Er9x ArduPilot Display

by uphiearl (earl@uphi.net)

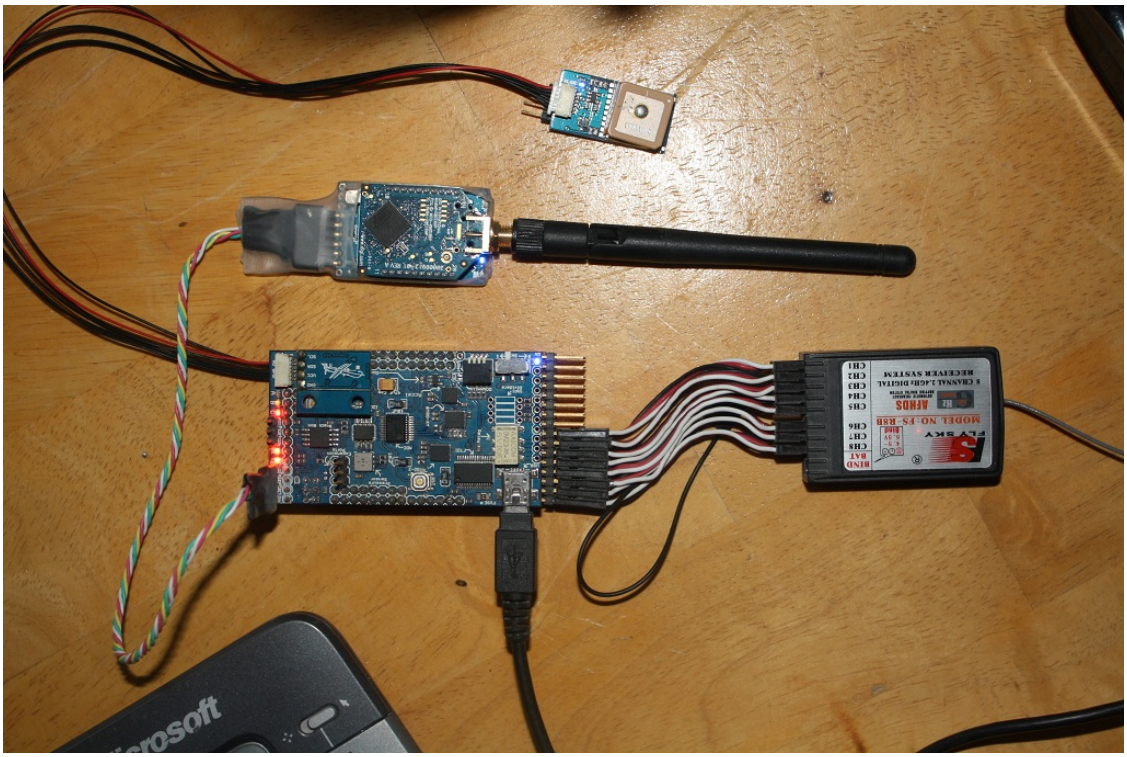
The Er9x is a very versetal R/C TX. I have modified eeraz Er9x firmware to display the Diydrones.com Ardupilot data on the LCD. There are 8 pages of data you can display while flying. Here are the 8 pages and what they display with explinations.

I will also show how to hook up the ardupilot to an Xbee on the plane as well as an Xbee on the Er9x side to get the data to display on the LCD.

Airplane Side

At Diydrones.com you can find a lot of information on the Xbee for the ardupilot data transmission. You need to have the data port configured for baud rate the same as the Xbee TX. I use a Diydrones Xbee carrier board as it has a voltage regulator on it to power the Xbee at the proper voltage. Get 2 as you will need one on the Er9x side as well. In the software make sure you ENABLE the data transmission.
See the Diydrones.com for the ArduPilot complete information.

Here is a picture of the ArduPilot Mega and Xbee data transmitter.



Er9x Side

Here is the Er9x side. Xbee connects to the Er9x MISO and MISI pins and the Xbee gets powered by the Er9x.
The Er9x and the Xbee data lines are both at TTL (3.3v) level that the Er9x wants so no need to convert to RS-232 (what a pain) !
The Xbee can fit inside the Er9x and the antenna can come out the old antenna hole after removing the old metal one. Be sure to shrink tube the Xbee so it does not short on anything. Tape it somewhere that does not interfere with the guimbles or switches.

Well, that was easy ! Now enjoy the ArduPilot data readout on the Er9x LCD screen. Below is the screens (without) data.
I hope you enjoy this modification, and show it off at your local flying field. They will think you have a $2000 + system !!!

Any questions or suggestions email to earl@uphi.net

uphiearl on the boards !

