4COM2003.circ-T02L1e09

You are given a design board with two input pins, a 6-bit pin A and a 6-bit pin B and one 6-bit output pin R.

Build a circuit that asserts the absolute value |A−B| on R. You will need a 6-bit 2-to-1 multiplexer for your solution, which you will have to build by yourself, since the use of the Plexer library is prohibited for this exercise. You may, however, take the 6-bit adder or subtractor from Logisim's Arithmetic library to save you time, but remember that you have already built one earlier. It is always a good idea to reuse your own components since you know exactly how they work.

How to submit your work

Do not move any of the input and output pins, since Logisim connects the test circuit to them based on their position rather than name (which is quite unfortunate, but cannot be helped)

Test the circuit by pressing on input pins with the hand control and recording your observations. When you are certain that the circuit works, reply to this message with the circuit file of your solution (and only the circuit file of your solution) in attachment. Do not change the subject line; make sure that the ticket number in it (i.e. the part that begins with **) is intact.