$$E_{1} = A_{1} \cos(\omega_{1}t + \phi_{1}) + A_{32} \cos\left(\omega_{2}t + \phi_{2} + \frac{\pi}{2}\right)$$

$$E_{2} = A_{2} \cos(\omega_{2}t + \phi_{2})$$

$$E_{3} = A_{31} \cos(\omega_{1}t + \phi_{1}) + A_{32} \cos\left(\omega_{2}t + \phi_{2} + \frac{\pi}{2}\right)$$

$$E_{4} = A_{41} \cos\left(\omega_{1}t + \phi_{1} + \frac{\pi}{2}\right) + A_{42} \cos(\omega_{2}t + \phi_{2})$$