



**Fox Delta**

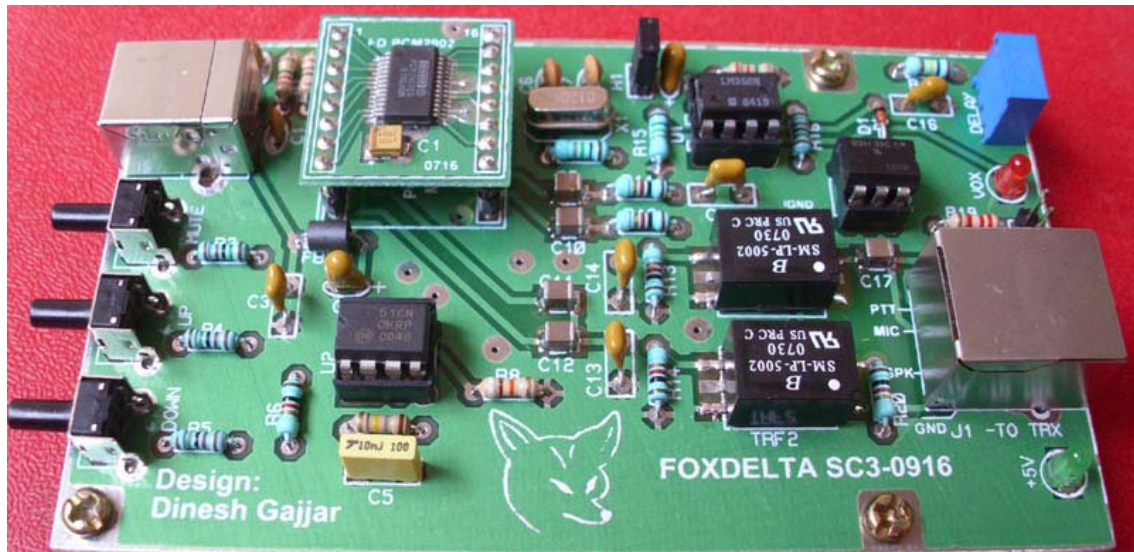
Amateur Radio Projects & Kits

**FD- SC3-0916**

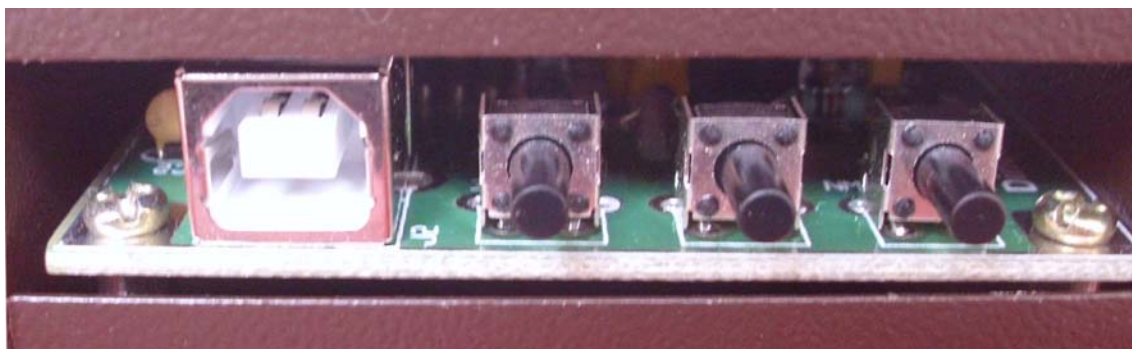
**Tech Info Document: SC3 PCM2902E based USB Sound Card Interface**

