



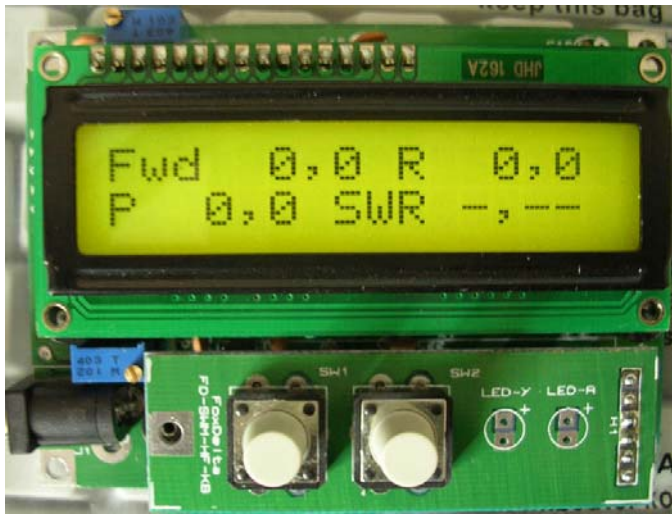
# Fox Delta

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:**

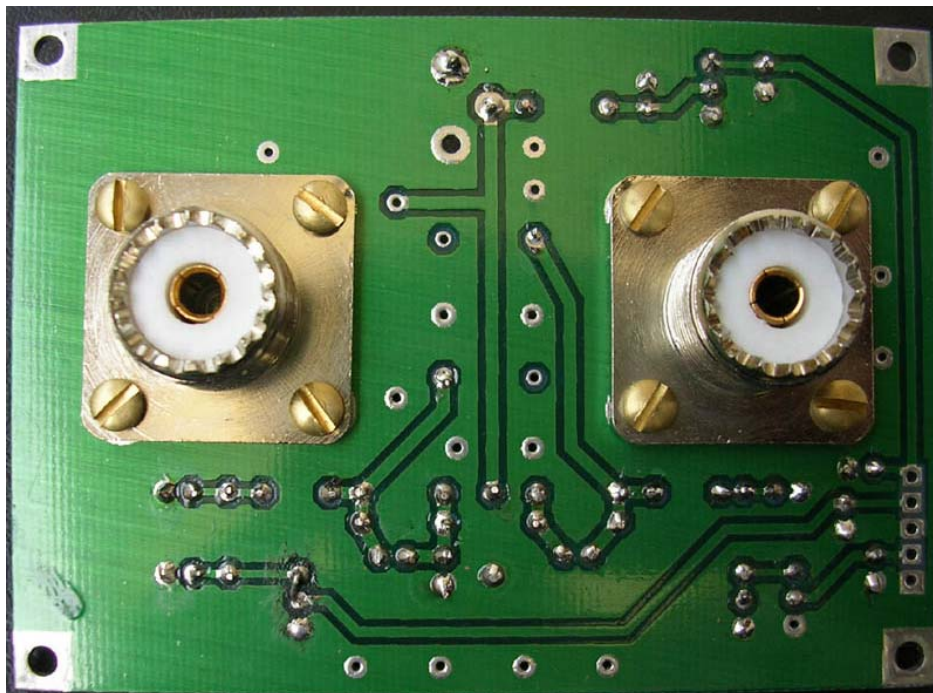
<b>Quantity</b>	<b>Part Detail</b>
1	<b>PIC16F877A DIP (Programmed) U2</b>
2	<b>Push Buttons with FD-SWM-HF-KB PTH PCB</b>
3	<b>Alum posts to support: 2 for LCD &amp; one for KB</b>
1	<b>Double Sided PTH PCB "SWM-HF"</b>
1	<b>7805 Regulator (or 78L05) ( U1 )</b>
1	<b>IC Socket 40Pin (PIC16f877A)</b>
1	<b>IC Sockets 8Pin (LM358)</b>
1	<b>LCD 2x16 (with 16pin male/female SIL headers)</b>
1	<b>LM358 Dual Op.Amp. DIP8 (U3)</b>
1	<b>NCV3055-104 or IRFR110 or Equi. MOSFET (Q1)</b>
1	<b>2.5V Reference Zener Diode (Z1)</b>
1	<b>16.000 MHZ Crystal (X1)</b>
1	<b>DC Socket (J1)</b>
<b>Parts</b>	<b>Capacitors, Resistors &amp; Inductors</b>
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)
2	1k (R12, 13)
2	33pf Ceramic (C21, 22)
1	1k (R9, 10, 11)
1	18K (R8)
2	15k (R2, 4)
2	47K (R3, 5)
1	10K (R1, 12, 13)
2	LED 3mm (Red, Green)



