



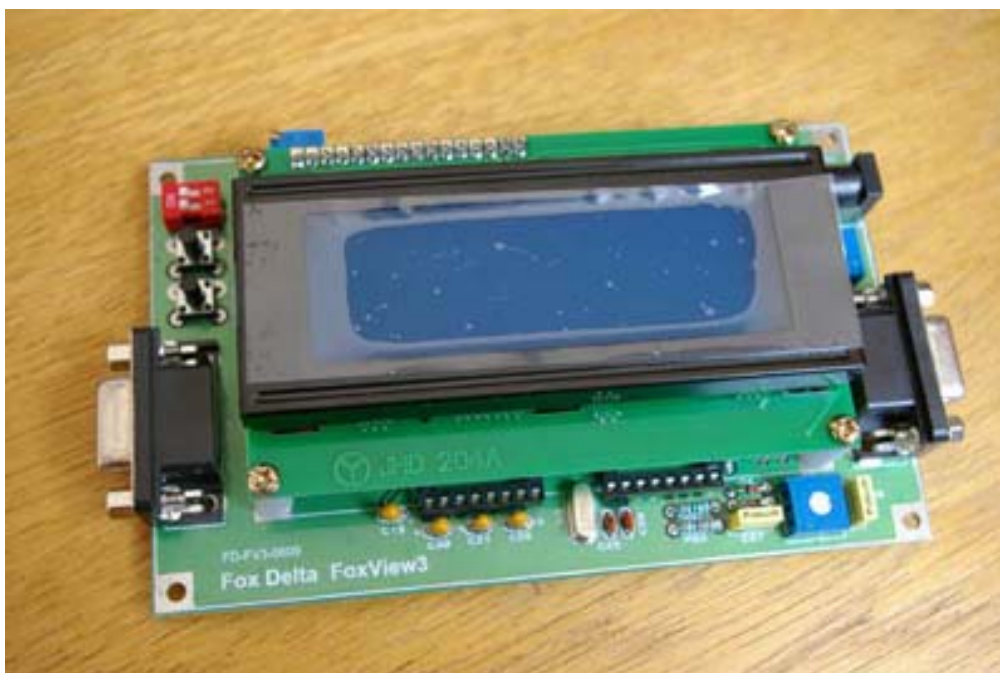
Fox Delta

Amateur Radio Projects & Kits

FD – FoxView3

FoxView3 Rev0511: An APRS Stand-Alone LCD Viewer & Position Encoder

FoxView3 Rev 0511



FOXVIEW3 Rev0511 is last revision of FoxView series of APRS Viewers for radio amateurs, based on original design by [Max/IK3SVW's Peek_SVW](#).

FoxView3 Rev0511:

This version is based on modification suggested by [F4EYW/ OM Benoit](#). It uses MX614 modem's receiving capability to enhance PIC88's packet reception.

Even after above modification to design, basic objectives of FoxView remains same, like:

1. APRS Viewer with 4 x 20 LCD
2. APRS Position Encoder (Fix Home Position or GPS)
3. Built-in "Fill-in" Digi
4. APRS TNC (APRS DATA from Radio to PC)
5. GPS support (RS232)
6. Free Powder Coated Metal Case
7. APRS Tracker

Designed with a large 4x20 Characters Back-lite LCD Display, FoxView3 only requires an audio input from your receiver or transceiver and a DC 12V supply.

FoxView3 is designed for APRS Demos, general Viewing of APRS Data while moving and Personally, I would love to have this device to monitor APRS activities at my home without using a PC!!

However, looking to interest of the Radio Amateurs to use a GPS with FV3, this function is added in this version.

After all these goodies, it should not cost a fortune. In fact, with few components from here & there and a Free Firmware, you will be able to build this viewer/encoder yourself & enjoy APRS activities.

FoxView3 is basically a combination of [Peek_SVW](#) by [Max/IK3SWV](#), a Modemless TNC FW update by [Dennis Rogers/N5VRP](#) and further hardware changes suggested by [Benoit/F4EYW](#) making this a very useful project for Amateur Radio.

Design Change Bases:

It was an effort by [F1SRC](#) who first merged [FoxDigi](#) & [FoxView](#) in one box and effectively used for APRS Viewing and APRS Digi.

