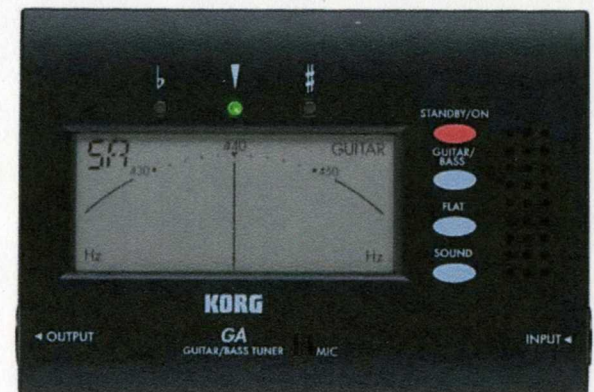
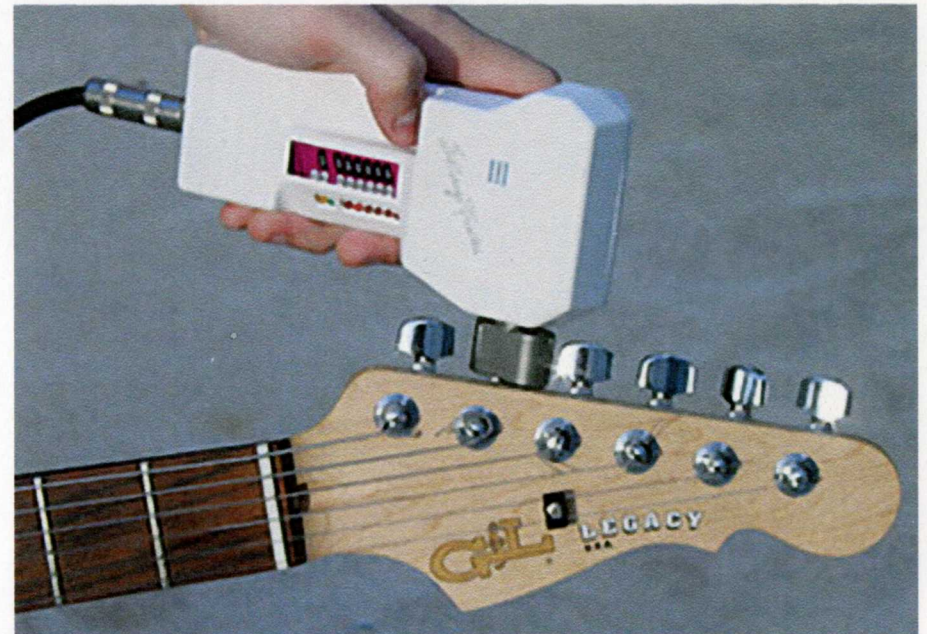


Traditional Tuners



High-tech Tuners

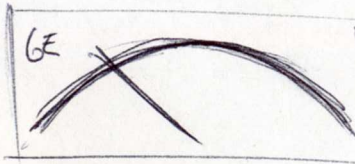
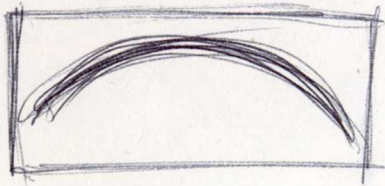


Problems

- Not easy to hold
- "uncool" shape
- afraid it will turn on accidentally in bag
- not easily changeable batteries
 - don't know where to put it
 - hard to open when figure out where
- screen wastes space
- light for when hit note does not work
- hard to ballance on guitar while tuning (tuning takes two hands)
- "sound" button does not work

Solutions

- more ergonomic
- fit hand better
- better form \Rightarrow just bc its cheap doesnt = uncool
- hold button
- less prominent / protruding buttons
- covered ~~with~~ for buttons
- more obvious where batteries are located
- casing/cover that references others
- easier mechanism
- better screen / information area
 - less wasted space
 - more clear
- clip mechanism (to hole,)
- sticky background (like headband material)
- KEEP IT
LOW COST / AMATURE LEVEL
- Attach to capo? less equipment?



