

N3ZI DDS VFO
Complete Kit, Bill of Materials

Part	Qty	Description / Appearance	Designator	Source	Approx Cost (single Piece)
Micro ATMEGA168	1	28 Pin Dip	U1	N3ZI (Included in Bare Bones Kit	
Circuit Board	1	N3ZI DDS	PCB	N3ZI (Included in Bare Bones Kit	
13.44 MHz XTAL	1	Marked ECXR3392	XTAL	N3ZI (Included in Bare Bones Kit	
Oscillator	1	Metal can 50MHz	U3	N3ZI (Included in Bare Bones Kit	
DDS Chip AD5932	1	Tiny 16 pin TSSOP	U2	Analog Devices, Digikey	\$0.00
Socket	1	28Pin DIP socket	U1	Digikey, Mouser, Jameco	\$0.50
LCD	1	KTM-S1201	J5 LCD	Substitute any 44870 Type display sold on Ebay	\$5.00
.01uF Capacitor	4	Yellow 103	C1,C2,C3,C6	Digikey, Mouser, Jameco	\$0.10
0.05 Capacitor	2	Brown .05	C8, C10	Can Subs 0.1 Digikey, Mouser, Jameco	\$0.10
0.1uF Capacitor	3	Blue or Yellow 104	C11, C12, C15	Digikey, Mouser, Jameco	\$0.10
27pF Capacitor	2	Orange 27	C13, C14	Cubs Subs 18 to 33pF Digikey, Mouser, Jameco	\$0.25
Electrolytic Cap	1	Black Radial	C9	Value not critical Digikey, Mouser, Jameco	\$0.25
68pF Capacitor	2	Brown Square 68	C4, C7	Digikey, Mouser, Jameco	\$0.10
150pF Capacitor	1	Orange 151	C5	Digikey, Mouser, Jameco	\$0.10
1.5uH Inductor	2	Tan or Green body, with Brown, Green stripes	L1,L2	Digikey, Mouser, Jameco	\$0.50
Volt Reg	1	TO-220 7805	U4	Digikey, Mouser, Jameco	\$1.00
Diode	1	Black epoxy	D1	Digikey, Mouser, Jameco	\$0.10
Signal Diode	1	Glass	D2	Digikey, Mouser, Jameco	\$0.10
2N4124	2	To-92 2N4124	Q1,Q2	Can Substitute ay NPN, 2N2222, 2N3904 Digikey, Mouser, Jameco	\$0.25
47K Resistor	2	Yellow, Purple, Orange	R2,R4	Value not critical 22K tio 68K OK	\$0.10
4.7K Resistor	1	Yellow, Purple, Red	R3	Value not critical 2.2K tio 6.8K OK	\$0.10
10K Resistor	1	Brown, Black, Orange	R6	Can use Fixed 10K or Pot,	\$0.10
Encoder	1		R-ENC	Use Bourns PEC11-4020F-S0024 Stocked at Mouser	\$1.25
Pushbutton Switch	2		SW1,SW2	Any	\$0.25
RCA Jack	1		J1	Any	\$0.50

For those who are considering the bare bones kit, I am supplying this information as to the source of the other parts needed, suggested sources and estimated cost to you. Most of these parts are not very critical and substitutions can be made.

WWW.PONGRANCE.COM