



# Fox Delta

Amateur Radio Projects & Kits

FD- MPSSC

**Schematic & Parts list: PIC18F4520 Multi-Purpose Sensor System Controller**

## **PARTIAL KIT**

**This project is developed for Amateur Radio Community by:**

[Antonio Alfinito / I2TZK](#)

[Dinesh Gajjar / VU2FD](#)

[Frank Dzuirda / K7SFN](#)

**PIC18F4520 Multi-Purpose Sensor System Controller:**

**MPSSC Partial Kit includes following:**

1. CPU Unit main Board with all components but without:
  - A) Parts used for LCD
  - B) LCD Display
  - C) Metal Case

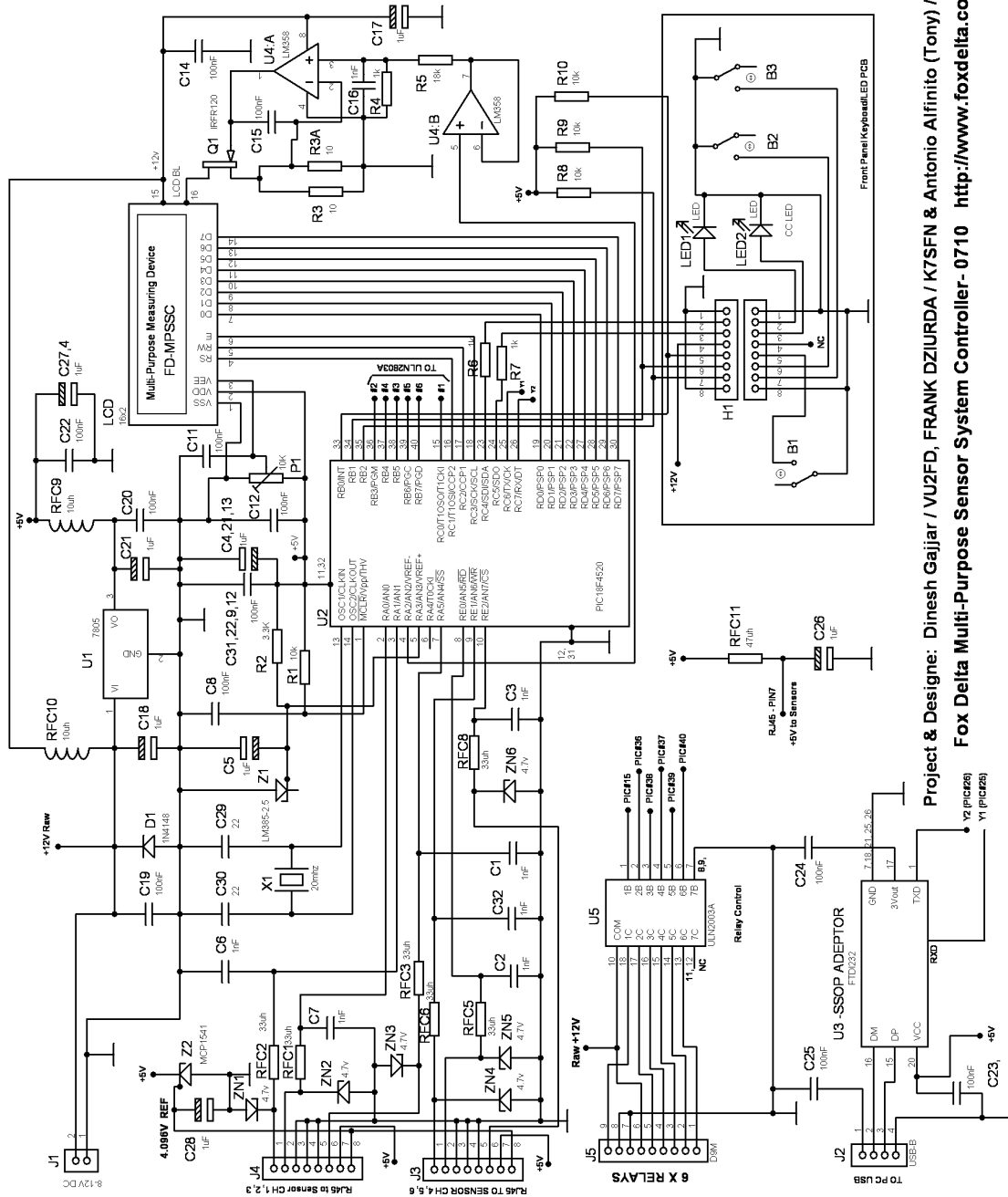
**Includes:**

2. Temperature Test Board with two temperature sensors.
3. CAT5 Cable for interconnection of CPU to Test Board

**MPSSC CPU Unit:**



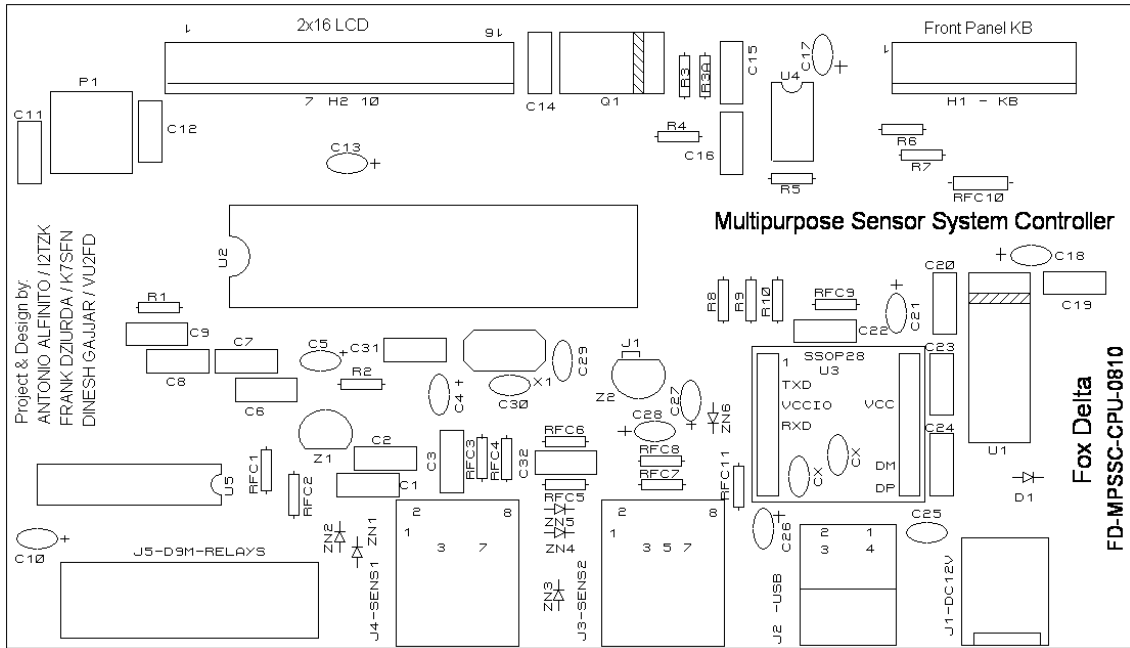
# Multi-Purpose Sensor System Controller- CPU Schematic



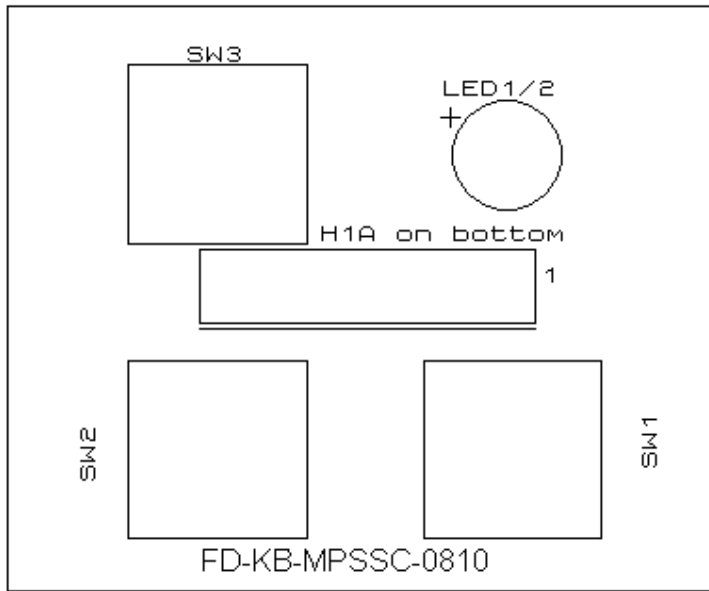
Project & Designe: Dinesh Gajjar / VU2FD, FRANK DZURDA / K7SFN & Antonio Alfinito (Tony) / I2TZK  
 Fox Delta Multi-Purpose Sensor System Controller- 0710 <http://www.foxdelta.com>

Y2 (pic2a)  
 Y1 (pic2a)

