

FREQUENCY CENTRAL

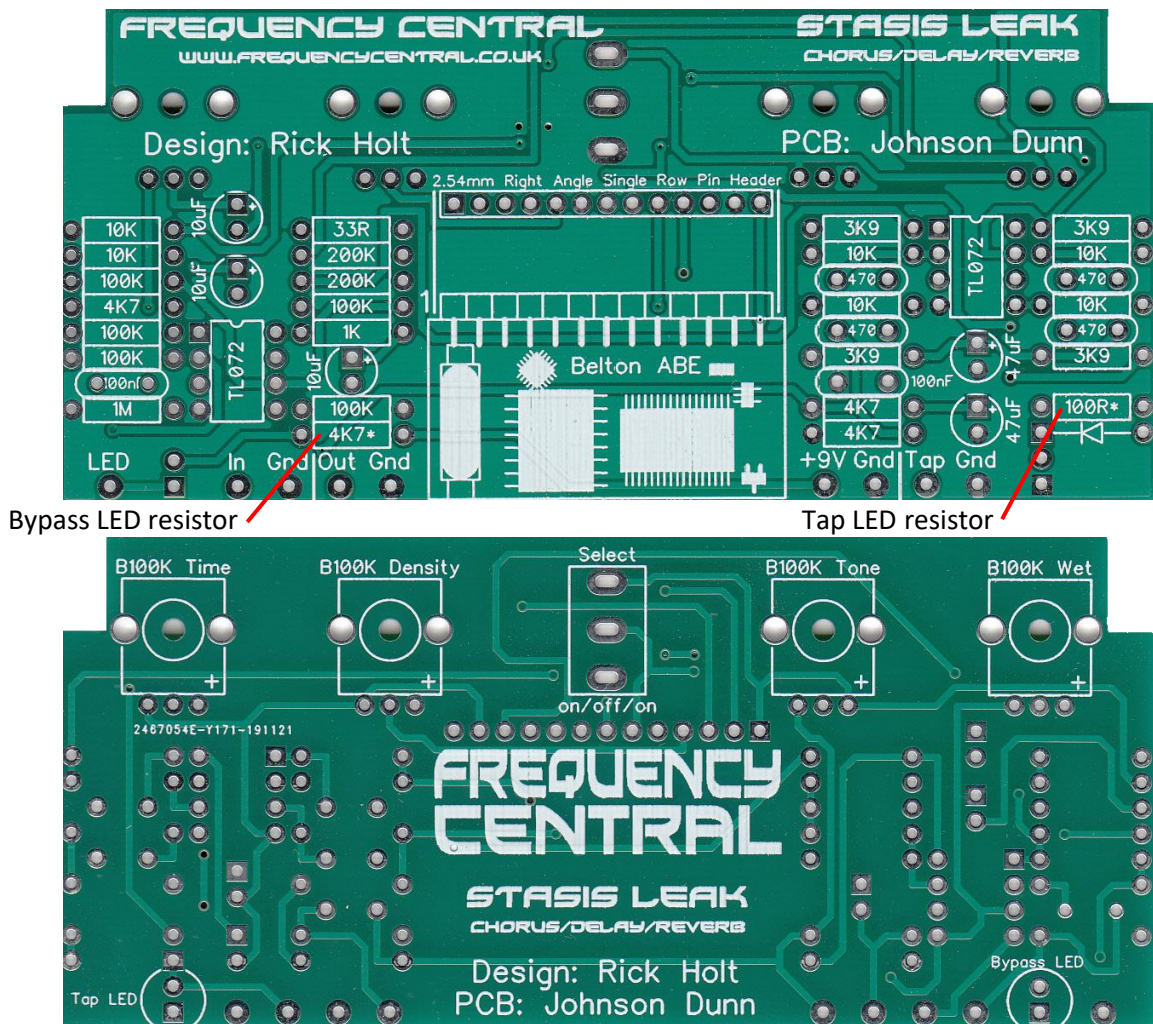
Build documentation for:

STASIS LEAK

CHORUS/TAP DELAY/PLATE REVERB

Stasis Leak is a 48kHz DSP effects module, providing a choice of stereo chorus, stereo plate reverb and tap tempo delay. Stasis Leak is based around a Belton ABE-FX sub board, which in turn is based around a Coolaudio V1000 chip.

What's not included on this build doc: How to wire the whole thing together within an enclosure. Maybe you know this bit already. Some hints on page 4.



Stasis Leak features 2 PCBs:

- Main PCB ([schematic](#))
- [Belton ABE-FX](#), a fully populated SMD PCB which plugs into the Pots 'n' sockets PCB

Please observe correct polarity of the electrolytic caps and ICs!

Bill of Materials

33R x 1 100R x 1 1K x 1 3K9 x 4 4K7 x 4 10K x 6 100K x 5 200K x 2 1M x 1 All resistors ¼ watt metal film.	470pF x 4 100nF x 1 10uF x 3 47uF x 2	Belton ABE-FX You can buy this from me, or some other place. TL072 x 2 1N4148 x 1 5mm red LED x 2	B100K x 4 Pin Header SPDT toggle x 1 on/off/on 3PDT footswitch x 1 Momentary footswitch x1 For Tap Tempo 6.3mm socket x 2 DC socket x 1 1590BB enclosure
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Affixing the Belton ABE-FX

The Belton plugs in to the **Main** PCB using a right angle header (see BOM above). Make sure you mount the Belton the correct way around (see photos).

