SERGE MODULAR MUSIC SYSTEMS

Dual Octave Switcher Modification

Parts for Modification

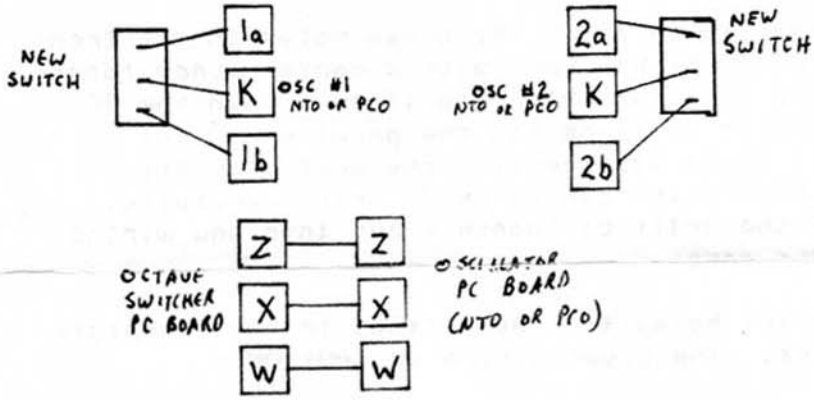
2 3-position single pole switches
2 Shoulder Washers

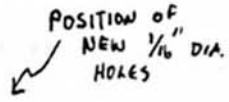
56" #22 Insulated Hook-Up Wire (stranded)

4 196 K 1% Precision Resistors (brown-white-blue-red-brown)
4 280 K 1% Precision Resistors (red-grey-black-orange-brown)
4 22.1K 1% Precision Resistors (red-red-brown-red-brown)
4 10 K Trimmer Potentiometers

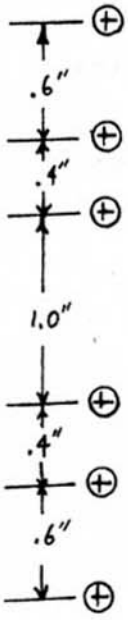
2 1/2" Standoffs
4 4-40 Screws
2 Lockwashers
2 Flat Washers

1 Octave Switcher PC Board





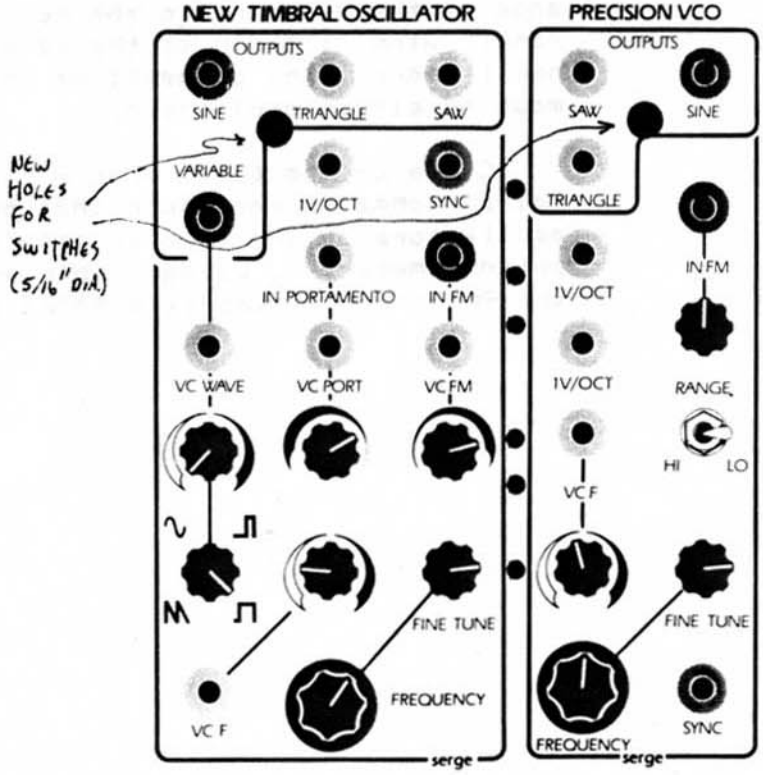
FRONT PANEL HOLES



.4" ≃ 13/32"

.4" ≃ 19/32"

USE 1/16" DRILL BIT



The Printed Circuit board should be assembled as shown in the diagram. Components are mounted on the side without the square pads, and are soldered on the sides with the square pads. Be careful to avoid causing solder shorts between close pads. Cut the leads after soldering is complete. The leads should be cut as close to the solder itself, without cutting into the solder. Leads should not be long enough that they will bend over to short out against other traces or wires.

The Pc board will mount between two oscillators, and depicted by the position of the holes between the MTO and PCO in the diagram. It does not matter whether the oscillators are MTO's or PCO's, the hook ups are the same.

The first step is to drill the 6 new holes in the front panel. Use a 1/16" drill bit, and with a center punch locate and punch the hole positions before drilling. Open the PC Rack of the assembled unit and lay the panel on a flat surface. A drill press will provide the most accurate drilling, but a hand drill can be used. Drill carefully, making sure that the drill bit doesn't cut into any wiring on the rear of the panel.

Drill two 5/16" holes for the switces in the faceplate of the Oscillators. The keyword here is CAUTION.

Mount the PC board on the two stand-offs on the extreme ends of the PC board to the new outer holes in the front panel. Wire as shown to the pads on the adjacent oscillators. The connections to the X, Y, and W pad can be made to either oscillator.

Close up the panel when wiring is complete and test the new switches to make sure that they will switch the oscillators up and down an octave. Calibrate the potentiometers by using a thin adjustment screwdriver from the front panel. (Xcelite #3322 or #3323 work well.)