INTRODUCTION

Thank you for purchasing the matching VEC-820KC Enclosure Kit. The VEC-820KC is the all metal case for the VEC-820K CW Filter Kit. The VEC-820KC consists of the full metal enclosure and all necessary hardware, including rubber feet for making the installation of the VEC-820K quick and easy.

TOOLS AND SUPPLIES

Universal Kit-building Tools: Although your particular kit may require additional items to complete, virtually all construction projects require a work area outfitted with the following tools and supplies:

- ☐ 30-60 watt Soldering Iron
- ☐ High-temperature Iron Holder with a Moist Cleaning Sponge
- ☐ Rosin-core Solder (thin wire-size preferred)
- ☐ Needle Nose Pliers or Surgical Hemostats
- ☐ Diagonal Cutters or "Nippy Cutters"
- ☐ Wire Strippers
- ☐ Solder Sucker, Vacuum Pump, or Desoldering Braid
- ☐ Bright Desk Lamp
- ☐ Magnifying Glass
- ☐ 1/4" Nut Driver
- ☐ Small Phillips Screwdriver
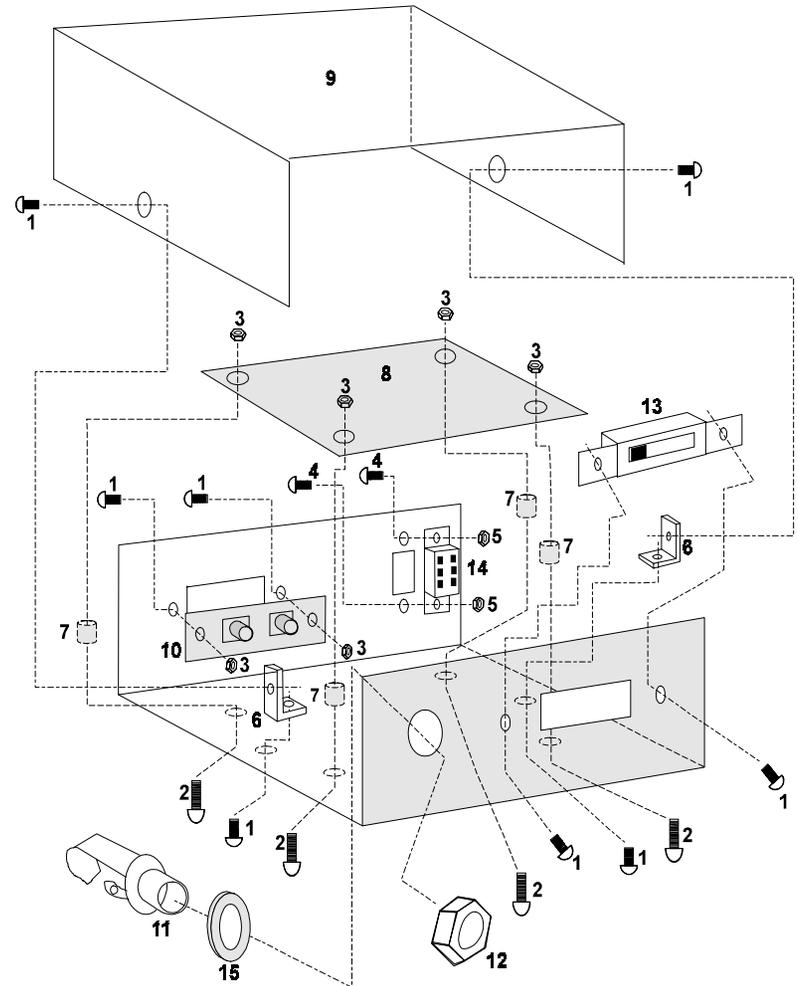- ☐ 7/16" and 1/2"open end wrenches

PARTS LIST

The Parts List below is for the VEC-820KC. Please inventory all parts before beginning case construction.

