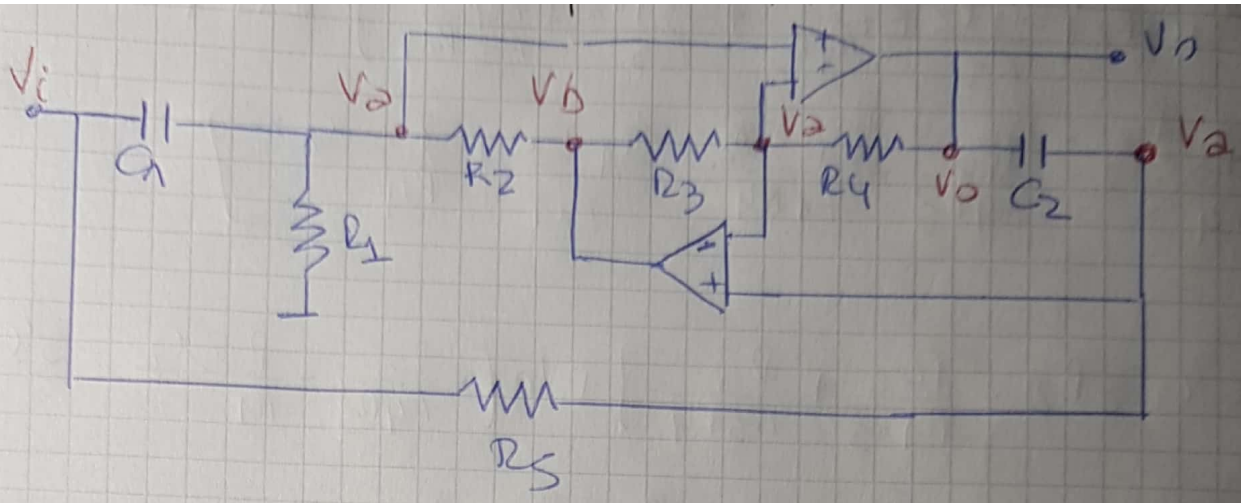

$$Vi\,SC_1 + \frac{Va}{R_1} = \frac{Va - Vo}{R_4} \qquad \frac{Va - Vo}{R_4} = Vo - Va$$

$$Va\left(\frac{1}{R_1} + SC_1 + \frac{1}{R_2}\right) - \frac{1}{R_2}Vb - SC_1 Vi = 0$$

$$Va\left(SC_2 + \frac{1}{R_5}\right) - \frac{1}{R_5}Vi - SC_2 Vo = 0$$

$$Va\left(\frac{1}{R_3} + \frac{1}{R_4}\right) - \frac{1}{R_3}Vb - \frac{1}{R_4}Vo = 0$$

$$Vb = \left[Va\left(\frac{1}{R_1} + SC_1 + \frac{1}{R_2}\right) - SC_1 Vi\right] R_2$$

$$Vb = \left[Va\left(\frac{1}{R_3} + \frac{1}{R_4}\right) - \frac{1}{R_4}Vo\right] R_3$$

$$Vo\left[Va\left(\frac{1}{R_1} + SC_1 + \frac{1}{R_2}\right) - SC_1 Vi\right] R_2 = \left[Vo\left(\frac{1}{R_3} + \frac{1}{R_4}\right) - \frac{1}{R_4}Vb\right] R_3$$

$$Vo\frac{R_2}{R_1} + Va\,SC_1 R_2 + Vo - SC_1 Vi R_2 = Va + Va\frac{R_3}{R_4} - \frac{R_3}{R_4}Vo$$

$$Va\frac{R_2}{R_1} + Va\,SC_1 R_2 - Va\frac{R_3}{R_4} = -\frac{R_3}{R_4}Vo + SC_1 R_2 Vi$$

$$Va\left[\frac{R_2}{R_1} + SC_1 R_2 - \frac{R_3}{R_4}\right] = -\frac{R_3}{R_4}Vo + SC_1 R_2 Vi$$

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$$-\frac{R_3}{R_4}sC_2V_o + \frac{R_3}{R_4R_5}V_o + s^2C_1C_2R_2V_i + \frac{sC_1R_2}{R_5}V_i - \frac{1}{R_5}\left[\frac{R_2}{R_1} + sC_1R_2 - \frac{R_3}{R_4}\right]V_i - sC_2\left[\frac{R_2}{R_1} + sC_1R_2 - \frac{R_3}{R_4}\right]$$

$$V_i\left[s^2C_1C_2R_2 + \frac{sC_1R_2}{R_5} - \frac{R_2}{R_1R_5} + \frac{sC_1R_2}{R_5} + \frac{R_3}{R_5R_4}\right]$$

$$V_o\left[-\frac{R_3}{R_4}sC_2 + \frac{R_3}{R_4R_5} - \frac{R_2sC_2}{R_4} - s^2C_1R_2C_2 + \frac{R_3sC_2}{R_4}\right]$$

$$V_i\left[s^2C_1C_2R_2 - \frac{R_2}{R_1R_5} + \frac{R_3}{R_5R_4}\right] + V_o\left[-\frac{R_3}{R_4R_5} - \frac{R_2sC_2}{R_4} - s^2C_1R_2C_2\right] = 0$$

$$\frac{s^2C_1C_2R_2 + \frac{1}{R_5}\left(\frac{R_3}{R_4} - \frac{R_2}{R_4}\right)}{s^2C_1R_2C_2 + \frac{sC_2R_2}{R_1} + \frac{R_3}{R_4R_5}}$$

$$= \frac{s^2 + \frac{1}{R_5C_1C_2R_2}\left(\frac{R_3}{R_4} - \frac{R_2}{R_4}\right)}{s^2 + s\frac{1}{R_1C_1} + \frac{R_3}{R_4R_5R_2C_1C_2}}$$

$$\frac{1}{R_5C_1C_2R_2}\left(\frac{R_3}{R_4} - \frac{R_2}{R_4}\right) = \frac{1}{9} \qquad \frac{R_3}{R_4R_5R_2C_1C_2} = 1$$

$$\frac{1}{R_4C_1} = 1$$

$$R_2 = \frac{8}{9} \qquad R_5 = \frac{9}{8}$$

Si asumo:

$R_3 = R_4 = 1$ $\quad R_1 = 1$ $\quad \frac{1}{R_5R_2}(1 - R_2) = 1/9$

$C_1 = C_2 = 1$ $\quad \frac{1}{R_5R_2} = 1$

$\frac{1}{R_2} = R_5$

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