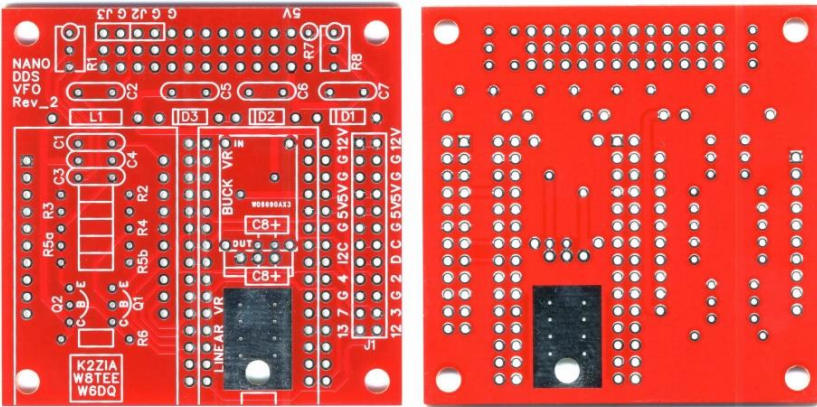


## Nano DDS VFO Kit Rev\_2 (3 – 30 MHz)

by Farrukh Zia (K2ZIA), Jack Purdum (W8TEE) and Dennis Kidder (W6DQ)

Based on the original design in *Arduino™ Projects for Amateur Radio* by Dr. Jack Purdum and Dennis Kidder

### Nano DDS VFO Rev\_2 Printed Circuit Board (Top and Bottom View) (Size 2.4x2.4 inches)

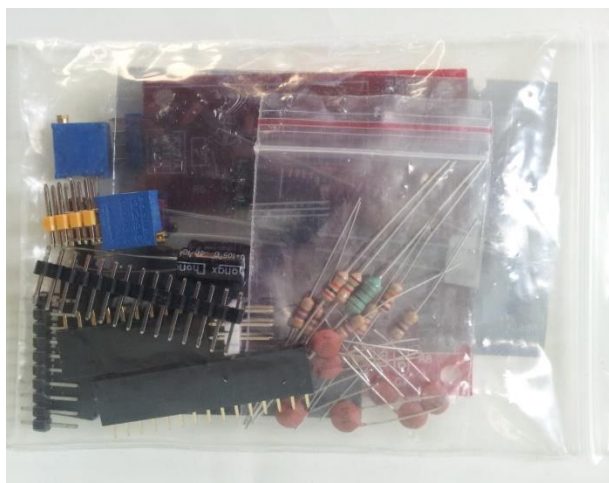
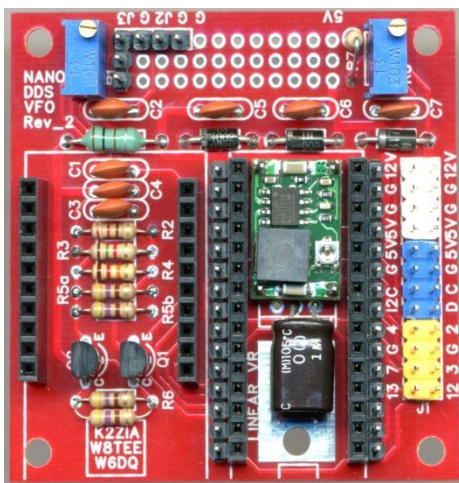


Nano DDS VFO PCB Only: \$ 4.95

Packaging and Domestic First Class Postage: \$ 2.00

Total: \$ 6.95

Packaging and USPS first class international mailing charge to *all other countries* is **US\$ 15.00**, for up to 8 PCBs. It will take 10 to 15 days from date mailed to delivery.



SN	Item Name	Schematic & PCB Reference	Kit Quantity
1	Printed Circuit Board	PCB	1
2	Header-socket-10pin	U3 socket	2
3	Header-socket-15pin	U2 socket	2
4	Header-pins-2x4-white	J1-A	1
5	Header-pins-2x4-yellow	J1-B	1
6	Header-pins-2x4-blue	J1-C	1
7	Header-pins-1x4-black	U1,J2,J3	2
8	Volt-Reg-Mini-360	U1	1
9	Transistor-2N2222A	Q1,Q2	2
10	Diode-1N4001	D1,D2,D3	3
11	Inductor-100uH	L1	1
12	Capacitor-100nF-50V	C1 thru C7	7
13	Capacitor-100uF-25V	C8	1
14	Resistor-TrimPot-10k	R1,R8	2
15	Resistor-220-1/4W	R2	1
16	Resistor-1k5-1/4W	R3	1
17	Resistor-12k-1/4W	R4	1
18	Resistor-470-1/4W	R5a,R5b	2
19	Resistor-470-1/4W	R6a,R6b	2
20	Resistor-20k-1/4W	R7	1

Nano DDS VFO PCB and Basic Parts Kit (all parts seen on assembled PCB in the picture): \$ 10.95

Packaging and Domestic First Class Postage: \$ 4.00

Total: \$ 14.95

Packaging and USPS first class international mailing charge to *all other countries* is **US\$ 15.00**, for up to 4 PCB + Basic Parts Kits. It will take 10 to 15 days from date mailed to delivery. For larger quantities, please inquire by email.

