



Fox Delta

Amateur Radio Projects & Kits

FD- ST2-USB

ST2-USB-0220 KIT: PIC16F876A LCD Computer Interface for Yaesu Controller

ST2-0417 Kit Parts List: (PCB REV 0220)

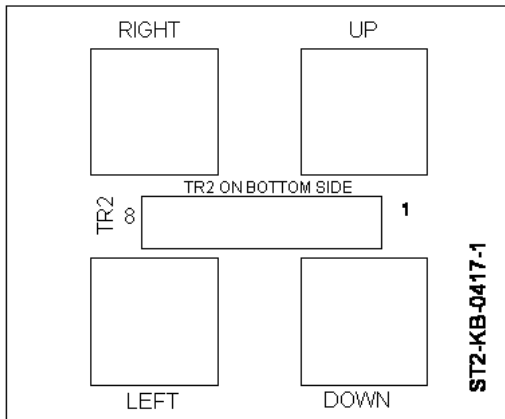
Quantity	Part ID	Details
1	U1* / M1	CH360G SO16* (Plug-in Adapter)
1	U2	PIC16F876A Pre-programmed
1	U3	ULN2803A DIP18
1	U4	7805 5V Regulator
7	D1, 2, 3, 4, 5, 6, 7,	1N4148
4	TR1	2pin Screw terminals X 4
1	P1	10K Preset
1*	X1*	12MHZ HC49U Crystal (On Adapter)
1	X2	4MHZ HC49U Crystal
5	FBX1 – 6*	FB SMT 1206 Pre-Soldered on PCB
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	ST2-0220 DSPTH PCB & KB PCB+CH340 Adapter
1	IC Socket	18PIN DIP
1	IC Socket	28PIN DIP Narrow
1	Headers	3pin with shorting pin: Power Selection

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	0.01uF Poly
3	C3, 14, 10	0.1uF Poly
6	C1, 2, 4, 7, 13, 15,	1uF Tantalum
2	C14, 15	10 or 22pf Ceramic
2	C5, 6	27pf Ceramic (On adapter)

Notes:

1. U1 is SMT part and is provided on a plug-in module
2. P1 is LCD Contrast Preset.
3. U2 is supplied pre-programmed
4. TR3 is for connections to your Yaesu Rotor Controller. User is required to make a suitable cable.
5. 3PIN Header is Power selection for selecting power from USB (5V) or Rotor (12V)
6. **ST2-0417 PCB is revised to 0220, with design change: Headers for power selection instead of a Relay, CH340 on a plug-in adapter and all Ferrit beads are SMT.**

Silk View of Key Board: PCB REV 0318



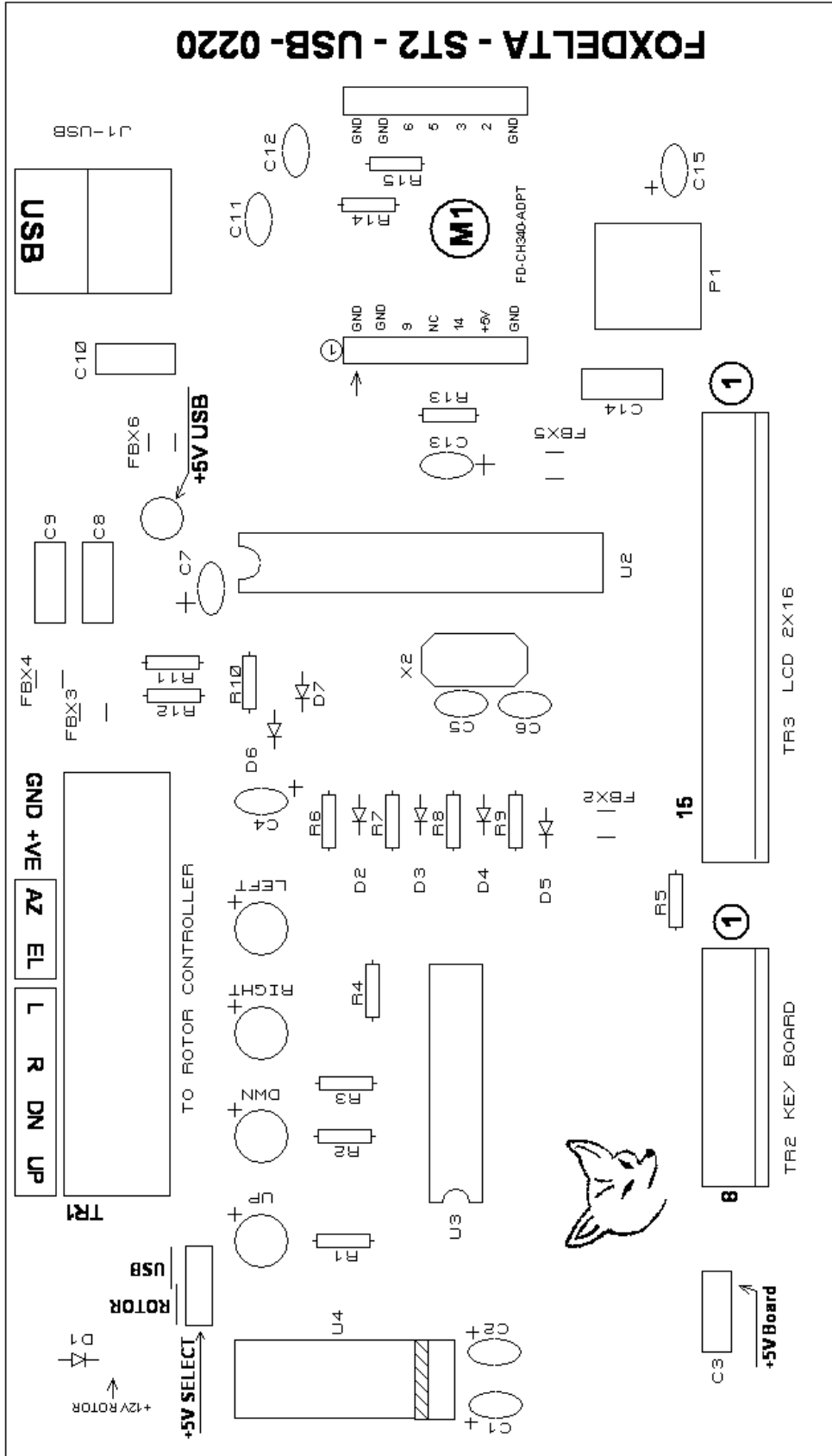
TR2 is a matching 8SIL socket (with Main Board TR2) and is installed on **Solder side** of this PCB. Push Buttons are installed on **Component side**.

