

YAKBAK

Bi-Directional
NMEA to WiFi Bridge
www.yakbitz.com

Once powered up the YakBak creates a WiFi hotspot. Connect to this with your Wifi Phone/Tablet etc using the default password of 12345678.

Next start your browser and enter 192.168.6.1 into the address bar to access the setup screen shown in Fig. 1.

Operating Mode

The YakBak can operate as an Access Point which creates a private network to which you connect your WiFi enabled devices such as a smartphones, PCs or tablets. This is the factory default mode.

The YakBak can also connect to your existing WiFi network so your devices can access the NMEA data broadcast by the Yakker and also access resources of your network such as the internet or a printer.

N.B. If the Yakker cannot connect to your router pressing the reset button will reboot it in Access Point mode.

Protocol

The YakBak can send and receive your NMEA data over WiFi using either UDP or TCP protocols as required by your navigation software. UDP is the default factory setting.

Transmit Power

You can adjust the transmit power of the Yakker according to the range required.

Baud Rate

The baud rate is the speed that your NMEA equipment such as your AIS receiver, GPS, Sounder uses to send or receive it's data. Refer to your equipment's manual to determine the speed that it sends or receives at.

You can set the receive and transmit speeds independently which can be very useful. For example you could connect your AIS receiver/transponder which sends data at 38400 baud to the YakBAK's Rx terminal to send the AIS data to navigational software on your tablet/PC. Then you can send waypoint data from your navigational software via the YakBAK to your autopilot connected to the YakBAK's Tx terminal at 4800 baud.

Loop Back (Rx => Tx)

Selecting this option causes any sentences coming into the Rx terminal to be sent out of the Tx terminal as well as being broadcast over WiFi. Note that AIS data will not be sent out of the Tx port unless it's speed is set to 38400.

Sentence Conversion

MWV to VWR Select this option if your autopilot requires the VWR relative wind sentence but your wind instrument only sends the MWV sentence. The YakBak will then convert any incoming MWV sentence to VWR automatically.

V2.2 to V2.3 Select this option if your GPS/Plotter or navigation software outputs version 2.2 or earlier sentences but your autopilot requires version 2.3 or later sentences. The YakBak will then automatically convert any outgoing autopilot sentences to V2.3. The sentences that will be converted are APB, BWC, RMB, RMC, VTG and XTE.

The screenshot shows the configuration page for the YakBAK device, accessed via a browser at http://192.168.6.1. The page has a green background and contains the following settings:

- YakBAK by YAKBITZ 2 Port NMEA to WiFi Bridge**
- Enter new connection details and hit Submit WiFi
- Create Access Point
 - SSID: YakBAK
 - PWD: 12345678 (8-16)
- Connect to Router/AP
 - SSID: YourNetwork
 - PWD: YourPassword (0-16)
- UDP Mode
 - UDP Port: 2000
- TCP Mode
 - TCP Port: 23
- Transmit Power: HIGH
- NMEA
 - Rx: 4800, 9600, 19200, 38400 (38400 is selected)
 - Tx: 4800, 9600, 19200, 38400 (4800 is selected)
 - Loop Back (Rx => Tx)
- SENTENCE CONVERSION
 - MWV to VWR (Relative Wind)
 - V2.2 to V2.3 (AP Sentences)
- Submit
- NMEA DEBUG VIEWER

Fig. 1

NMEA DEBUG VIEWER

The NMEA Viewer allows you to see the NMEA sentences immediately before they are transmitted over WiFi.

This is very useful when first getting connected, if you can see your data here then you know you have a good connection to your NMEA equipment and you can now move on to setting up your software to receive the transmitted sentences.

The NMEA Viewer can also be used to test any sentence filtering you've set up. Sentences that are being blocked by your filter will not be seen here as the NMEA Viewer only shows the sentences that are being transmitted to your WiFi devices.

Reset Button

Pressing the reset button reboots the YakBak in Access Point mode. Press and hold the reset button until the green light starts blinking (approx 5 sec.) to reset the Yakker to factory default settings.

CONNECTIONS

Connect the NMEA OUT + wire of your Chartplotter to the YakBak's Rx terminal.

Connect the NMEA IN + wire of your Autopilot to the YakBak's Tx terminal.

Set the Baud Rate (speed) of your Chartplotter and Autopilot to match the speed of the YakBak.



Fig. 2