Parts List

☑	Qty.	Part Description
☐	1	VEC-820K Cabinet Chassis
☐	1	VEC-820K Cabinet Cover
☐	1	Kit Decal Set; VEC-820
☐	1	Flat Metal Washer; .416"x.625"x.062"
☐	1	9MM Hex Nut
☐	2	2-56 x 3/16" Machine Screws
☐	2	2-56 Hex Nuts
☐	6	4-40 Hex Nuts
☐	1	Slide Switch; DPDT, 125VAC 3 Amp
☐	1	1/4" Mono Phone Jack
☐	1	Screw-on terminal Strip
☐	1	Angled Solder Lug
☐	1	1" x 1" Double -Sided Tape
☐	4	Round Rubber Feet
☐	2	Small Tapped "L" Brackets
☐	6	4-40 x 3/16" Phillips Machine Screws
☐	4	#4 x 3/16" Round Aluminum Spacers
☐	4	4-40 x 1/2" Phillips Machine Screws

In addition to the above pieces of hardware, you should still have a thin steel flat washer, a 3/8" hex nut and the screws for the slide switch wired to the circuit board. These parts were left over from the VEC-820K kit. You were asked not to discard them, that they will be needed when you installed the circuit board in an enclosure. If possible, you need to locate them.

PARTS PLACEMENT DIAGRAM

1. 4-40 x 3/16" Machine Screws
2. 4-40 x 1/2" Machine Screws
3. 4-40 Hex Nuts
4. 2-56 x 3/16" Black Machine Screws
5. 2-56 Hex Nuts
6. "L" Bracket
7. #4 x 3/16" Spacer
8. Circuit Board

9. Top Cover
10. Terminal Board; Screw Type
11. 1/4" Phone Jack
12. 9MM Hex Nut
13. 4P4P Slide Switch; SW1
14. 2P2P Slide Switch; SW2
15. .416 x .625 x .062 Flat Steel Washer

STEP-BY-STEP ASSEMBLY

To install your filter in the VEC-820KC matching enclosure follow these instructions *(read **all** instructions before beginning ... take your time)*:

Installing the Circuit Board

Please refer to the Parts Placement diagram for hardware locations.

☐ ☐ 1. Find the front and the rear panel decal; separate using scissors. Put the rear panel decal on first. This is done by: **a.)** Remove all debris and oil from the chassis. This should be done using a piece of cloth and alcohol. **b.)** Remove the crack and peel to expose the adhesive. **c.)** Place the decal on the rear panel without securing it completely. **d.)** Gently rub the alignment circles and/or rectangles with your finger--if the circles and/or rectangles are centered in the enclosure holes (also check the corner alignment marks) secure the decal by rubbing and removing all air bubbles. **e.)** If the alignment circles and/or rectangles are not centered, adjust the decal accordingly then secure. **f.)** Use a penknife, or small Exacto™ knife, to cut away the unused edges and cut out the component holes. **g.)** Repeat this procedure for the front panel.

☐ ☐ 2. Desolder and remove the RED battery snap lead from the VCC point on the circuit board. Make sure the hole where the RED battery snap wire was is completely clear of solder.

☐ ☐ 3. Insert one end of a 1 1/2" insulated wire into the hole at the Point labeled VCC on the circuit board. Solder in place and trim the excess lead.

☐ ☐ 4. Place the bottom chassis in front of you with the round hole in the front panel facing you.

☐ ☐ 5. Install the two L-brackets on the chassis using two of the 4-40 x 3/16" machine screws (1). The longer side of the L-bracket must be connected to the chassis using the two holes centered on each edge of the enclosure. Refer to the diagram on the previous page for location and orientation.

☐ ☐ 6. Mount the circuit board in the chassis. Remember, the large slide switch already wired to the board goes into the slot next to the round hole in the front panel. Mount the board a follows: **a.)** Insert the 4-40 x 1/2" machine screws (2) into the holes in the chassis, then sit the chassis on the table so the screws do not fall out. **b.)** Slip one #4 x 3/16" spacer (7) over each screw. **c.)** Sit the board down onto the screws, making sure the knob on the large slide switch is inserted into

it's slot. **d.)** Install the angled solder lug on the screw at the left rear corner of the board. **e.)** Secure the board to the screws using four 4-40 hex nuts (3) and tighten.

