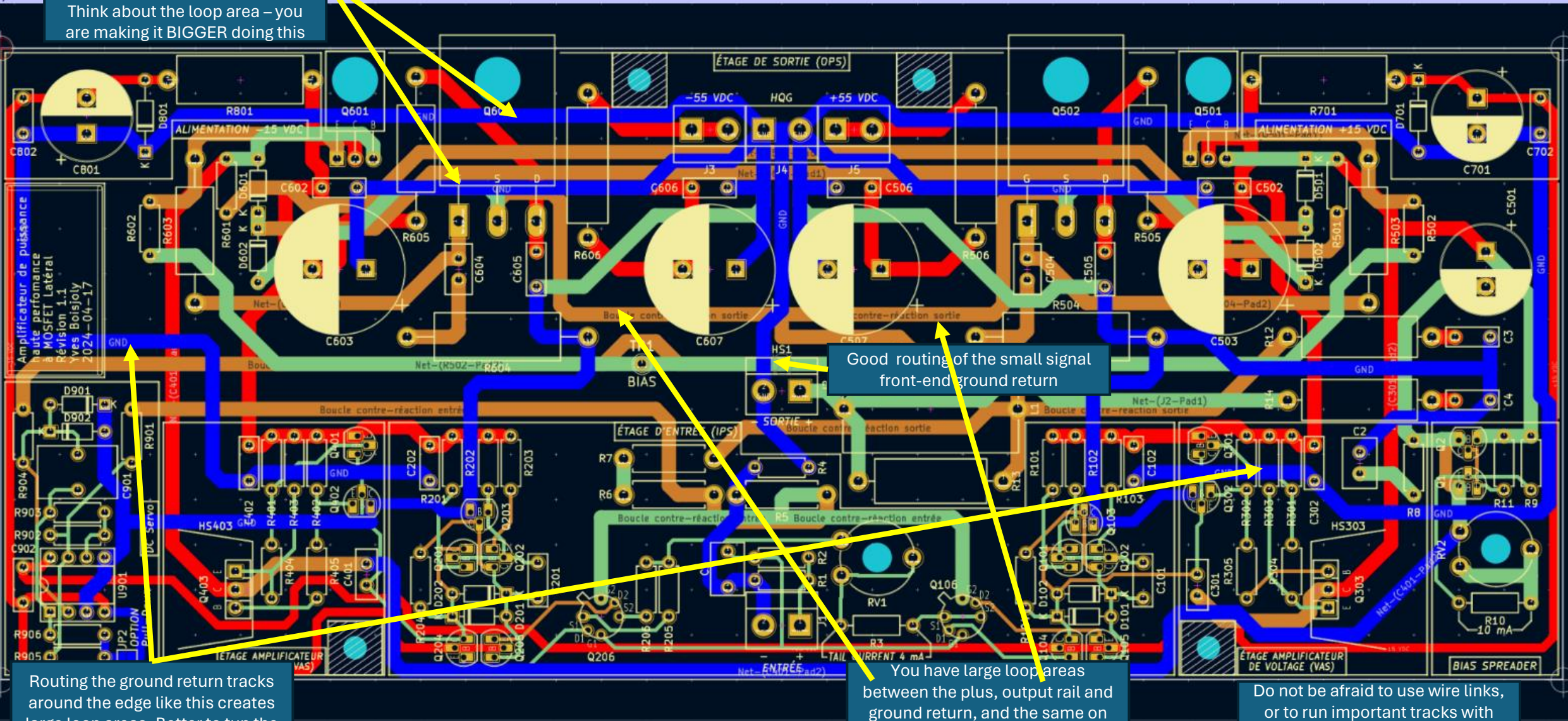


No need to separate these ground returns. Use a single ground track and take all decoupling cap returns to this ground track. Think about the loop area – you are making it BIGGER doing this



Good routing of the small signal front-end ground return

Routing the ground return tracks around the edge like this creates large loop areas. Better to run the grounds down the middle next to the small signal front-end ground.

You have large loop areas between the plus, output rail and ground return, and the same on the minus side. Start by laying these tracks FIRST before any others.

Do not be afraid to use wire links, or to run important tracks with single core wire neatly under the PCB in order to optimize the signal routing. See the kx2-Amp for an example

- I would not split the input sections on either side of the input connector. Keep them together so you can make the layout more compact and then place the input connector off to one side.
- Good idea to thicken up the ground return tracks (for the small-signal ground, the track does not have to be thick)

Here is a partial screenshot of a built amplifier (ax-Amplifier) showing how the power tracks, output rail and ground returns are routed to keep the loop areas small. This class A amp runs at 2.2A standing current and the noise floor is -136 dBr ref 60W RMS output with no input signal, and -126 Br at full output. The trick here was to keep the power, output and ground return rails all tightly coupled, and to then run a separate small signal ground to the front end and HBR using a 1mm single core wire, and, to do the same for the feedback signal – so the loop areas in both cases were very tight.

