



Fox Delta

Amateur Radio Projects & Kits

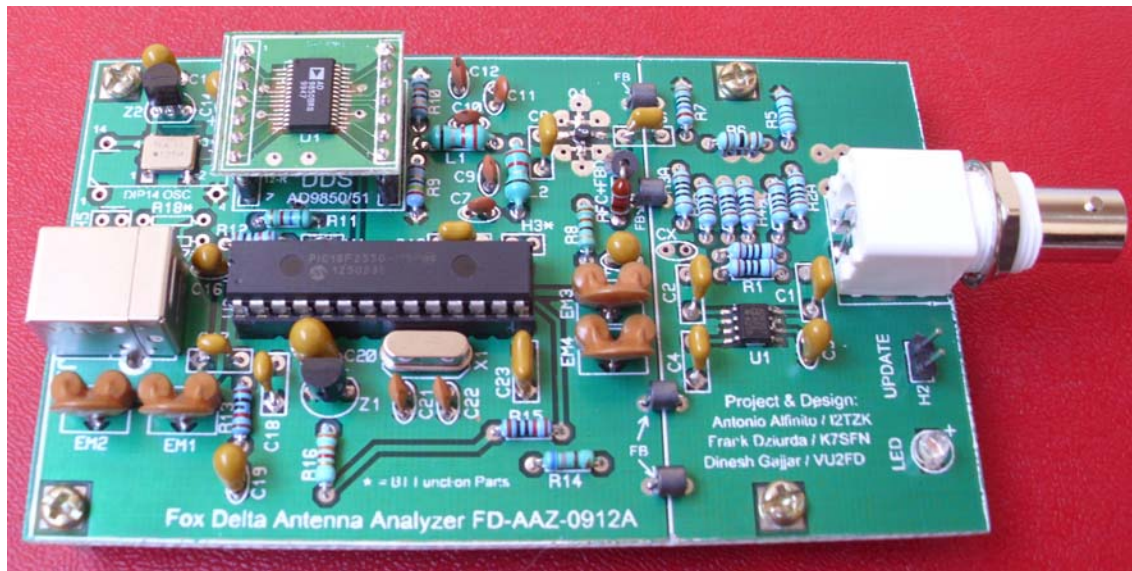
FD- AAZ-0912A

AAZ-0912A Specific Info Doc: HF PIC18F4550/4553 USB Antenna Analyzer

USB ONLY VERSION

AAZ- 0912A KIT: Full Kits and Assembled.

Includes AD9850, AD8307 and ERA3SM RF Amp are Pre-Soldered on board.

