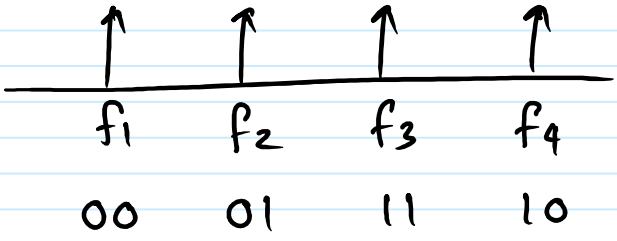
# M-ary FSK Signalling

M different frequencies to indicate M possibilities of a symbol ($\log_2 M$ bits per symbol)

Example : 4-FSK



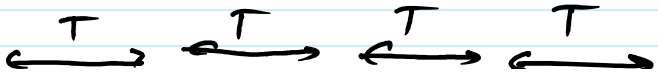

Symbol Rate $1/T$

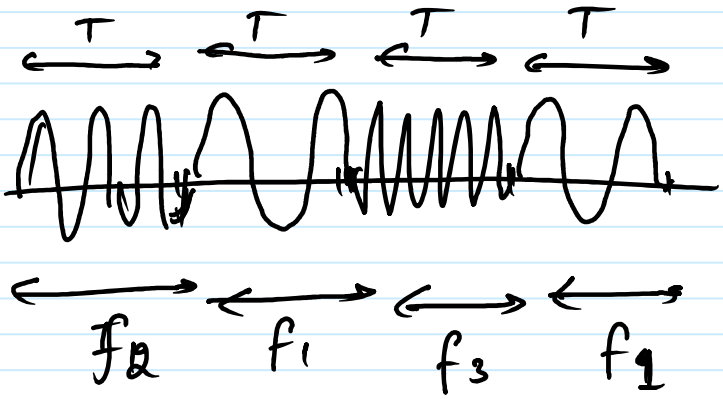
Symbol duration T

Consider bit pattern

01001100

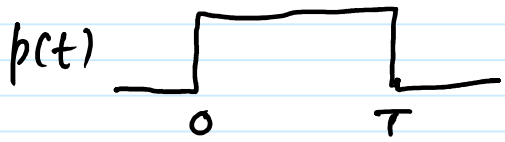
Corresponding 4-FSK Waveform






Let $f(n)$ denote the frequency corresponding to $n^{th}$ bit pair

To write the modulated waveform expression consider the rectangular pulse




Now $x(t) = \sum_n \cos[2\pi f(n)t]\, p(t-nT)$

delayed pulses play role here also (FSK)

Raised cosine pulses are applicable here also.