on/press
flat
sound



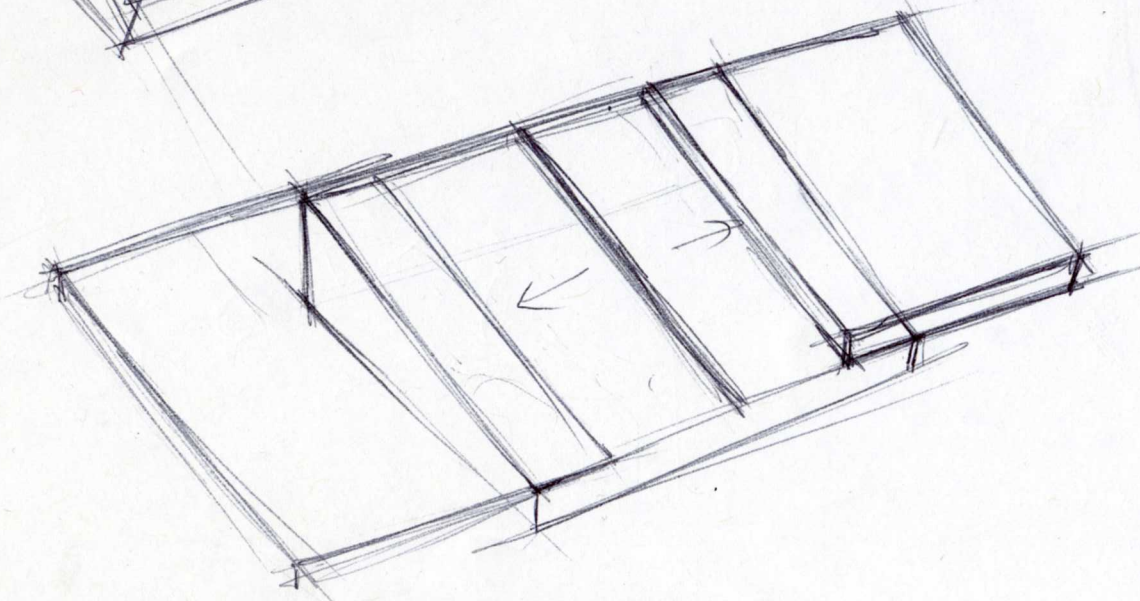
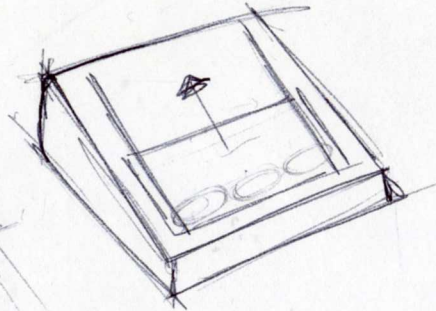
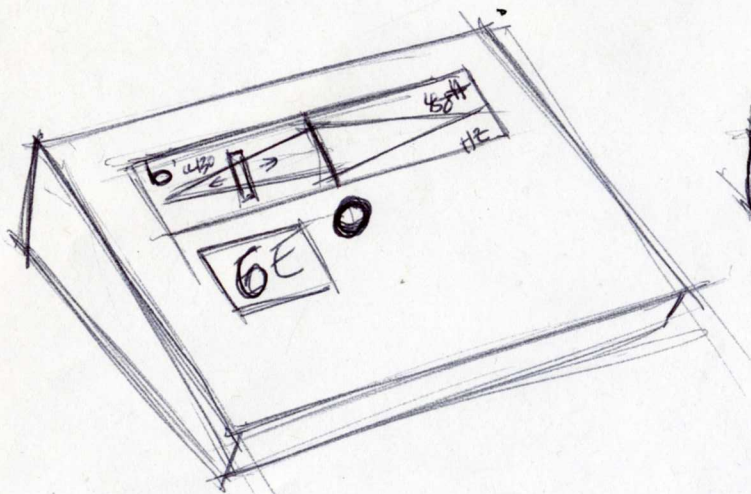
mic