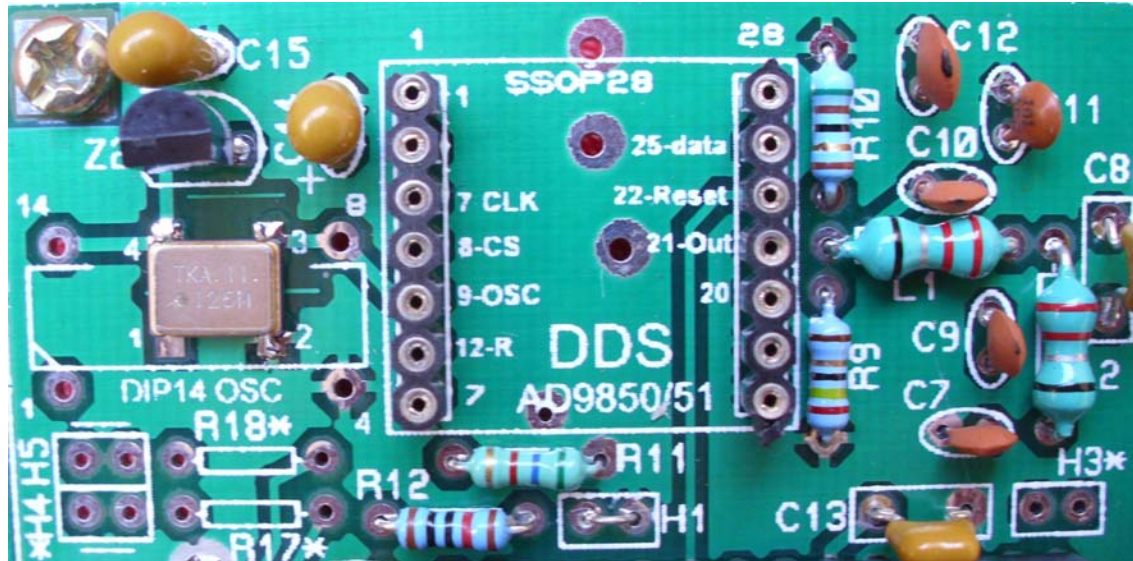


DDS Assembly:



Kits are supplied with AD9850 Pre-soldered on a carrier board for easy assembly. This plug-in module is tested for full HF range before dispatch with kits.

OSC and DDS area:



AAZ-0912A has possibility to use a standard DIP14 style Oscillator or an SMT OSC.

Use as follows:

AD9851 30MHZ DIP14 OSC
AD9850 125MHZ DIP14 OR SMT OSC

IF 125MHZ SMT OSC is used, we require 3.3V for that device. This is achieved by installing Z2 (LP2950 3.3V) regulator.

IF 125MHZ DIP14 Osc is used, you need to see its specification if it works on 5V or 3.3V. If OSC is 5V you may omit Z2 and place a jumper across.

If DIP14 OSC is 3.3V, Z2 is required to convert 5V to 3.3V.

Full Kits are supplied with SMT OSC and Z2 as visible in above picture.

DDS Module:

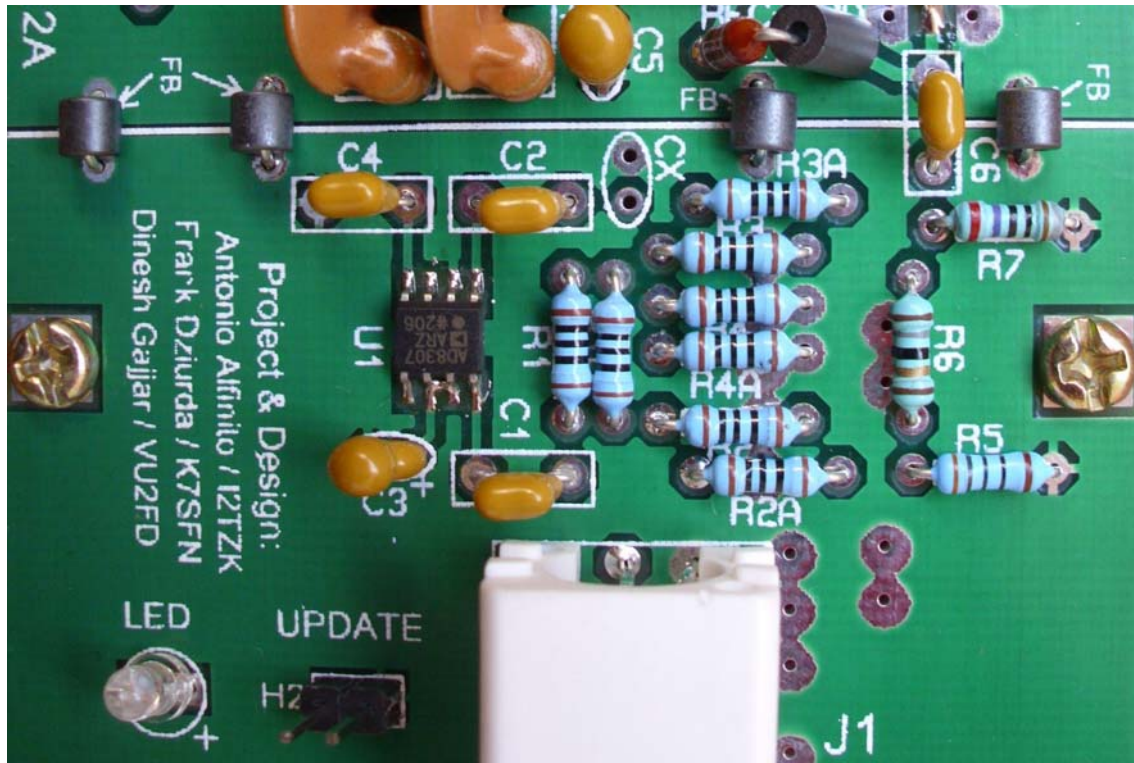
DDS module is supplied pre-soldered and pre-tested on HF bands.

