

ALPHA BUILD GUIDE

Here are the general build notes for the Alpha RE-606, this is not a full build doc and some things will be assumed, please refer to the included BOM for parts. For placement you can refer to the TR-606 service manual on my blog at www.dinsync.info

You can build anyway you are comfortable with but I suggest you build in this order,

RF jumpers

Power section

Digital section and switchboard

Analog section

Toms board (machine will function without toms board so build that last)

There's a couple of things to attend to before building so check all of this short document before you start.



What's in the alpha bundle?

1x pcb set (3pcs) mainboard, switch board and tom board.

1x pot set, 1x tempo, 1x vol, 6x control 50kb (accent pot 10k is substituted with 50k as we wont have them for another month, means effect will be at the upper 90-100% of rotation)

1x rotary set (2pcs) must be modified (see below)

1x sumida coil and adaptor

1x jack set (6pcs)

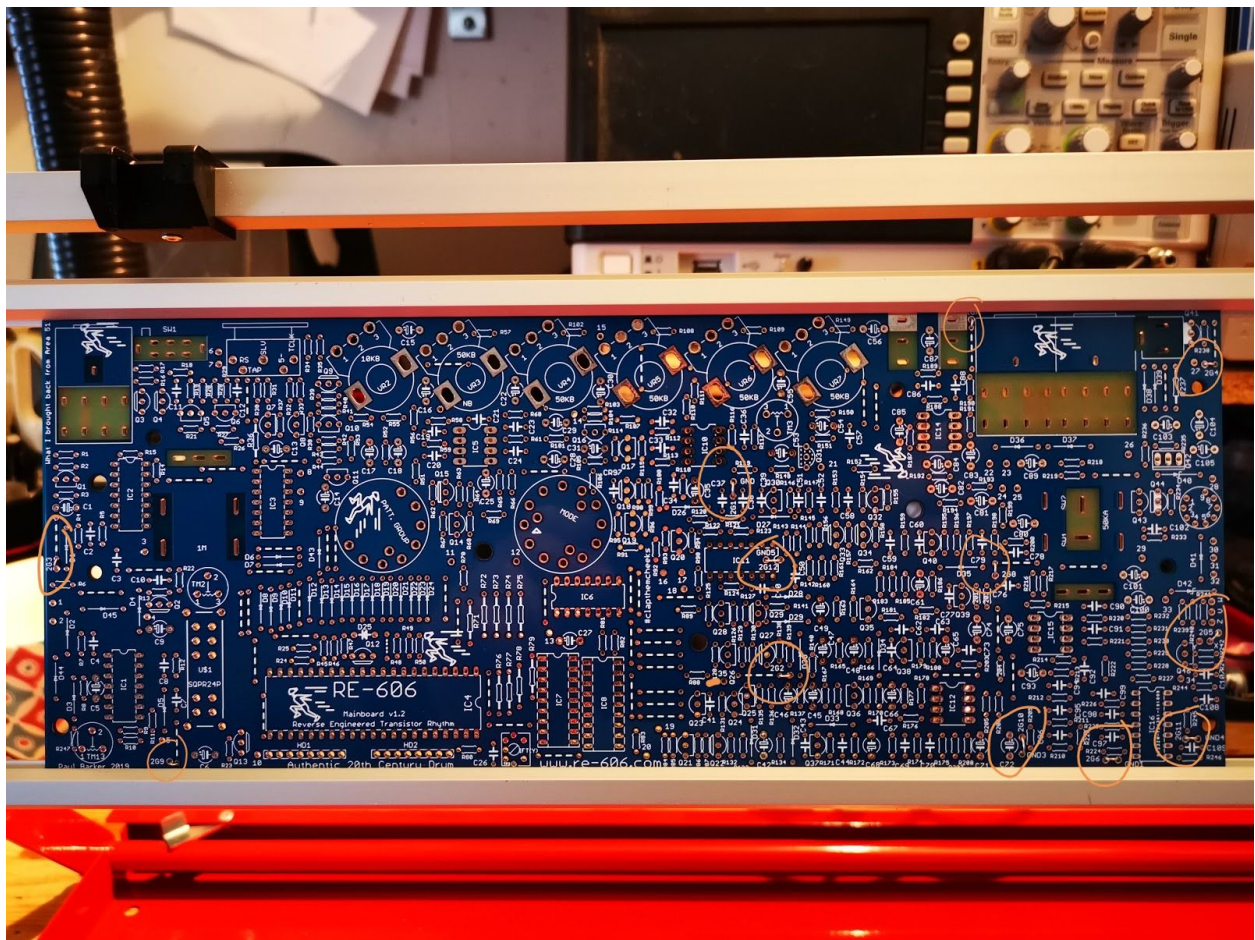
1x sync switch

1x power transistor set (3pcs)

RF jumpers

Unlike the re303 we have made the surface wire jumpers into the copper layer, so these do not need to be populated. However we still have 12 jumpers to connect to the upper layer. These must be fitted as they form the upper RF shield which lowers noise and trigger bleed.

