This is to show a new coordinate system, which can be keyworded with any lower-case letters for an instance for a specific circuit or a part of it, and used for circuits to be inserted into and connected with other circuits efficiently. Whatever the coordinate system is modified, the circuit logical structure should be not changed essentially.

Then many instances of such coordinate system can be used in "one" big circuit.

Figure 1, an instance of the coordinate system (with keyword “demobygangliu”) as background with two connected devices and a few dark points with some lables.

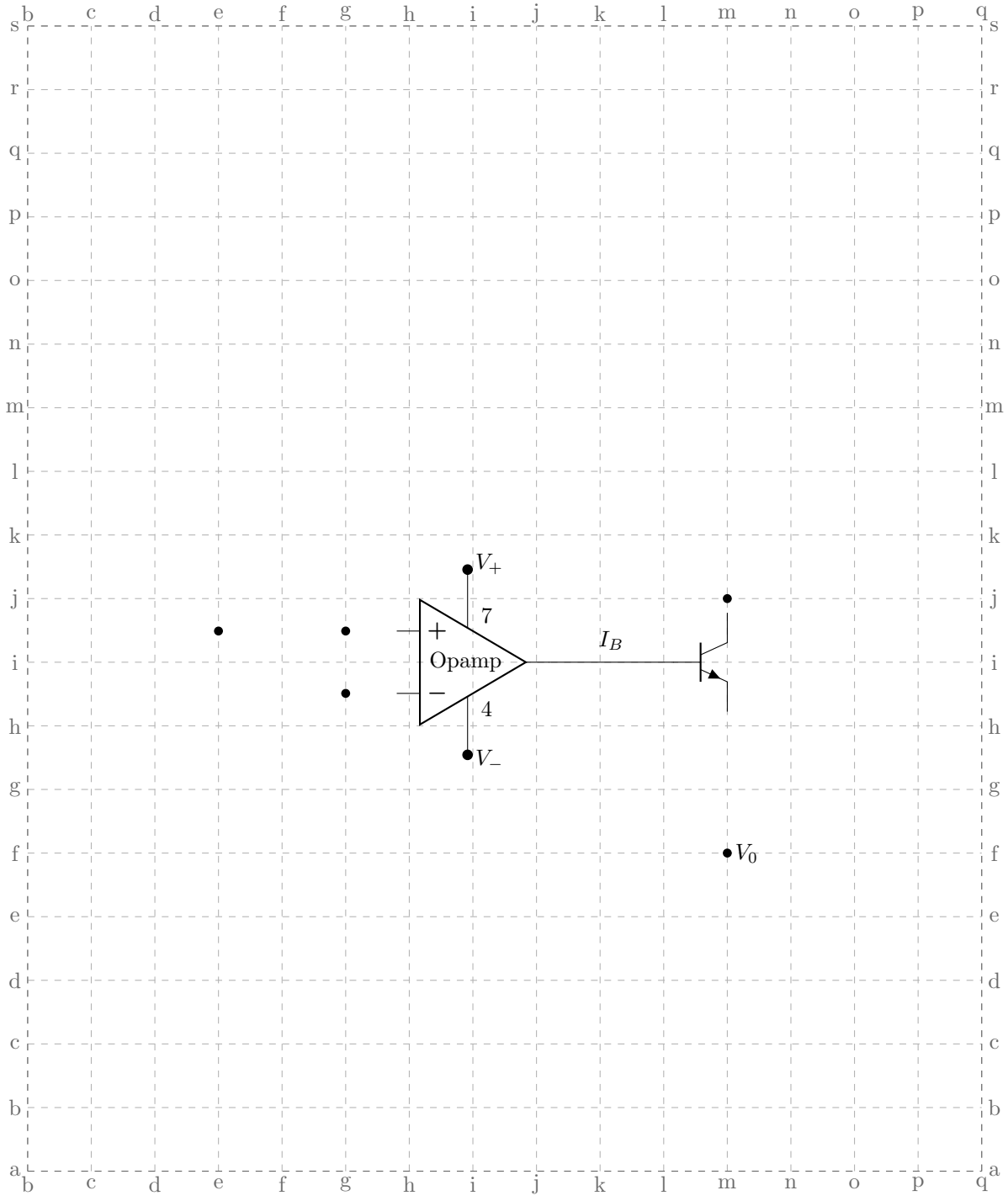


Figure 2, the background of coordinate system with keyword “w”, where wxxxf, wxxxm, wyyyd, wyyyg, and wyyyk, are further manually increased by 1.3, 3.6 3.2, 4.5, and 2.9 respectively in the separate unique coordw.tex file, then the dashed lines are not evenly distributed, while the coordinate letters are still placed properly.

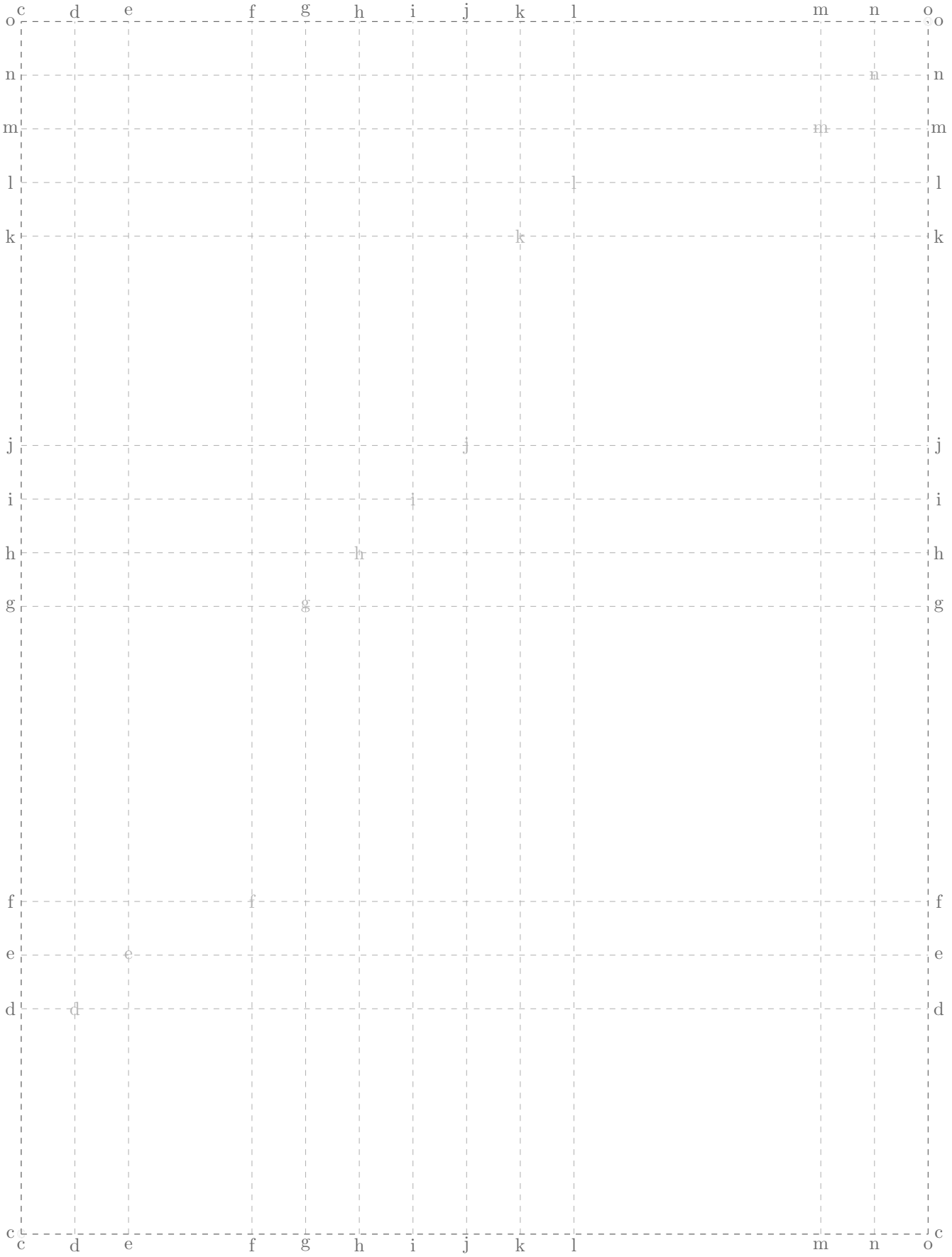


Figure 3, a circuit is drawn (in five steps actually) with the help of the coordinate system “demobygangliu”.

