

## RI Mobile Maker Lab

Personalized Knife-Cut Vinyl Stickers

January 2019

### Description

The RI MML provides access to the Silhouette Portrait Cutting Tool, an electronic, computer controlled cutting tool that functions a lot like a home printer. Connected via a simple USB cable, a small blade is used to cut paper, cardstock, vinyl, fabric and other materials, up to 8" wide and on rare occasions up to 10'0" long. The Portrait utilizes Silhouette Studio, software provided by the manufacturer to translate designs into cut files. Much like other technologies in the Lab, the Portrait is a subtractive technology, though the process may require quite a bit of manual dexterity to remove unwanted material.

Students are able to quickly develop creative content for output on a several of materials for a variety of applications. Custom stickers are by far a favorite.

Software is installed locally on the RI MML laptops, though vector files are easily imported.

### Outcomes

- Exposure to design process
- Exposure to design/fabrication problem solving
- Understanding the general functions & interface of an Electronic Cutting Machine (Knife Cutter)
- Understanding of the general functions & interface of Silhouette Studio software
- Knowledge of industry applications and/or jobs

### Cohort Size

Six Knife Cutter machines accomodate a cohort of 6-12 active participants. Depending on cohort size, participants may work individually or in groups.

### Sequence

1. Students enter trailer and are given a description of Knife Cutter technology and how it works.
2. Students use the Silhouette Studio software to choose a design or create their own design.
3. After completing their designs, students will use the same Silhouette Studio software to send their designs to the machine.
4. Once all cutting is completed, students will receive a follow-up overview of the CNC machining process and there will be time for questions.

