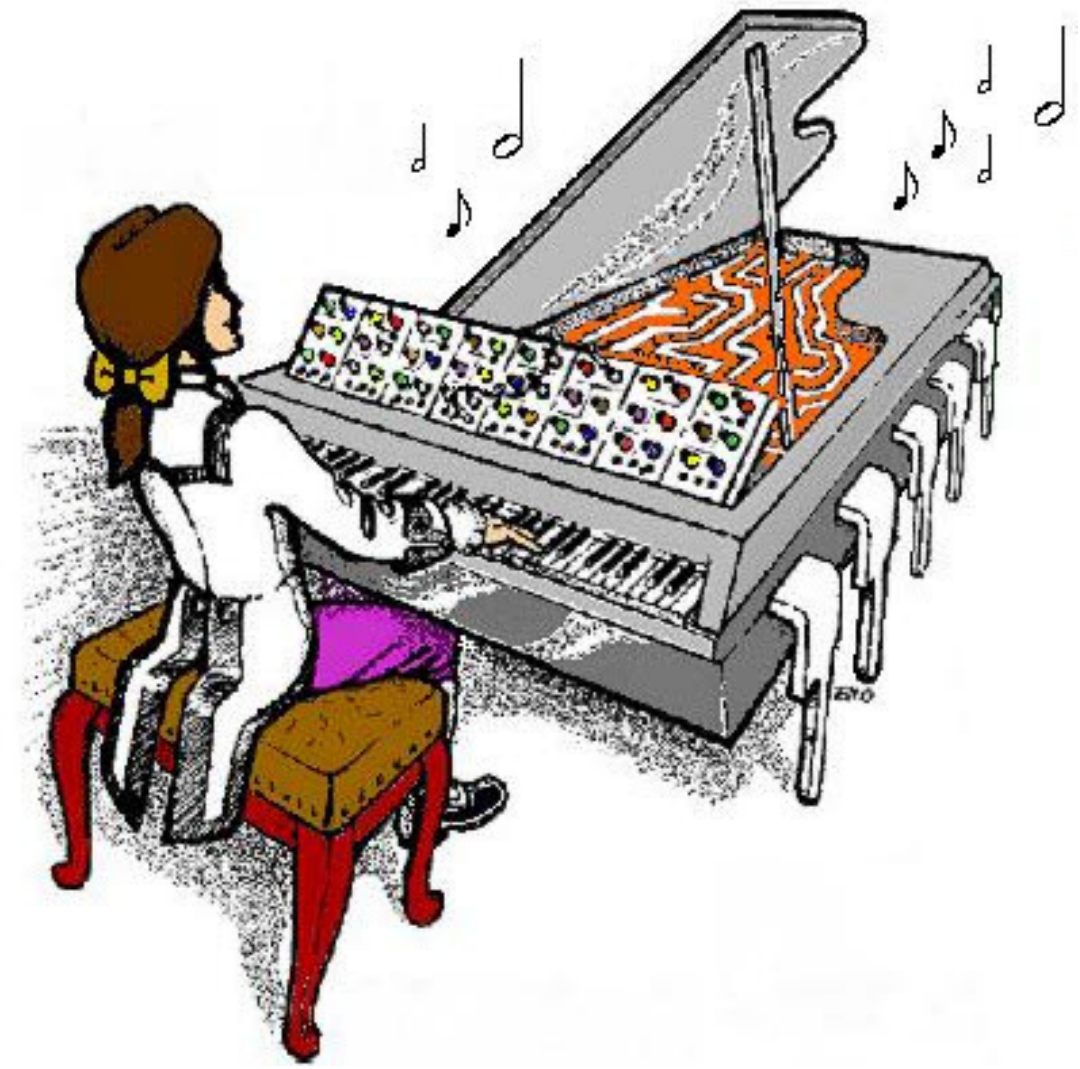

5U Octave Switcher

Construction Guide

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5U Octave Switcher

Construction of the 5U Octave Switcher is very straight forward but does involve the use of surface-mount components. Constructors should refer to the printed Component Overlay for any specific comments regarding the board assembly, the Bill of Materials for the current value of all components and General Construction Notes for general pcb assembly guidelines. You are advised to check all of these documents on our website to ensure you have the latest copy.

1. First fit all the SMT components to the boards
2. Then fit the through-hole components

Power Supply Option

For best operation the switcher should use the most stable power rails in the system. If available then these should come from the VCO circuit itself. In the ASM we have a dedicated +/-10V power rail for the VCO and these should be used for the switcher.

If you don't have access to +/-10V rails then R109 should be adjusted to suit larger power rail supplies. For +/-12V supplies R109 should be 30K while for +/-15V rails R109 should be 62K.

Calibration

1. Remove jumper LK101
2. Monitor the [OP] output (J101 pin 2)
3. Set the selector switch to its maximum position
4. Adjust P103 for 8.0V

This completes the initial calibration of the 5U Octave Switcher unit.

P102 - Transpose Offset

By default, the 5U Octave Switcher is set to give you 0, +1, +2 through to +8 octave transposes. If your application requires a different range of transposes such as -3, -2, -1, 0, +1, +2, +3, +4 then use P102 to apply the necessary offset.

1. Set the selector switch to the desired '0' position
2. Fit jumper LK101
3. Adjust P102 to set [OP] to 0.0V

Integrated Install

When installing the switcher as a permanent function in, say, a VCO you may not want to sacrifice the loss of the 1V/Octave input if only one is provided on the module. This will require a minor modification to the module simply involving the addition of a resistor between the [OP] output of the switcher and a specific point in the module. if you have access to the module schematic then you should see a common point at the 'front end' of the module where the COARSE TUNE, FINE TUNE and 1V/Octave controls join. Each of these controls will have a resistor between this common point and the controls. Determine the value of the resistor used for the 1V/Octave input and add a resistor of the same value from this common point to the [OP] output.