$$\alpha = \omega_1 t, \quad \beta = \omega_2 t, \quad \alpha << \beta \text{ t.j. } \omega_1 << \omega_2$$

$$\cos(\alpha+\beta) = \cos\alpha \cdot \cos\beta - \sin\alpha \cdot \sin\beta, \quad \cos(\alpha-\beta) = \cos\alpha \cdot \cos\beta + \sin\alpha \cdot \sin\beta$$

$$2\cos\alpha \cdot \cos\beta = \cos(\alpha+\beta) + \cos(\alpha-\beta), \quad \cos(\alpha-\beta) = \cos(\beta-\beta)$$

$$\cos^2\alpha = \frac{1+\cos 2\alpha}{2}$$

$$\left[\cos\alpha + \cos\beta\right]^2 + K\cos\beta = \cos^2\alpha + 2\cos\alpha \cdot \cos\beta + \cos^2\beta + K\cos\beta$$

$$= \frac{1+\cos 2\alpha}{2} + \cos(\alpha+\beta) + \cos(\alpha-\beta) + \frac{1+\cos 2\beta}{2} + K\cos\beta =$$

$$= 1 + \frac{1}{2}\cos 2\alpha + \cos(\beta-\alpha) + K\cos\beta + \cos(\beta+\alpha) + \frac{1}{2}\cos 2\beta$$

$$\cos(\beta-\alpha) + \cos\beta + \cos(\beta+\alpha) =$$

$$= 2\cos\alpha \cdot \cos\beta + K\cos\beta = \underbrace{K\left[1 + m\cos\omega_1 t\right]}_{\textbf{AMPLITÚDA}} \cdot \cos\omega_2 t, \ m = \frac{2}{K}$$

$$m - \text{koeficient modulácie}$$

$$\underbrace{K\left[1 + m\cos\omega_1 t\right]}_{\textbf{AMPLITÚDA}} \cdot \cos\omega_2 t$$

$$\omega_2 - \text{nosná (frekvencia)}$$

$$\alpha = \omega_1 t, \quad \beta = \omega_2 t, \quad \alpha << \beta \text{ t.j. } \omega_1 << \omega_2$$

$$\cos(\alpha+\beta) = \cos\alpha \cdot \cos\beta - \sin\alpha \cdot \sin\beta, \quad \cos(\alpha-\beta) = \cos\alpha \cdot \cos\beta + \sin\alpha \cdot \sin\beta$$

$$2\cos\alpha \cdot \cos\beta = \cos(\alpha+\beta) + \cos(\alpha-\beta), \quad \cos(\alpha-\beta) = \cos(\beta-\beta)$$

$$\cos^2\alpha = \frac{1+\cos 2\alpha}{2}$$

m – koeficient modulácie

$$\underbrace{K\left[1+m\cos\omega_1 t\right]}_{\textbf{AMPLITÚDA}} \cdot \cos\omega_2 t$$

ω_2 – nosná (frekvencia)

$$\left\{\left[1+m\cos\omega_1 t\right]\cos\omega_2 t\right\}^2 = \left[1+m\cos\alpha\right]^2\cos^2\beta = \left[1+2m\cos\alpha+m^2\cos^2\alpha\right]\frac{1+\cos 2\beta}{2} =$$

$$= 1+2m\cos\alpha+m^2\frac{1+\cos 2\alpha}{2} + \left(1+2m\cos\alpha+m^2\frac{1+\cos 2\alpha}{2}\right)\frac{\cos 2\beta}{2} =$$

$$= 1+\frac{m^2}{2}+2m\cos\alpha+\frac{m^2}{2}\cos 2\alpha+\frac{\cos 2\beta}{2}+2m\cos\alpha\cdot\frac{\cos 2\beta}{2}+\frac{m^2}{4}\cos 2\beta+\frac{m^2}{4}\cos 2\alpha\cdot\cos 2\beta =$$

$$= 1+\frac{m^2}{2}+2m\cos\alpha+\frac{m^2}{2}\cos 2\alpha+\frac{1}{2}\left[1+\frac{m^2}{2}\right]\cos 2\beta+m\cos\alpha\cdot\cos 2\beta+\frac{m^2}{4}\cos 2\alpha\cdot\cos 2\beta =$$

$$= \underbrace{1+\frac{m^2}{2}}_{A_0}+\underbrace{2m}_{A_1}\cos\alpha+\frac{m^2}{\underbrace{2}_{\frac{m}{4}A_1}}\cos 2\alpha+\underbrace{\frac{1}{2}\left[1+\frac{m^2}{2}\right]}_{A_0}\cos 2\beta+\underbrace{2m}_{A_1}\cos(2\beta-\alpha)+\underbrace{2m}_{A_1}\cos(2\beta+\alpha)+\frac{m^2}{2}\cos(2\beta-2\alpha)+$$

$$+\frac{m^2}{2}\cos(2\beta+2\alpha) =$$

$$= A_0 + A_1\cos\alpha+\frac{m}{4}A_1\cos 2\alpha+\frac{m}{4}A_1\cos(2\beta-2\alpha)+A_1\cos(2\beta-\alpha)+\frac{A_0}{2}\cos 2\beta+A_1\cos(2\beta+/\alpha)+\frac{m}{4}A_1\cos(2\beta+2\alpha)$$