**SC3- 0916**

**Completed SC3 Interface:**



**SC3 USB Connection Side:**



**USB**

**Mute**

**UP**

**DOWN**

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**HID AUDIO CONTROL**

## Transceiver Connection Side:



+5V LED

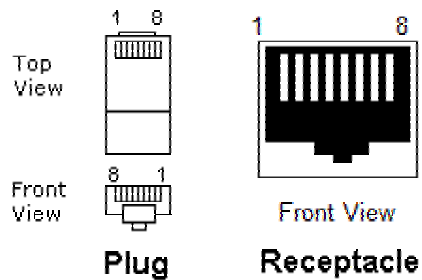
Transceiver

MIC/PTT

VOX LED

VOX DELAY

## RJ45 Connections J4 PINOUT and Details:

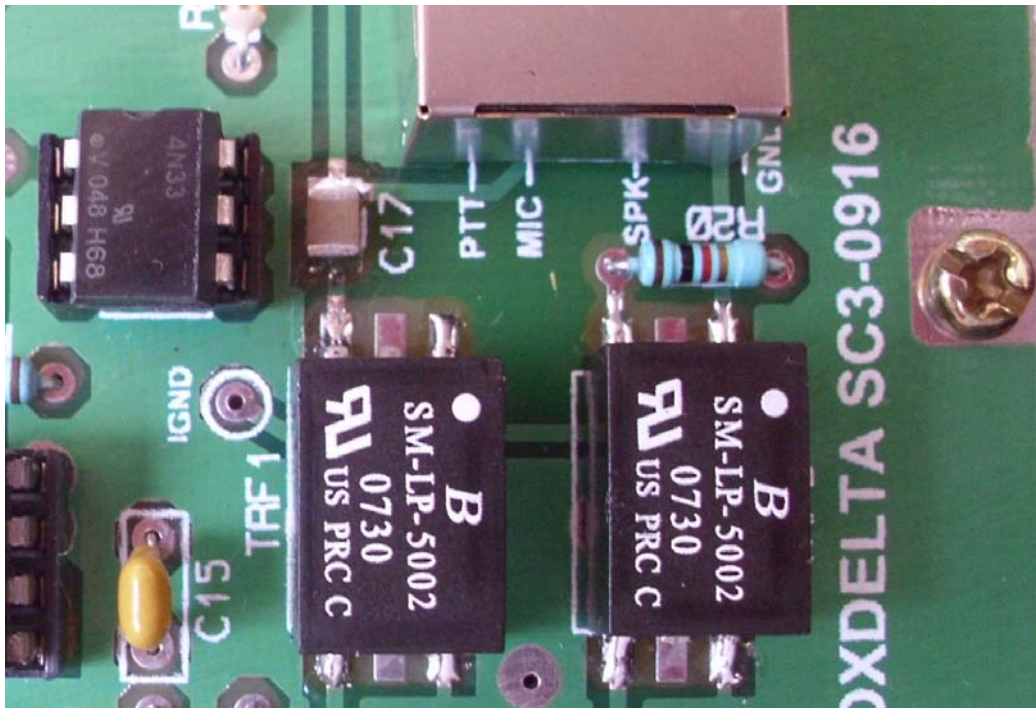


1, 3, 5,	GROUND (Transceiver Ground, Isolated from PC Ground)
2	Audio IN From Radio
4, 7	NC
6	Audio OUT to TRX MIC
8	PTT OUT

One un-crimped RJ45 Male is included with Kits or Assembled. Use a CAT5 cable to make a suitable cable for your radio.