*Buyer has to assemble and solder the parts on the PCB according to the schematic diagram and instructions in the Nano DDS VFO Assembly Manual. Nano Arduino Module, AD9850 DDS Module, I<sup>2</sup>C LCD and Rotary Encoder are NOT included in the above kit. These additional items along with a suitable 12V power supply are needed to make a working DDS VFO. They can be bought from eBay and other online sellers. See Assembly Manual for suitable recommendations.*

*The Nano DDS VFO Assembly and Technical Reference Manual as well as an online link to download the control program software is available from web site ([www.farrukhzia.com/k2zia](http://www.farrukhzia.com/k2zia)) or by email ([farrukh.zia@usa.net](mailto:farrukh.zia@usa.net))*

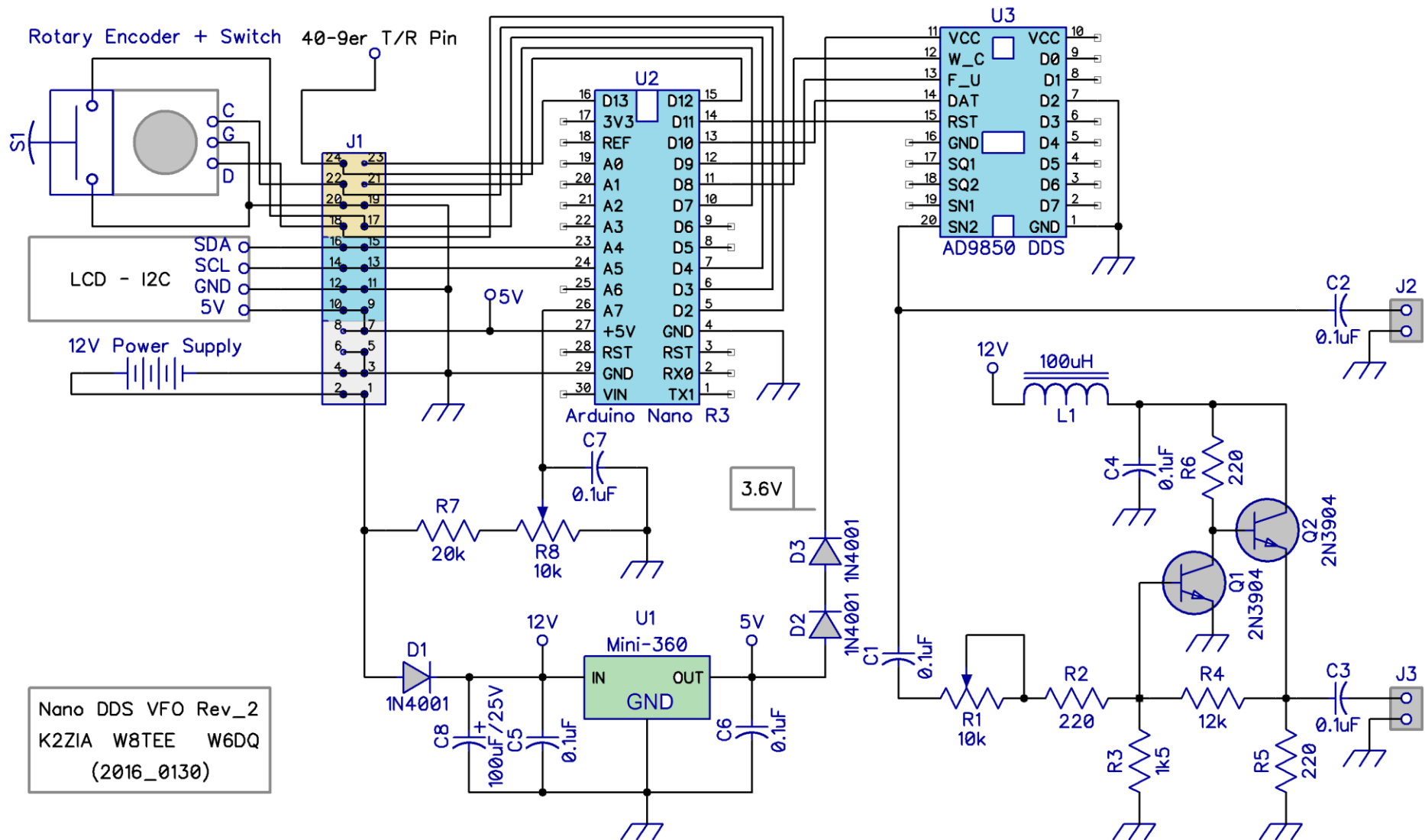
Payment can be made by check, money order or PayPal to Farrukh Zia.

Please include your postal shipping address, valid email address, and PCB/Kit quantity with your payment.

Mailing address for check or money order: **Farrukh Zia, 799 Carpenter Rd, North Brunswick, NJ 08902, U.S.A.**

PayPal Payment ID email address: [farrukh.zia@usa.net](mailto:farrukh.zia@usa.net)

For **domestic** orders, PayPal sends auto email to buyer's email address with tracking and delivery information.



R2,R3,R4,R7 are ¼ Watt; R5,R6 are 220 Ohm ½ Watt (or two 470 Ohm ¼ Watt in parallel)

After the DDS VFO board is fully populated, but **BEFORE** the Nano and DDS modules are plugged into their socket headers, the output of the Mini-360 adjustable buck regulator **must be adjusted to 5.0V**. For this adjustment, connect 12V DC power to J1 pins 2 and 4 using suitable Dupont jumper wires, connect DMM probes to the 5V and G (Ground) pads near one side edge of the VFO PCB (see picture above). Slowly **rotate the tiny round trimmer potentiometer on the Mini-360 module** with a jeweler's Philips screw driver until you measure almost exactly 5.0 V on the DMM.