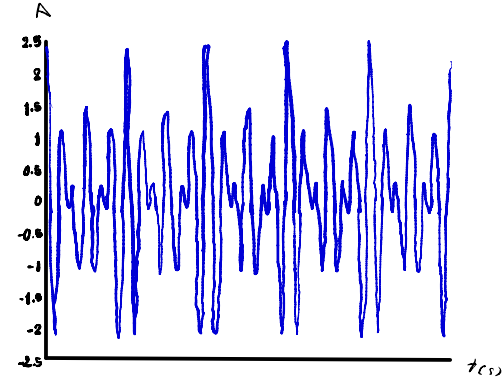
$AM = [g + 6 \cdot m(t)] \cos(\omega t) \Big/ 6 \cdot m(t) = 2 \cdot \cos(\mu t)$

ค.ถี่ของตัวพาห์ = 20 Hz

ค.ถี่ของสัญญาณข่าวสาร = 100 Hz

$g = 0.5$

สัญญาณ AM ใน Time Domain



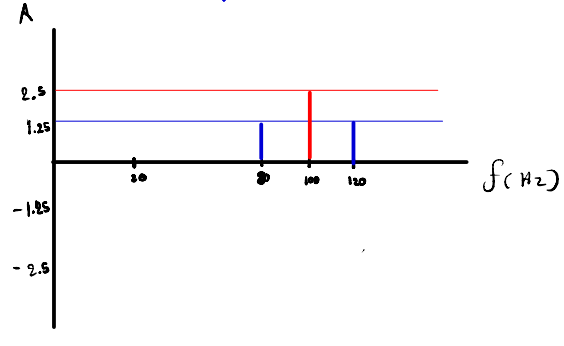
$AM = [g + 2\cos(\mu t)] \cos(\omega t)$

$\omega = 2\pi f_c t = 200\pi t$

$\mu = 2\pi f_m t = 40\pi t$

$AM = [g + 2\cos(40\pi t)] \cdot \cos(200\pi t)$

สัญญาณ AM ใน Frequency Domain



ค่าดรรชนีการ Modulation index (Modulation Depth)

$m = \frac{P - D}{P + D}$

$P = 2.5 - (-2.5) = 5$

$D = -1.5 - 1.5 = -3$

$= \frac{5 - (-3)}{5 - 3}$

$= 8/2 = 4$ Over-Modulated