# Stearns FlipChip Tester User’s Guide

# FTDI USB/SPI Cable Driver Installation

When you plug in the FTDI USB/SPI cable Windows will (usually) automatically install the driver. Unfortunately this driver cannot be used with the Tester software. You need to remove the automatically installed driver and replace it with the FTDI D2xx Direct Driver. You need to install the 32-bit or 64-bit version of the driver depending on which version of Windows you are using. The drivers are available from the FTDI WWW page: <http://www.ftdichip.com/Drivers/D2XX.htm>

To replace the USB/SPI cable driver, click on the Start icon, right-click on “Computer”, and left-click on “Properties”. Left click on “Device Manager” and a new window will open. Then Left-click on the triangle to the left of “Ports”, right-click on the USB Serial Port that matches the USB/SPI cable that you just installed, and left-click on “Update Driver Software”. If you are unsure of the port that matches your cable, unplug it and see which one disappears, and then reinstall the cable. Left-click on “Browse my computer for driver software”, left-click on the “Browse” button, select the folder where you unpacked the driver ZIP file that you downloaded from the FTDI WWW site, left-click on the “Next” button, and let Windows install the FTDI USB/SPI Driver.

# Test File Format

The Test File is a plain text file and can be created and edited with a simple text editor.

Blank lines are (almost always) ignored.

All of the lines at the beginning of the file up to the line beginning with “PINS” are comments. (See the line beginning with “M216” in the example below.)

The line beginning with “PINS” starts the pin assignments section. The next line in the file is the first pin assignment. The first entry in the pin assignment line is the column in the test vectors that will show up later in the test file. In the example below the “1” refers to the first column of a text vector line. The next entry in the example is an “I”. This means that the corresponding signal is an input on the FlipChip and an output from the Tester. The tester will drive this signal, and make sure that the resulting input pin on the FlipChip had the correct logic level. The third entry is “AA1”. This corresponds to the connector and pin where the FlipChip will be plugged into the tester. The remainder of the line is a comment. There must be a blank line after the last pin assignment line.

The next line in the file shows the type of signal, Input, Output, or Pullup, that is defined in each column of a test vector line. In this example only Inputs and Outputs are used. Remember, these definitions are relative to the FlipChip.

The test vector line will contain a 0, 1, or an X. If the pin is defined as an Input, the Tester will drive the signal to the defined logic level, 0 or 1, and will ignore any signal with an X. A blank column means that the signal does not change from the previous line.

M216 6 FLIP FLOPS

PINS

1 I AA1 E1-1 CLEAR-N E1-5/6 E1-8/9 E2-5/6

2 I AB1 E1-3 CLOCK E1-5/6

3 I AC1 E1-2 DATA E1-5/6

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