ET-460/494

DSP Lab 11

Equipment Required:          Texas Instruments eZdsp USB Stick

                             Male-to-Male Audio Cable

                             Audio Source (e.g. computer, mp3 player, microphone)

                             Headphones (or speakers)

Lab 11

   (1.)  Follow the slides for Chapter 11, "Adaptive Noise Reduction". **Again make sure
         the 551 chipset is still selected.**

   (2.) This lab introduces noise reduction.  This is an excellent example of a very real world
         problem that can be solved with a DSP module and proper coding.

   (3.) To create the noise needed for this lab, it is recommended that you use some source
         of white noise, a fan, or some source of background noise.  Voices and music will
         not work as noise sources.

   (4.)  Questions:

         a. What is the LMS equation?

         b. Why is the error squared?

         c. What happens if mu is too small?  Too large?

         d. What are the three implementation variables?