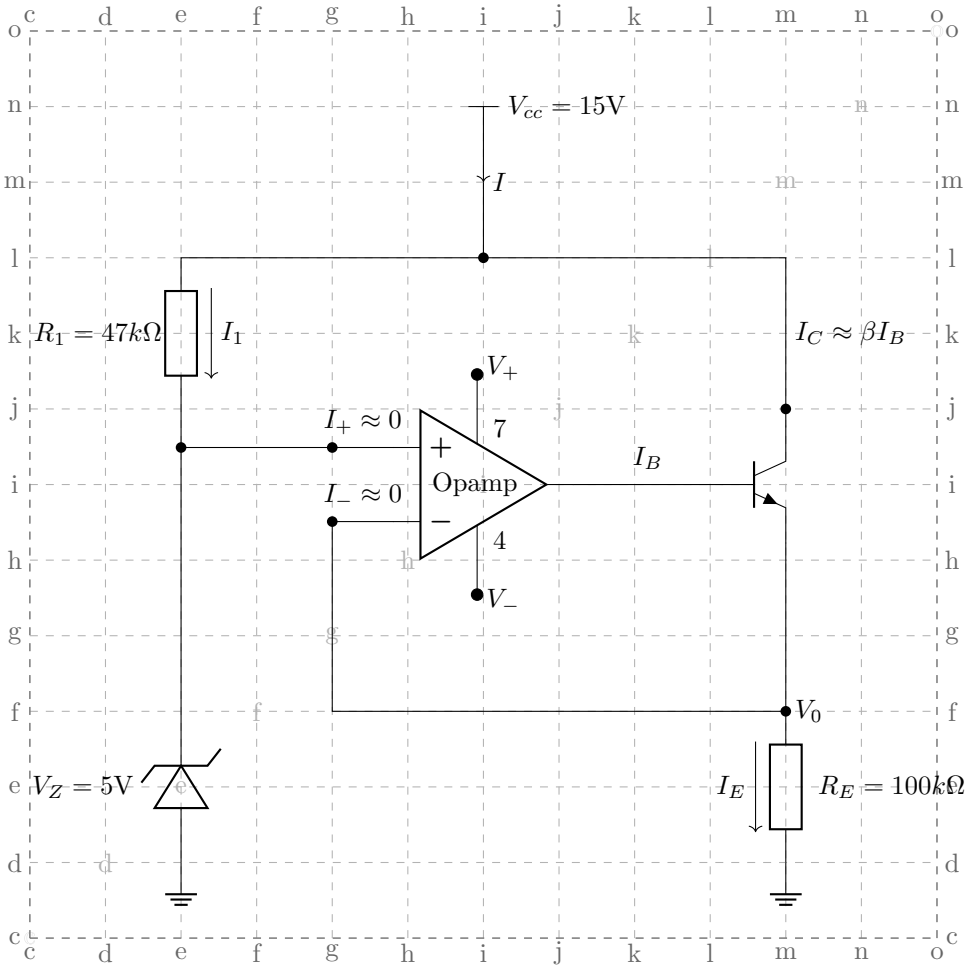
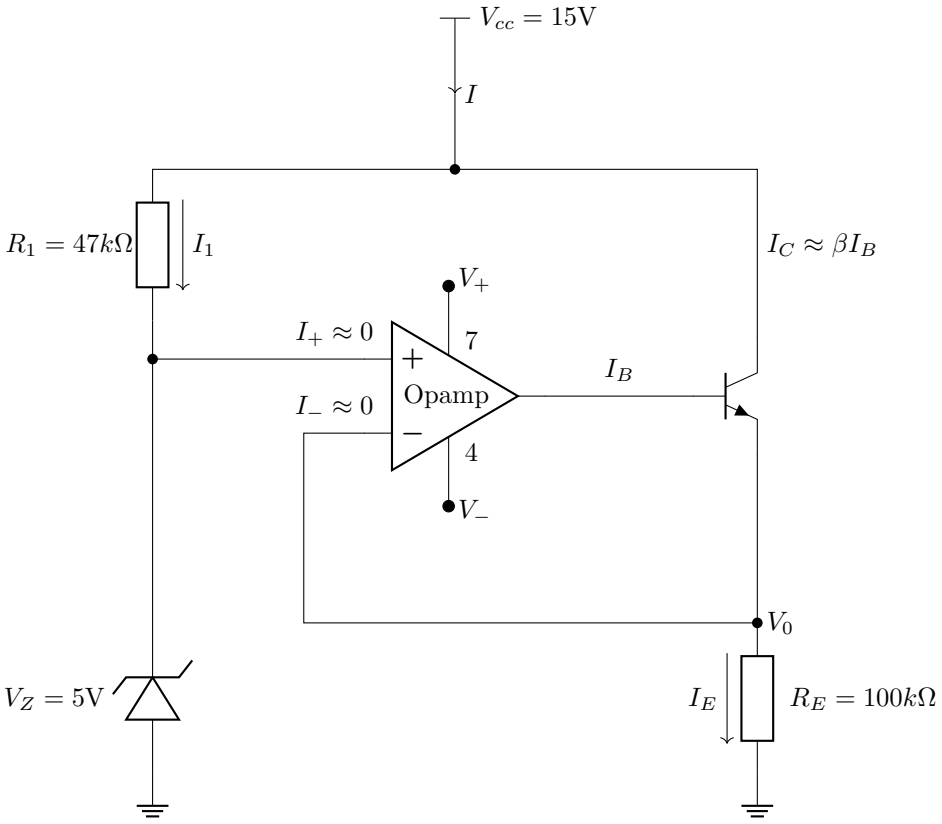


