



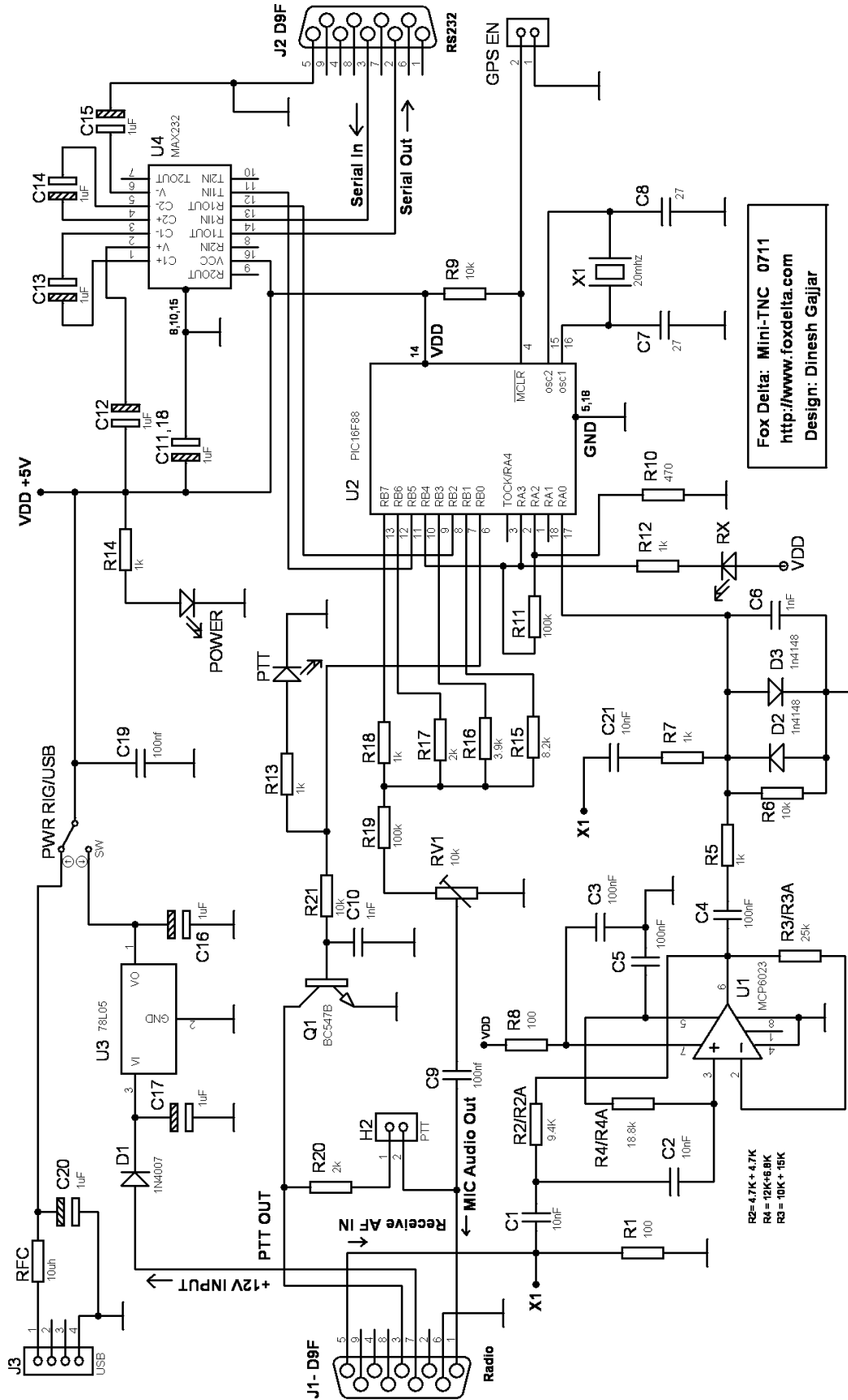
## Silk Snap & Kit Parts List of Mini-TNC: A 1200 Baud Simple TNC using PIC16F88

