6.002 Demo# 18 (Load Set up demo#18.set)
Energy and Power in RC Network **Agarwal Fall 00**
Lectures 22 (also reviewed in lecture 23)

Description: To show power consumption using MOSFET and RC Network.

Starting with a frequency approximately 300 HZ square wave and the S1 on the card should be on and monitor the ammeter read out. As the frequency goes up the ammeter reading goes up, as the Frequency goes down the ammeter goes down linearly. If the S1 on the card is on off position the output remains the same regardless of any change in frequency.

See schematic diagram next page for more detail

[For this demo we need two cameras with a video switcher and light to show to ammeter read out.]

Oscilloscope Setup

CH	V/DIV	OFFSET	MODE	FUNC	MATH	VERTICAL	HORIZONTAL
1 on	2	-3.5	DC	off			
2 on	5	14	DC	off			
3 off			DC	off			
4 off			DC	off			
Horizontal: 1 ms		Acquisition:		AUTO AUTO	4	Trigger:	CH1

Waveform Generator Setup

UNIT	WAVE	AMP	OFFSET	FREQ
FG1	Square	4	660 mV *	300 HZ *

Power Supply Setup

+6	+25	-25	OUTPUT
off	+15	off	
			Trigger: INT

- note if you set offset below 450 mV the output signal will be noisy. It has to be set at 660 mV in order to work properly.

*Note Prof Lang wants the starting frequency @ 200 Hz square wave. Keep analog meter @ common and plus (+) position no need to move it to current position, just set current @ 10 mA range it should work.