☐ ☐ 7. Secure the large slide switch (SW1) using two 4-40 x 3/16" machine screws (1) that came with the VEC-820K kit. Tighten the screws in place.

☐ ☐ 8. Install the small slide switch (SW2) to the rear panel using two 2-56 x 3/16" black machine screws (4) and two 2-56 hex nuts (5). Orient the switch so the black knob is extending out the back of the rear panel.

☐ ☐ 9. Install the 1/4" mono phone jack (11) as follows: **a.)** Slip the flat steel washer (15) over the threaded end of the jack. **b.)** Install the threaded end of the jack from the inside of the chassis, through the front panel hole. **c.)** Position the jack so as it is shown in the Parts Placement diagram. **d.)** Secure the jack to the front panel using the 9mm hex nut (12).

☐ ☐ 10. Install the screw-type terminal board (10) into the horizontal slot on the rear panel using two 4-40 x 3/16" machine screws (1) and two 4-40 hex nuts (3). Install the terminal board from the inside of the chassis.

Wiring the Enclosure

You must position the enclosure so the front panel is facing you. For the following point-to-point wiring steps you will also need the VEC-820K manual to locate some of the reference points mentioned.

☐ ☐ 1. Locate the insulated wire connected to Point A on SW1. Connect it to the right solder lug on the terminal board. The right lug is the one closest to SW2. Solder in place.

☐ ☐ 2. Locate a piece of 3" insulated wire. Cut a piece 1" long and remove a ¼" of the insulation from each end.

☐ ☐ 3. Connect the 1" insulated wire between the left most lug on the terminal board and the angled solder lug located on the board. Solder both ends of the wire in place.

☐ ☐ 4. Locate another 3" piece of insulated wire. Cut a piece 2¼" long and remove a ¼" of the insulation from each end.

☐ ☐   5. Connect the 2¼" wire between the short lug on the ¼" phone jack and the solder lug located at Point C. Solder both ends of the wire in place.

☐ ☐   6. Wire the filter ground by: **a.)** Remove the BLACK battery wire from the point labeled GND on the PC board. **b.)** Insert one end of the an insulated wire (3 3/4" long) into the hole at the point labeled GND on the PC board, then solder in place. **c.)** Connect the other end of the insulated wire, at point GND, to the angled solder lug. **d.)** Connect the BLACK battery snap wire to the angled solder lug. **e.)** Solder all wires connected to the angled solder lug.

☐ ☐   7. Locate C11 which is already connected to SW1. Connect the negative end of C11 to the long lug on the ¼" phone jack. Solder in place.

Important Note: There are two vertical rows of solder contacts on the backside of SW2. You can use either vertical row, but *only use one row.*

☐ ☐   8. Locate the insulated wire on the circuit board at the point labeled VCC. Connect this wire to the middle lug on SW2 as shown in the figure below:
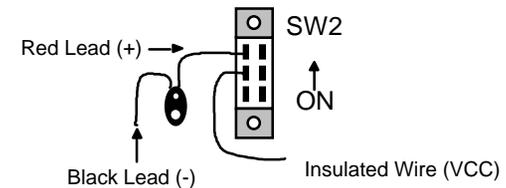
☐ ☐   9. Connect the RED battery snap wire to the top lug on SW2 as shown in the above figure. Solder this wire and the one from step #8.

☐ ☐ 10. Locate the four (4) rubber feet. Remove each of them from the adhesive strip one at a time and stick at each corner on the bottom of the chassis. These are to keep the VEC-820K from sliding around on the desktop.

☐ ☐ 11. Locate the piece of double-sided tape . This is to be used for holding the 9-volt battery in place. Locate a place on the underside of the top cover where the battery will not interfere with any components. Peel off the backing of the tape and stick it to the chosen location.