Summary

Your WindBot is a GPS-based tool that enables you measure True Wind where it matters most: on the water. It is part of the YachtBot product family and natively interfaces with the YachtBot website and the Igtimi API for easy sharing, viewing and analyzing races and training sessions. Like all YachtBot devices, the WindBot features single button operation and arrives ready to go. Happy sailing!

Before you head out on the water …

Get a (large) SIM card with a data plan.

Register the device to your YachtBot account at www.yacht-bot.com by entering the serial and tag numbers.

Remove the WindBot brain's bung with the supplied carabineer. Insert the SIM card and re-fit the bung carefully. Attach the WindBot brain to the pole using the rubber straps.

Preferably outside, with a full view of the sky, push the power button on the WindBot until you hear two beeps and see the two bottom LEDs flash. The device now looks for GPS signal (bottom) and checks the data connection (top indicator). For the YachtBot website to recognize the WindBot, both indicators must flash and then go solid. Ready to go!

Your WindBot consists of …

A three meter long carbon fibre pole, in two parts. The top part is fitted with an ultrasonic sensor at the top and an attachment for

the WindBot brain. The bottom part is fitted with the optional pole bracket for easy attachment to your boat. The two parts are joined together and secured with Velcro strapping. The bottom end of the pole fits into the optional rubber pole cup to avoid damage to your boat.

The WindBot brain connects to an optional pigtail, via which the WindBot can be charged and data read out.

Your WindBot came with …

- Carabineer and tweezer assembly – used to open the brain's bung and remove SIM card
- USB cable – standard micro USB cable for charging or reading data from SD card
- Two rubber straps (black or orange) for securely attaching the WindBot brain to the mounting plate
- Power supply (DC to 4mm plug) for charging

Buttons, indicators, ports

WindBot features single button operation and has three indicator lights: power, cell connection and GPS status indicators.

On/off sequence

Press and hold down the button for 3s to turn on the WindBot. The power indicator lights up, then in sequence the status indicators below turn on. The device then beeps twice, at which point you release the button. The power indicator remains on

solid and the two indicator lights start flashing. Once cell and GPS connection are established, both indicators remain on solid.

To turn the WindBot off, press and hold down the button for 3s until you hear one long beep. It is normal for the shutting down to take several seconds. If data sync is enabled in the configuration file, the device may not turn off immediately.

Charging

Ensure that the WindBot is turned off. Remove the bung at the bottom of the device. Plug in the supplied power pack into the power charge socket. The power indicator turns on solid until the battery is charged, then it turns off. A 90% charge is achieved after approximately 4 hours, full charge between 6 and 8 hours.

Charging via USB cable is slower and depends on the available current supply (via DC pack or PC).

SD card and SIM card

WindBot needs both cards inserted to operate. The direction to insert is indicated on the case of the WindBot. Always use the supplied SD card, as only high quality SD cards function fully with YachtBot products. If in doubt, ask us.

Configuration file

To make changes to the configuration file on your WindBot, connect the WindBot to a PC using the USB cable. The SD card appears as a storage device and you can edit the config.ini file in place.

Magnetic inclination

To get accurate True Wind readings, you need to enter the correct magnetic declination for your location, e.g.

- NAV DECLINATION +19.5

Synchronisation

Sync mode is an optional setting in the configuration that allows the device to send all data to the YachtBot servers as it is shutting down. It is off by default. With sync enabled, turn off the device in the normal way, by pressing the power button as described above. While the device is in sync mode:

- Power indicator flashes
- Cell connection indicator flashes while establishing a connection, then on solid while syncing data
- GPS indicator is off
- Other indicators (if fitted) are off

If the power and cell connection indicators are both flashing, the device is still trying to establish a connection to the servers. This process times out after 10 minutes and the device turns off. All data files remain on the SD card and another sync attempt is made during the next power off event.

When sync has finished, WindBot beeps, then turns off automatically.

If the device is in sync mode and you would like to force it off and cancel sync, press and hold the button again until you hear a beep. WindBot turns off after several seconds.

APN

To establish a data connection via the SIM card, set the correct APN network, user name and password, e.g.