### Isolation Transformers:

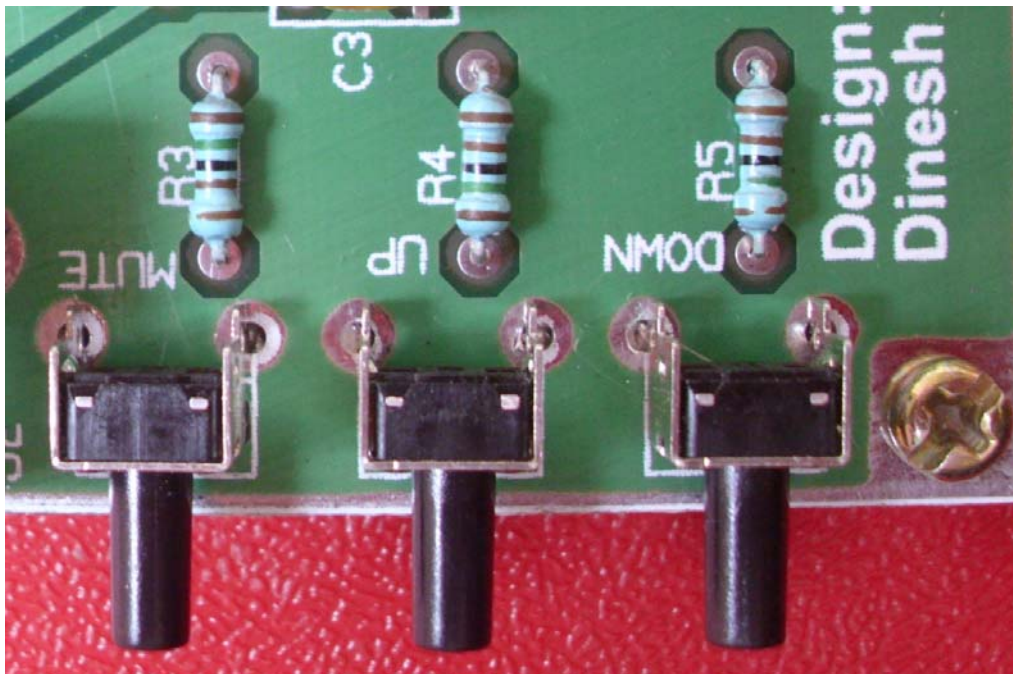
Two, 600 ohms, SMT, Bourns SM-LP-5002 Transformers are used for audio IN and OUT:



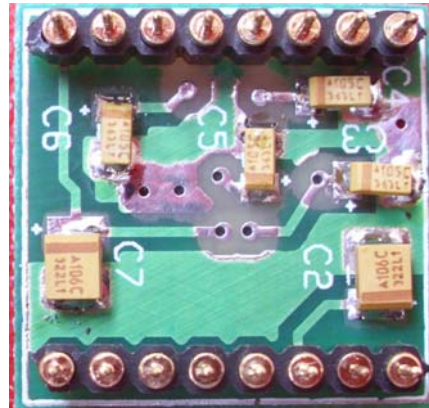
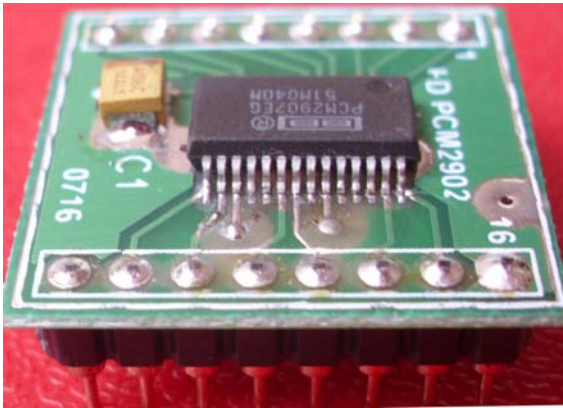
4N33 is used for PTT isolation.

R20 is supplied as 1K. Depending on amount of audio output available from your radio, you may change value of this resistor.

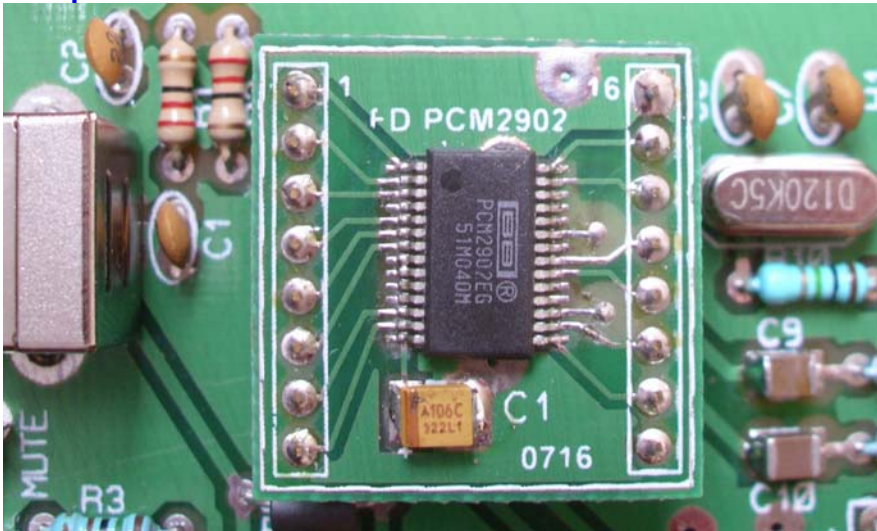
### HID Volume Control:



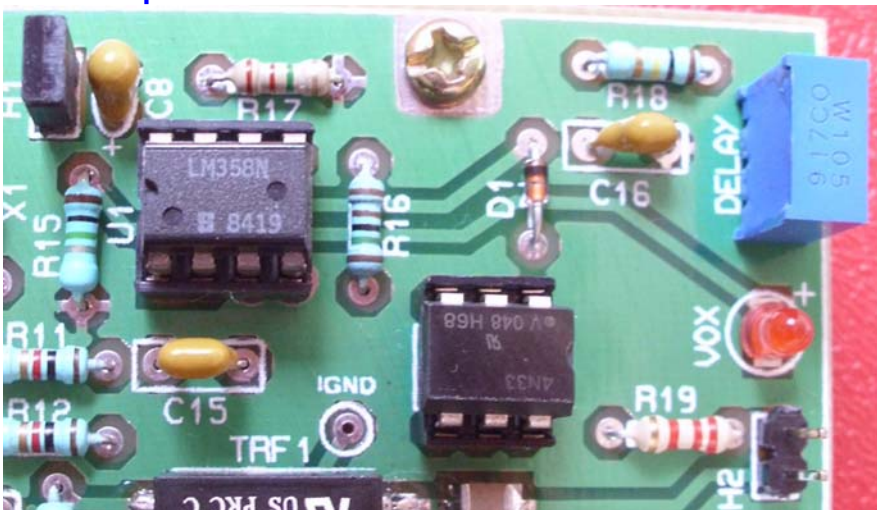
2902E SSOP28 chip is pre-soldered on a carrier board with all necessary decoupling capacitors and is supplied assembled and tested:



Completed M1 Module: Installed on Main PCB:



VOX Components:



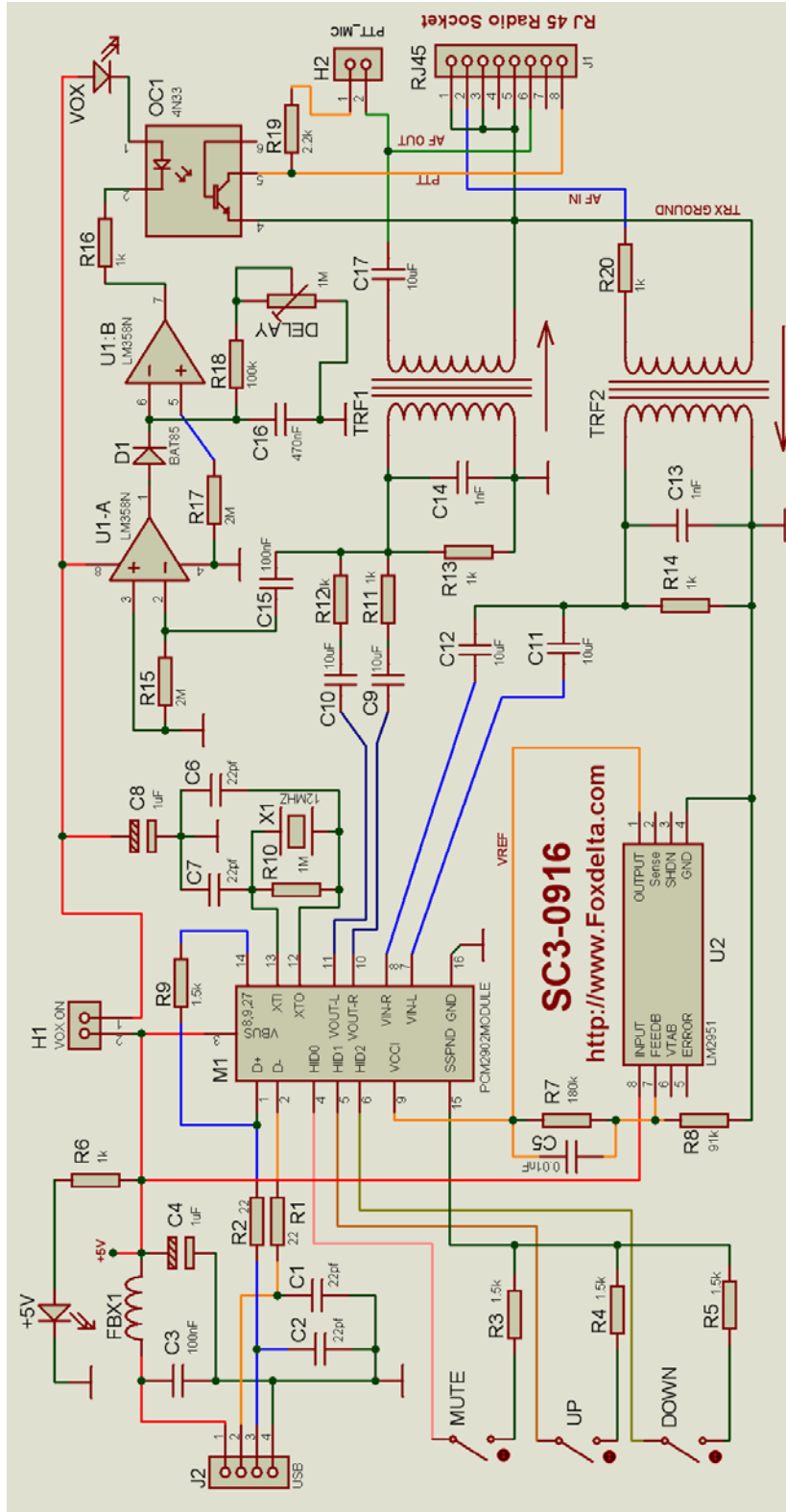
### SC3 0916 KIT Parts List:

Quantity	Part ID	Part Details
1	U1	LM358 DIP8
1	U2	LM2951 DIP8
1	M1	PCM2902E Assembled/Tested Module
1	PCB	SC3-0916 DSPTH PCB
1	Metal Case	Free metal case
1	Set	Hardware
1	OC1	4N33 DIP6
1	DIP6	Socket for 4N33
2	DIP8	Sockets for LM358 and LM2951
1	X1	12MHZ Crystal
1	J1	RJ45 PCB Socket
1	J2	USB PCB Socket
3	Mute/Up/Dwn	Push switches right angle
2	TRF1/TRF2	600 ohms isolation transformer Bourns SM-LP-5002
1	DELAY	1M Preset R/A
2	H1/H2	Headers with shorting pins
1	RJ45 Male	Un-crimped male connector to make transceiver cable
2	SIL9 Female	9pin solid brass female connector for M1
1	Case	Free Powder Coated Metal case
<b>Capacitors</b>		
4	C1, 2, 6, 7	22pf
1	C5	0.01uf Poly
2	C4, 8,	1uf Tantalum
2	C13, 14	0.001uf Poly
2	C3, 15	0.1uf Poly
1	C16	0.47uf Poly
5	C9, 10,11,12,17	10uf 1206 Poly
<b>Resistors</b>		
2	R1, 2,	22 ohms
4	R3, 4, 5, 9	1.5K
7	R6, 11, 12, 13, 14, 16, 20	1K
1	R7	180K
1	R8	91K
1	R10	1M
2	R15, 17	2M
1	R18	100K
1	R19	2.2K

#### Note:

1. M1 is supplied assembled and tested for kits
2. All SMT Parts are pre-soldered on PCB for kits

### SC3-0916 Schematic:



73s / Dinesh Gajjar  
7<sup>th</sup> October 2016

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