Examining the Impulse Response of Project 1 in Windows XP
courtesy of Rob Garret

To make sure the sound-field simulator is working properly it is necessary to examine its impulse response, and to do this it is necessary to get samples of the EVM analog output into the computer (preferably into MATLAB) where they can be examined in detail.

**HOW-TO** setup the soundcard for recording analog out from the EVM, under winxp:

To enable the soundcard to record audio:
- control panel --> sounds,speech,and audio devices --> sounds and audio devices
- --> Choose 'audio' tab
- --> Click 'Sound Recording','Volume' button
- --> Then select 'line in' and turn the volume slider all the way up

(Here I am assuming we want to record with 'line in' and not 'mic'. There are a few good reasons for this: 2-channels, mic input has an amp that adds noise. Also thinking of noise: de-select all other inputs; e.g. CD-IN, mic, etc )

'sounds and audio devices' is also known to winxp as: C:\WINDOWS\System32\mmsys.cpl
So 'run' "C:\WINDOWS\System32\mmsys.cpl" if you can't find your way through the start menu.

It may be worthwhile to place a shortcut to 'sounds and audio devices' on the desktop.

Now that we have the soundcard setup:

1. Get a working program running on the EVM
2. Connect EVM-out to soundcard-line-in (blue='line-in', green='line-out', pink='mic')
3. Go to matlab and type:
   ```matlab
   >> fs=48000; t=2; y=wavrecord(t*fs,fs,2);
   >> figure(1); plot((1/fs)*[0:t*fs-1]',y(:,1));title('left channel');
   >> figure(2); plot((1/fs)*[0:t*fs-1]',y(:,2));title('right channel');
   ```

and there you go. You've got samples!