



Fox Delta

Amateur Radio Projects & Kits

FD- GP-CPU-0317

Tech Info Document: GP-CPU-PIC18F25K22 LCD Controller Board

GP-CPU-0317:

Multi-Purpose PIC18F25K22 Based PIC Controller for hobby projects

GP-CPU-0317, a PIC18F25K22 based control Board with I2C, LCD and front panel controls, communicates to a project board (Fits onto FRC20 Socket at the back) to function as a project display.

GP-CPU-0317 requires a target board called "Project Board". Firmware for PIC18F25K22 should be written for that target board requirement.

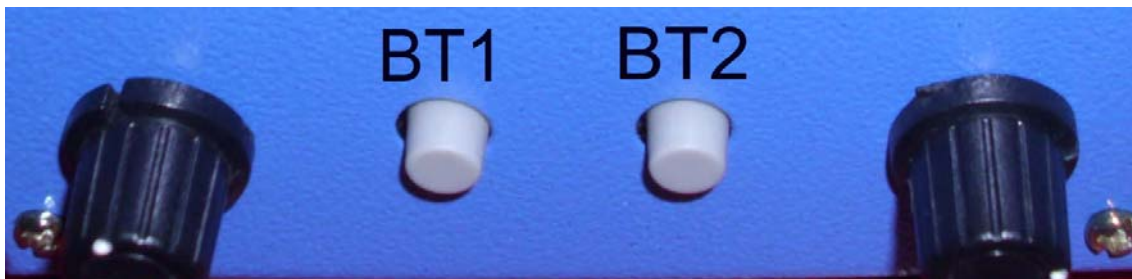
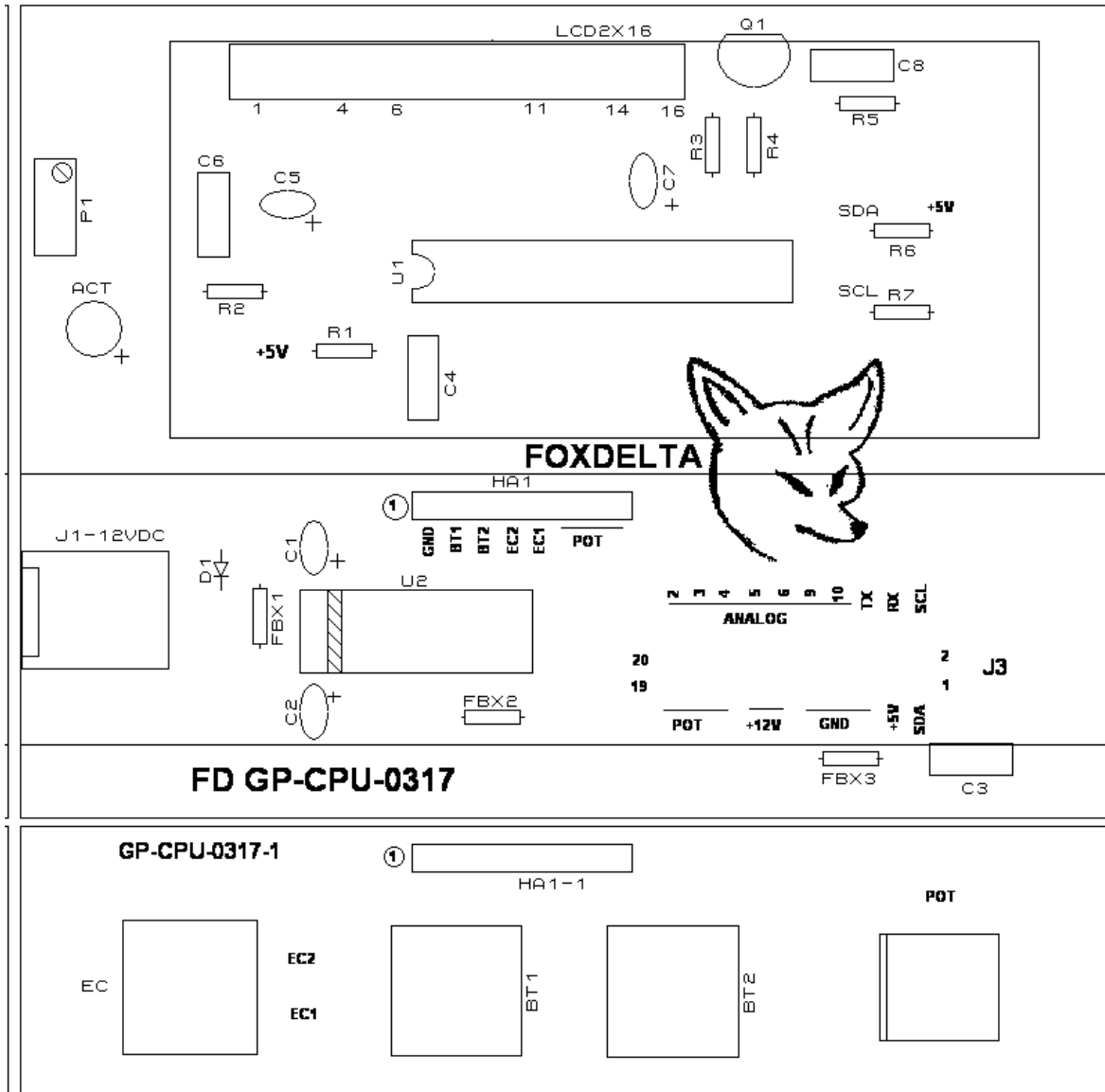
Project expected to use this CPU/LCD Controller are:

- 1. FM RADIO (First to go!)**
- 2. 144-148MHZ FM Receiver**
- 3. HF SSB Receiver**
- 4. APRS Terminal/Viewer**
- 5. Many more to come....**

PIC18F25K22 was selected for its very low price and advanced programming capabilities, especially, I2C commutation.



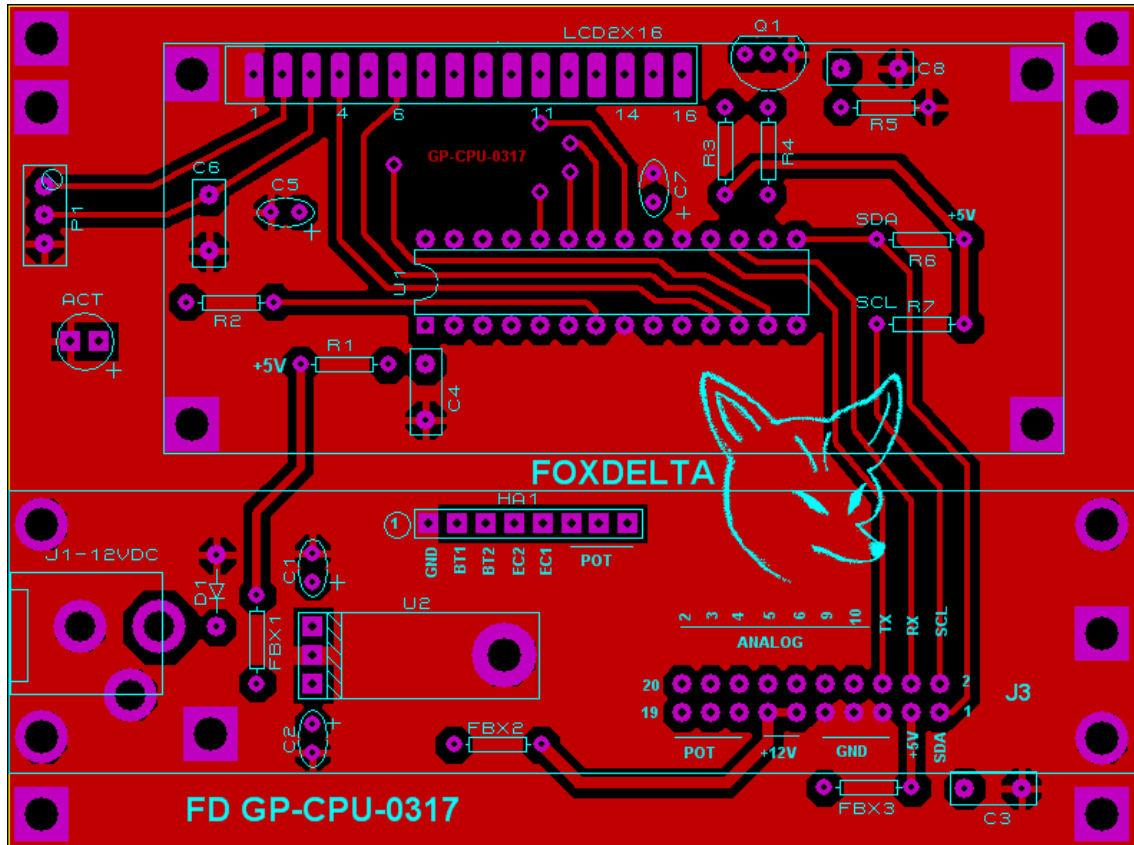
SILK Snap of PCB TOP:



Encoder / Tune

Volume

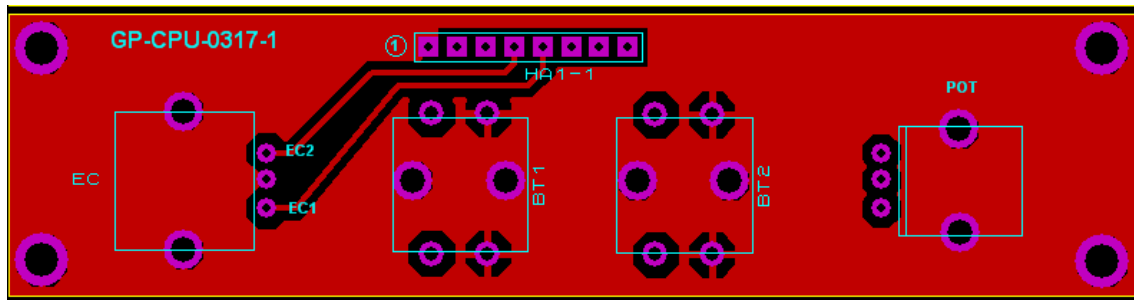
GP-CPU-0317 TOP View:



CPU Board has PIC18F25K22 Processor, DC 12V Input Socket, 7805 Regulator and LCD Backlight Dimmer control.

