

Rounding hardware

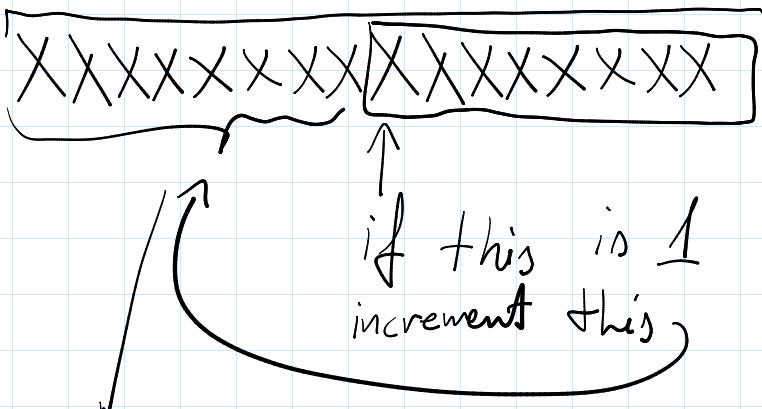


$$(-1)^S \cdot M_s \cdot 2^{E-63}$$

Normalize step

After "Big ALU"
First bit of mantissa must
be a 1 or fpn = 0

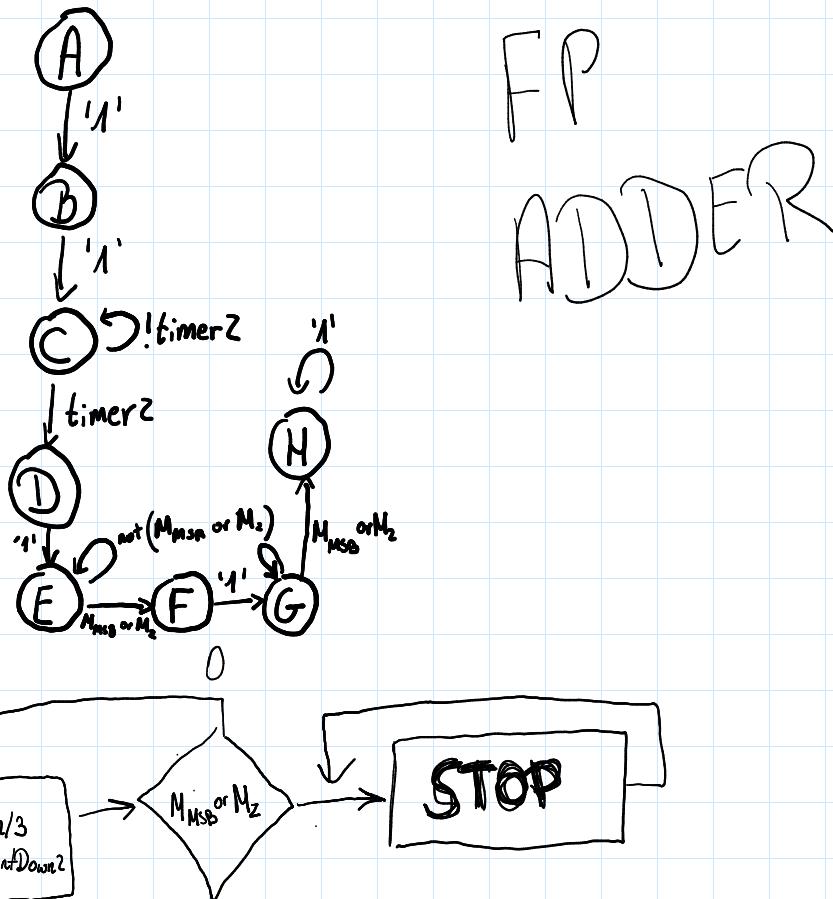
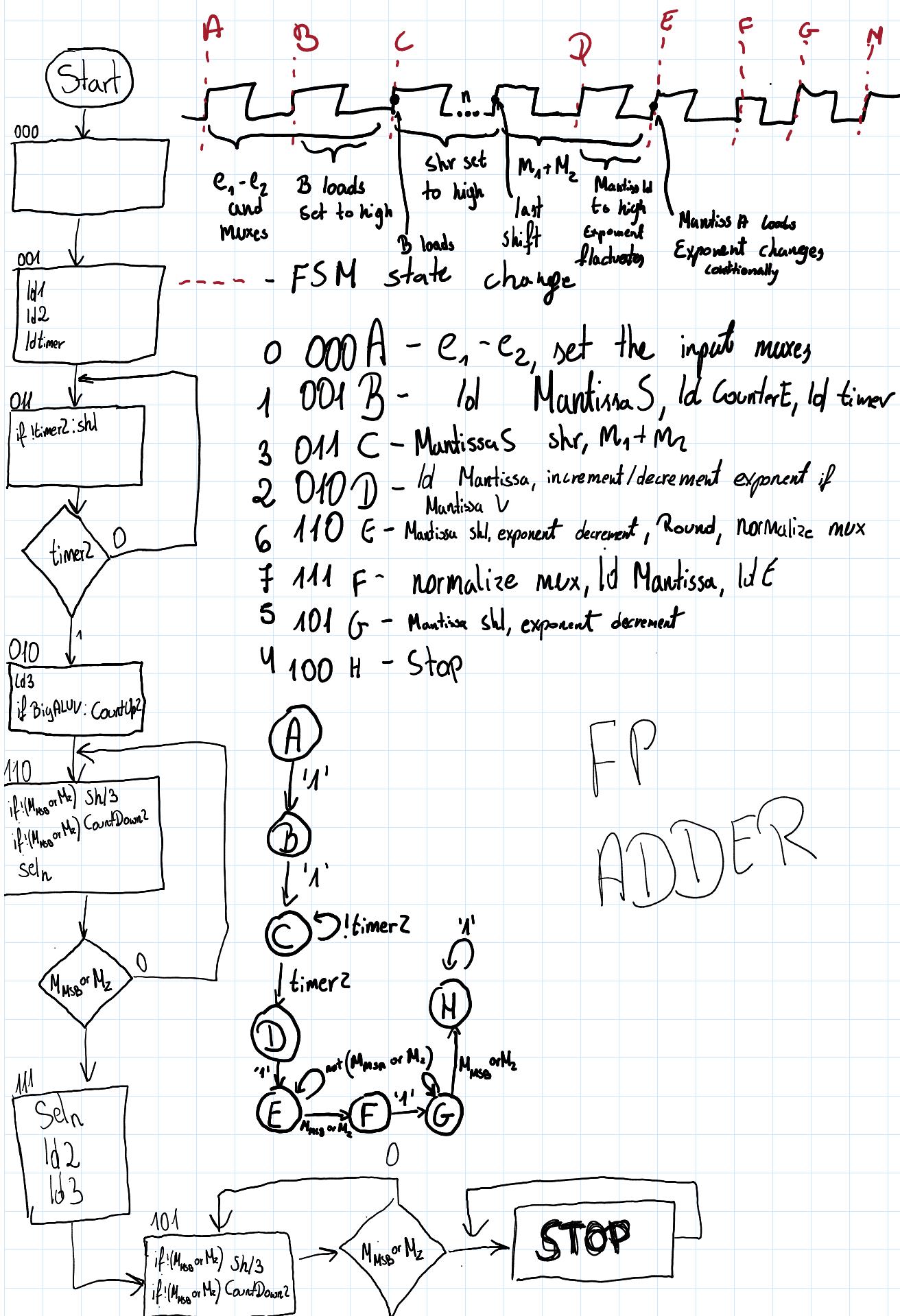
$M_B = 16 \text{ bits}$
Mantissa