Tap Tempo

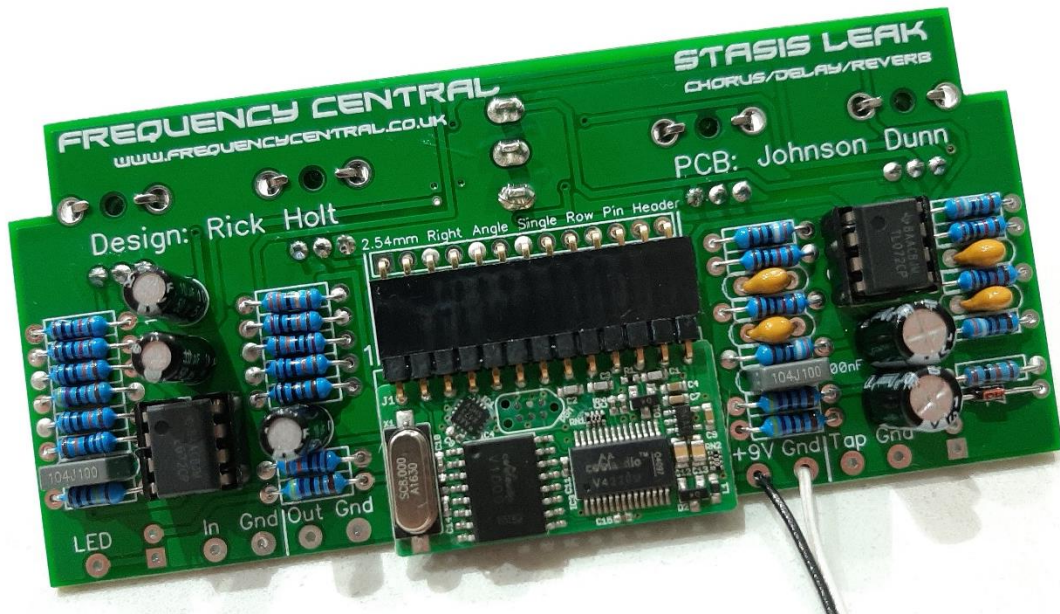
The momentary switch in the BOM can be used as either push to make or push to break. It's worth making sure you know which lug is which before soldering. For this application we need push to make. See photo below. Connect one lug of the switch to the TAP pad on the PCB, connect the other lug to ground (Gnd on the PCB). No need to connect the Tap LED to anything other than the PCB.



Main PCB:

Populate the Main PCB front first, as shown on the silkscreen, starting with the lowest profile components, so:

- Resistors, diode
- IC sockets
- Header for Belton. You will need to space this off the board by 1mm or so. Wedge a credit card between it and the PCB, then solder it in place. Return the credit card to your wallet.
- Non-electrolytic capacitors
- Electrolytic capacitors



Now populate the rear of the Main PCB:

- Potentiometers, on/off/on switch, LEDs



Building your Stasis Leak into an enclosure

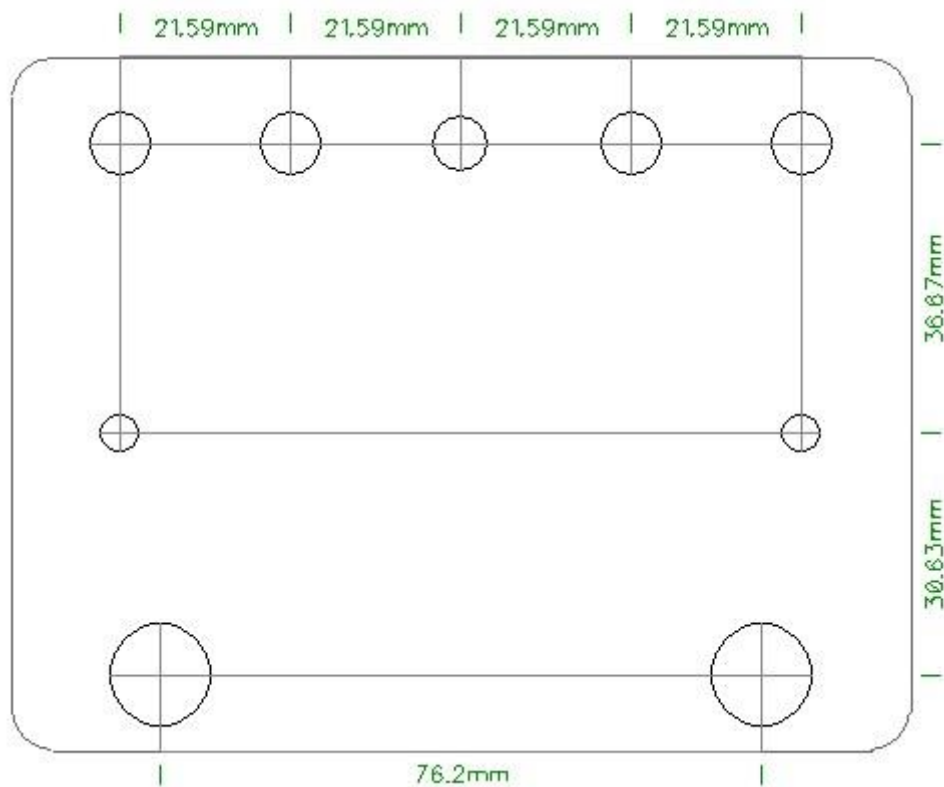
The Stasis Leak PCB is designed to fit into a 1590BB enclosure.

The Bypass LED needs to have its pad on the PCB grounded, as part of your 3PDT wiring.

Please note that there are centre holes for the potentiometers on the PCB, you can use these to mark your enclosure. Probably best to do this BEFORE you assemble the PCB.

[Here's a DXF file](#)

Here's a drill template:



RDH 06/12/19

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