

$$v^+ = \frac{e/R + S_2/R}{1/R + 1/R} = \frac{e + S_2}{2}$$

$$v^- = \frac{S_3/R + S_1/R}{1/R + 1/R} = \frac{S_1 + S_3}{2}$$

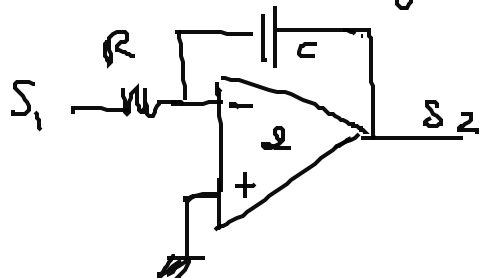
$$v^+ = -v^- \Rightarrow e + S_2 = S_1 + S_3 \Rightarrow S_1 = e + S_2 - S_3$$

Ampli 4

$$v^+ = 0$$

$$v^- = \frac{S_1/R + S_2/R + S_4/R}{3/R} = \frac{S_1 + S_2 + S_4}{3}$$

$$v^+ = v^- = 0 \Rightarrow S_4 = -(S_1 + S_2)$$



$$\left. \begin{aligned} v^+ &= 0 \\ v^- &= \frac{S_1/R + S_2 j C \omega}{1/R + j C \omega} \end{aligned} \right\} = 0 \quad \frac{S_1}{R} = -S_2 j C \omega$$

⇓

$$S_2 = -\frac{S_1}{j R C \omega}$$