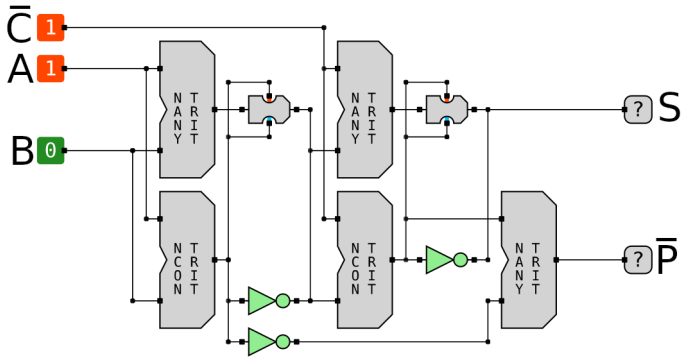
Tryte Adder PCB specification

Tryte Adder is the simplest arithmetical circuit, that just adds to ternary integers (tryte-sized, SBTNS encoded) taking carry-in into account and produces their sum and carry-out. The circuit consists of six trit adders, chained one after another. Therefore, next images describe trit adder.



Pins description

C - carry-in, should be inverted by STI

A - first augend (dimension: 1 trit)

B - second augend (the same dimension)

S - sum trit

P - carry-out propagation trit, inverted by default

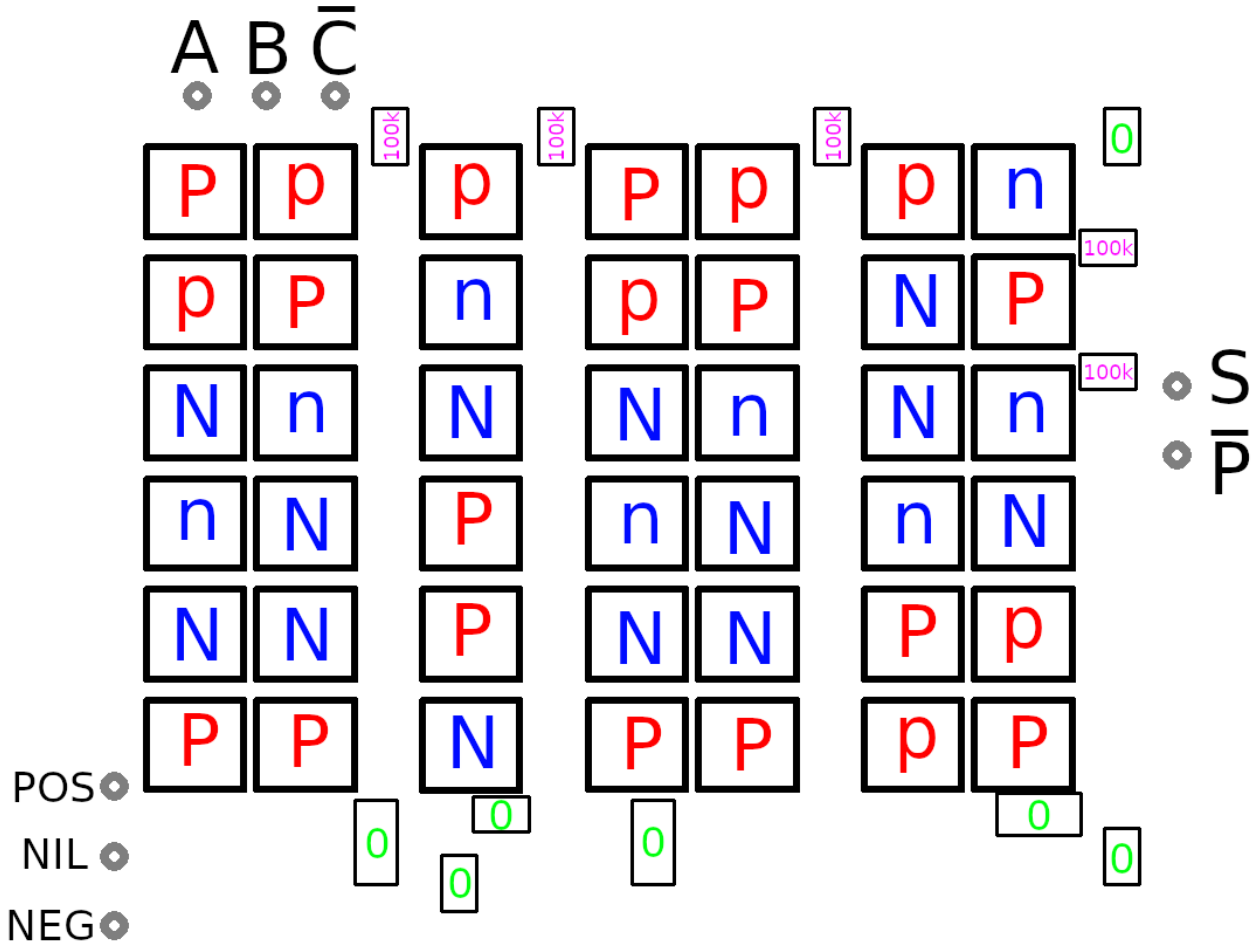
Designed behaviour

“S” trit is equal to (A + B + C) mod 3, value “2” is represented as “-1”

“P” trit is equal to (A + B + C) / 3 - integral division

Note: output signals can be weak and may need amplification by STI.

PCB layout



Note: actual layout differs a little bit from shown above, but the only difference is the placement of few pulling and bridging resistors. All transistors remain on their places specified above.