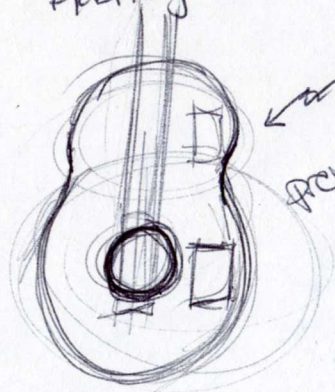
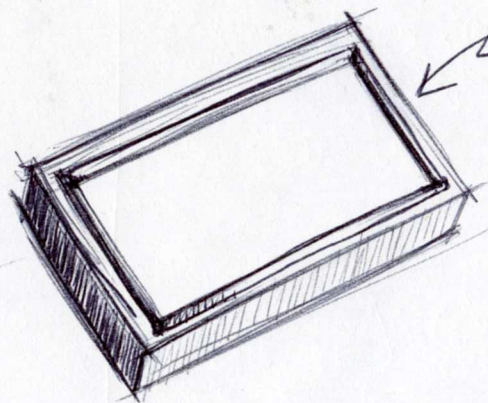
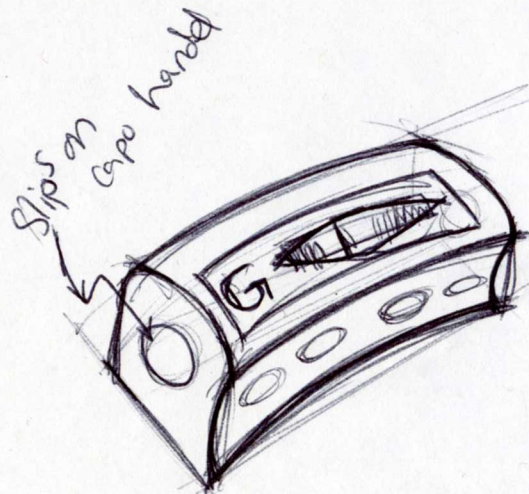
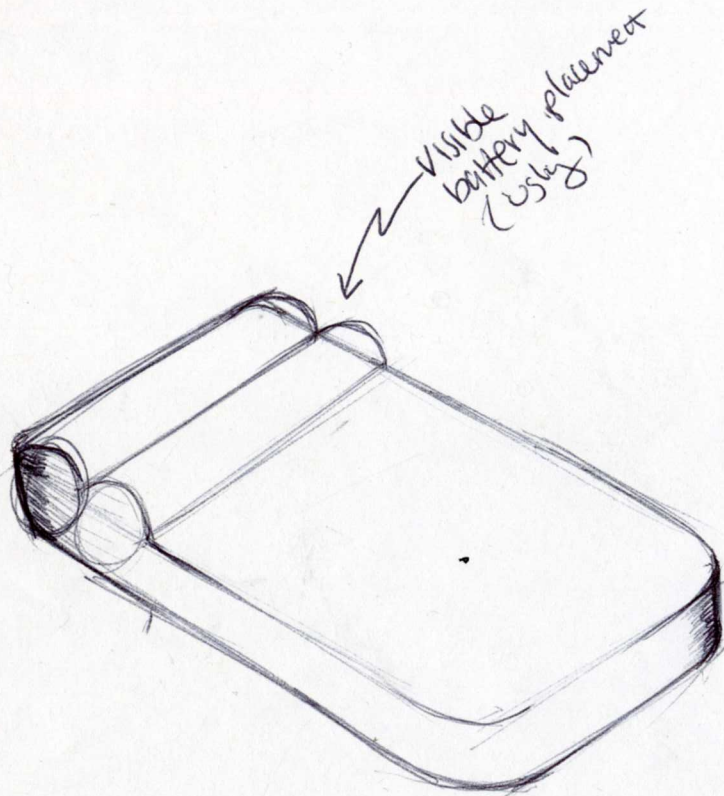
Things on front