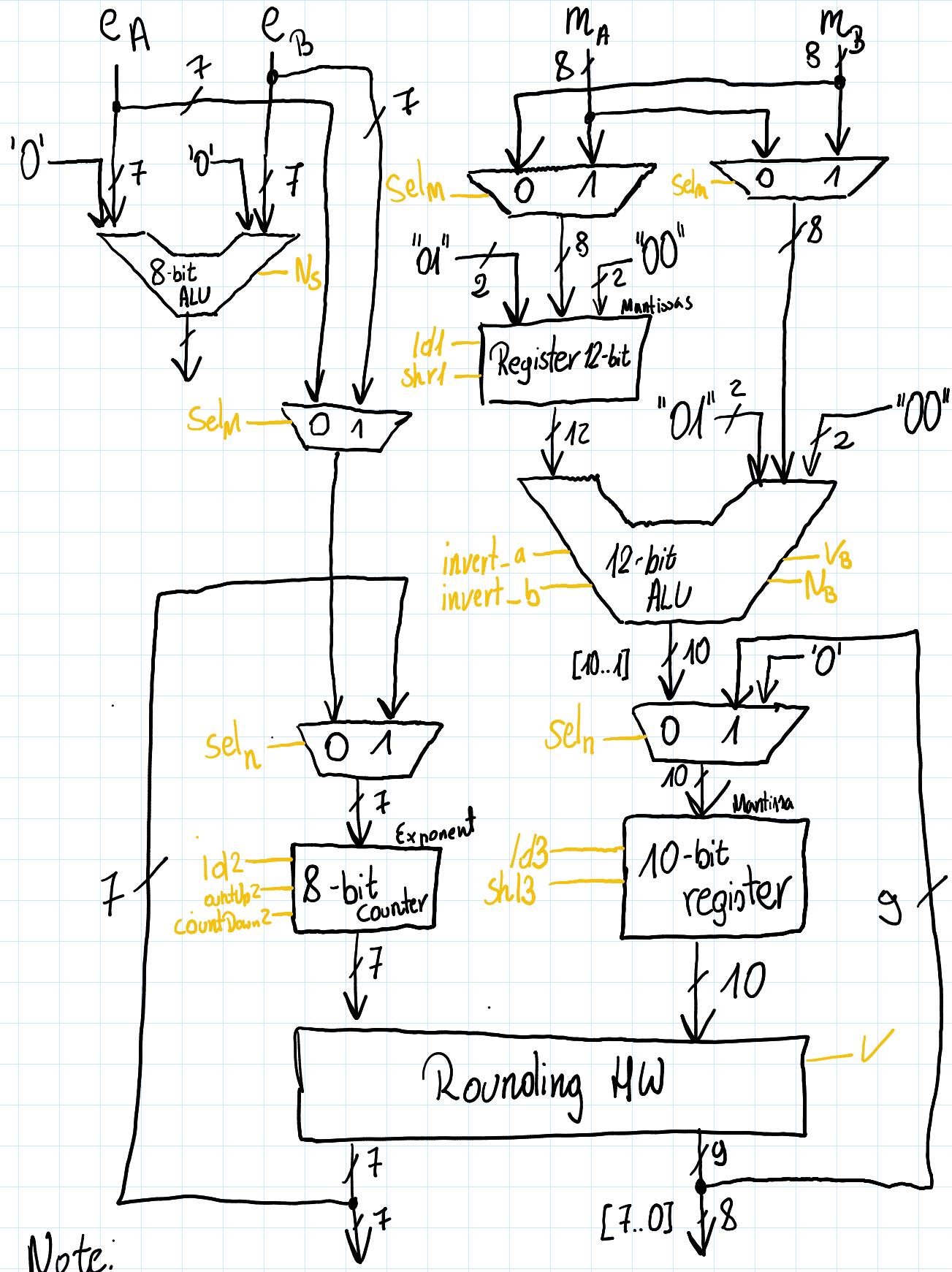


if overflow, increment exponent

$$-1 \cdot 0.5 \approx -1 \cdot 1$$

$$-0.5 \approx 0 ?$$





Note:

$\oplus 11 \cdot e_a < e_b$

- if NS. ~ H ~ D

A. $1.M_A \cdot 1.M_B, e_1 + e_2, ldE, ld$ mantissa

B. $(e_1 + e_2) + 63 \left(\begin{array}{l} \rightarrow 1 \text{ if Mantissa } V \\ |0| \in \end{array} \right)$

C. Normalize, round

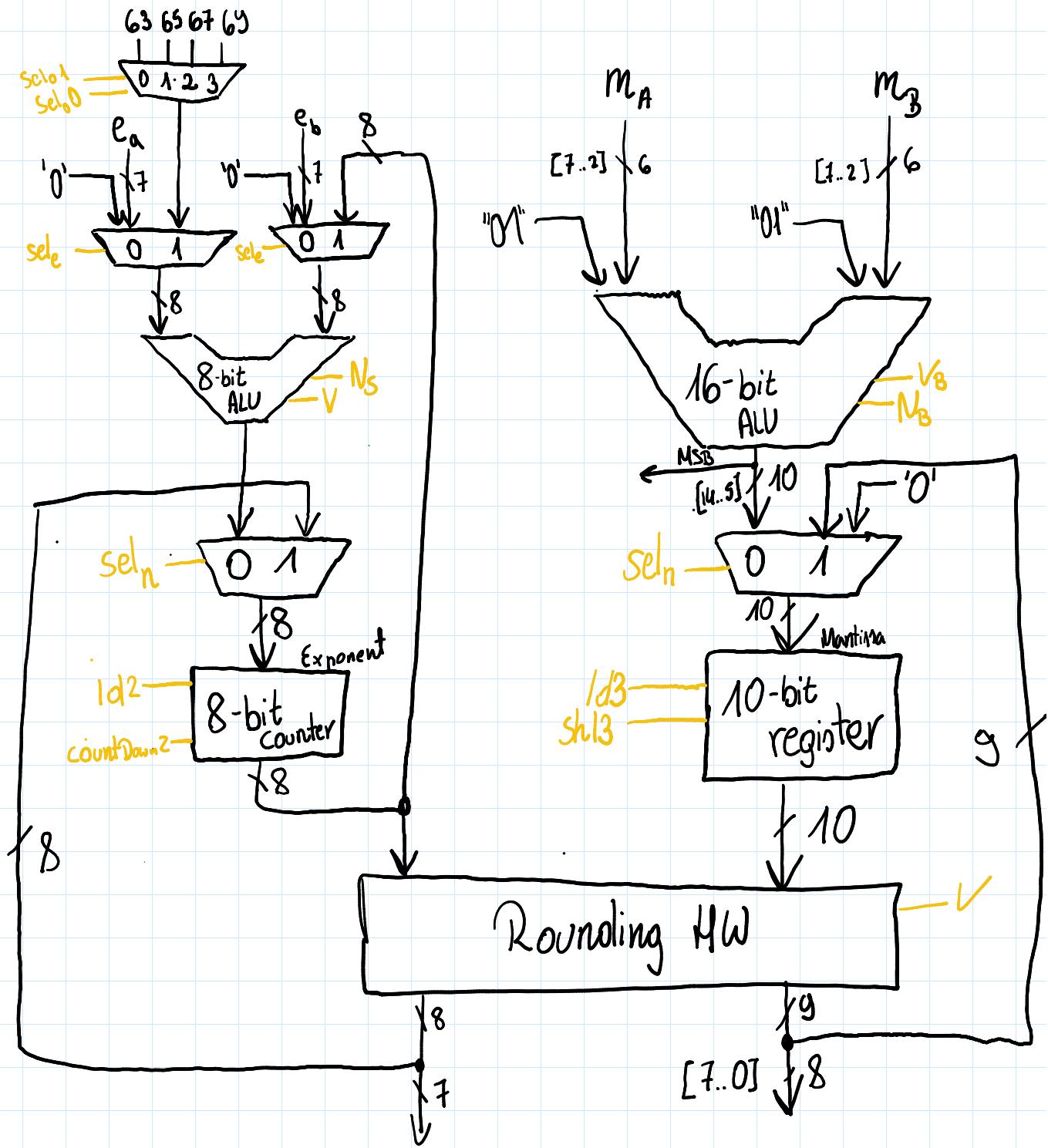
D. Reload

E. Renormalize, round

F STOP

G dc

H dc



$$S = S_A \oplus S_B$$