**100W HF Directional Sensor/Bridge:**



**Backside of HF Bridge with SO239:**

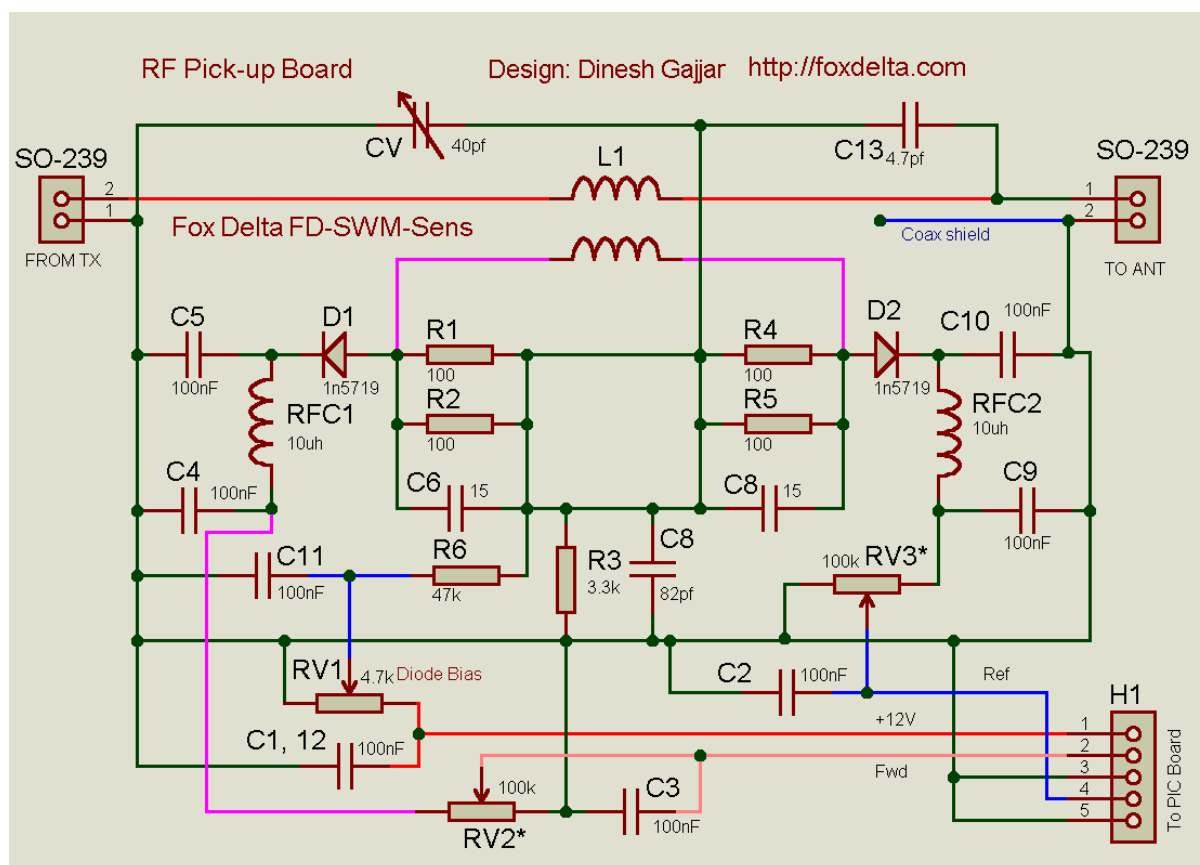


## 100W HF Sensor Bridge Parts List:

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
8	Brass bolts & nuts
1	82pf Ceramic (C7)
1	40pf Variable Capacitor (CV)
1	4.7pf 1000V Disc Ceramic (C13)
1	RG174 coax 7cm long
2	15pf (C6, 8)
1	Double Sided PTH PCB FD-SWM-HF-Sens
2	10uh RFC (RFC1, 2)
9	0.1uf Ceramic

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

## SCHEMATIC OF HF Pick-up Bridge Board:



Dinesh Gajjar  
27<sup>th</sup> March 2007

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