MAE 412: Laboratory 1

Measuring AIM 65 Time Delays Using the Oscilloscope Cursors

Instructions

Determine minimum and maximum time delay using the TTL mode of the function generator as input to the AIM 65. Oscilloscope channel 1 monitors the input and channel 2 monitors the computer output. Think about why this variation can occur.

Waveform Persistence

To get an idea of the range of possible time delay values, turn on persistence by following the steps below:

1. Press **Display** to bring up the Display menu

2. Adjust the amount of persistence under the *Persist* option

Setting the persistence to "Infinite" will help in determining the minimum and maximum time delays.

Time Delay Measurements Using the Cursors

To measure the actual time delay values, activate and adjust the cursors by following the steps below:

1. Press **Cursor** to activate the cursors and bring up the Cursor menu

2. Set the cursor *Type* to "Time"

3. Set the cursor *Source* to "CH1"

   Note: The CURSOR 1 and CURSOR 2 LEDs under the CH 1 and CH 2 vertical position knobs should now be on

4. Adjust the positions (in time) of the cursors using the cursor knobs

   Note: The cursors should appear on the screen as two vertical yellow (for CH 1) lines

5. Align the cursors with the rising edges of the input and output signals

6. Record the cursor positions (shown on the menu) and their absolute difference (*Delta*)