- screen tells you # or to how much
- ~~key~~ tells you where key

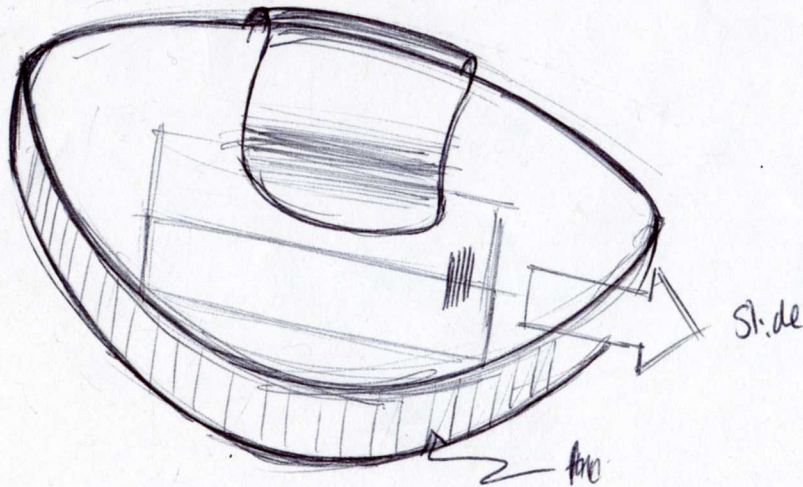
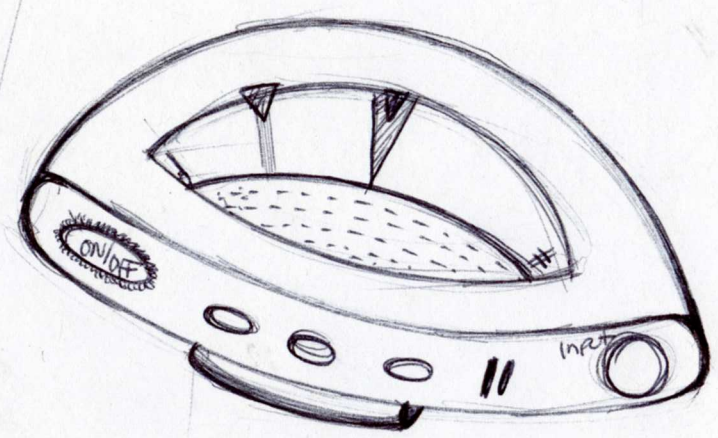
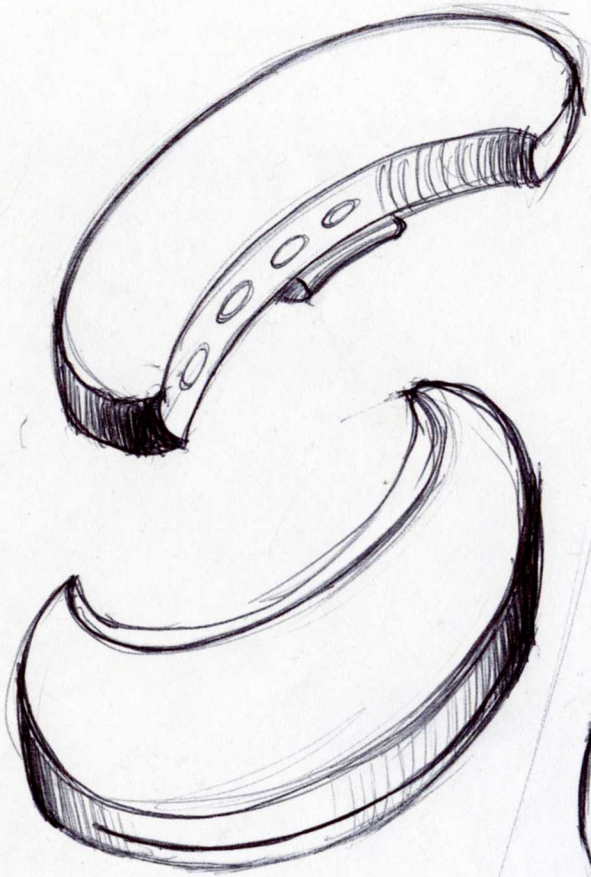
Input

