000-11068-001	
Item	Quantity
WIFI-1 Hardware Module	1
Install guide	1
Screw pack	1
2m Network Cable	1
Power cable	1

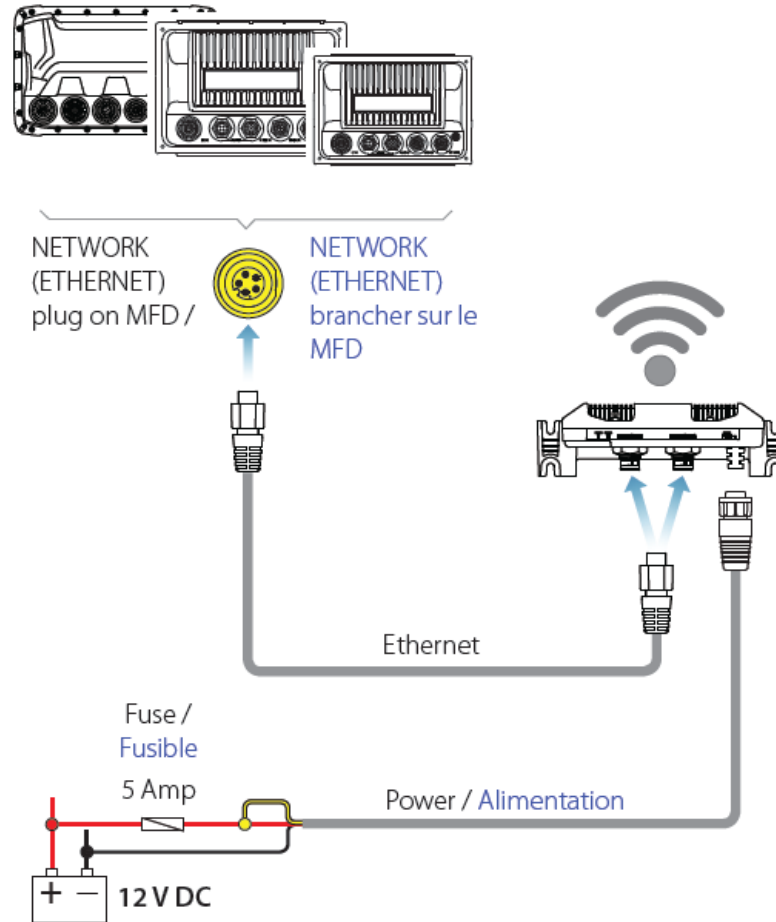
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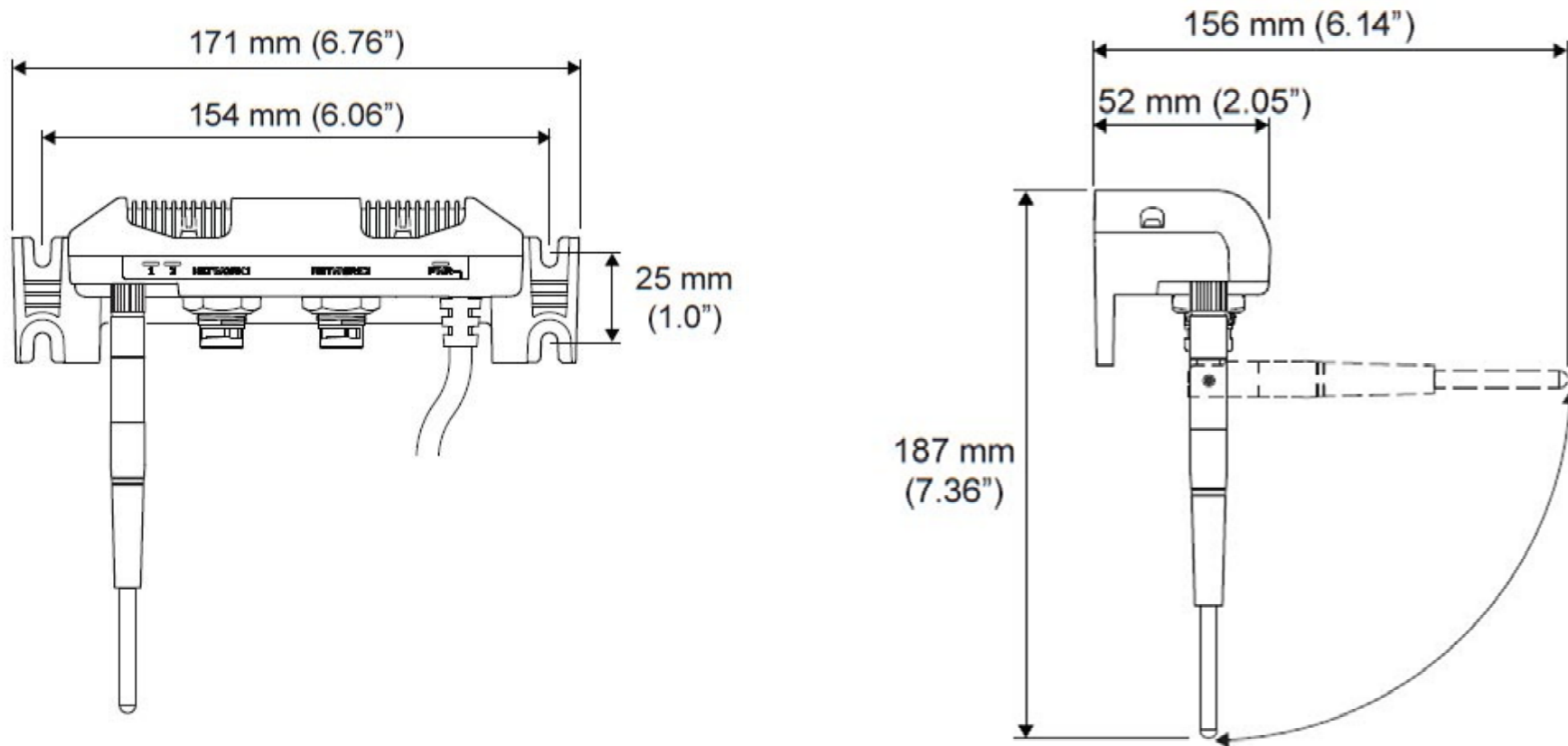
WiFi-1 hardware module



