



Fox Delta

Amateur Radio Projects & Kits

FD- ST2-USB

Silk Snap & Parts List: PIC16F876A LCD Satellite Tracker & Rotor Controller

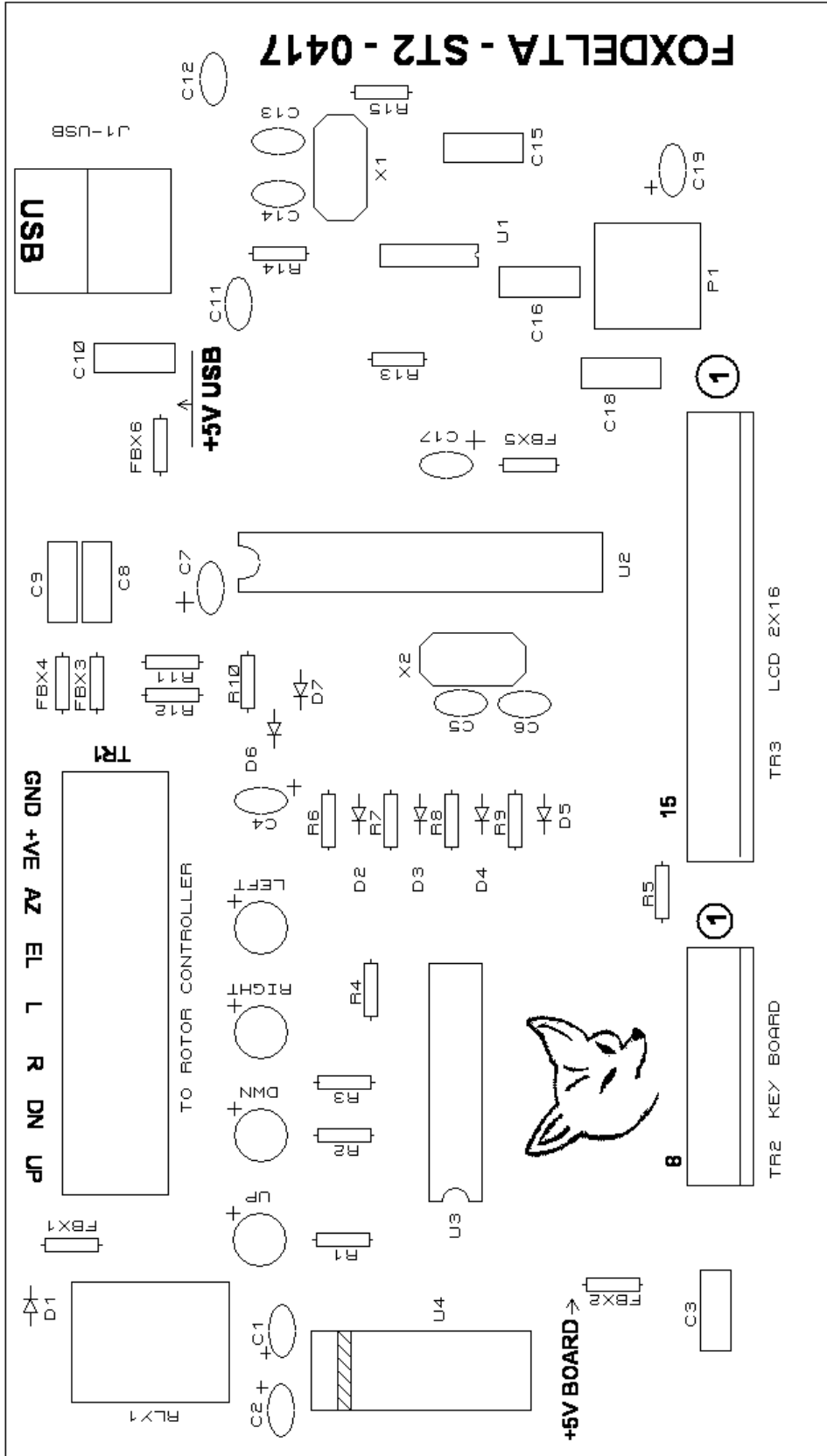
ST2 – 0417 Kit Parts List: (USB)

