

### Problem set 7

Problem 5 b: implementation of channel equalization for QPSK data.

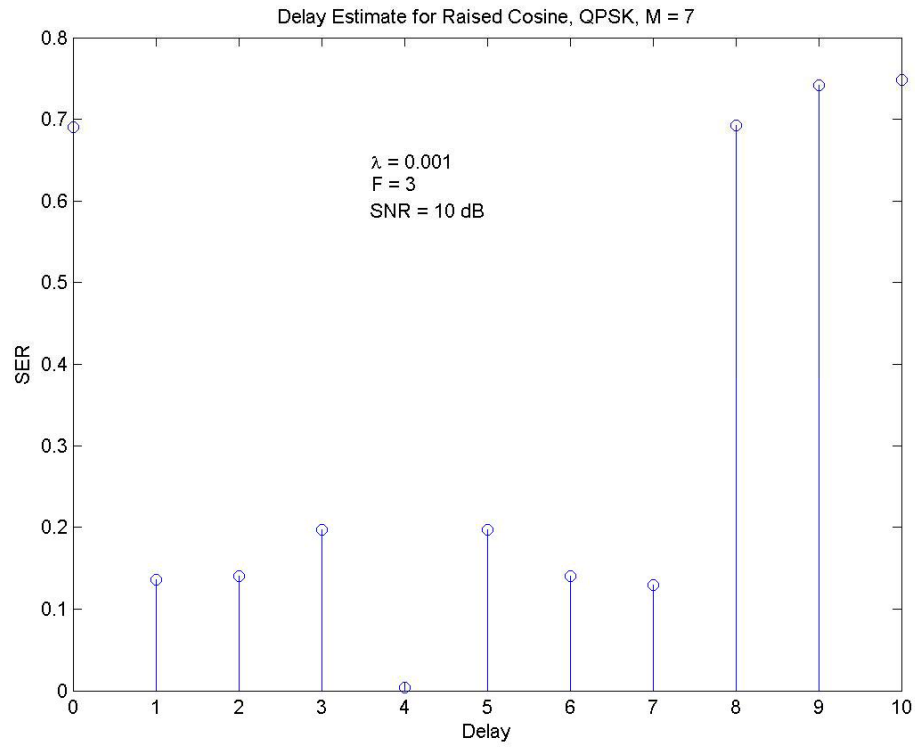
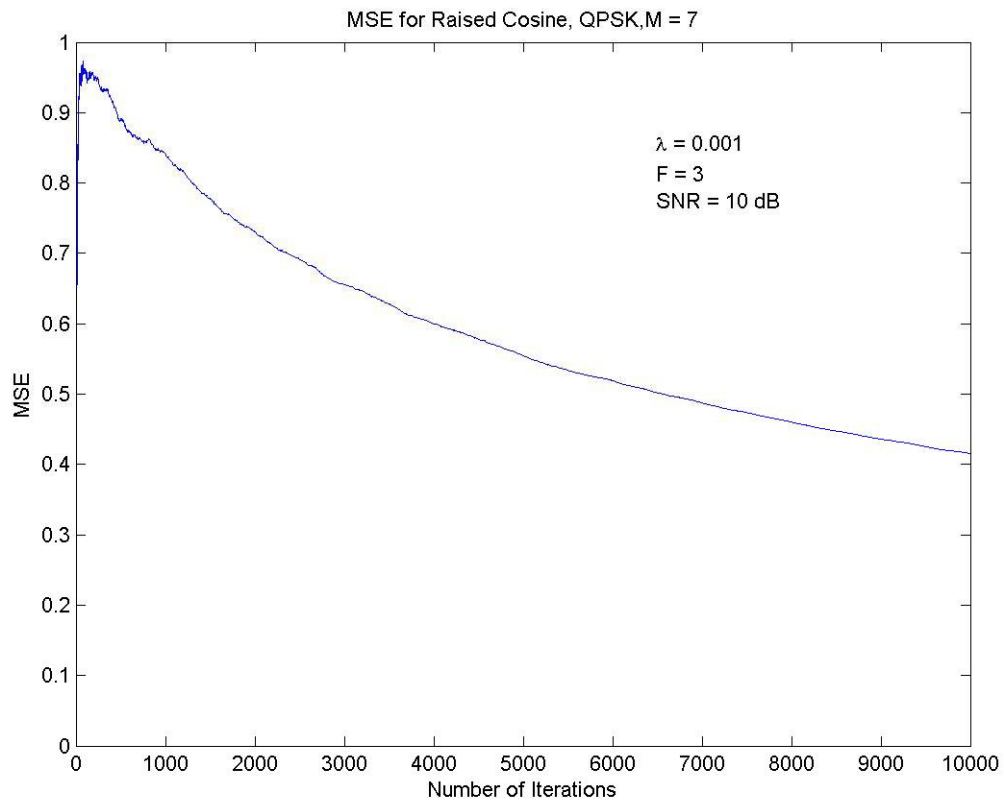