WiFi-1 hardware module



Dimensions



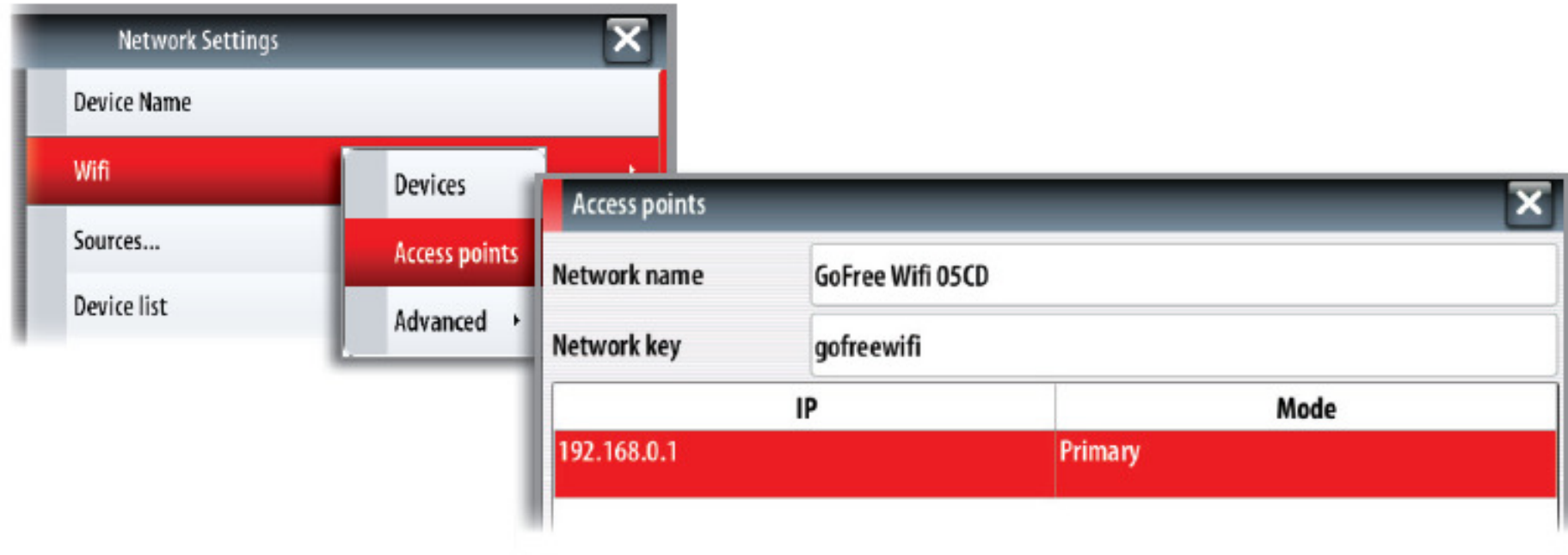
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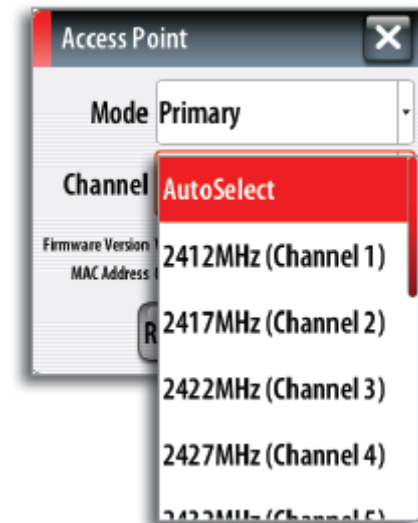
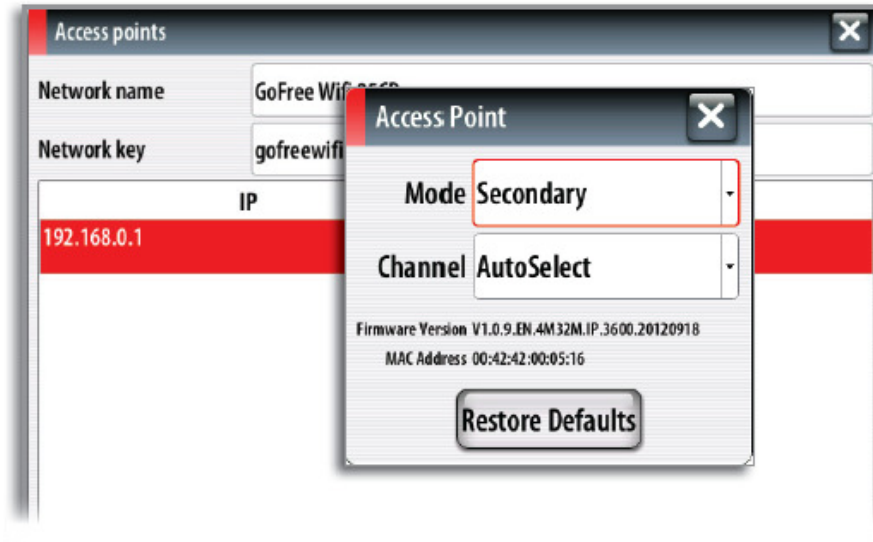
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Setting Up WIFI-1



