```
t=linspace(0,20,1000);
x2=cos(t);
x2(x2>0)=ones(size(x2(x2>0)));
x2(x2<0)=-ones(size(x2(x2<0)));
y2=lsim(B,A,x2,t)';
plot(t(501:1000),y2(501:1000));legend('y2');
```