



Fox Delta

Amateur Radio Projects & Kits

FD- ST2-USB

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

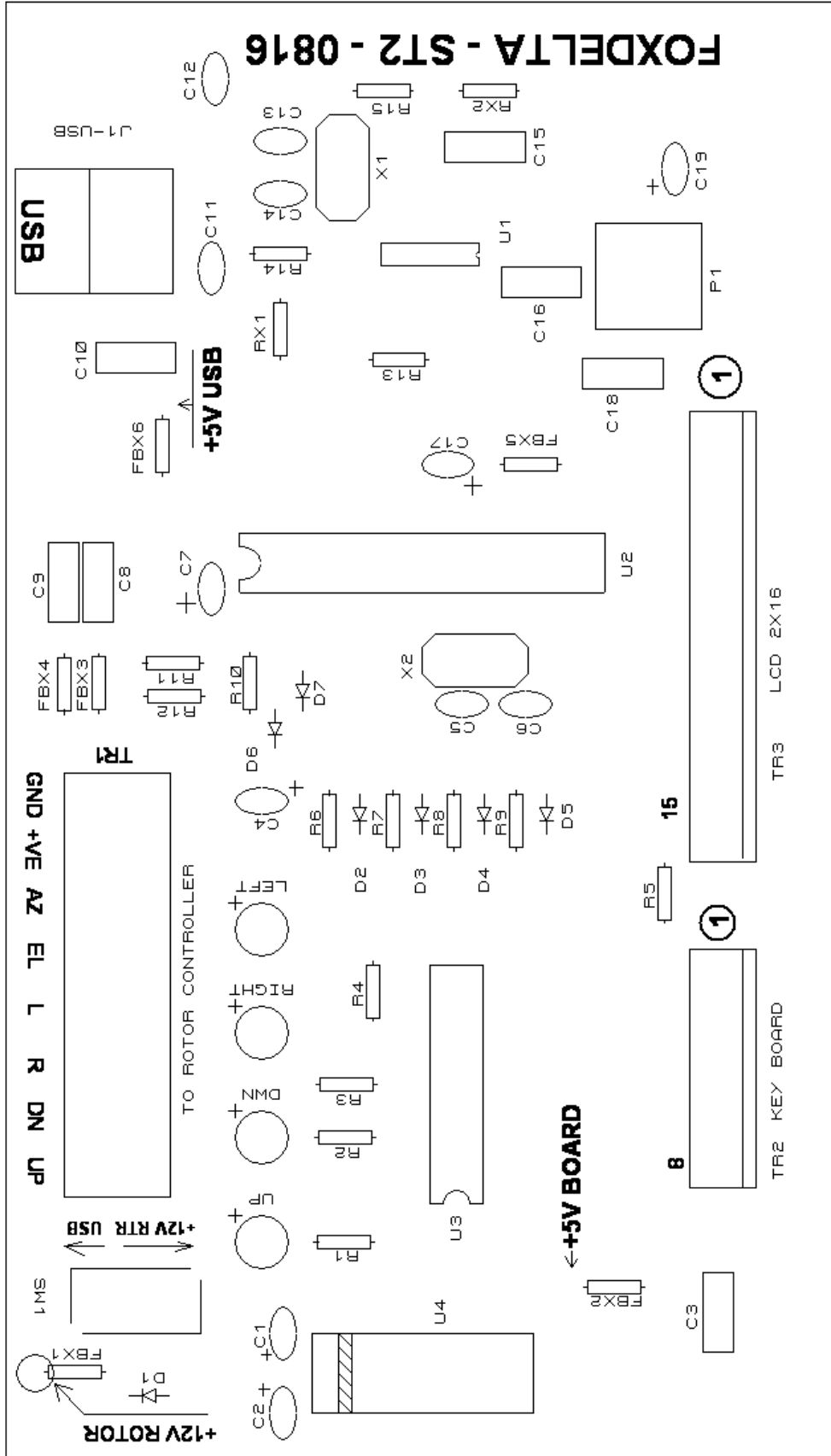
ST2 – 0816 Kit Parts List: (USB)

Quantity	Part ID	Details
1	U1	CH360G SO16*
1	U2	PIC16F876A Pre-programmed
1	U3	ULN2803A DIP16
1	U4	7805 5V Regulator
1	SW1	DPDT Push Switch
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	ST2-0816 DSPTH PCB & KB PCB
1	IC Socket	16PIN DIP
1	IC Socket	28PIN DIP Narrow

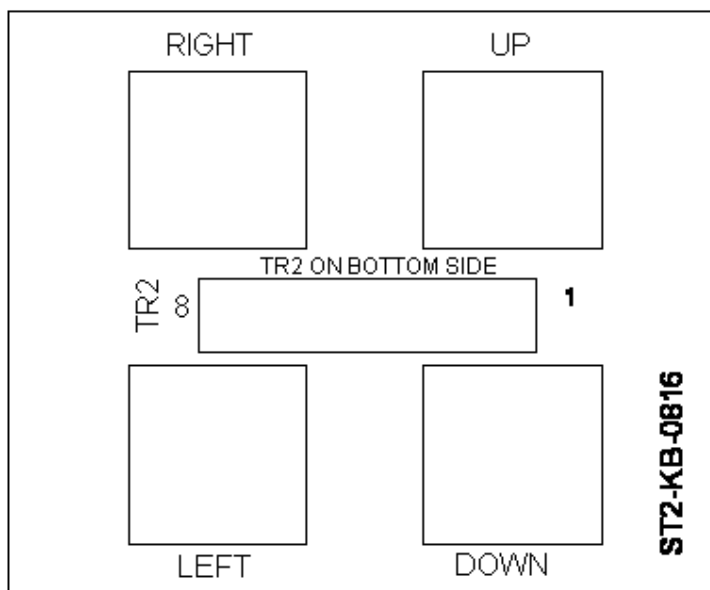
Quantity	Part ID	Details
7	R1, 2, 3, 4, 10, 11, 12	1K
3	R5, 14, 15	22 ohms
4	R6, 7, 8, 9,	100K
1	R13	4.7K
2	C8, 9	0.001uF Poly
5	C3, 15, 16, 18, 10	0.1uF Poly
6	C1, 2, 4, 7, 17, 19,	1uF Tantalum
4	C14, 13, 11, 12	22pf Ceramic
2	C5, 6	27pf Ceramic

* = Pre-soldered on PCB

Silk Snap of the ST2 - 0816 PCB:



Silk View of Key Board for ST2-0816:



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. SW1 is Power switch for 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)
2. Refer to ERROR Document on last page of this document regarding U4/7805. On ST2-0816 PCBs, this regulator must be installed on the solder side.

ST2 – 0816 PCB error: U4 mounting / SILK ERROR:

U4 must be mounted on other side (Solder Side) of the board as detailed and explained in two pictures below:



73s / Dinesh Gajjar / 29 December 2016

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