Additional menus in NSS RTM2.5 allow you to set WIFI-1 Network name and Password

Setting Up WIFI-1



Connecting 2 WIFI-1 ports.
Set up the first as secondary, then connect the other – it will become the primary.

Advanced users can select WiFi channel if required (avoid interference at boat shows!)



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Apps

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GoFree Controller App



Take control of your MFD anywhere on the boat using your iPad/Android tablet.



NSS touch-screen commands mirrored on iPad giving you total control*

*Autopilot/Czone control pending legal clearance.

Free to Download!

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GoFree Controller App



Enable/disable wireless control of NSS

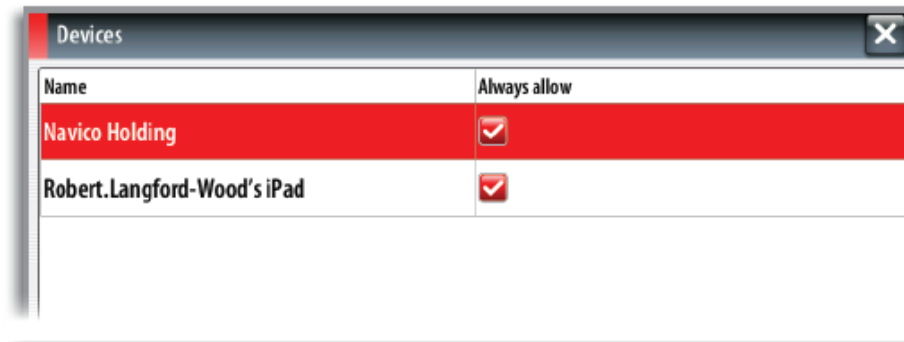
Download the App from the application store to the wireless device, and tap the icon to request control of the NSS.

The first time you request control from the wireless device the NSS will prompt you to confirm remote control from this device.



When control is confirmed, the connection will be immediately established.

All connected wireless devices will be listed in the NSS dialog, and you can change the access level for all connected devices.