Here are the 12 specific points on the upper copper pour that need to be connected to the lower pour ground. The picture shows where the 12 points should be connected with jumpers.



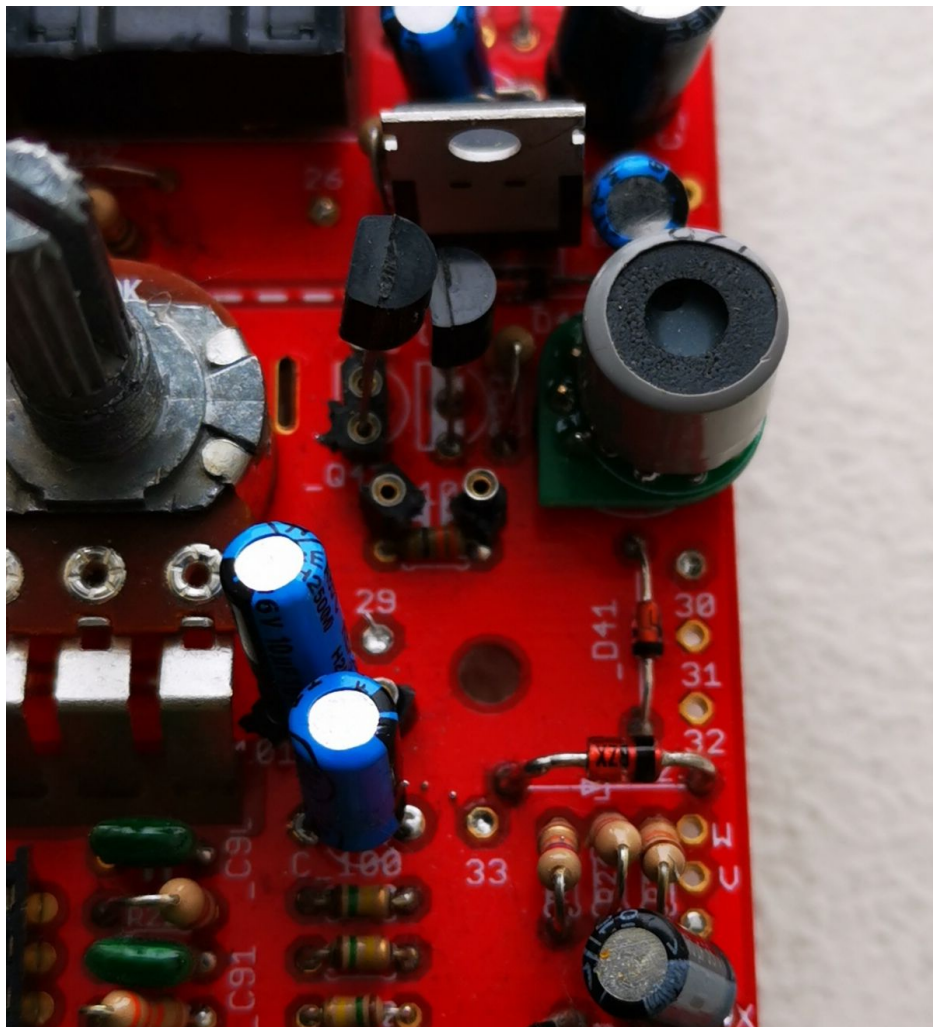
Sumida coil

Use the same procedure as in the RE-303 builds docs

<http://privat.bahnhof.se/wb447909/dinsync/shop/RE-303v1.2BUILDGUIDE.pdf.zip>

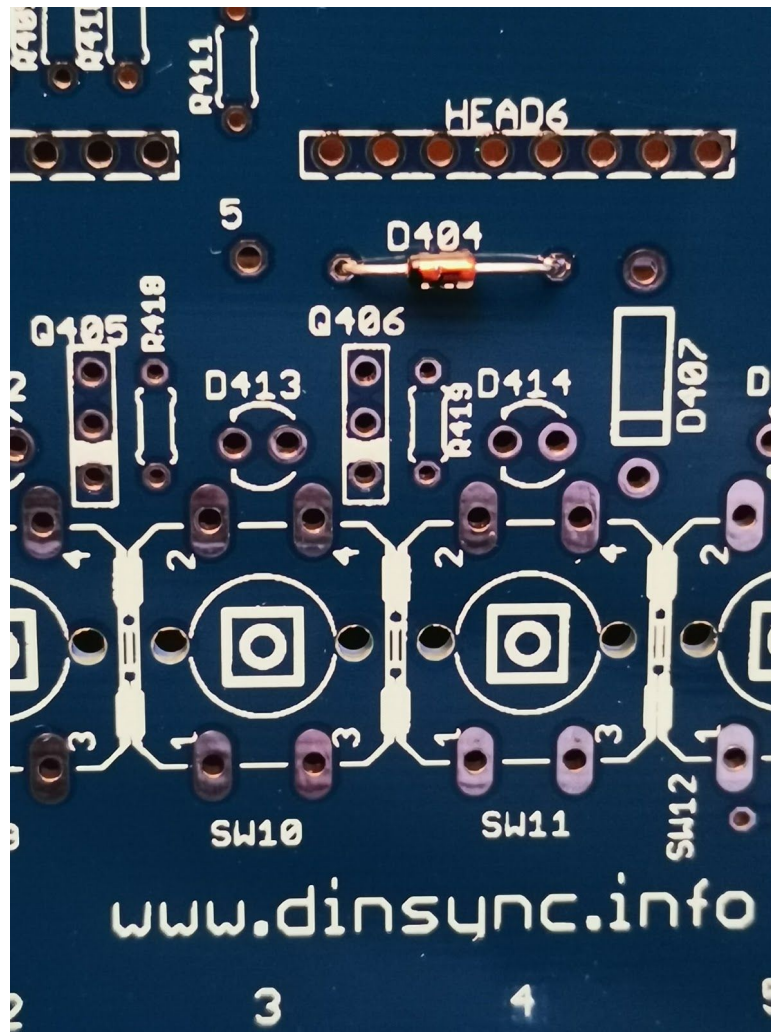
TAKE NOTE OF THE PIN NUMBERS ON THE PCB!

While the numbers are the same as on the RE-303 the rotation is different, see attached picture of a placed coil on the RE-606



Wrong diode orientation on switchboard

The silkscreen legend for D404 on the switchboard is backwards, place the diode correctly now (with the cathode facing left as per the picture below) before proceeding.



Adjusting the rotary set for RE-606

The included rotary set is from the RE-303, we will have new stock of rotaries for the 606 at launch but for now we must **modify the 7pos** (6 clicks) rotary.

First we need to pick the right pot from the two, the inner pin is **longer on the 7pos**, also this part has 6 clicks in rotation.



First you must clip 4 legs away for this part to fit the pcb (the ones marked with black pen). **Double check orientation before removing them.**

The second modification is to remove the rotary stop, if you look on the inner section, you can see a small bent up tab that stops rotation at both ends. Use some needle nose pliers to carefully bend the tab out so that it can freely rotate 360 degrees. Now that the part can rotate freely, the extra positions will all be accent.

Interconnection wires