Quantity	Part ID	Details
1	U1*	CH360G SO16*
1	U2	PIC16F876A Pre-programmed
1	U3	ULN2803A DIP16
1	U4	7805 5V Regulator
1	RLY1	12V USB/Rotor PWR Change Over Relay
7	D1, 2, 3, 4, 5, 6, 7,	1N4148
4	TR1	2pin Screw terminals X 4
1	P1	10K Preset
1	X1	12MHZ HC49U Crystal
1	X2	4MHZ HC49U Crystal
6	FBX1-6	Ferrite Bead Inductors
1	LCD	2x16 with backlight
4	LED	3MM LED
1	J1	USB Socket R/A PCB
2	TR2	SIL8 Male + Ribbon
4	TR3	SIL8 Male (8+8) + 2 x 8Ribbon
1	Case	Powder Coated Metal case
1	Set	Hardware Keyboard
1	Set	Hardware Case
1	Set	Hardware LCD
4	KB Push Buttons	KB buttons 12MM
1+1	PCB	ST2-0417 DSPTH PCB & KB PCB
1	IC Socket	16PIN DIP
1	IC Socket	28PIN DIP Narrow

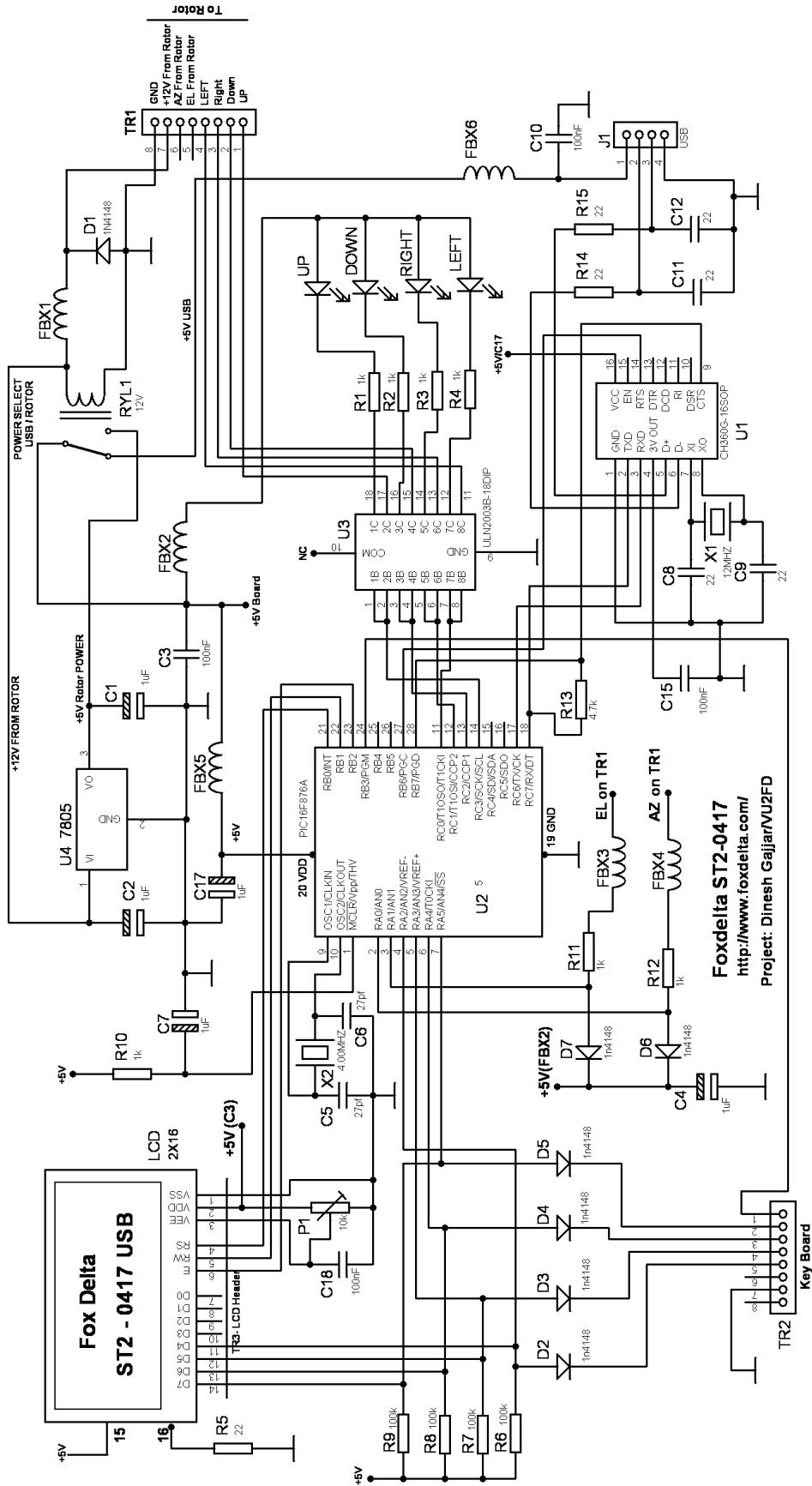
Quantity	Part ID	Details
7	R1, 2, 3, 4, 10, 11, 12	1K
3	R5, 14, 15	22 ohms
4	R6, 7, 8, 9,	100K
1	R13	4.7K
2	C8, 9	0.001uF Poly
5	C3, 15, 16, 18, 10	0.1uF Poly
6	C1, 2, 4, 7, 17, 19,	1uF Tantalum
4	C14, 13, 11, 12	22pf Ceramic
2	C5, 6	27pf Ceramic

