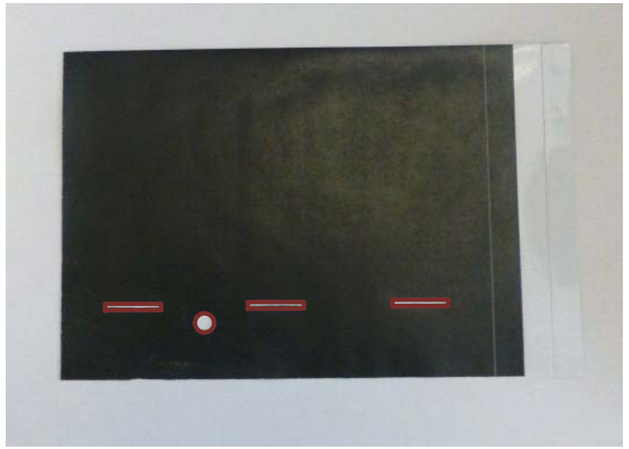
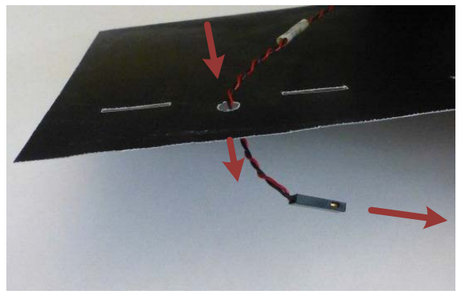
A. Creating the Speaker Housing

1 To assemble the speaker housing, use one cylinder cutout and the speaker. The second cylinder cutout is extra in case it's needed.

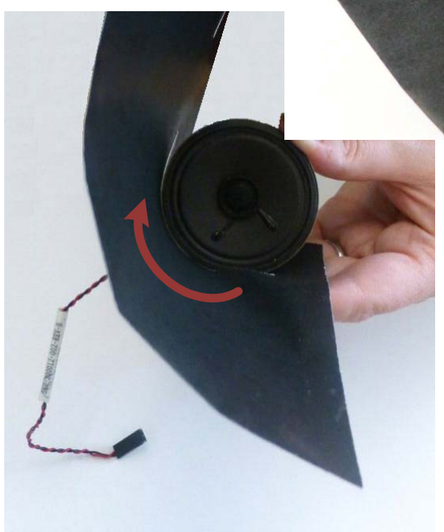
2 Pop out all of the tabs in the cylinder cutout.



3 With the solid black side facing up, push the speaker cable through the round hole and pull it through.



4 Place the edges of the speaker in the small rectangular tabs and roll the cylinder around the speaker.



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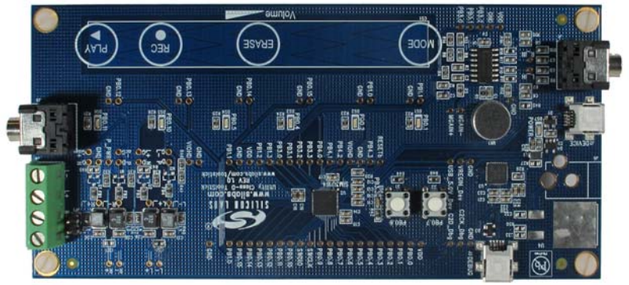

- Class-D ToolStick Quick Start Guide (this document)
- 2 x cylinder cutouts
- 1 x 1 W speaker
- 1 x male-to-male stereo cable
- 2 x mini USB cables
- Class-D ToolStick board

The Class-D ToolStick kit contains the following:

The Class-D ToolStick demonstrates direct-drive Class-D amplification using the Si3U1xx high drive I/O. The kit demonstrates the integrated USB 2.0 full-speed transceiver, internal oscillator and phase-locked loop (PLL), up to 300 mA high-drive I/O, dual SAR ADCs, enhanced programmable counter array (EPCA), and capacitive sensing.

Class-D ToolStick Kit Quick-Start Guide

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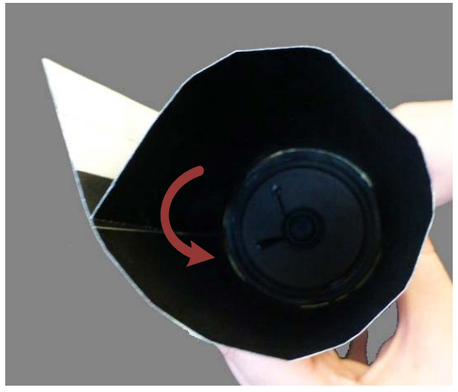
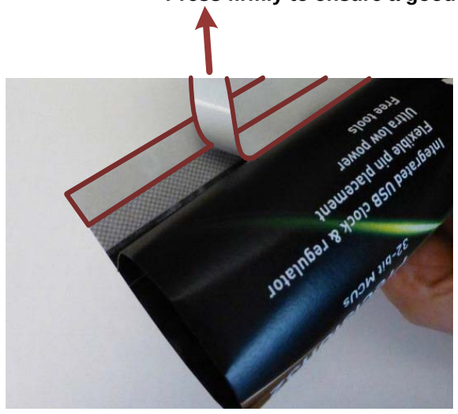
Austin, TX 78701

5 Pull the edge without the adhesive strips in as tightly as possible. It should line up with or go past the white line printed inside the cylinder.