Figure 4, the same as the above but erasing the coordinate background by commenting out the one command "\coordinatebackground ..." line.



Supposing the following two additional circuits will be inserted into the above one at proper positions, then connected.

Figure 5, the first circuit to be inserted.

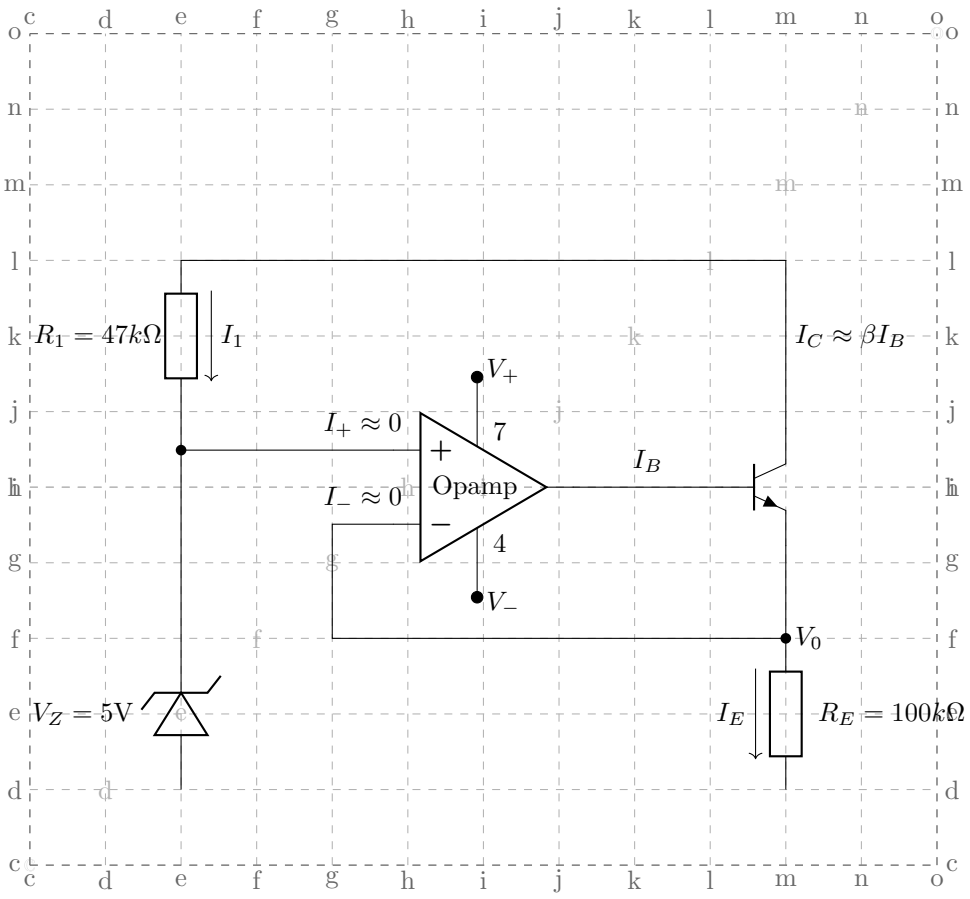


Figure 6, the second circuit to be inserted.

