

Shaun Salzberg
Design For DIY Manufacturing
Production Plan

General Production Plan

Initial Product Quantity: 500 for a museum-based pilot study

Main Parts:

- Circuit boards
- Rock enclosures

Circuit Board:

Once fully designed and laid out in a CAD program like Eagle, I intend to get the circuit boards produced in China. They're fairly small and simple, and the aesthetic and tolerance requirements of the boards are not important, so they're a perfect candidate to be mass produced abroad in a cheap factory.

Rock Enclosure:

The rock enclosure is much more important, aesthetically, than the circuit board, so I'd like to assemble this part on my own in a workshop. It requires well made molds, carefully mixed casting materials, and a delicate sanding job to get right. I'd probably need one or two other people to help me make the molds and do the castings, but if we make enough molds, it shouldn't be too tough to bat out 500 of these things in a week or two without excessive wMedia Lab Iork.

Detailed Production Plan

Total Electronic Parts Needed:

- ID-12 RFID Reader X 500
- SMD Attiny85 X 500
- SMD RN-42 Bluetooth Module X 500
- WS2801 IC X 500
- 5060BRG4 SMD RGB LED X 500
- SMD Resistor X 1500
- SMD Capacitor X 500
- 110mAh LiPo battery X 500
- USB Type 'Mini-B' Female SMD connector X 500
- Battery Charging circuitry (parts?) X 500

Total Enclosure Materials Needed (each rock is roughly 0.5 fl oz, each mold is roughly 0.8 fl oz):

- Rebound 25 Brushable Silicone Rubber X 400 fl oz
- EasyCast Clear Casting Epoxy X 250 fl oz
- White Powder Dye X 2.5 fl oz (assuming 1% mix ratio)

Capital Infrastructure Needed:

- Rented workshop X 2 months
- Belt Sander X 1

- Large wooden work table X 2
- Large roll of thick paper to cover work surface X 1
- Long wooden mixing sticks X 100
- Large plastic buckets to mix materials X 4
- 3D printed amulets to make molds X 50
- Laser cut acrylic to house molds X 3000 sq in
- Duct Tape X 1 roll
- Employees X 1