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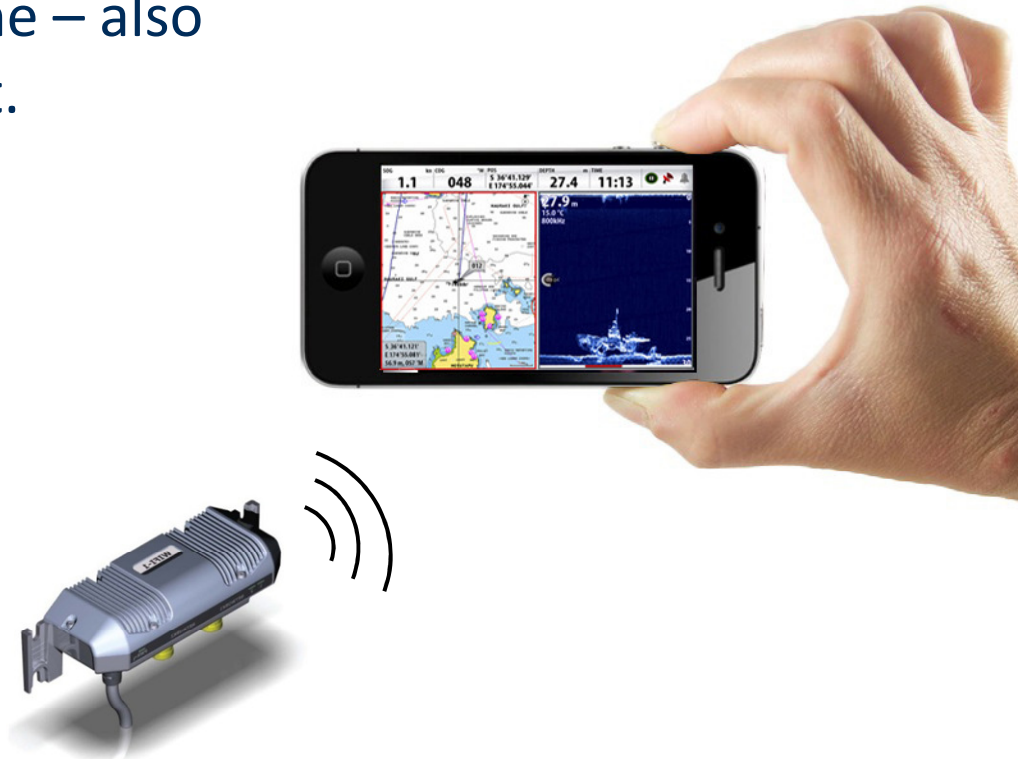
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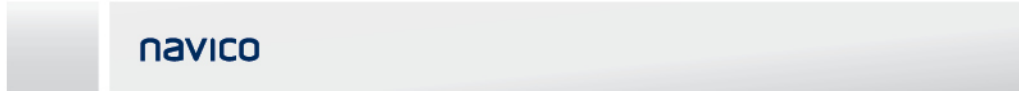
GoFree Viewer App



View your MFD anywhere on the boat using your iPhone/Android smartphone – also available for iPad/Android tablet.



Free to Download!



GoFree Apps



More than 1 MFD on the network -
choose which one to mirror on the
tablet



Only one WIFI-1 access point required

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GoFree Apps



More than one iPad...connect multiple iPads/iPhones to one MFD....
Use MFD menu to enable/disable control from each iPad.



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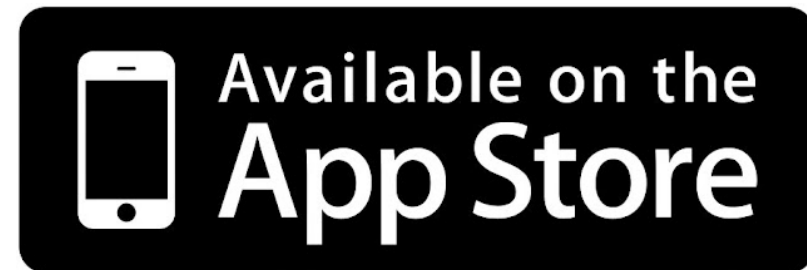
GoFree Apps