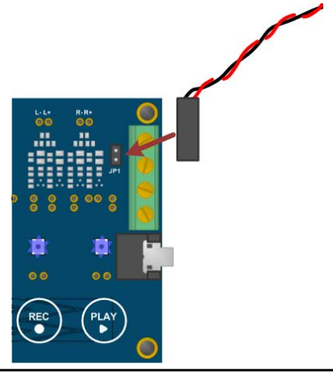
6 Peel off the backing from the adhesive strips on the outside flap and stick the outside flap down. Press firmly to ensure a good hold.



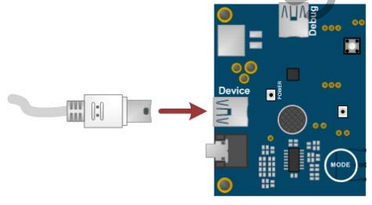
7 The speaker housing is now complete.

B. Using the Demo

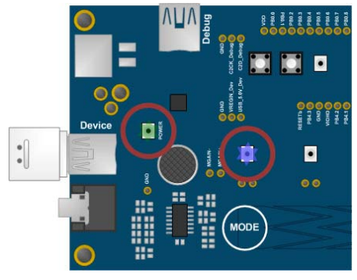
1 Connect the assembled speaker and housing to the 1 x 2 header JP1 on the board.



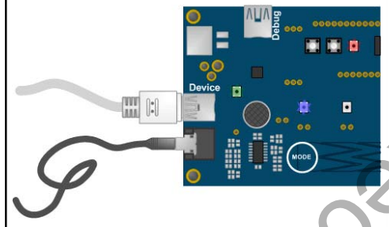
2 Power the Class-D RD board through either USB connector (Debug or Device) using a mini USB cable from the kit. Do not touch the Capacitive Sensing Slider when connecting power to the board.



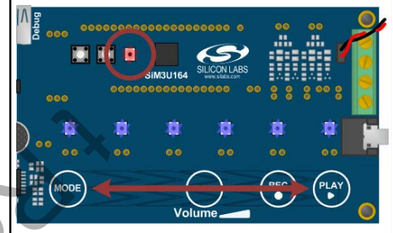
3 The green POWER LED (DS7) turns on when power is applied. The blue Mode 1 LED (DS1) will turn on when the board is ready.



4 The default mode (Mode 1) is stereo jack input mode. Attach one end of the male-to-male 3.5 mm stereo cable in the kit to the jack (J1) and the other end to an input device (phone or MP3 player).



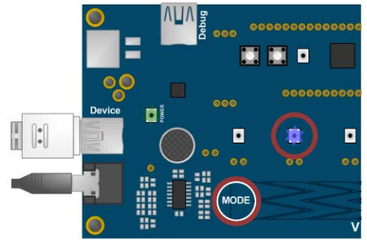
5 Change volume by sliding up and down on the Capacitive Sensing slider. The blue LEDs indicate the volume level.



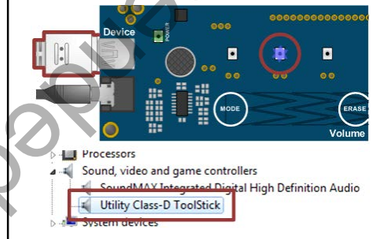
Note: The red LED (DS8) indicates when the input source signal is too loud.

6 Press and release the MODE button to switch to the other modes. The single blue LED indicates the current mode.

Mode 1 = Stereo Audio Jack
Mode 2 = USB
Mode 3 = Play Prerecorded Flash
Mode 4 = Play/Record Flash

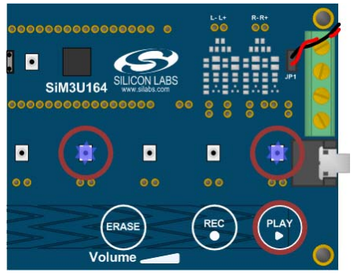


7 In USB mode, connect the Device USB connector to the PC using the mini USB cable, if it's not already connected. Ensure the device appears in Device Manager. Play or record music using software.

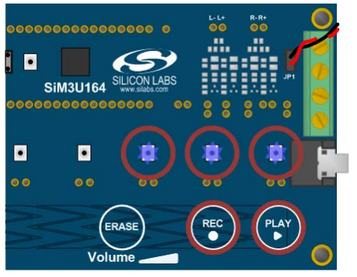


Note: Mode changing is disabled while a sound recording program is open.
Note: Check volumes in the System Mixer and in the application.

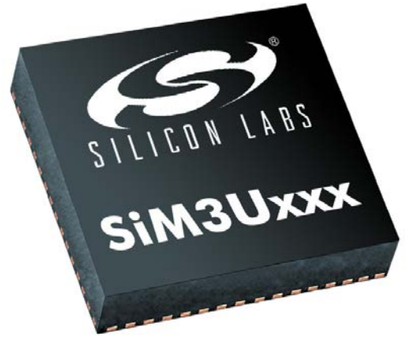
8 In Prerecorded Flash mode, press the PLAY button to hear the prerecorded Flash contents. The blue LED (DS6) turns on when playing.



9 In Play/Record Flash mode, press the REC button to record and the PLAY button to play the recorded message. The blue LED (DS5) turns on when recording, and the blue LED (DS6) turns on when playing.



C. Relevant Documentation



Application Notes:
www.silabs.com/appnotes

- **AN726:** Class-D ToolStick User's Guide
- **AN670:** Getting Started with the Silicon Labs Precision32 AppBuilder
- **AN667:** Getting Started with the Silicon Labs Precision32 IDE
- **AN664:** Precision32 CMSIS and HAL User's Guide
- **AN672:** Precision32 si32Library Overview

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