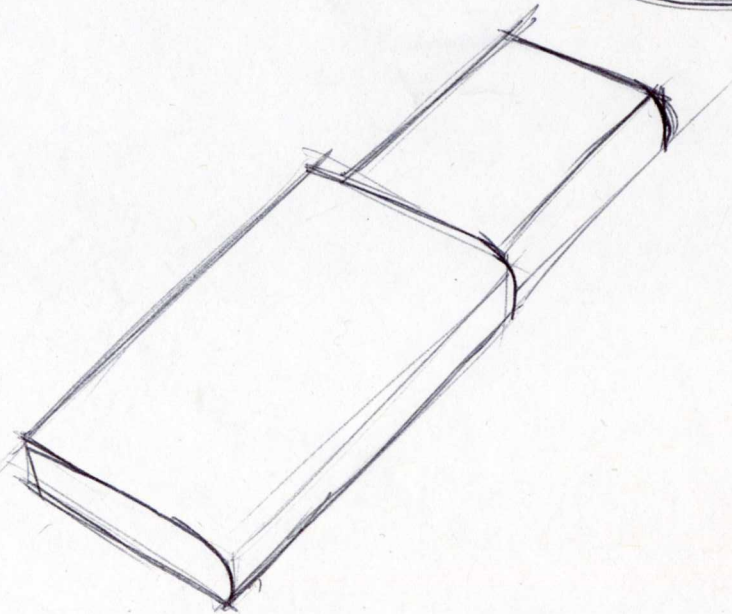
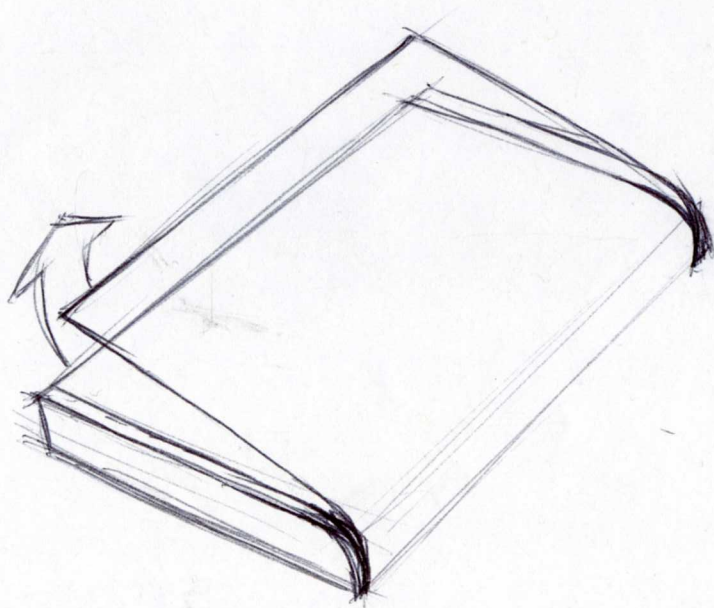
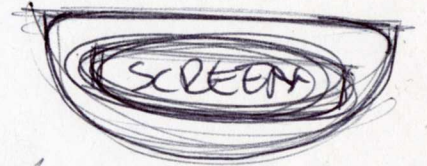
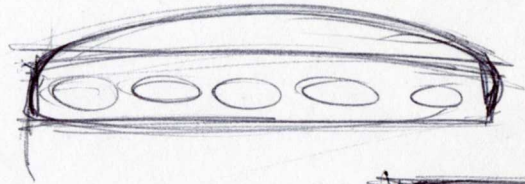
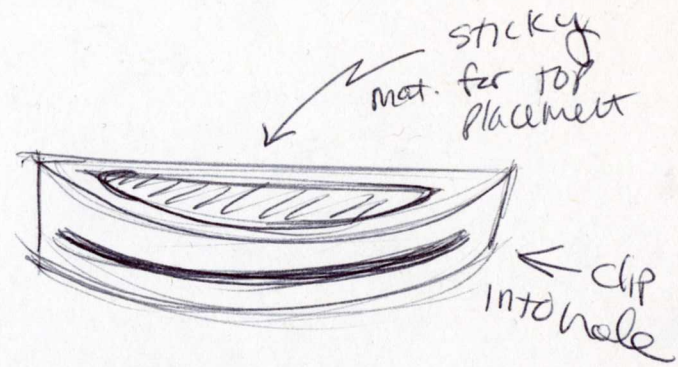
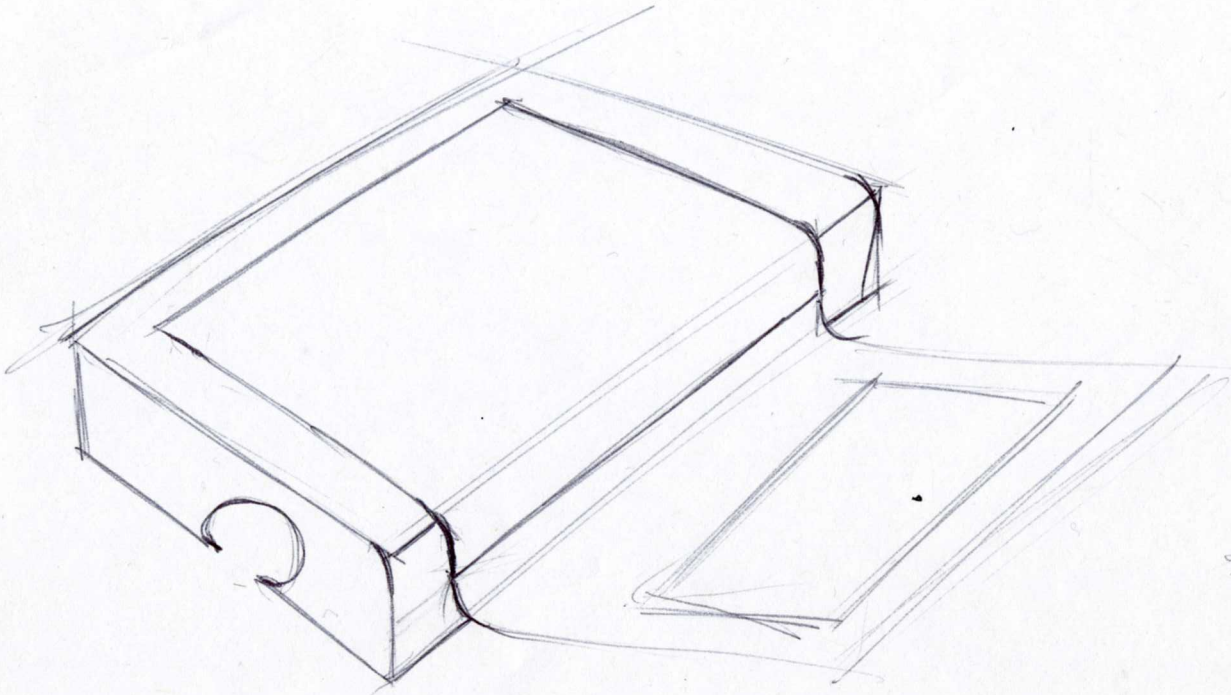
- on/off
- buttons
on/press
flat
sound
- speaker
- mic
- input