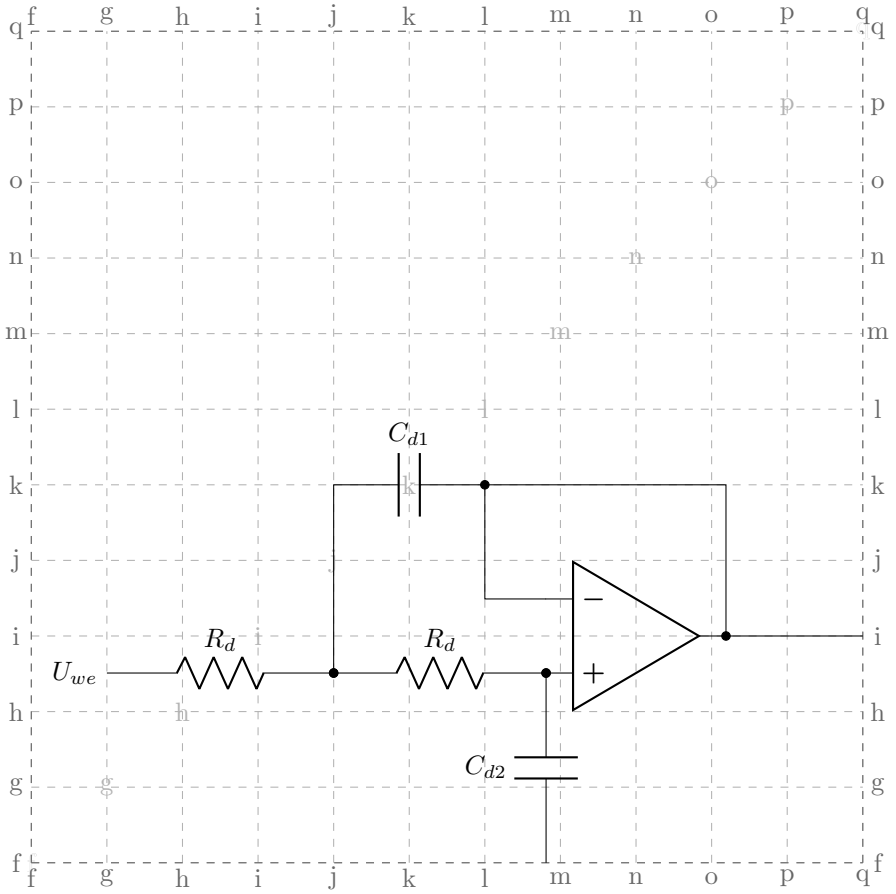


Figure 7, the coordinate system of the original circuit is easily switched to the one with keyword “g”, which is adjusted to allocate spaces for the two circuits to be inserted, without changing the circuit logic. (Keeping the “demobygangliu” system unchanged, so that the above circuits using it are not affected.)