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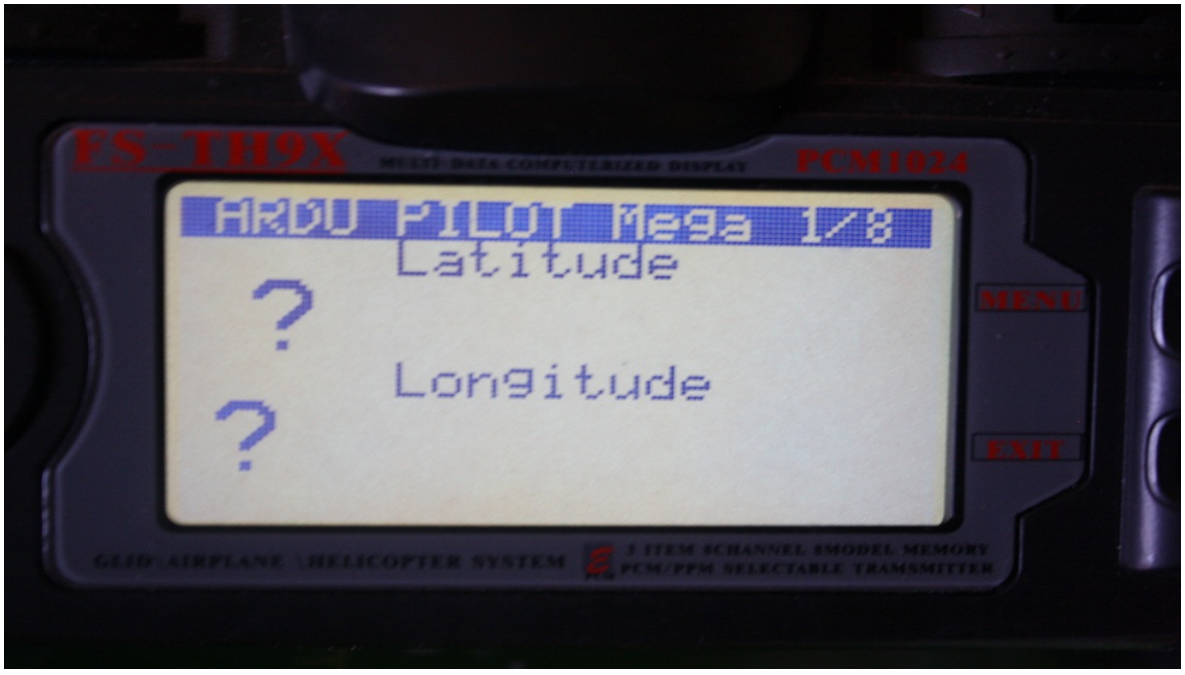
Latitude and Longitude display.