There are connections between the boards, also there's some on the mainboard only. Use detachable headers if possible. The lengths of wire needed are rounded up and also include 2cm for striping and tinning ends.

The following tables show source, destination points (highlighted in yellow) and wire lengths (highlighted in blue)

MAINBOARD	SWITCHBOARD	TOM BOARD	MAINBOARD	LENGTH (cm)
1			35	24
2	2			9
3	N/C	N/C	N/C	-
4			34	31
5	8			24
6	4			16
7	1			16
8	10			24
9	9			24
10	3			12
11	7			16
12	5			16
13			28	22
14			33	22

MAINBOARD	SWITCHBOARD	TOM BOARD	MAINBOARD	LENGTH (cm)
15		4		12
16		1		16
17		2		16
18		3		16
19	12			16
20	11			16
21		5		12
22		6		12
23		7		12
24		8		12
25		9		12
26		10		12
27			Battery +	
28			13	*
29		11		12
30	13			12
31			Battery -	
32	14			12
33			14	*
34			4	*
35			1	*

Final notes

At high gain here is some leak from the cymbal and some trigger bleed from the tom. This is minor and the TR also has a ton of noise at high gain. These may be fixed with bom adjustments or just down to the RF shield (which was pretty hard to recreate in eagle) Either way its nominal in normal use.

A big thank you to AFX303 for the bom, he did most of the work there, I've made a few changes and notes but only minor. I used LM358 op-amps in my build, I doubt these are critical to the sound. You should use metal film caps if possible for correct tone.

Also the germanium diode, I've used pulls from old TR's, this needs to be tested for subs.

If you find any faults, suggestions or questions for the bom i'll open a thread for it on the forum, i'm not going to post the bom until its 100% final then it will be locked and posted as the official.

The CR parts are just ceramic caps! (seems to be a design change at some point as there are no surface parts on my reference boards)

Get drumming!

Paul