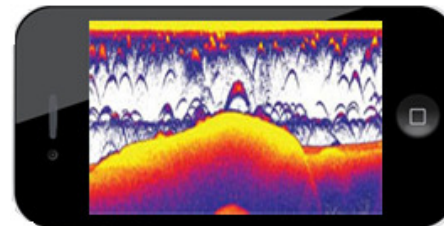
GoFree Viewer and Controller Apps



Q1 2013



Q4 2012



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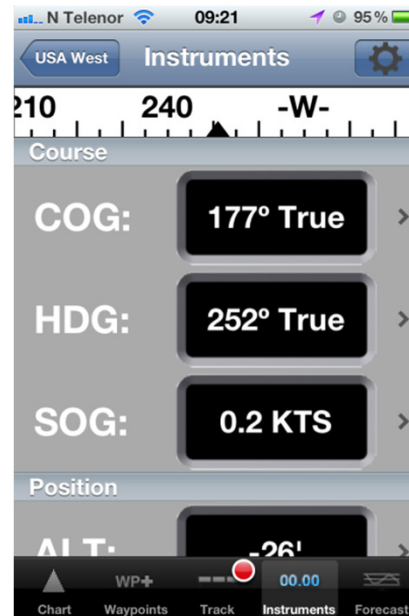
GoFree 0183 link



NMEA 0183 data is bridged from the MFD to WIFI enabling connection to any app that features 0183 TCP/IP link...including:



iRegatta



iNavx



Rosepoint Coastal Explorer

GoFree 0183 link supported in NSS RTM2

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GoFree 0183



NMEA 0183 to Wifi converters have up to now been 3rd party add-on modules.

Functionality included with NSS+WIFI-1:

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GoFree 0183



A screenshot of the "Network Settings" menu in a software interface. The menu items are: Sources..., Device list, Diagnostics, SimNet Groups..., Damping..., Calibrate Water Speed..., NMEA2000, and NMEA0183. The NMEA0183 item is highlighted in red.

A screenshot of the "NMEA0183" configuration dialog. It has a "Receive waypoint" checkbox checked. Below it are dropdown menus for "Serial communication" (set to RS-422) and "Baud rate" (set to 4800 (default)). There is an "Output" checkbox which is unchecked, and a field for "Output sentences...". The "Ethernet" option at the bottom is highlighted in red.

A screenshot of the "NMEA0183 Over Ethernet" dialog. It displays an information icon and the text "IP Address 169.254.145.206 Port 2051". There is a red "OK" button at the bottom right.

A blue arrow points from the "Ethernet" option in the second dialog to the "NMEA0183 Over Ethernet" dialog.

Extra menu items in NSS RTM2:

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Connecting to iNavX



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We invented our own protocol for sending numeric navigation data over Wifi.

You don't need to purchase the NMEA2000 spec

We made the data easy to use.

Uses web technology - your website developer will be able to understand the data and create web pages and apps for you.



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Example 1:

Superyacht wants to build custom vessel monitoring PC program for navigation/engine/Czone system.

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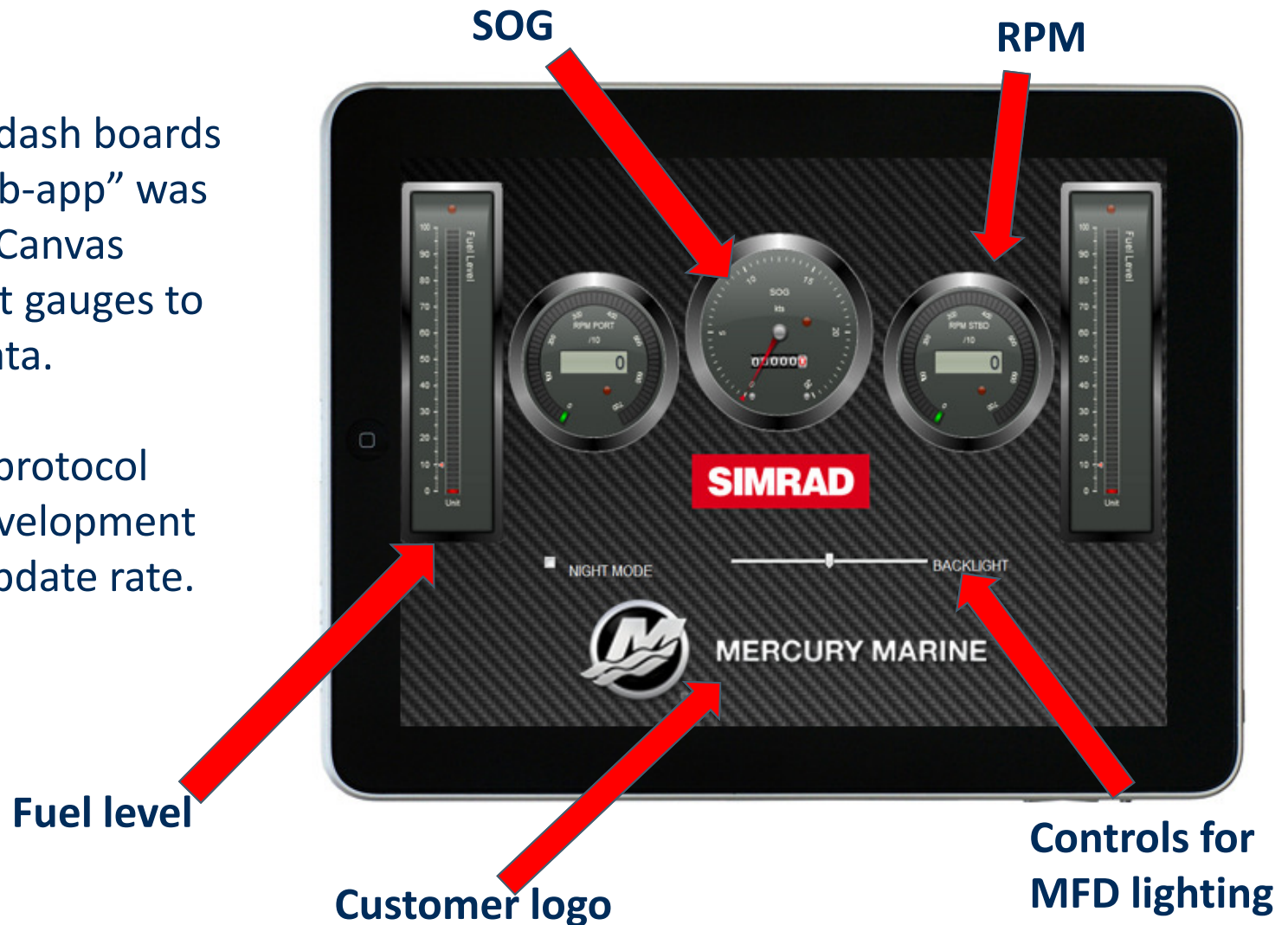
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GoFree Toolkit - Examples