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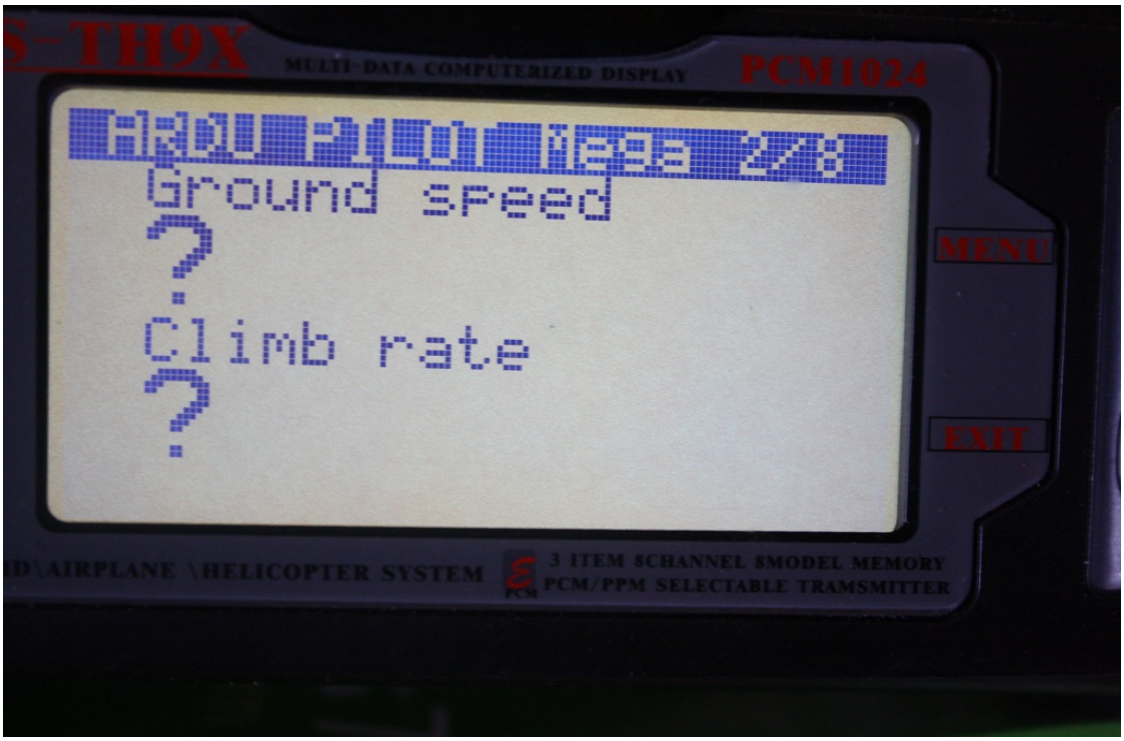
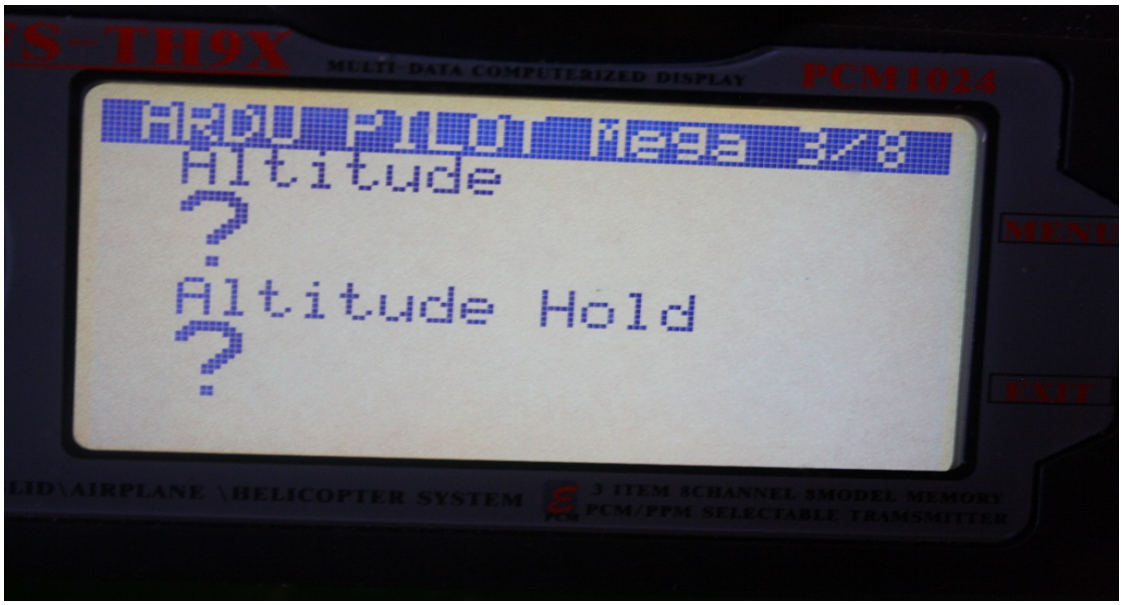
Ground Speed and Climb Rate