- cell apn network
- cell user user1
- cell pass password1234

Details

Mounting WindBot

WindBot is sensitive to location on your boat. Because the True Wind calculation depends on the GPS location, any magnetic disturbances can influence this measurement. In practice, this means that when used on a RIB, WindBot needs to be mounted as far away from the motor as possible.

How to tell if WindBot is mounted incorrectly? If you can see boat movement data in your wind measurements, then your mounting location is likely incorrect. Contact us with photographs of the boat you wish to mount WindBot on and we'll advise of best location.

SIM card

You need a large form-factor (Mini) SIM card with data plan. The maximum data usage per full charge cycle is about 3 MB. When fitting the SIM card, make sure that the SIM card is inserted straight.

In some countries, the APN user name and password needs to be set before data transmission works and a new SIM needs to make contact to the network on a conventional smart phone first

Registering on YachtBot

Like all YachtBot devices, the WindBot needs to be registered with a YachtBot account – either yours or your organization. A device can only be unregistered by the current owner. Please refer to YachtBot website documentation for details.

Attaching the ultrasonic sensor

When assembling the sensor to the top of the pole, make it so that the red mark is pointing at the same side as the WindBot brain. The screw holes are distributed unevenly around the circumference of the fitting to ensure this.

How does WindBot work?

WindBot uses the raw data from the ultrasonic sensor at the top and subtracts the motion of the boat as measured by the WindBot brain's internal GPS and IMU (inertial measurement unit). This removes the apparent wind component caused by the boat movement.

WindBot uses the local cell phone network to report its GPS location back to YachtBot five times a seconds. When not in cell coverage, the WindBot stores the location data and sends it to YachtBot as soon as the device does a sync cycle at power off.

Storage

When not in use for longer times, WindBot should be stored in a dry environment.

Oh no! Something went wrong?

If your question isn't answered in this document and scenarios below, please visit the support pages on our website or email us at support@igtimi.com. If possible, always send photos, screen shots, and configuration and log files.

Is the WindBot waterproof and does it sink if dropped it in the water?

Yes and yes.

I think I have done everything right but the indicators never go solid. What's wrong?

First check that the SIM and SD cards are inserted correctly.

If the data indicator keeps flashing, check out the SIM card trouble shooting tips on our support website. The most common cause for problems is related to brand new SIMs being used. Put the SIM card in a conventional smart phone and make sure you

can browse to websites other than that of the SIM card provider and that there is no PIN set for using mobile data.

If the GPS indicator keeps flashing, your device isn't getting a satellite fix. This can happen if you're inside a building or outside surrounded by tall structures or trees. On a boat, make sure WindBot brain can see the sky. Contact us at support@igtimi.com if the problem persists.

I have some great ideas for features for WindBot or the YachtBot website. Who can I talk to?

We'd love to hear from you! Contact us at info@igtimi.com

Specifications

Pigtail connector (if fitted)

On pole is a Switchcraft "Cord Female" connector EN3C8FX, the mating connector is a Switchcraft "Inline Male" EN3L8MX.

Pigtail	Function	Notes
1	GND	
2	-	
3	TXD/OUT	4800 8n1 (NMEA0183)
4	12V out	300mA limit. Could be used to power wireless Bluetooth dongle
5	CHG	8V-16V, 5W

6	GPIO1/IO_IN	
7	GPIO2/IO_OUT	
8	Shield	

Be good

Safety

Handle your WindBot, battery, and charger carefully.

Only use supplied accessories. Incompatible batteries, chargers and cables may cause serious injuries or damage your WindBot. Never place WindBot or its parts on, in, or near sources of heat, such as radiators, fires, microwave ovens or stove tops. The battery may explode when overheated.

Waste

We support the Waste Electrical and Electronic Equipment Directive (WEEED), applicable in European Union and other European countries with separate battery return systems.

This product and its accessories (such as chargers, batteries and the USB cable) cannot be disposed of with other household wastes when they reach the end of their life. If batteries are not properly disposed of, these wastes may cause harm to human health and the environment. To prevent the harm, please dispose of or recycle them separately from other waste so as to boost resource recycling and reuse.