STAR MAKER

Star Maker is a 12hp scanning stereo mixer. It has 4 inputs (labeled 1-4) and 2 ouputs for sound(labeled Left/Right). Input should except both audio and CV but are intended for audio use. Input 1 and 3 are connected to left out whereas 2 and 4 are hooked up to the right output. It has a clock input and an audio (clock)input, you can use both at the same time if you want to. It has a gate out that keeps track of what is going on within the circuit, but since pauses are a thing in this design this is reflected here as well, so don't expect a steady clock for the most part. The top switch sets how many active steps each sequence will have, 4,5 or 8. When selecting 5 or 8 the circuit will insert pauses where there is no input (abover step 4 that is).

The bottom switch is for division of the audio clock, if you want it to go somewhat slower or faster. Sometimes this circuit locks up, if so you can switch the division switch and see if it comes alive again. There is also a button for manual stepping and setting the "start" position for a sequence before adding a clock. Ie if you want the sequence to start at step 3 press the button until the LED beneath panel for LED 3 is lit. For more information about functionality, patch tips etc., check out my [YouTube channel](#).

Build guide:

Building this is pretty straight forward since all SMD components are pre-soldered:

Place the power connector according to the silk screen and solder it in. Make sure no joints are touching.

I then usually place the potentiometers first and solder only one pin from the top of the board, watch out touching the SMD components with your iron in crowded areas. That way they will not fall off when we turn the PCB. Then I do the same with all jacks, just soldering the ground connector (the one that is sticking out form the jack and has a square pad). Double and tripple check that all solder joints on the connectors look good and that all pins are properly soldered in. If you have some type of magnification that usually helps.

I then place the switches but don't solder any pads on those, let them wiggle but don't fall out. I then place the tactile switch try make it as straight to the board as possible without the actual button placed.

Mount the panel, align the switches so they are straight, pots and jacks as well, insert the button on the tactile switch so it is straight through the panel.. Solder everything in. Double check, plug it in, voila!

Also, the holes for this panel might be 0.5mm off on one side (first version). If you are having problems mounting it, simply start with one side (up or down), insert a screw but don't tighten it too much, go to the other side, do the same, back to the first side fully tighten and go back and do the same. That way the panel will slowly align itself to you rails. I haven't had any problems using these panels at all in my Aturia racks but I've heard from people using other rails that it might be an issue. If everything else fail you can use a small rounded file and make top or bottom holes 0.5mm larger since the panel is in pcb material this should be very easy to do.

Designator	QTY	INFO	Product link
J1–J9	9	Thonkiconn jacks	https://www.thonk.co.uk/shop/thonkiconn/
RV1–4	4	100k Lin Pot T18 9mm Alpha	https://www.thonk.co.uk/shop/alpha-9mm-pots-vertical-t18/
SW1–2	3	ON-ON-ON DPDT Switch / TYPE A	"https://www.taydaelectronics.com/mini-toggle-switch-dpdt-on-on-on-mts2033.html
For RV-1-4	4	Must be Black	https://www.thonk.co.uk/shop/micro-knobs/
	1	10pin eurorack header	
SW3	1	tactile switch	https://www.mouser.se/ProductDetail/612-TL1105SPF100Q
SW3	1	cap for tactile switch	https://www.mouser.se/ProductDetail/612-1R-BK