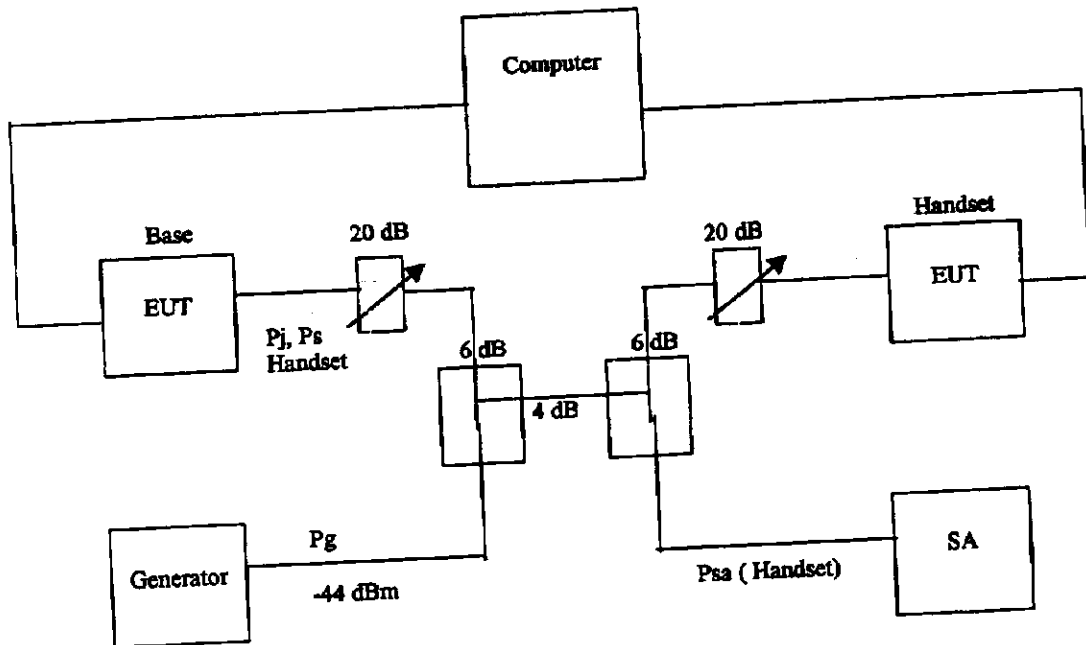


### Test Setup Diagram



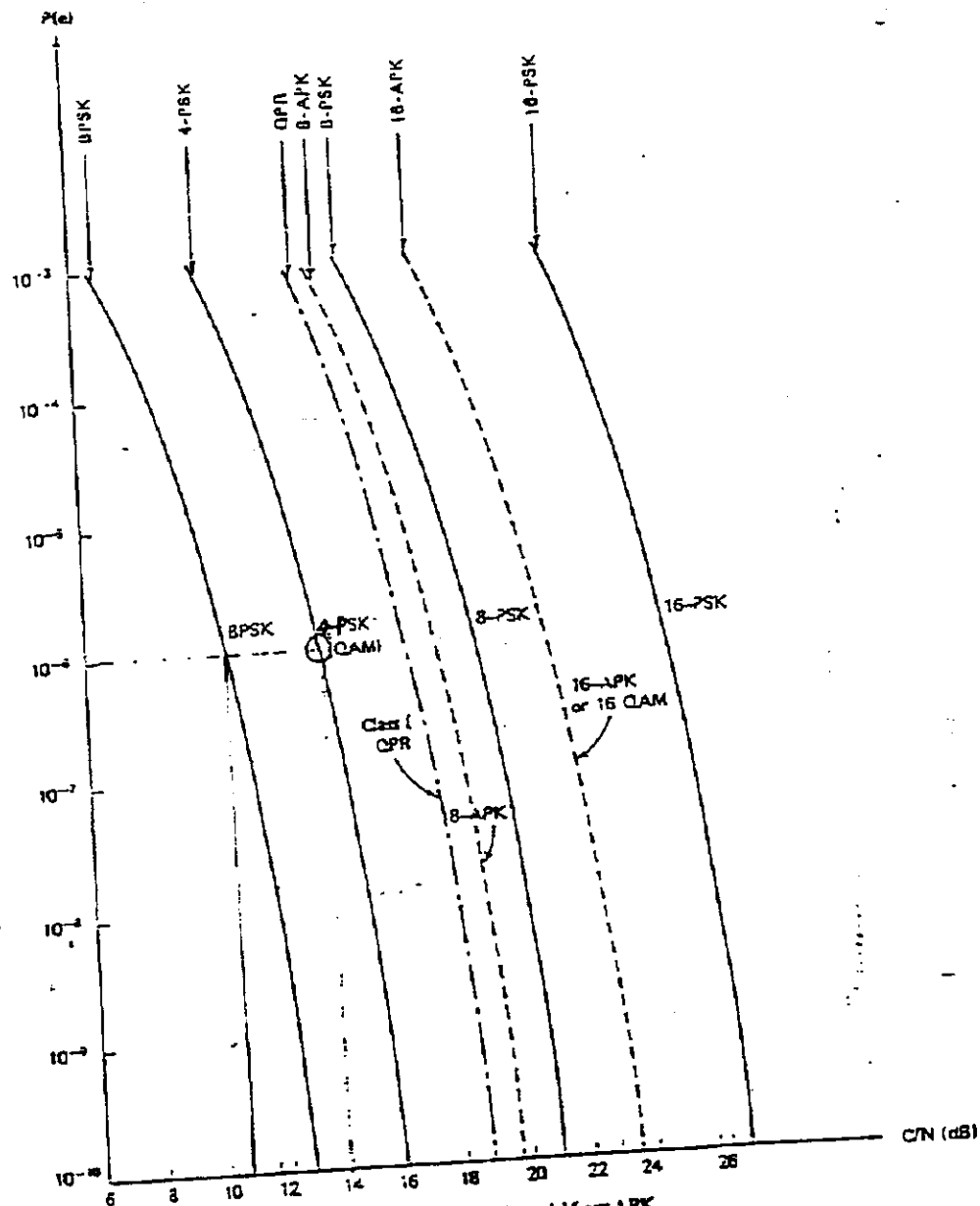


Fig. 3.11.  $P(e)$  performance of  $M$ -ary PSK, QAM, QPS, and  $M$ -ary APK coherent systems. The rms  $C/N$  is specified in the double-sided Nyquist bandwidth.

Figure showing offset for QPSK (4-PSK) modulation  $C/N$  offset (14 dB).  
 (Obtained from DIGITAL COMMUNICATIONS: Microwave Applications, by  
 Kamilo Feher, Prentice-Hall Inc., 1981)