

ALU Functions

R plus S

- Simply drive ALU select signals to choose Adder output without any inverting

S minus R

- Drive invert signal on R and apply Carry in of 1 on ALU Select output from adder

R minus S

- Drive invert signal on R and apply Carry in of 1 on ALU Select output from adder

R or S

- Drive select signal to choose OR output from ALUMux

R and S

- Drive select signal to choose AND output from ALUMux

R' and S

- Drive invert signal on R
- Drive select signal to choose AND output from ALUMux

R XOR S

- Drive select signal to choose XOR output from ALUMux

R XNOR S

- Drive select signal to choose XOR output from ALUMux
- The MSB of ALUMux should be set so that choose inverted output is chose for f.