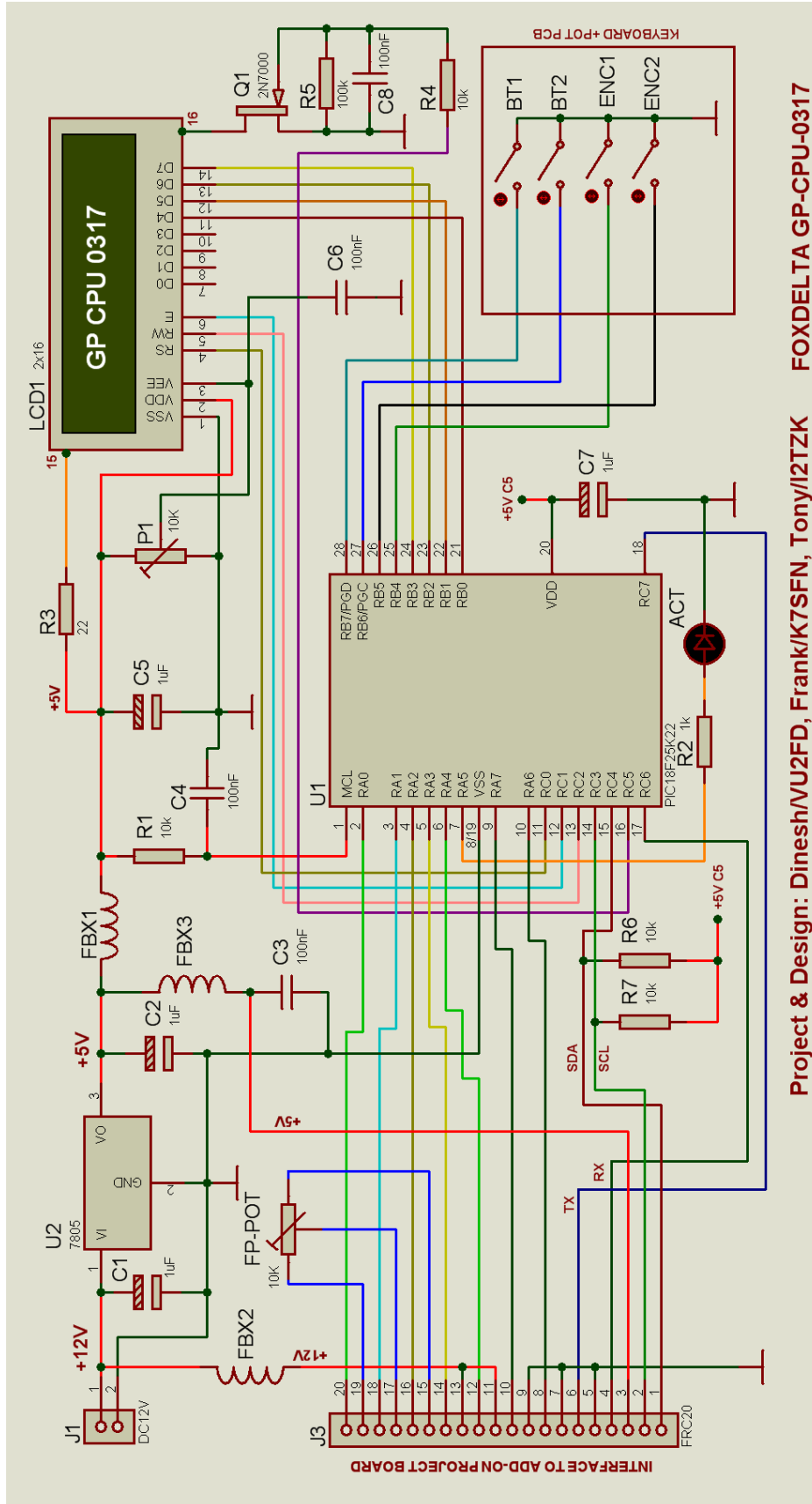
J3 is the FRC connector thru which, this controller communicates to a project board attached to this CPU

Key Board View:



Front Panel Keyboard, provides an Encoder, two menu push buttons and Audio Gain Controller.

GP-CPU-18F25K22: Schematic



Project & Design: Dinesh/VU2FD, Frank/K7SFN, Tony/I2TZK FOXDELTA GP-CPU-0317

GP-CPU-0317 Kit Parts List:

Quantity	Part ID	Part Details
1	U1*	PIC18F25K22 DIP28 Pre-Programmed with Project hex
1	DIP28	IC SOCKET
1	PCB	FD-GP-CPU-0317 DSPTH PCB
1	P1	10K LCD Contrast Preset
1	LCD	2X16 LCD with Back Light with SIL M/F Headers
1	U2	7805 TO220
1	EC	Encoder Alps EC12
1	POT	10K Panel Pot P090
1	J3	FRC20 Female
1	Q1	2N7000 TO92
1	D1	1N4148
1	J1	DC Connector 12V
2	BT1/2	12MM Push buttons
1	ACT	3mm LED
3	FBX1/2/3	Ferrite Bead Inductors
1	KB PCB	GP-CPU-0317-1 Keyboard PCB
1	Set	Hardware Nut/Bolts etc for main PCB+KB
1	Case	Free Powder Coated Metal Case
Capacitors:		
4	C1, 2, 5, 7	1uF Tantalum
4	C3, 4, 6, 8	0.1uF Poly
Resistors:		
4	R1, 4, 6, 7	10K
1	R2	1K
1	R5	100K
1	R3	22 Ohms

*U1 is Supplied Pre-Programmed with an associated project code.

73s / Dinesh Gajjar
1st July 2017

For more details, please visit Project Page: <http://www.foxdelta.com>