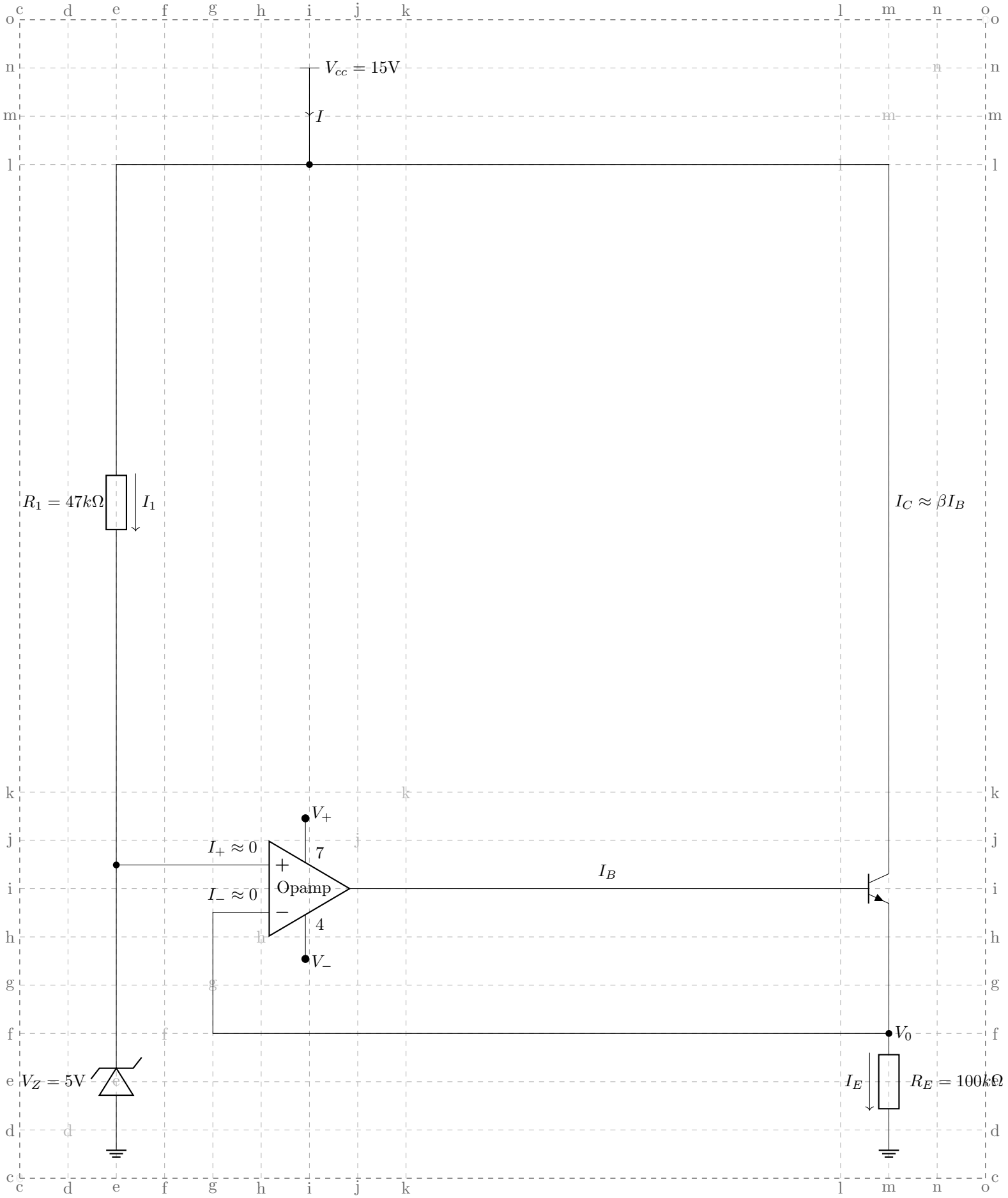


Figure 8, then the two circuits are inserted and connected.

