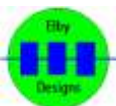




IF101 2Q/4Q

Construction Guide

Revision 1.02
June 27th, 2018



IF101 2Q/4Q

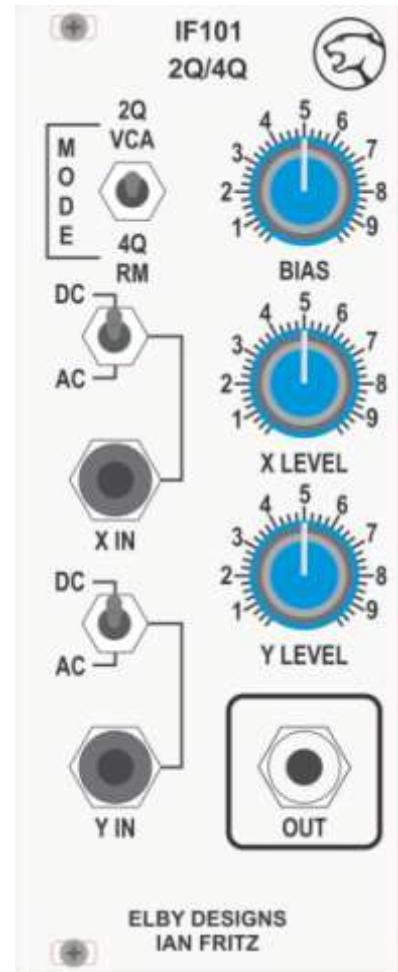
Construction of the IF101 requires the assembly of 2 boards:-

Column 1 - IF101 PCB ([3D Model](#))

Column 2 - Panther Support Pot PCB ([3D Model](#))

Constructors should refer to the [Component 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 the Carrier Board assembly ([3D Model](#))
2. Fit all components to the boards following normal assembly guidelines except for all the jack sub-assembly
3. Mount the jack sub-assembly to the Column 2 board and then offer the assembly up to the front panel and secure the using the supplied nuts and washers
4. Solder the jack sub-assembly in to place
5. Install the Column 1 board
6. Fit the short IDC cable between the modules



Calibration

This circuit requires balance adjustments for each mode (2Q/4Q) and an overall gain adjustment. The following are required to make the adjustments:

1. An accurate +/-5 V audio signal. A good VCO output is fine.
2. An accurate +5V dc voltage. A LFO with an accurate 5 V square wave at very low frequencies may be substituted.

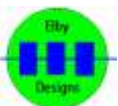
The setup steps are as follows:

Adjust the X balance

1. Set [MODE] to [2Q].
2. Set the [BIAS] knob fully counter-clockwise.
3. Turn the [X LEVEL] knob fully counter-clockwise.
4. Set [Y IN] to 'AC'
5. Connect the +/-5 V audio signal to [Y IN] and set the [Y LEVEL] fully clockwise.
6. Adjust P202 for minimum audio out.

Determine the bias threshold

1. Set [MODE] to [2Q].
2. Turn the [Y LEVEL] knob fully counter-clockwise.
3. Connect the +/-5 V audio signal to [X IN] and set [X LEVEL] fully clockwise.
4. Adjust the [BIAS] control to just below the point where the VCA starts to turn on. This is called the "threshold point".



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Adjust the Y balance

1. Leave the [BIAS] control at the "threshold point".
2. Set [MODE] to [4Q].
3. Turn the [Y LEVEL] knob fully counter-clockwise.
4. Set [X IN] to 'AC'
5. Connect +/-5 V audio signal to [X IN] and set the [X LEVEL] fully clockwise.
6. Adjust P203 for minimum audio out.

Adjust the gain

1. Leave the [BIAS] control at the "threshold point".
2. Set [MODE] to [2Q].
3. Set [X IN] to 'AC'
4. Set [Y IN] to 'DC'
5. Connect the +/-5 V audio signal to [X IN] with the [X LEVEL] fully clockwise.
6. Connect +5V DC to [Y IN] with the [Y LEVEL] control full clockwise.
7. Adjust P204 for unity gain.
8. Switch to [4Q] mode and check that the gain is near unity.