* = Pre-soldered on PCB

Silk Snap of the ST2 - 0417 PCB:

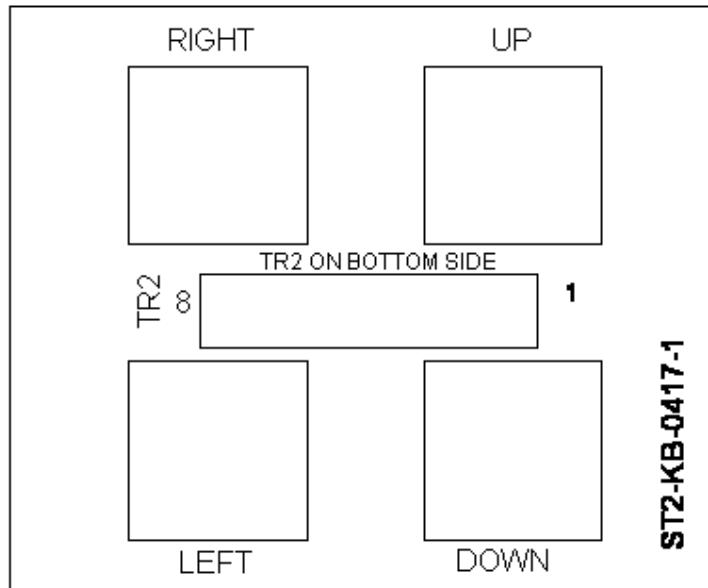


ST2 - 0417 Schematic:



Foxdelta ST2-0417
<http://www.foxdelta.com/>
 Project: Dinesh Gajjar/VUJ2FD

Silk View of Key Board for ST2-0417:



TR2 is a matching 8SIL socket and is installed on **Solder side** of this PCB.

Push Buttons are installed on **Component side**.

Match "1" on this board to "1" on main board for ribbon cable

Notes:

1. U1 is SMT part and is pre-soldered on PCB for kits
2. Special USB drivers for windows must be installed. Drivers create a Virtual COM port on your PC. Use that COM port for your Satellite program (SatPC32, Nova Etc)
3. P1 is LCD Contrast Preset.
4. U2 is supplied pre-programmed for both kits and Assembled
5. TR3 is for connections to your Yaesu Rotor Controller. You will require to make a suitable cable
6. RLY1 is a "Power Change Over" Relay for auto selecting power from USB (5V) or Rotor (12V)

Special note:

1. LCD Backlight is fix set by R5. You may change this resistor value to increase or decrease backlight brightness. Or remove it for no backlight (Power Saving)

73s / Dinesh Gajjar / 5th May 2017

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