**MPSSC CPU Silk:**



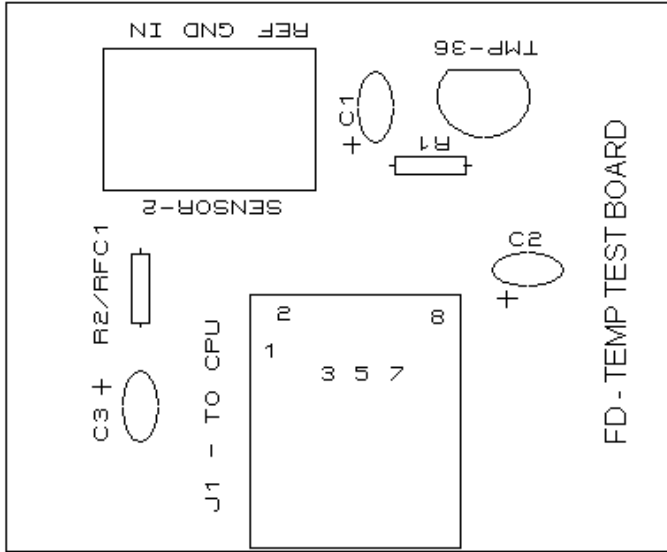
**LED/Key Board:**



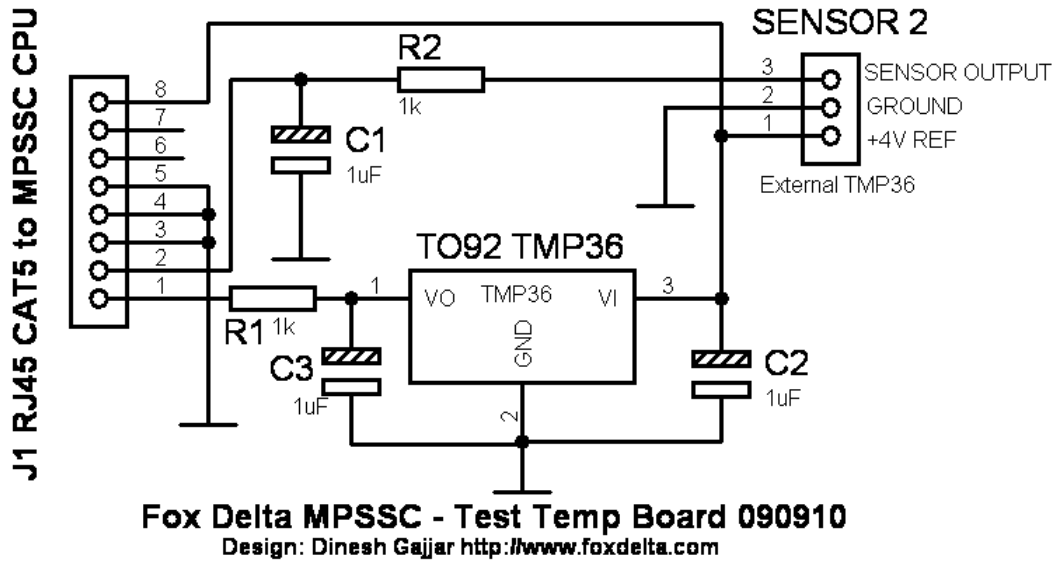
**MPSSC CPU Board Partial KIT Parts List: Includes Free Temperature Test Board.**

Quantity	Part ID	Part Details
1	U1	7805 TO220
1	U2	PIC18F4520 Pre-Programmed
1	U3	FTDI232 Pre-Soldered on 0.1inch Adepter
1	U4	LM385 DIP8
1	U5	ULN2803A Relay Driver
1	Q1	IRF120
2	Temp Sensor	Analog Devices TMP 36
1	D1	1N4148
1	Z1	LM385-2.5 TO92
1	Z2	MCP1541 TO92
6	ZN1-6	4.7V Zener Diodes
1	X1	20MHZ HC49U/US
1	J1	12V DC Connector R/A PCB
1	J2	USB Connector R/A PCB
3	J3, 4	RJ45 R/A PCB Connector (One in Test Board)
1	J5	D9M R/A PCB
6	33uH	RFC1, 2, 3, 5, 6, 8,
5	10uH	RFC 4, 7, 9, 10, 11
2	DIP Sockets	IC Sockets: 40PIN, 18PIN
1	Set	Male/Female 0.1inch Headers for U3
3	Push BTN	12mm Pushbuttons
1	LED	Dual Color 3mm LED for Keyboard
3	PCB	Keyboard, CPU and Test Board
1Set	SIL8	KB Ribbon and two SIL Sockets
1	Terminal Block	3 Pin terminal Block for Test Board.
1	Cable	CAT5 Straight 1Mtr
<b>All Resistors ¼ W 5%</b>		
1	47K	R1
1	3.3K	R2
2	10 Ohms	R3, 3A
5	1K	R4, 6, 7, (R1 & R2 in Test Board)
3	10K	R8, 9, 10
1	18K	R5
<b>Capacitors</b>		
13	1uf Tant.	C10, 18, 21, 17, 26, 27, 28, 4, 5, 13, (3 for Test Board)
7	0.001uf Poly	C1, 2, 3, 6, 7, 8, 16
11	0.1uf Poly	C9, 11, 12, 14, 15, 19, 20, 23, 24, 22, 31
2	22pf Cer.	C29, 30
1	0.1uf Cer.	C25

**Free Temperature Test Board Silk: INCLUDED WITH KIT / ASSEMBLED and CPU Partial Kits**



**Temperature Test Board Schematic:**



**Note: Temperature Test Board Parts are listed in CPU Parts List.**

73s

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24<sup>th</sup> March 2011

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