Fig 1: delay estimate for raised cosine for QPSK ,M = 7.

Fig 2: mean square error curve for QPSK, M=7



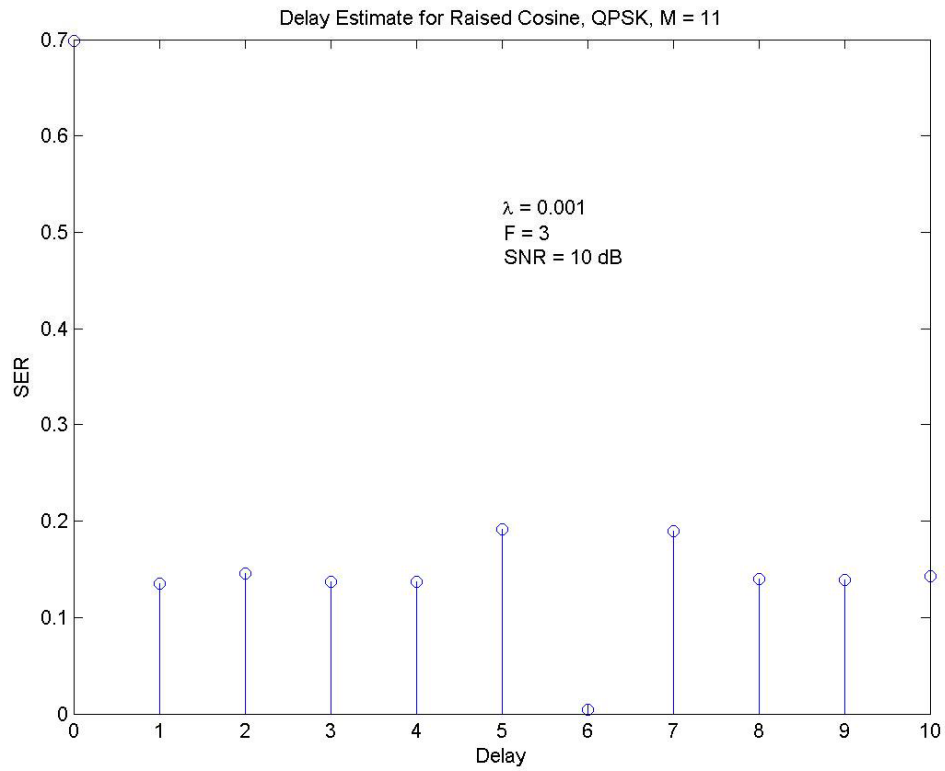


Fig 3: delay estimate for raised cosine ,QPSK and M = 11.

