#### Monolith 2.0

# an installation for Burning Man 2009

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#### Monolith 2.0

- Installation for Burning Man 2009
  - Theme: Evolution
- An 11-foot high Monolith
  - As in Arthur C. Clarke's Space Odyssey
  - It triggered jumps in the evolution of tools and technology
- The choice of tools in Monolith 2.0:
  - Side 1: two-person looper (complex technology)
  - Side 2: chalkboard (simple technology)

## **Construction**

• Design (using Google Sketchup):



## **Construction**

- In my backyard
- Steel base, designed to withstand 80mph winds
- Everything bolted together





## Monolith 2.0 construction







## Monolith 2.0 construction

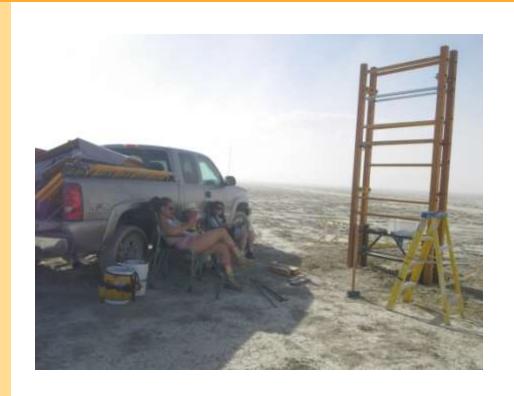




## Monolith 2.0 construction









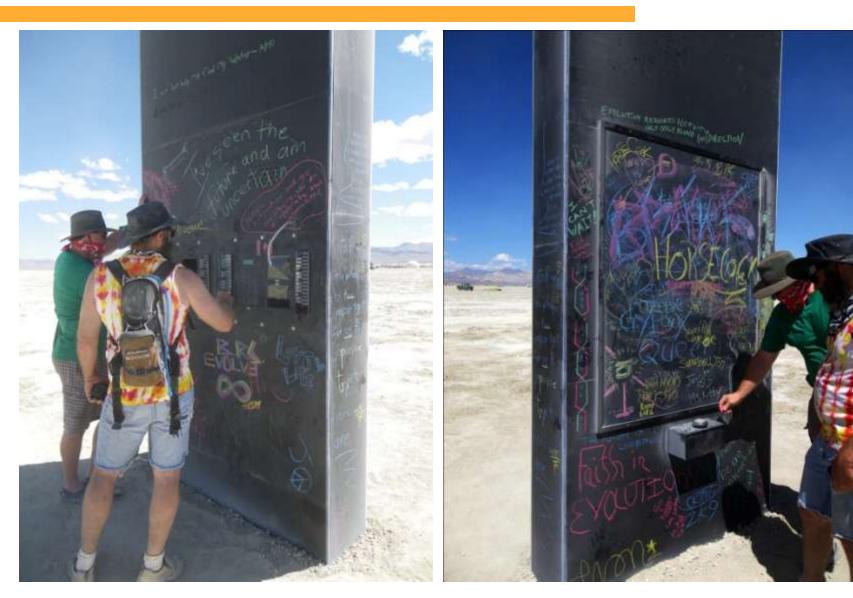




















## Monolith 2.0 on Flickr





#### **Feedback and Lessons Learned**

- Both sides were well-used
- Burners always draw outside the box
- Message boards on the playa are useful
- People had lots of fun with the looper
  - At all hours of the day and night
  - Many came back repeatedly
  - Some people actually read labels
- Best feedback: non-musicians made music **and** realized that **they** were the ones making it

## What's the controller part all about?

- Two independent controllers
- Each one is a 5-track looper 1 track each for lead/bass/pads/drums/other
- The two loopers share tempo, scale, and transpositions, so they don't conflict musically
- Lots of labeled buttons to control:
  - Loop length, fading out
  - Chords, sounds, scales
  - Saving/loading loops
  - Audio effects (using one of the iGesture pads)

# First controller prototype



## Final controllers (never to be seen so clean again)



#### What's inside each controller

- M-AudioTrigger Finger
- PertelianLCD display
- 2 Fingerworks iGesture pads
- 2 Korg Nanokeys
- USB hub



#### **Buttons**

- Originally was going to use arcade buttons
- Worldwide shortage
   of buttons due to release
   of Street Fighter IV
- Korg Nanokeys are cheap and come in black
- Convenient for labels
- Removed configuration buttons and covered in flexible acrylic for dust





#### **Other Hardware**

- Power consumption was a primary concern
- Asus Eeebox Atom N270 running Windows XP, hosting a total of 15 USB devices
- Edirol UA-20 audio interface
- Sonic Impact (T-class) amplifier and two 6x9 speakers
- FM transmitter
- Lights EL-wire outlining the monolith, and gooseneck LEDs
- 12 Volt deep-cycle batteries, swapped daily, charged with solar
- Battery 1: computer, amplifier, and both controllers (33 watts)
- Battery 2: EL-wire, lights, and FM transmitter

#### Software

#### • Keykit

- Handles all input: 4 Nanokeys, 4 iGestures, 2
  Trigger Fingers
- MIDI looping
- Controls the 2 LCD displays

#### • Plogue Bidule

- VST hosting
- Excellent routing features

#### Native Instruments

- Primarily FM8 (low CPU usage)
- Battery 3 for drums

## More info, pictures, video

• http://timthompson.com

• Search for 'monolith 2.0' on Flickr and YouTube.