Altitude and Altitude Hold



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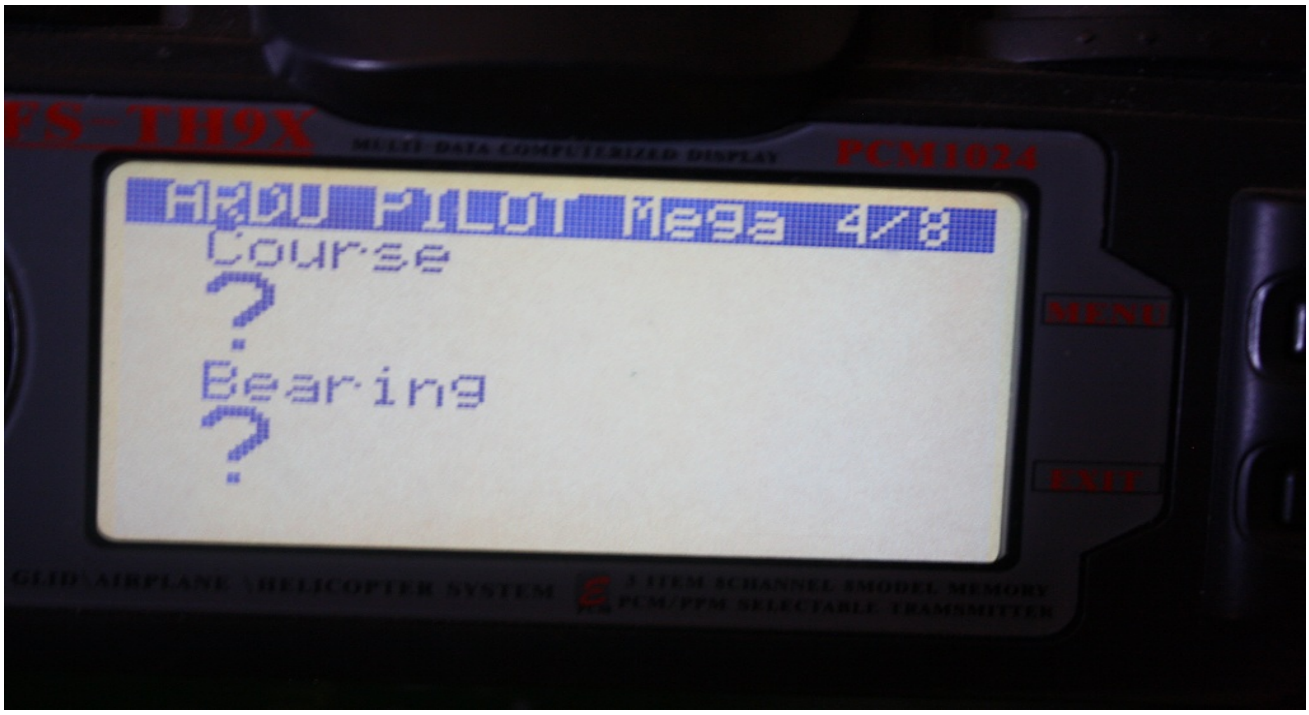
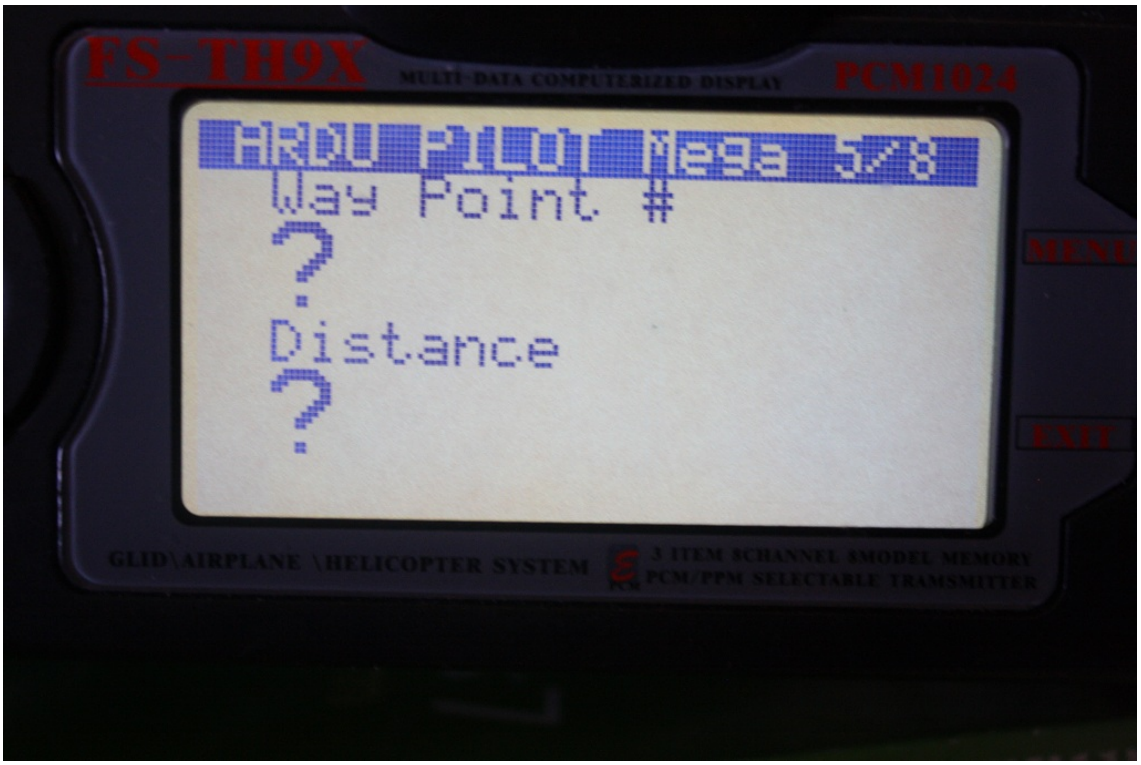
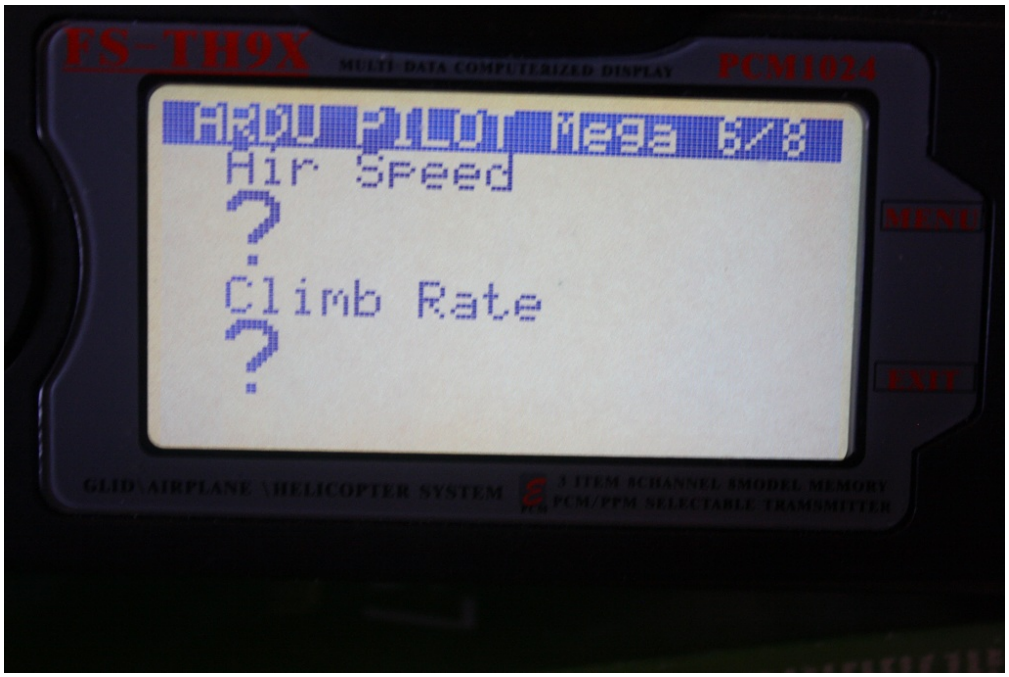
Course and Bearing