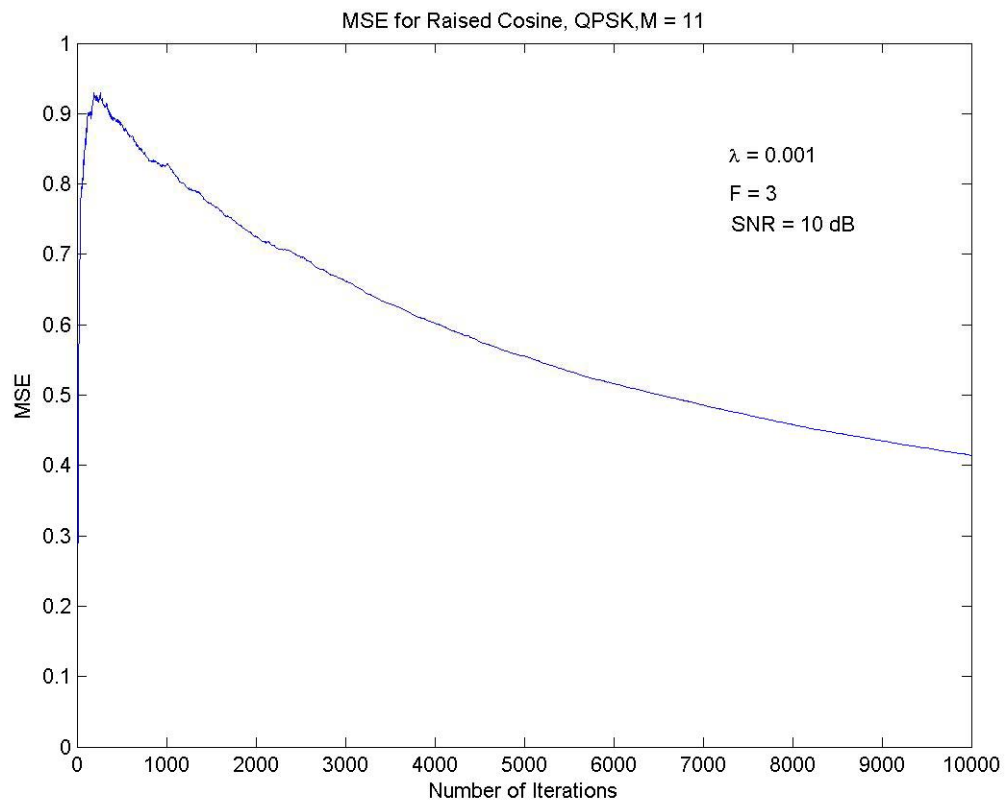


Fig 4: mean square error curve for M=11

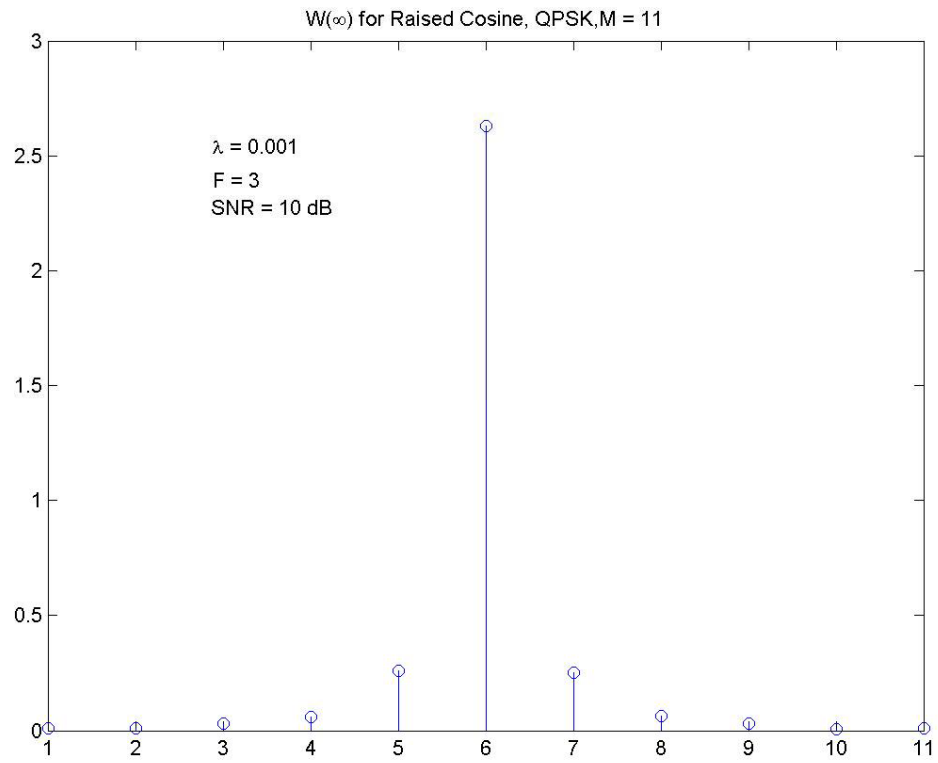


