

Wind speed logger Mk2

Written by Hans Summers

Friday, 12 June 2009 17:43 - Last Updated Tuesday, 05 October 2010 06:30

Following quick on the heels of the [Mk1 Windlogger project](#), I had built this new version which incorporates a host more features. The new version includes datalogging to an SD-card with Date/Time stamp as well as an onboard temperature sensor and light intensity sensor. External analogue inputs allow for logging wind direction too if your anemometer supports it. The output is a plain text file that can be read on any PC with a suitable cardreader, and opened directly in Excel or a text editor for further analysis.

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These first photos show my development unit, on a hand-made (scratched) PCB. **CLICK PICTURES FOR LARGER IMAGES!**

The graph shown is the first weekend run of the wind logger for real. Note the two peaks for light intensity showing daylight variation over the 2-day test period. Temperature variation is small (it was on an indoors windowsill) except for a couple of brief spikes when the sun came out and shone directly on the logger. There are two light sensors in this test: one is the onboard sensor and one is connected to one of the external inputs.

{gallery}wind2/proto{/gallery}

The photos below show a second version using a PCB manufactured by [Express PCB](#)

. I changed to a 2-row by 8-character LCD, to better fit the targetted waterproof box. The SD-card fits into a socket underneath the LCD along with the two buttons used for setting the date, time and other parameters (see below far right). Thanks also to John VK6ALY (a.k.a. John VK6JY) for advice and assistance on the PCB design and layout (below left)! It worked 100% first time! The cable gland entry is at the bottom of the box. The box (below) is sleek, sturdy and waterproof. It's easy to open the box to remove the SD-card, buttons or change the battery, without needing to mess with any screws etc.

{gallery}wind2/proto2{/gallery}

I even made a THIRD model, this one has a two-transistor amplifier and is designed to interface with the low level sine wave output of the industry standard NRG #40 anemometer sensor.

{gallery}wind2/proto3{/gallery}

Customised versions are possible (
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