AD9850 module is standard and that is what is supplied with kits or assembled.

Experimental Parts / Header on Board: NOT USED

R17, R18, H3, H4 and H5 are located on board but not used. Simply ignore these Locations/Parts

AD8307 and Return-loss Bridge:

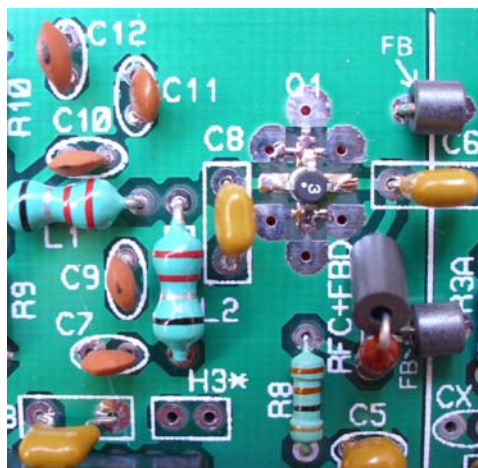


AAZ-0912A Full Kits and assembled are supplied with Pre-Soldered AD8307SO8.

Note the position of 4 ferrite beads supplied with kits.

CX is experimental capacitor and not supplied with kits.
Use a suitable value from 2pf to 4.7pf to fine tune bridge accuracy.

ERA3SM RF Amplifier:



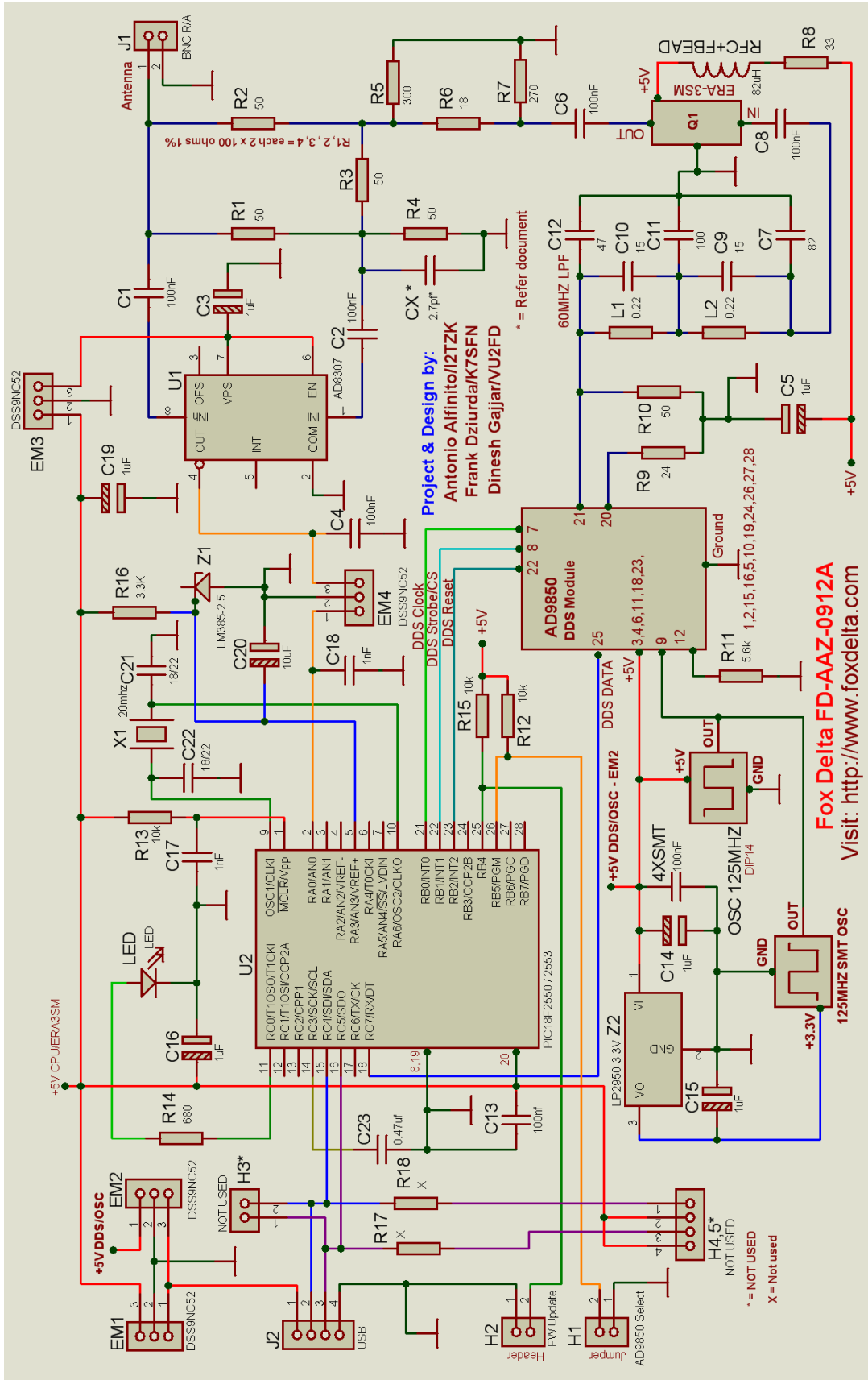
Q1, RF Amplifier is SMT part and is Pre-Soldered on board for Kits.

