



Fox Delta

Amateur Radio Projects & Kits

FD- SWM-HF

Schematic & Kit Parts List: PIC16F877A Micro Controller LCD HF 100W SWR Meter

Picture of the completed HF 100W LCD SWR/POWER Meter:



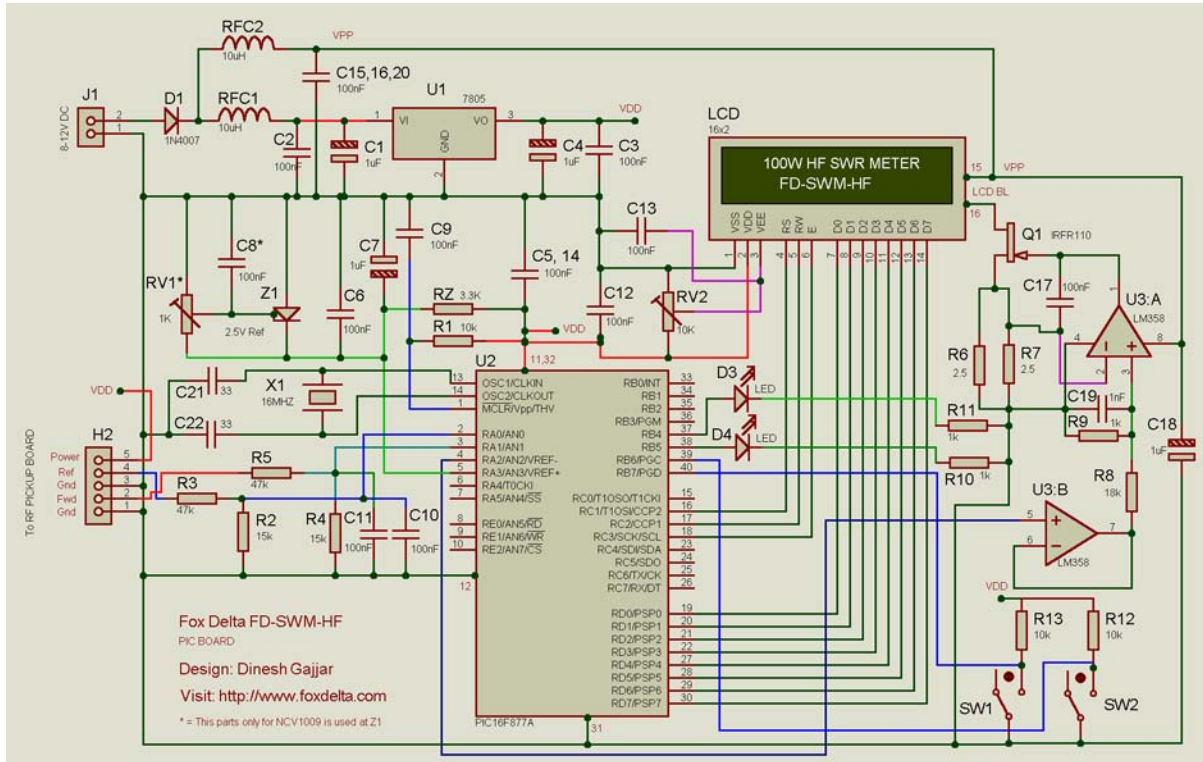
Picture without LCD Display & Function Switch PCB:



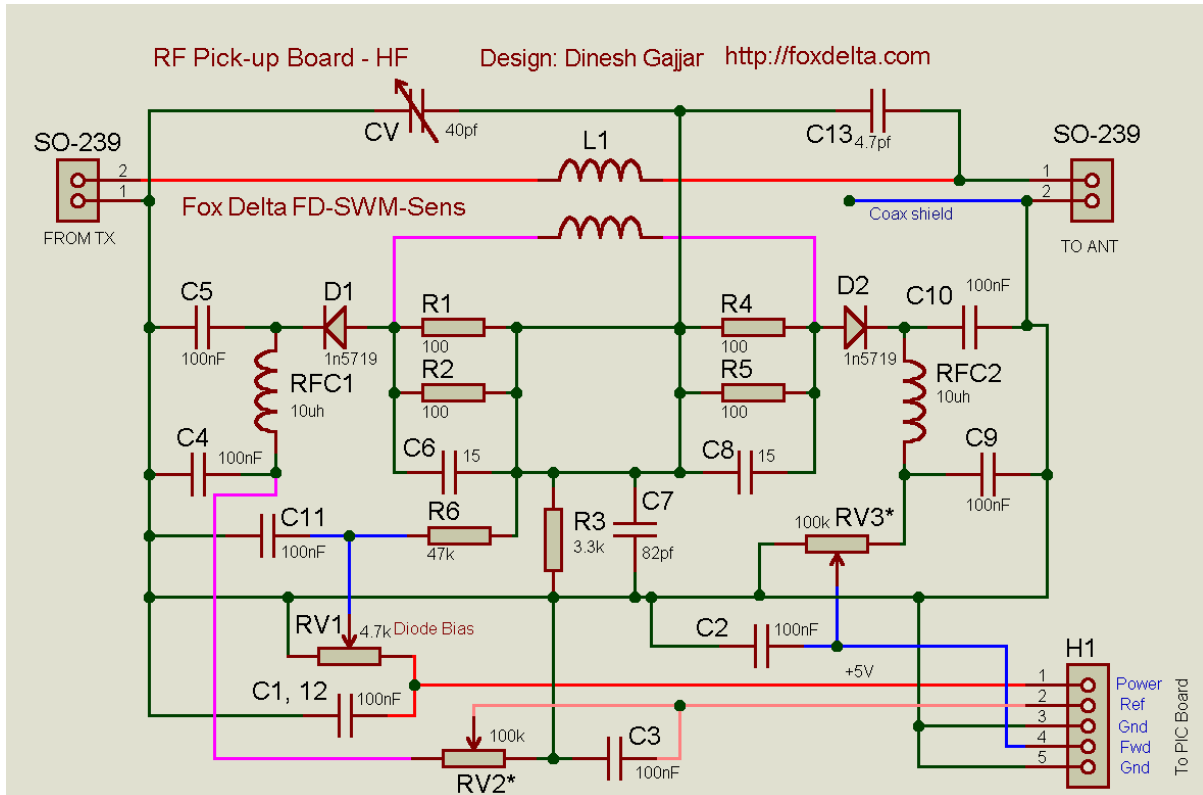
HF SWR Meter Kit Parts List: CPU & Keyboard:

Quantity	Part Detail
1	PIC16F877A DIP (Programmed) U2
2	Push Buttons with FD-SWM-HF-KB PTH PCB
3	LCD & KB Supports
1	Double Sided PTH PCB "SWM-HF"
1	7805 Regulator (U1)
1	IC Socket 40Pin (PIC16f877A)
1	IC Sockets 8Pin (LM358)
1	LCD 2x16 (with 16pin male/female SIL headers)
1	MCP6022 or LM358 Dual Op.Amp. DIP8 (U3)
1	NCV3055-104 or IRFR110 or Equi. MOSFET (Q1)
1	2.5V Reference Zener (Z1) LM285 or NCV1009
1	16.000 MHZ Crystal (X1)
1	DC Socket (J1)
Parts	Capacitors, Resistors & Inductors
2	10uh RFC (RFC 1, 2)
4	1uf Tantalum (C1, 4, 7, 18)
1	RV1 Preset, Bourns, 10T 1K (Only fitted if NCV1009 supplied)
1	Header H1 – 6pin
1	3.3K (RZ)
1	1N4007 (D1)
1	10K Bourns Preset (LCD BL) RV2
15	0.1uf Ceramic (All capacitors not listed elsewhere)
2	2.2 ohms (R6, 7)
3	1k (R9, 10, 11)
2	33pf Ceramic (C21, 22)
1	18K (R8)
2	15k (R2, 4)
2	47K (R3, 5)
1	10K (R1, 12, 13)
2	LED 3mm (Red, Green)

Schematic of the PIC16F877A Micro-controller board:



100W HF Directional Sensor/Bridge Schematic:



100W HF Sensor Bridge Parts List:

Quantity	Details
1	5k 10T Bourns preset (RV1)
2	100K 10T bourns preset (RV2, 3)*
1	L1: FT-50-43 core with 35 turns #24 wire
2	1N5719 Diodes
4	100 ohms (R1, 2, 4, 5)
1	47K (R6)
1	3.3K (R3)
2	SO239 Sockets (or N)
8	Brass bolts & nuts
1	82pf Ceramic (C7)
1	40pf Variable Capacitor (CV)
1	4.7pf 500V Disc Ceramic (C13)
1	RG174 coax 7cm long
2	15pf (C6, 8)
1	Double Sided PTH PCB FD-SWM-HF-Sens
2	47uh RFC (RFC1, 2)
9	0.1uf Ceramic

* Presets are options & fitted only if required for calibration.

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12th March 2008

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