# AGOGÔ

build guide (≥1.2)

difficulty: ☆☆☆[1]

∞

Hi fellow!

Just a quick intro before starting,

## what to have on hand

1. Soldering Iron - better with temperature control and a long tip
2. Solder wire
3. A pair of tweezers
4. Multimeter
5. Cutter
6. Solder sucker / wick (optional)
7. Silicone soldering mat (optional)
8. Helping hands (optional)
9. Flux (optional)

If you want to refresh yourself a bit about soldering stuff you can watch this video[2] by GreatScott!

A tool that can help you placing the components on the boards is the interactive bill of materials.



Download the .html *ibom* file and open it with a browser. You can use it to check where a component is located on the board.

Once downloaded it works fine also offline.

Here are listed all the AGOGÔ components, most of them are already pre-soldered on the board.

We just need to solder the through hole ones (THT).

**BE CAREFULL NOT TO TOUCH THE SMD COMPONENTS WHILE SOLDERING THE THT ONES.**

It's really easy to lose a tiny resistor or capacitor. Be careful when soldering parts that are close to others already in place.

now let's begin!

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[1] Easy procedure and standard components. The 3/5-stars rating is due to the fact that the module is dense and the soldering takes place in a narrow and crowded space. A long and thin solder tip is heavily recommended to avoid damages on the vactrols.

[2] https://www.youtube.com/watch?v=VxMV6wGS3NY

## vactrols

Match the short leg of the vactrol with the squared solder pad on the PCB.

>    *tip: it's easier to bend at 90° degree all the four legs before trying to fit the vactrol in place.*

>    *tip: cut out the lead as close to the board as possible. This will help the jack socket to sit*
>    *properly on that side of the board.*

| 8 | U1, U2, U3, U4, U5, U6, U7, U8 | VTL5C1 |
|---|---|---|

*ok, now flip the board.*

## jack sockets

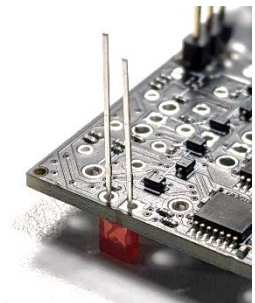Wait to solder them: just place all of them in the right place and move to the next step.

| 24 | J1, J2, J3, J4, J5, J6, J7, J8, J9, J10, J11, J12, J13, J14, J15, J16, J17, J18, J19, J20, J21, J22, J23, J24 | PJ398SM |
|---|---|---|

## LEDs

Short leg goes into the square pin. Don't solder them yet

| 2 | D1, D3, D5, D7 | Blue_3mm |
|---|---|---|
| 2 | D2, D4, D6, D8 | Red_3mm |

At last, put the panel on - underline check its direction - tighten the nuts and then solder all the jacks and LEDs - the closer to the panel, the more they will be evident on the panel's hollow line.

>    *tip: we are soldering them now to ensure that all the jack sockets and LEDs are aligned with*
>    *the panel. Use a long and thin solder tip to reach the socket pins without damaging the vactrols.*

check if everything is in place and properly soldered

1. The power header is single row, your cable has two rows, eighter works. Follow the pictures on the instruction manual if you have any doubts on how to power up the module. The module has a reverse power protection thanks to the bridge rectifier diode.
2. All the LEDs are off on startup[3]. Patch a CV source into the first row LPG CV input. If all the LEDs lights up following the CV source, move to the next step while keeping that cable connected.
3. Insert an audio source into the first LPG "I" input - first column of the module. Patch an output to the 8th LPG output - third column. You should hear an 8x version of the input plugged in the first LPG. Now connect the output to the LPG above and you'll get a 7x version, etc. etc. The output at LPG 1 will just give you a gated and unity gain version of your original input.
4. Now test each one of the LPGs individually patching your audio source, cv and output on the same row.
5. We have this way tested each one of AGOGÔ's chains. Good job mate!

done! enjoy your new
## AGOGÔ

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[3] *tip for the bravest: with the power off, connect a female-female breadboard cable to a free +12V male pin on bus board and the other end to the middle pin of the AGOGÔ's top 3-pins male header. This way your LPGs will always be open - LEDs on - if nothing is plugged in the CV's input column. Try this at your own risk: nothing will happen to the module itself if you wrongly connect a GND or a -12V pin to it instead of the +12V, but messing with the bus board is not something I'd advise to do if you don't know how it works. As Hitchcock would say "If you don't know how to operate it, LEAVE IT ALONE!"*