Fig 5: convergence of weights

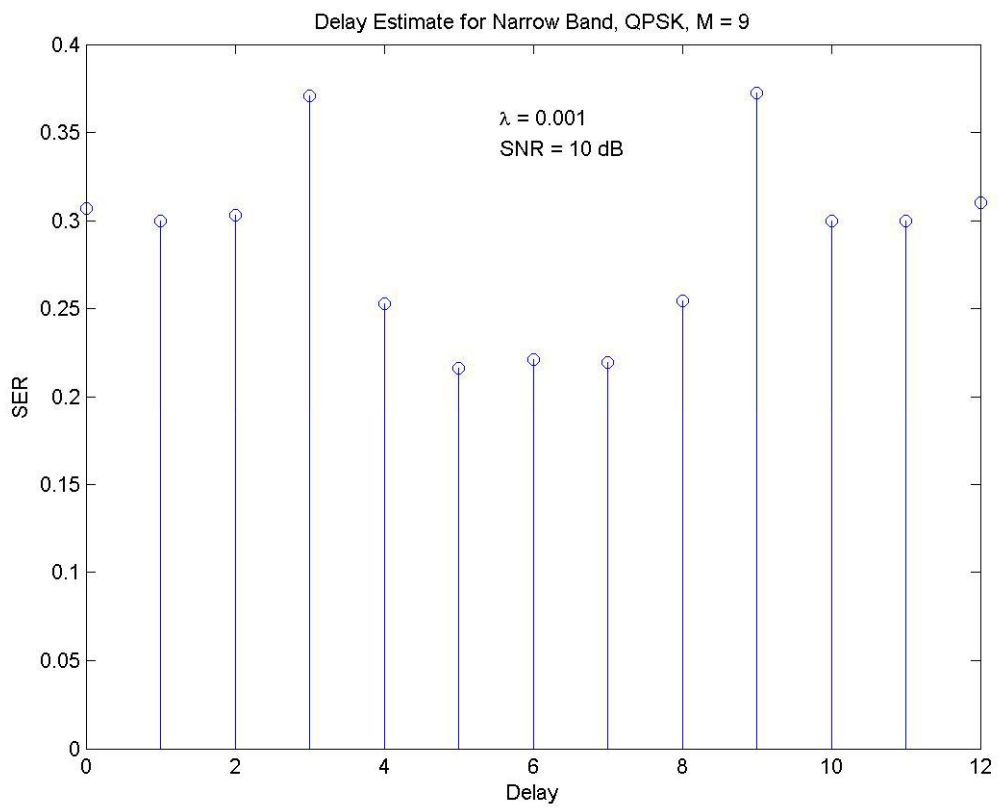


Fig 6: delay estimate for narrow band channel  $M=9$ .

