ASM321 Basic VCO

Construction Guide

Revision 1.6

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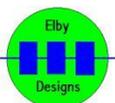
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Construction of the ASM321 requires the assembly of 4 boards:-

Column 1 - Panther Support 5 PCB (3D Model)
Column 2 - Panther Support 5 PCB (3D Model)
Column 3 - Panther Support 5 PCB (3D Model)
Backboard - ASM321 PCB (3D Model)

Constructors should refer to the PCB Overlay for any specific comments regarding the board assemblies, 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. Assemble all 8x Carrier Board assemblies (3D Model)
2. Build the ASM-VCO Core assembly as per these build notes
3. Fit all components to the boards following normal assembly guidelines except for all the jack sub-assemblies
4. Mount the 3x jack sub-assemblies to the Column 1 board and then offer the assembly up to the front panel and secure the using the supplied nuts and washers
5. Solder the jack sub-assemblies in to place
6. Mount the 2x jack sub-assemblies to the Column 2 board and then offer the assembly up to the front panel and secure using the supplied nuts and washers
7. Solder the jack-sub-assemblies in to place
8. Mount the 3x jack sub-assemblies to the Column 3 board and then offer the assembly up to the front panel and secure the using the supplied nuts and washers
9. Install the Backboard ensuring the correct alignment of the IDC connectors
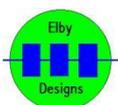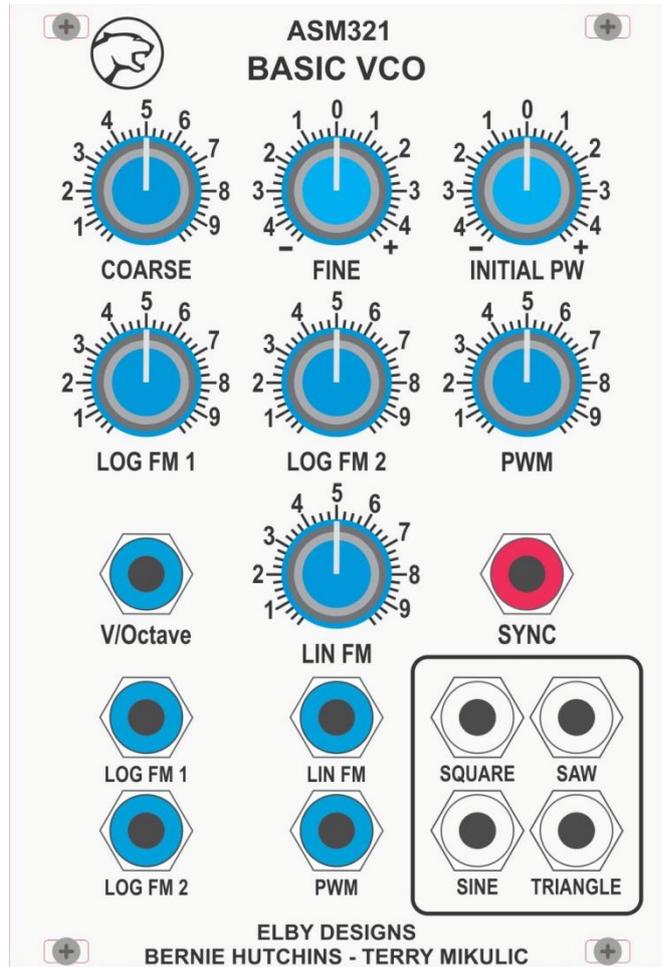
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Calibration

Initially you need to calibrate the ASM VCO Core board and should follow the instructions in the ASM VCO Core build notes.

The remaining calibration process is for setting the wave shaper outputs:-

SAWTOOTH Output

1. Monitor the [SAWTOOTH] output
2. Set the [COARSE] and [FINE] controls so that the output is running at around 100Hz
3. Adjust P201 until the waveform is centred around 0V

TRIANGLE Output

1. Monitor the [TRIANGLE] output
2. Adjust P303 until the output is about 4V pk-pk
3. Adjust P301 for optimum waveshape
4. Adjust P302 until the waveform is centred around 0V
5. Adjust P303 until the output is about 5V pk-pk
6. Repeat steps (3) to (5) for best triangle wave shape

SINE Output

1. Monitor the [SINE] output
2. Adjust P306 until the output is about 4V pk-pk
3. Adjust P305 for optimum symmetry
4. Adjust P304 for optimum waveshape
5. Adjust P306 until the output is 5V pk-pk
6. Repeat steps (3) to (5) for best sine wave shape