Create custom dash boards – this html “web-app” was created using “Canvas Steel” javascript gauges to show engine data.

GoFree toolkit protocol allows rapid development and fast data update rate.



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The logo for GoFree Toolkit features the word "GoFree" in a grey sans-serif font. Above the letter "o" in "Go" are three blue curved lines representing a Wi-Fi signal. Below "GoFree" is the word "Toolkit" in a bold, dark blue sans-serif font.

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Example 2:

Race team wants wireless navigation data for a custom sailing app.

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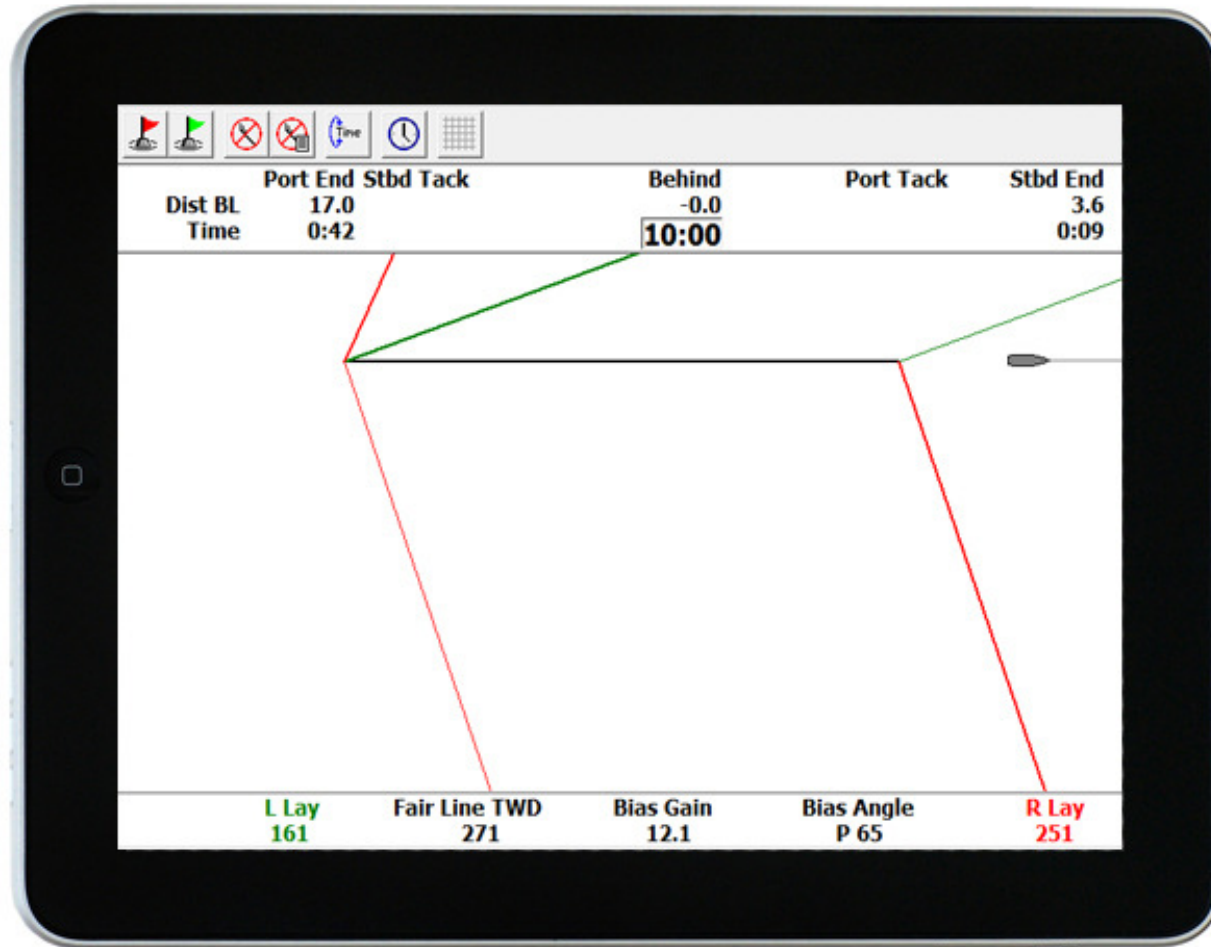
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Sailing app using live data from instrument system...