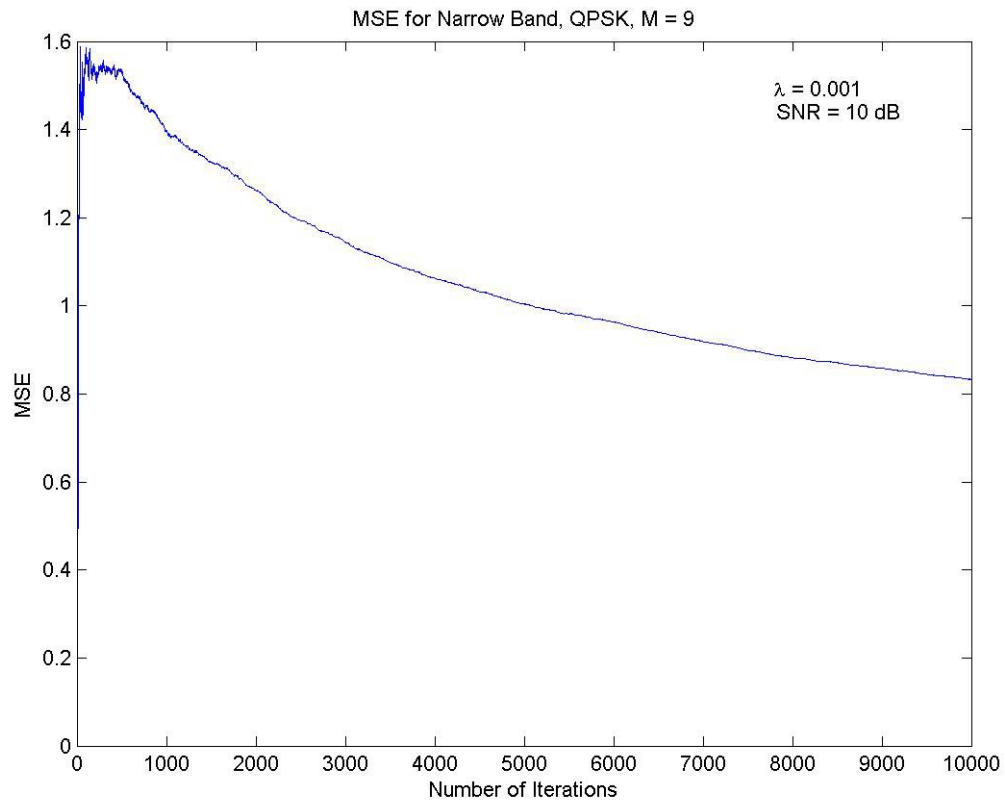


Fig 7: mean square error curve for M=9.

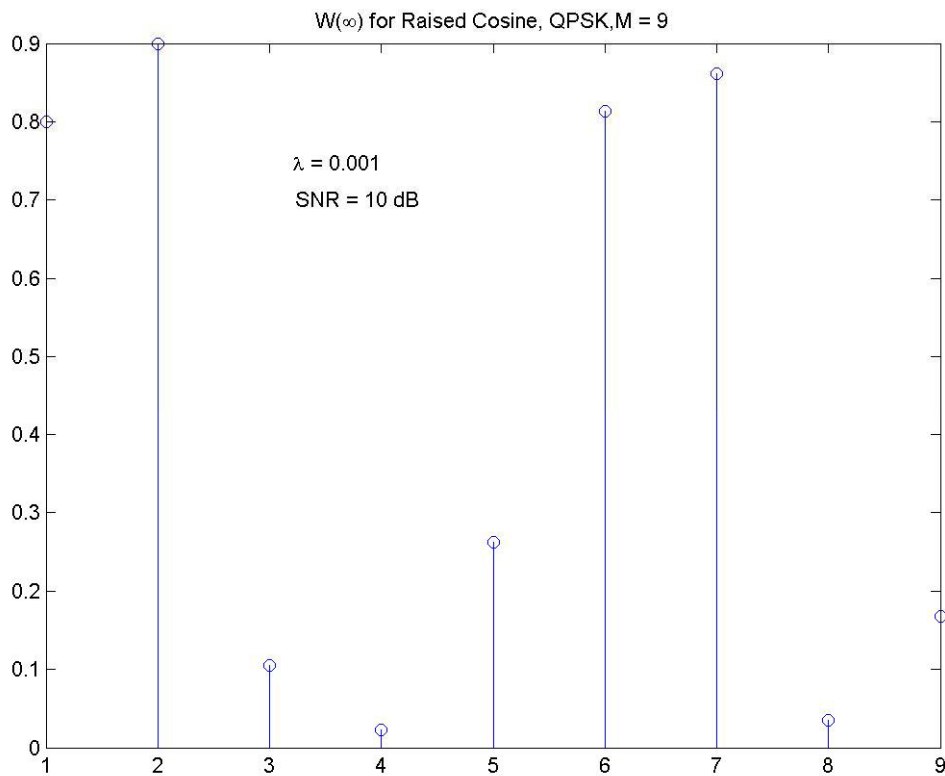


Fig 8: convergence of weights for M=9.