### Mini-TNC Kit Parts List: REV0711

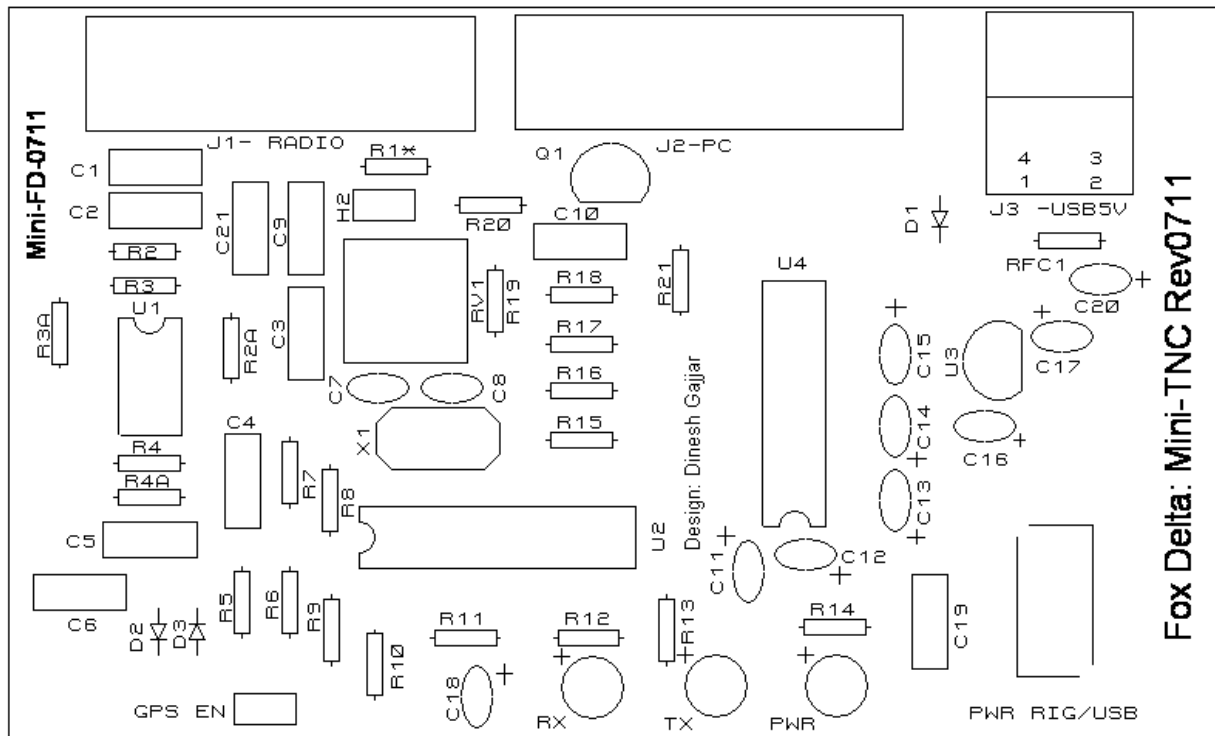
Qty	ID	Details
1	U2	PIC16F88, Pre-Programmed With Firmware V1.09
1	U4	MAX232 or Equiv. RS232 Driver
1	PCB	Mini-TNC Double Sided PTH Board Rev0711
1	U3	78L05
1	U1*	MCP6023, Audio Filter/Amplifier
1	Q1	BC547B, PTT Switch
2	J1, 2	D9 Female Right Angle Connector PCB
1	SW1	Push Switch "USB 5V OR 12V From J2 PIN 7"
3	LED	3mm: RX, TX & Power
1	X1	Crystal 20MHZ HC49US
1	RV1	Preset Bourns 10K
1	D1	1N4007
2	D2, 3	1N4148
1	DIP8*	IC Socket for U1
1	DIP18	IC Socket for U2
1	DIP16	IC Socket for U4
1	D9M	D9 Male Connector for Transceiver Connection
1	Case	Powder Coated Metal Case
Qty	ID	Details
9	C11, 12, 13, 14, 15, 18, 16, 17, 20	1uf 35V Tantalum
5	C3, 4, 5, 9, 19,	100nf Poly
3	C1*, 2*, 21**	10nf Poly
2	C10, 6	1nf Poly
2	C7, 8	22 or 27pf Ceramic
2	R1, 8*,	100 ohms 1/4W
1e	R2/R2A*	2 X 4.7K = 9.4k
1e	R3/R3A*	10K + 15K = 25k
1e	R4/R4A*	12K + 6.8K = 18.8k
1	R10	470
3	R6, 9, 21	10K
2	R11, 19	100k
6	R5*, 7**, 12, 13, 14, 18,	1K
1	R15	8.2k
1	R16	3.9K
2	R17, 20	2K

- \*= Parts used if MCP6023 is installed. (Do not install C21 in this case).
- \*\* = Parts required if direct audio input to PIC16F88's PIN 17 is opted. (omit all \* Parts)

**Schematic:**



## Silk Snap of the Mini-TNC Board:



### J1: D9F: Connects to Radio & DC +8 to 12V

1. Audio out from Mini-TNC to transceiver (MIC)
2. NC
3. PTT to transceiver
4. NC
5. Transceiver receiver audio input to Mini-TNC (RX Input)
6. Power & Signal Ground
7. +12V for Mini-TNC.
8. NC
9. NC

### J2: D9F: Connects to PC by standard Serial cable. No null modem is required for PC Connection.

1. NC
2. Serial Out
3. Serial In
4. NC
5. Ground.
6. to 9, not used.

### J3: +5 USB for Mini-TNC

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Please visit <http://www.foxdelta.com> for more information on this project.