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The logo for GoFree Toolkit features the word "GoFree" in a grey sans-serif font. Above the "o" in "Go" are three blue curved lines representing a Wi-Fi signal. Below "GoFree" is the word "Toolkit" in a bold, dark blue sans-serif font.

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Example 3:

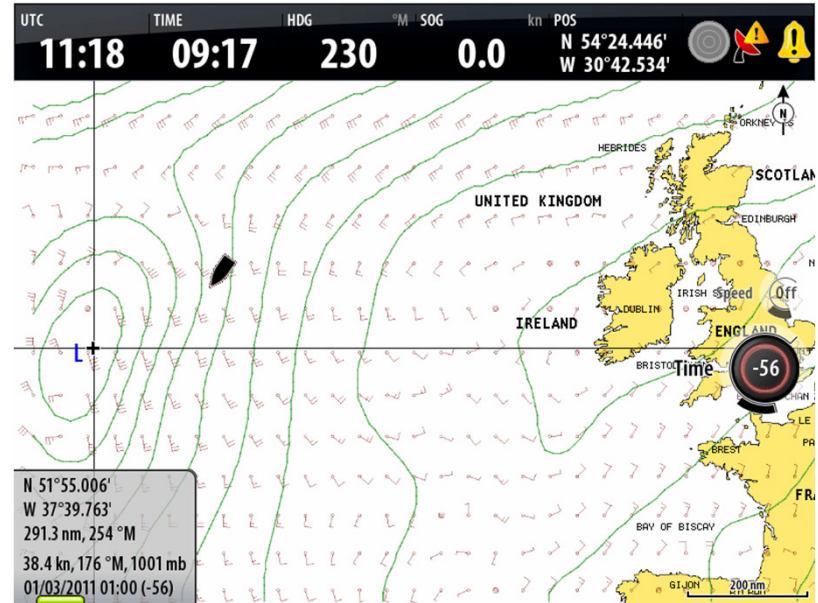
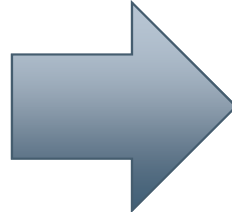
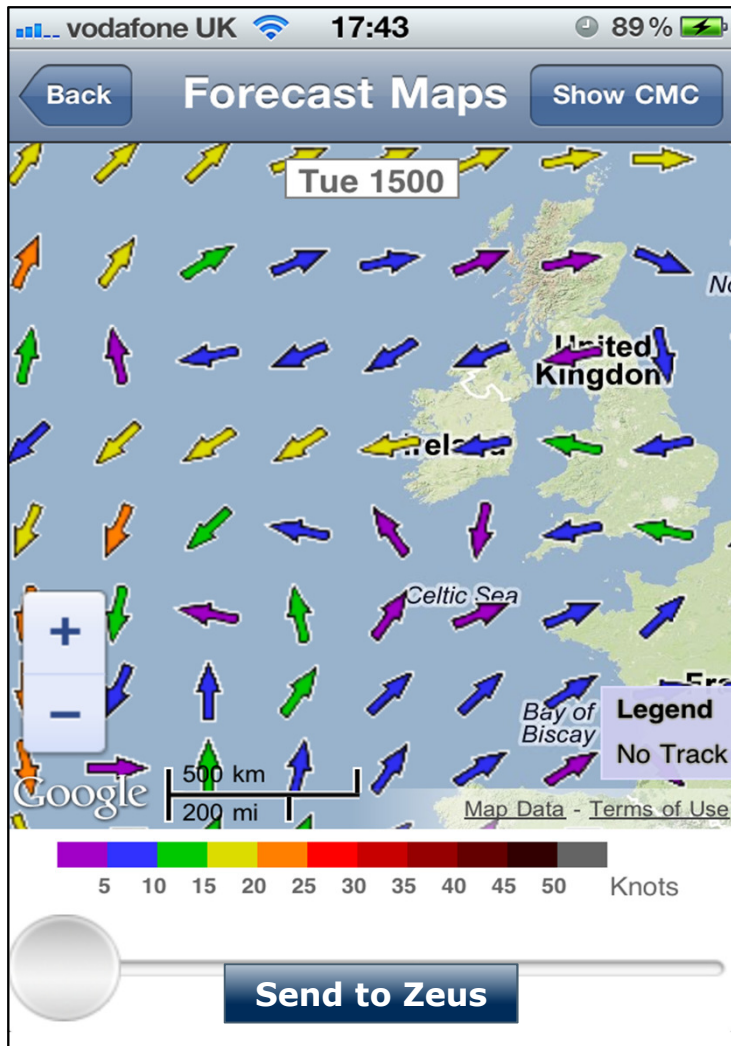
Weather provider wants ability to send data from iPhone to MFD:

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GoFree Toolkit



Advantages of developing with GoFree Toolkit

Specification	Connection Method	Protocol	Comments
GoFree Toolkit	Websocket	GoFree	<ul style="list-style-type: none">• Specification is available for free, under license• 2-way communication• Fast data update rate• Can be implemented from browser, e.g. Javascript• Service discovery via Bonjour, SSDP and Navico multicast protocol (directly supported in Windows and iOS)

No other protocol is as easy to work with as GoFree Toolkit!

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GoFree Toolkit



GoFree Toolkit specification available to interested 3rd parties under NDA.

Contact gofree@navico.com for a login, specifying your contact details and the intended use.



If you create an app that we like, we'll promote it on our websites for you.

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GoFree Product Feature Matrix



Product	GoFree 0183 data	Date	GoFree Controller app	Date	GoFree toolkit support	Date
NSS	RTM2	Available now	RTM2.5	23 rd Nov 2012	RTM3	2013
NSE	Future release	2013	Not supported	-	Future release	2013
NSO	Future release	2013	Not supported	-	Future release	2013
HDS Gen2	Future release	2013	Future release	2013	Future release	2013
HDS Gen2 Touch	RTM1	Available now	RTM2	Q2 2013	RTM2	Q2 2013
Zeus	RTM2	Q1 2013	Not supported	-	RTM2	Q1 2013

FAQs



Q: How do I stop unauthorised users on other boats connecting to my MFD?

A: In order to connect to the GoFree wireless network the user must enter the correct passphrase. This can be obtained from the MFD menus.

Q: Can I disable the iPad's remote control functionality?

A: Yes you can do this at any time from the MFD.

Q: Can you control the Autopilot from the iPad?

A: No, Autopilot and Czone digital switching control has been disabled pending legal clearance.

Q: Can WIFI-1 connect to the internet via a marina hotspot?

A: Not initially.

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FAQs



Q: Can I use the viewing screen on iPad (like the iPhone)?

A: Yes, when you connect the iPad, if you select “No” to allowing remote control the iPad is limited to “View Only”. You can view connected devices and make restrictions at any time via the MFD.

Q: How are the connections made and wiring routed to the WIFI-1, NMEA or Ethernet?

A: Ethernet only (Yellow-plug type connector)

Q: Can WIFI-1 support multiple mobile devices?

A: Yes, multiple iPads can view (and control) the MFD if you wish to enable this.

Q: I already have a WiFi Router on my boat. Do I have to install a WIFI-1 as well?

A: WIFI-1 is specifically set up to work with Navico MFDs. If you plan on using a 3rd party WiFi access point it may be possible but we would not provide technical support for this. There will be an advanced user manual published for the WIFI-1 module detailing these settings.

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