

Part A

1. Build the “Quick-Look” circuit shown in Fig. 1 (Fig. 5 in data sheet). Your oscilloscope has only two channels, so connect SSTRB to Channel 1 and DOUT to Channel 2. Trigger on the falling edge of Channel 1.

Note: The Quick-Look circuit has DIN tied to +5V, so the control-byte data is 11111111 or \$FF (Hex). This selects Channel 7 as the single-ended analog input relative to COM (see Table 3 in the data sheet).

2. Use the calibrator to provide analog input between 1.000 and 1.200 V. List the digital output bytes that you observe over this range, and specify the transition voltages. In your write-up . . . Calculate the INL errors.

3. Find the range of analog input voltage that corresponds to \$B5 (Hex).

Part B

1. Make the following connections to the green I/O block that extends from your computer: Pin 37 - DIN, Pin 38 - \overline{CS} , Pin 39 - SCLK, Pin 17 - GND. Be sure to remove all previous connections to DIN, \overline{CS} , and SCLK.

2. Start the LabView program and open the file FGEN.vi.

3. Set all of the toggle switches on the front panel of the virtual pattern generator to 1 and set the clock frequency to 10 kHz. Leave other settings. Press Go to start the vi. You should be able to observe conversion results in response to an analog input at Channel 7 as in §A2.

4. Determine and implement the control-byte settings that allow for single-ended conversions at Channel 4.

5. Determine and implement the control-byte settings that allow for differential conversions at Channel 3 (+) and Channel 2 (-).

6. Determine and implement the control-byte settings that put the MAX1112 in Power-Down mode. Then return the MAX1112 to Fully-Active mode.