Way Point # and Distance



Air Speed and Climb Rate



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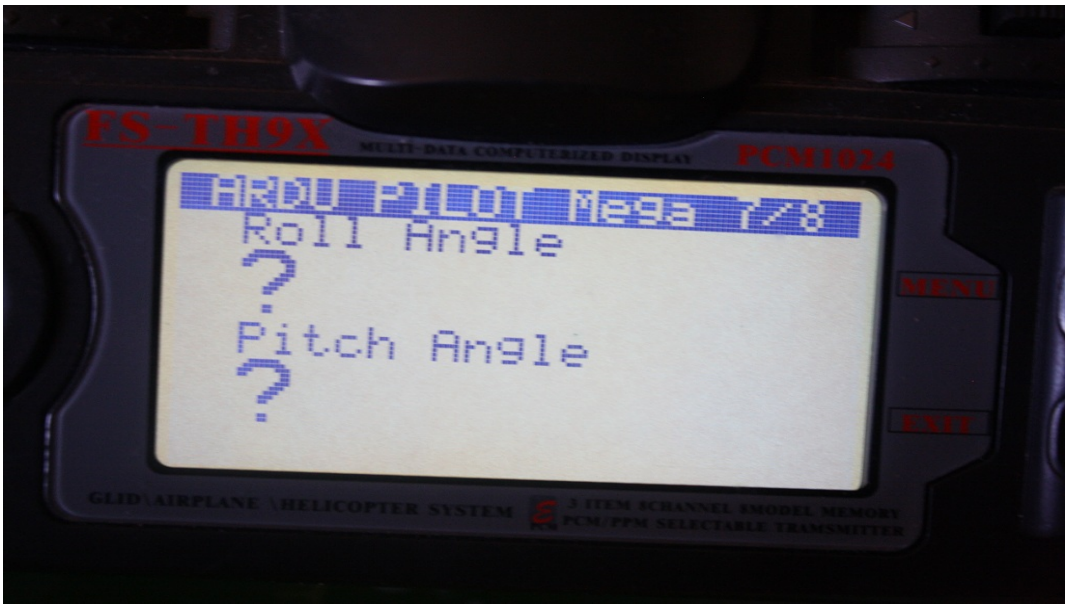
Roll Angle and Pitch Angle



ArduPilot Mode and RTL Distance