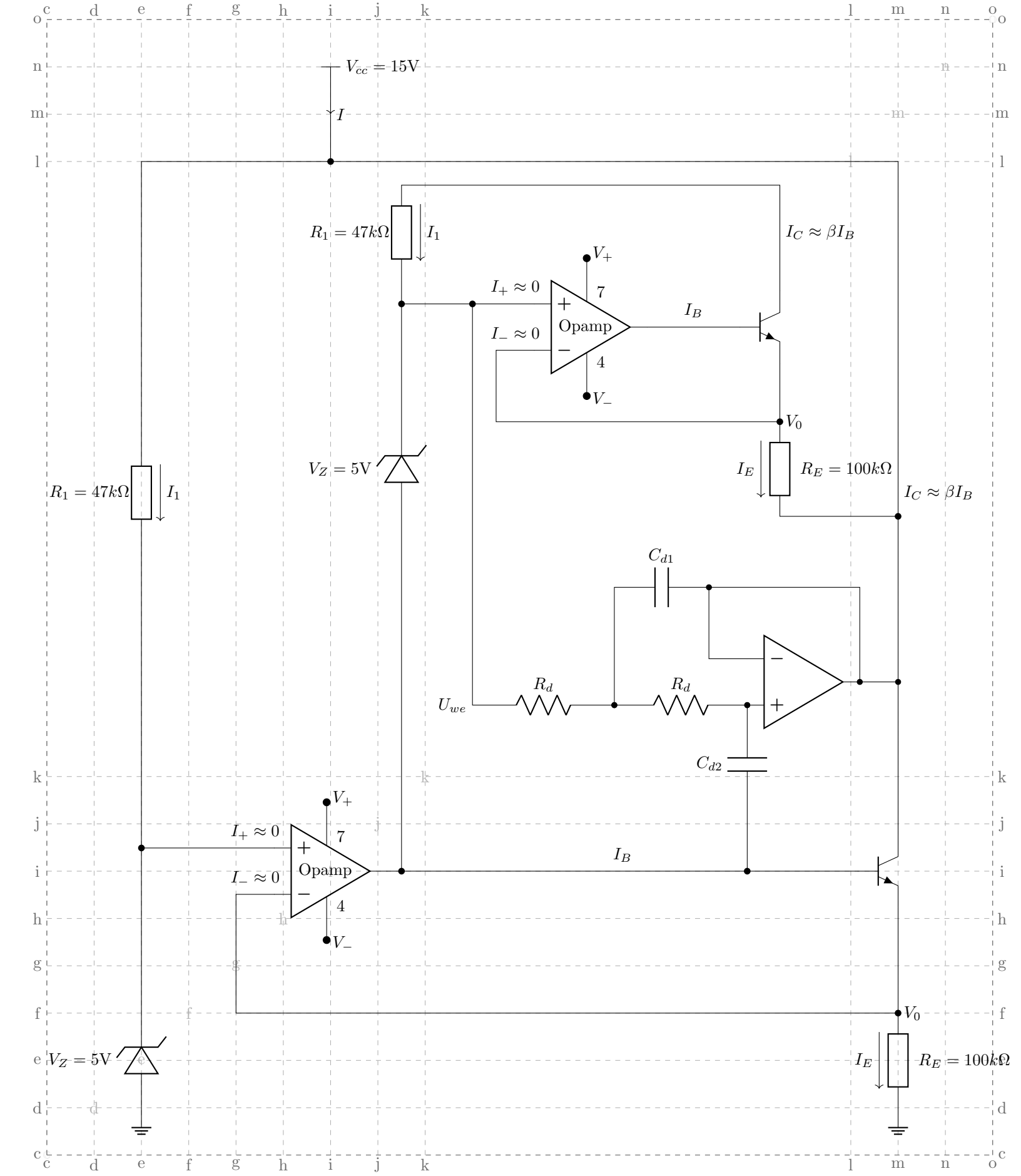


Figure 9, deleting the coordinate background by commenting out the only one command "\coordinatebackground ..." line.