AAZ – 0912A KIT Parts List:

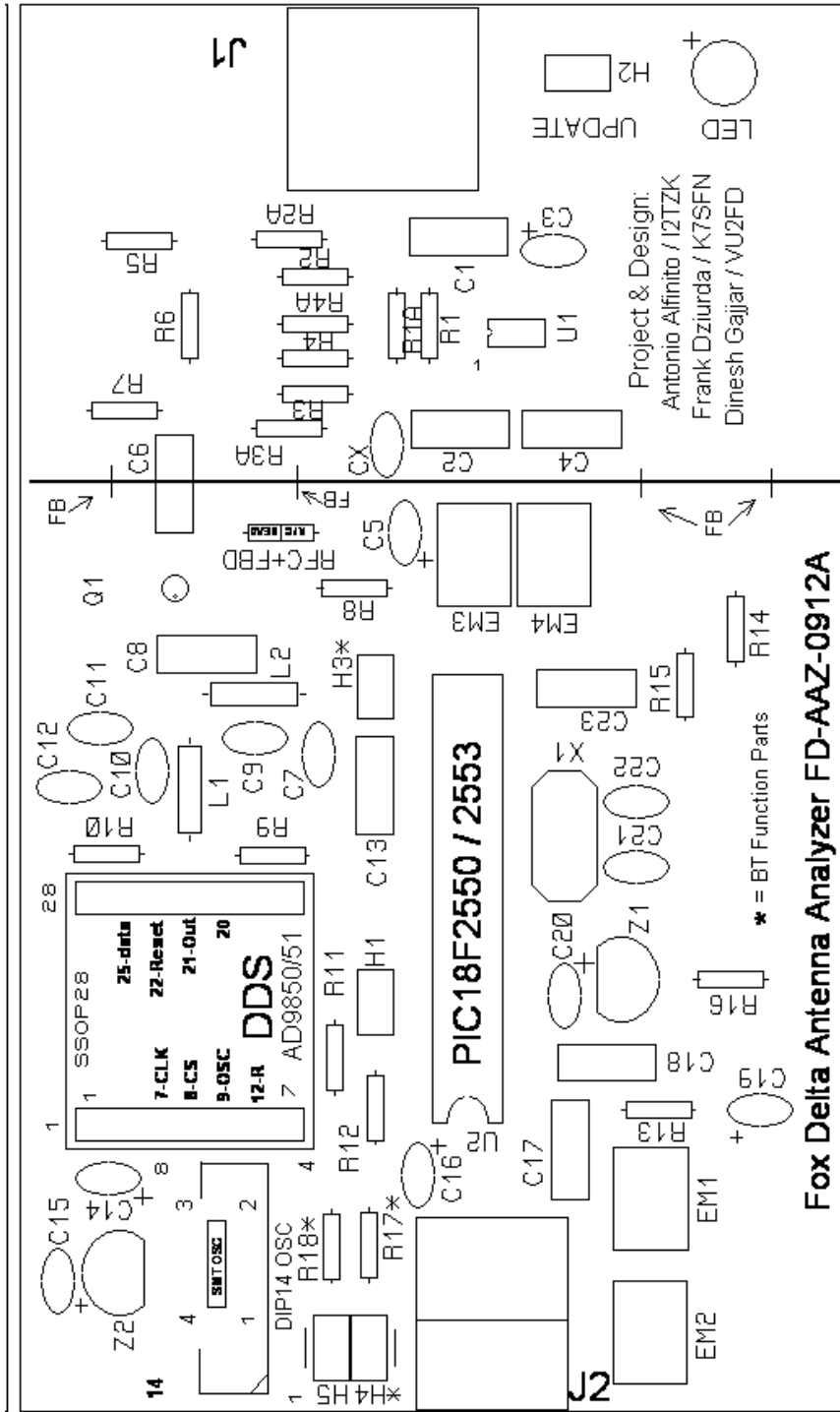
Quantity	Part ID	Part Details
1	U2	PIC18F2550 Pre-Programmed V5.00
1	AD9850 Adapter	AD9850 & SMT Caps are Pre-soldered
1	U1	AD8307 SO8 Pre-Soldered on Board
1	OSC	125MHZ SMT OSC 3.3V
1	X1	20MHZ Crystal HC49
1	LED	3mm LED
1	Q1	ERA3SM
1	IC Socket	28PIN DIP
1	PCB	FD-AAZ-0912 DSPTH PCB
1	Z1	LM-385-2.5V
1	Z2	LP2950-3.3V (only when SMT Osc is used)
4	EM1, 2, 3, 4,	DSS9NC
2	L1, 2	HF LPF Inductors / RFCs
1+1	RFC + Bead	82uH RFC+ 1 Ferrite Bead
1	J2	USB Socket, R/A, PCB Type
4	FB	4 X Ferrite Beads (Board Isolator)
1	J1	BNC R/A PCB
1	H2	2PIN Header (for FW Update)
NA	H1	Jumper (Short for AD9850)
X	H3, 4, 5	NOT USED
All Resistors ¼ W 5%		
1	R5	300 Ohms
1	R6	18 Ohms
1	R7	270 Ohms
8	R1/A, R2/A, R3/A, R4/A	100 Ohms
1	R8	33 Ohms
1	R9	24 Ohms
1	R10	50 Ohms
3	R12, 13, 15	10K
1	R11	5.6K
1	R14	680 Ohms
X	R17, R18	(Not part of this kit)
1	R16	3.3K
Capacitors		
2	C23	0.47uf Poly
2	C17, 18	.001uf Poly
6	C1, 2, 4, 6, 8, 13,	.1uf Poly
6	C3, 5, 14, 15, 16, 19	1uf Tantalum
2	C21, 22	18/22pf Ceramic
2	C20	10uF Tantalum
1	C7,	82pf Ceramic
2	C10, 9	15pf Ceramic
1	C12	47pf Ceramic
1	C11	100pf Ceramic

Q1, AD9850, AD8307 and SMT 125MHZ OSC** are pre-soldered on board
H1= Short for AD9850. Open for AD9851

AAZ-0912A Schematic:



AAZ-0912A COMPONENT SIDE SILK:



73s

Dinesh Gajjar

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For more information, please Visit: <http://www.foxdelta.com>