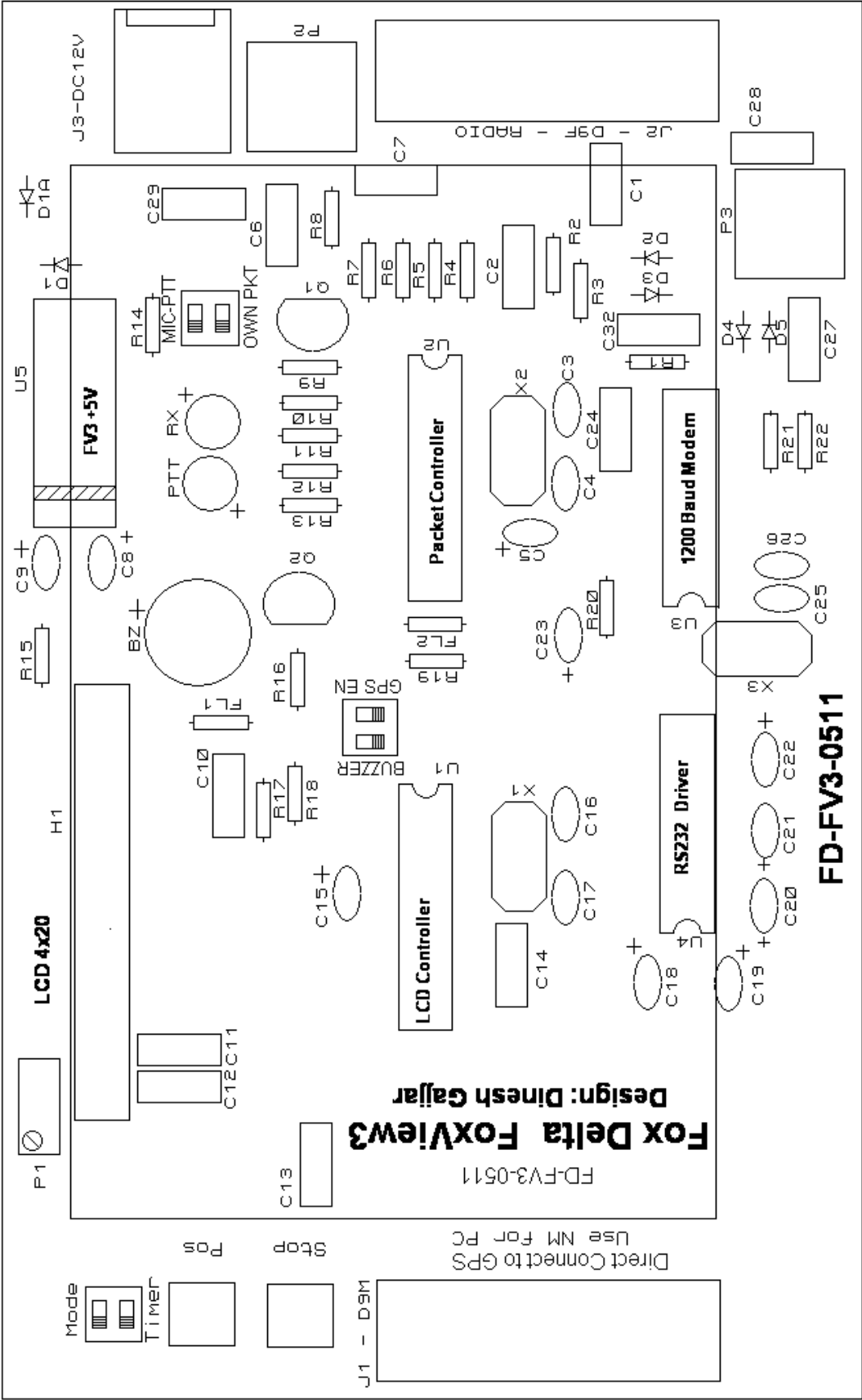
His experiment prompted new design where I have merely merged two designs on one board: i.e. [FoxDigi](#) and [FoxView](#).

Here is a picture of the first proto under test by F1SRC:



[F4EYW/ OM Benoit](#) made more changes, updated firmware and suggested that we use MX614's RXD to feed received data to PIC88, which otherwise was receiving packets thru it's A/D input port.

Mod increased sensitivity of received packets and now received packets are well filtered thru MX614 and fed to both PIC628A (Viewer) and PIC88 (Position Encoder)



[illegible]

FV3 Rev0511 Parts List:

Quantity	Check	Part ID / Details
1		FoxView3-0511 Double Sided PTH PCB
1		MAX232 DIP16
4		1N4148 (D 2, 3, 4, 5)
1		1N4007 (D1 or D1A)
2		RFC 33-47uH (FL1, 2)
1		PIC16F628A (U1) with firmware FoxView.hex
0	X	MX614 U3 DIP16
1		PIC16F88 (U2) with Firmware FoxDigi-614.hex at 4800 or 9600
2		18PIN IC Sockets
2		16DIP IC Sockets
2		7805 (U5, 6)
10		1uf/35V Tantalum (C5, 8, 9, 15, 18, 19, 20, 21, 22, 23)
11		0.1uf Ploy Capacitors (C1, 7, 10, 11, 12, 14, 24, 27, 28, 29, 32)
1		0.01uf Poly (C13)
2		0.001uf Poly (C2, 6)
6		22pf ceramic (C3, 4, 16, 17, 25, 26)
1		D9Feamle R/A PCB Connector (J2)
1		D9M R/A PCB Connector (J1)
1		Crystal 20.000MHZ (X2)
1		Crystal 10.000MHZ (X1)
1		Crystal 3.578MHZ (X3)
2		Transistor BC547B (Q1, 2)
1		10k Bourns 10T/V Presets (P1) LCD Contrast
2		10K Bourns 1 Turn Preset (P2, 3)
2		LEDs 3mm (Red, Green)
3		2 position DIP Switches (Mode/timer, GPS/BZ, MIC/PKT)
2		4mm Push Buttons (Pos/Stop)
1		Buzzer
1		Set of header: 16pin Male/Female for LCD (Incl. GPS En Hdr)
1		Set: 2xNut, 2xBolt & 2xPlastic Spacers for LCD
1		LCD 4x20 with Back-Light
1		DC Connector (J3)
1	✓	Free Powder Coated Metal Case with hardware
		Resistors (0.25W 1% or 5%)
1		3.9K (R6)
1		8.2K (R7)
2		2K (R5, 14)
1		470 ohms (R9)
5		1K (R2, 4, 11, 13, 16)
6		10K (R1, 3, 12, 17, 18, 19)
1		10 ohms (R15)
5		100K (R8, 10, 20, 21, 22)

73s

Dinesh Gajjar

Project Re-Launched: 08th May 2025

Please visit project page at: <http://www.foxdelta.com>