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

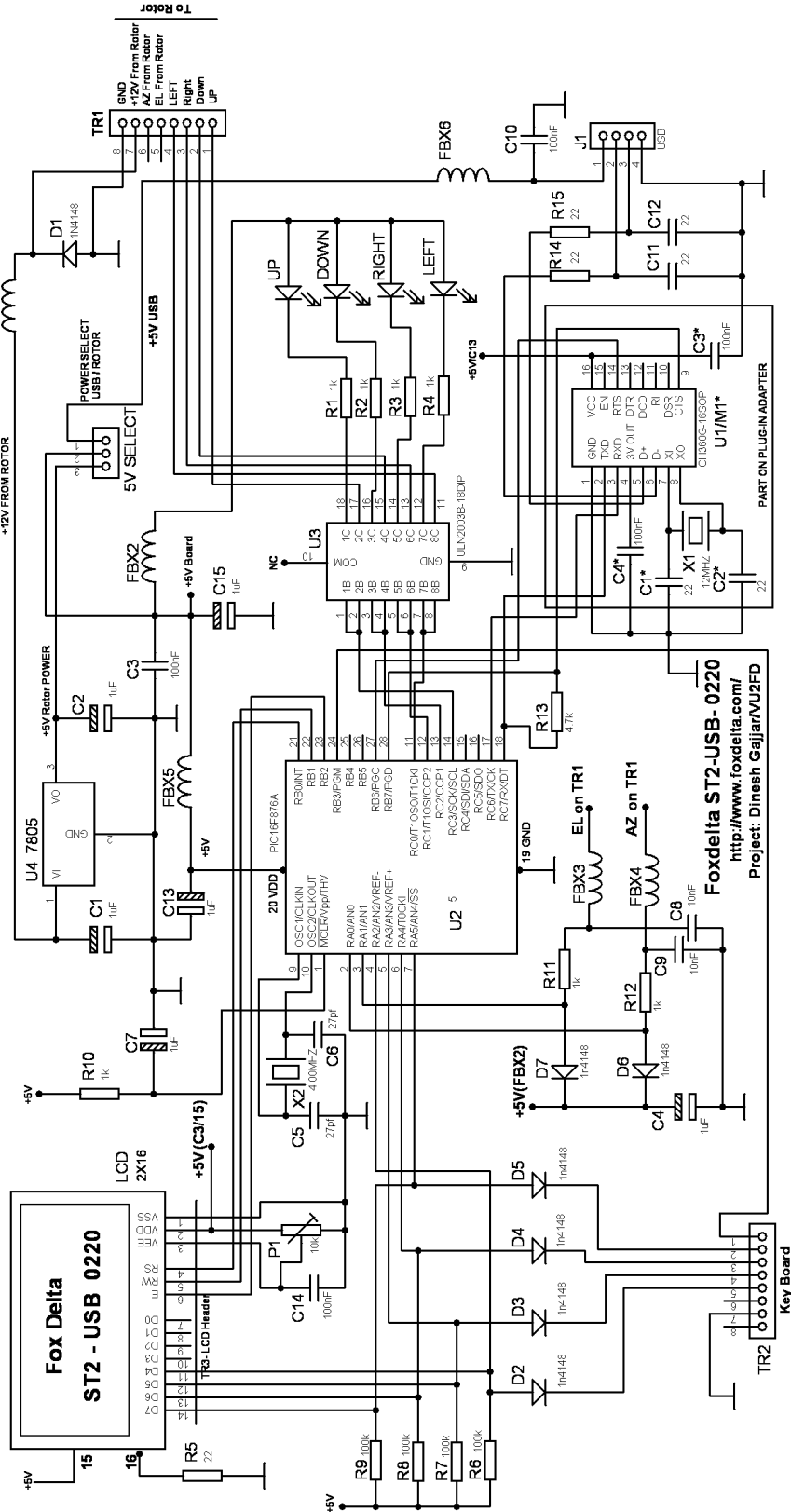
ST2 to Yaesu Controller Connections:



Terminal Name	Purpose
GND	Ground
+VE	12V from Rotor Controller
AZ	Azimuth A/D from Rotor
EL	Elevation A/D from Rotor
L	LEFT (AZ)
R	Right (AZ)
DN	DOWN (EL)
UP	UP (EL)



ST2-USB-0220 Schematic:



73s / Dinesh Gajjar / 18th March 2020

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