Fox Delta

Amateur Radio Projects & Kits

FD- PM2

Schematic & Parts List: AD8307 Dual Channel LCD 500MHZ RF Power Meter

PM2: Rev.2 PIC16F876A LCD RF Power Meter:

With success of PM1, This is a second run of PCBs with several changes on RF Power meter design.

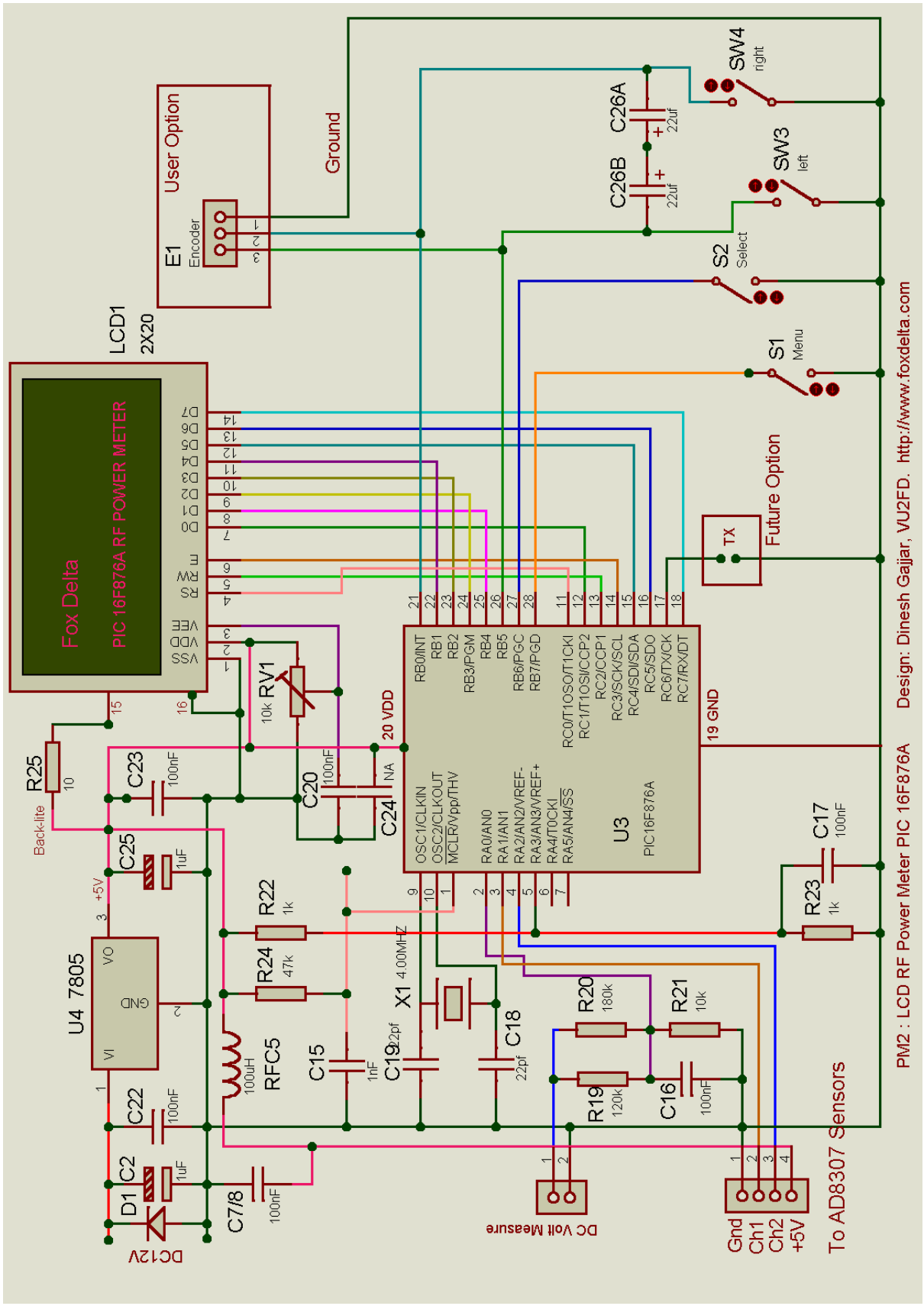
Following design changes implemented after receiving suggestions from the amateurs who bought PM1 kits:

1. **Much smaller in size. Measures only 12cm x 6cm**
2. **Now menu operation is thru two push buttons and encoder is replaced by two more push buttons. Making it more economical.**
3. **LCD back light connections now configurable for various types of display**
4. **Two AD8307 sections on board. All parts in sensor section now supplied with kit but without AD8307. These are DIP packages & may be obtained from Analog Devices or Digikey.**
5. **LCD Contrast preset**
6. **DC Input connector. Accept DC from 9V Battery or Ext. DC 12V.**

RF Power Meter Kit Parts List:

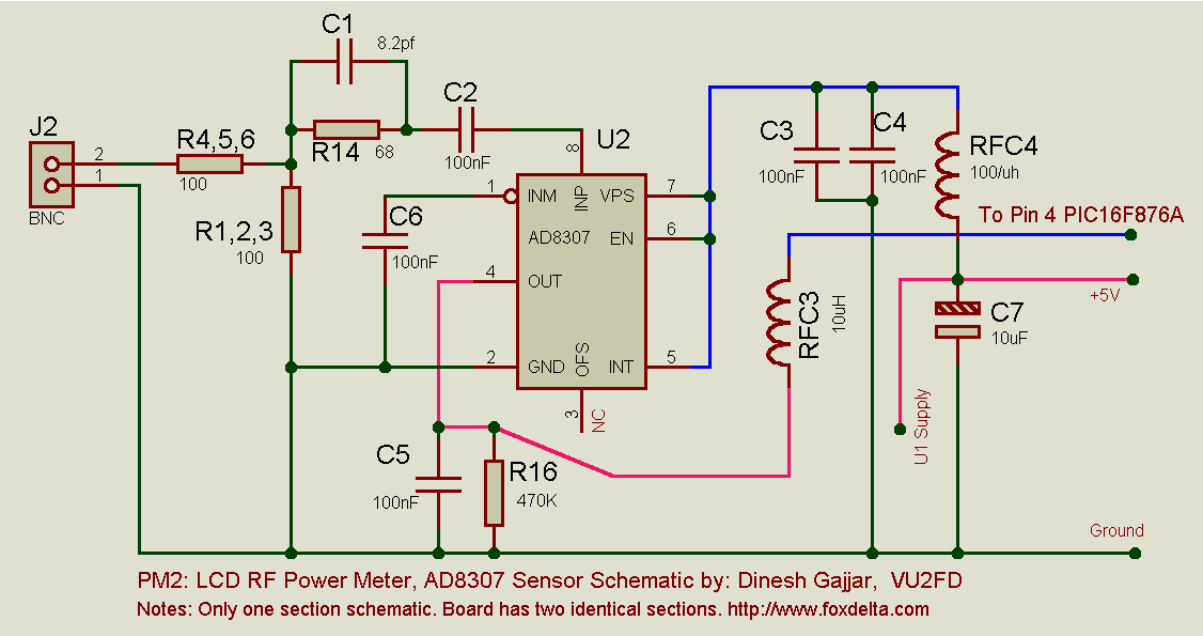
1	PIC16F876A
4	Push Buttons
2	Alum posts to support LCD
1	Double Sided PTH PCB "PM2"
1	7805 Regulator
1	Header Male 8pin for LCD BL
1	IC Socket 28Pin (PIC16f876A)
2	IC Sockets 8Pin (2xAD8307)
1	LCD 2x20 (includes male/female SIL headers)
1	4.000 MHZ Crystal
Parts	Capacitors, Resistors & Inductors as per schematic
Sensor	All components for dual channel sensor section are supplied with kit but without AD8307.

Schematic of the RF Power Meter: PIC section:



Note: C2 at the input of 7805 in above schematic is C21 on PCB.

Schematic of the LCD Power Meter: AD8307 Sensor Section:



PM2 PCB has dual channel inputs, means that there are two independent sections as detailed above, each using an AD8307 (not supplied with kits)

Table for equivalent component values on two sides of AD8307 sections:

	Input J2	Input J1
Resistors	R4, 5, 6	R10, 11, 12
	R14	R13
	R16	R15
	R1, 2, 3	R7, 8, 9
RFC	RFC3	RFC1
	RFC4	RFC2
Capacitors	C1	C12
	C2, 3, 4, 5, 6	C9, 10, 11, 13, 14
	C7	C8
IC	U2	U1

73s/Dinesh Gajjar
15th Dec 2006

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