**Experiment-04**

**DSB-SC MODULATOR AND DETECTOR**

t=0:0.000001:0.001;

vm=1;

vc=1;

fm=2000;

fc=50000;

m\_t=vm\*sin(2\*pi\*fm\*t);

subplot(4,1,1)

plot(t,m\_t)

title('message')

c\_t=vc\*sin(2\*pi\*fc\*t);

subplot(4,1,2)

plot(t,c\_t)

title('carrier')

subplot(4,1,3)

title('DSB SC')

s\_t=m\_t.\*c\_t;

hold on;

plot(t,s\_t)

plot(t,m\_t,'r')

plot(t,m\_t,'r')

hold off;

r=s\_t.\*c\_t;

[b a]=butter(1,0.01);

mr=filter(b,a,r);

subplot(4,1,4);

plot(t,mr);

title('demodulated')