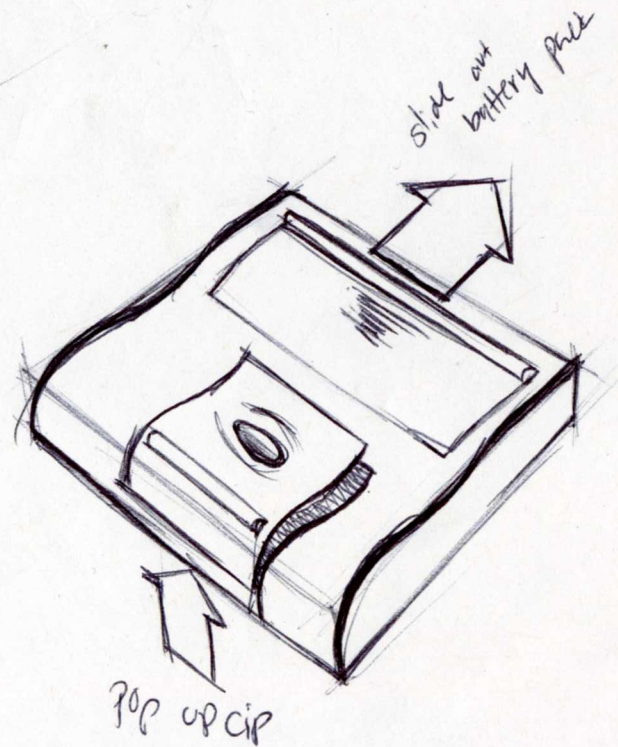
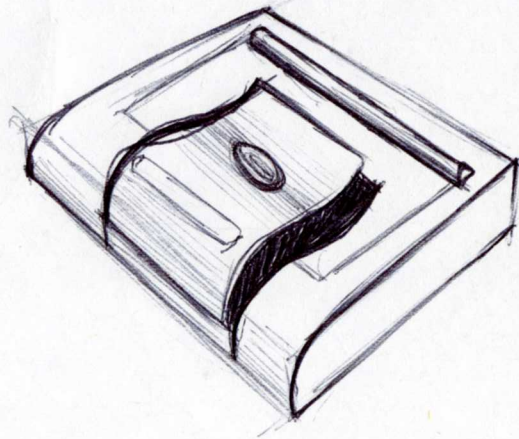
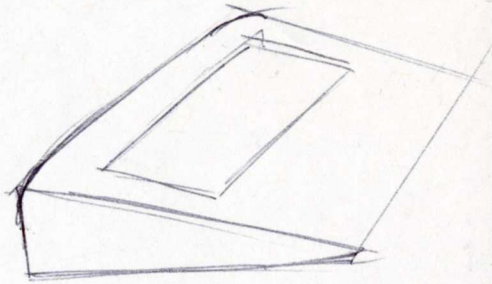
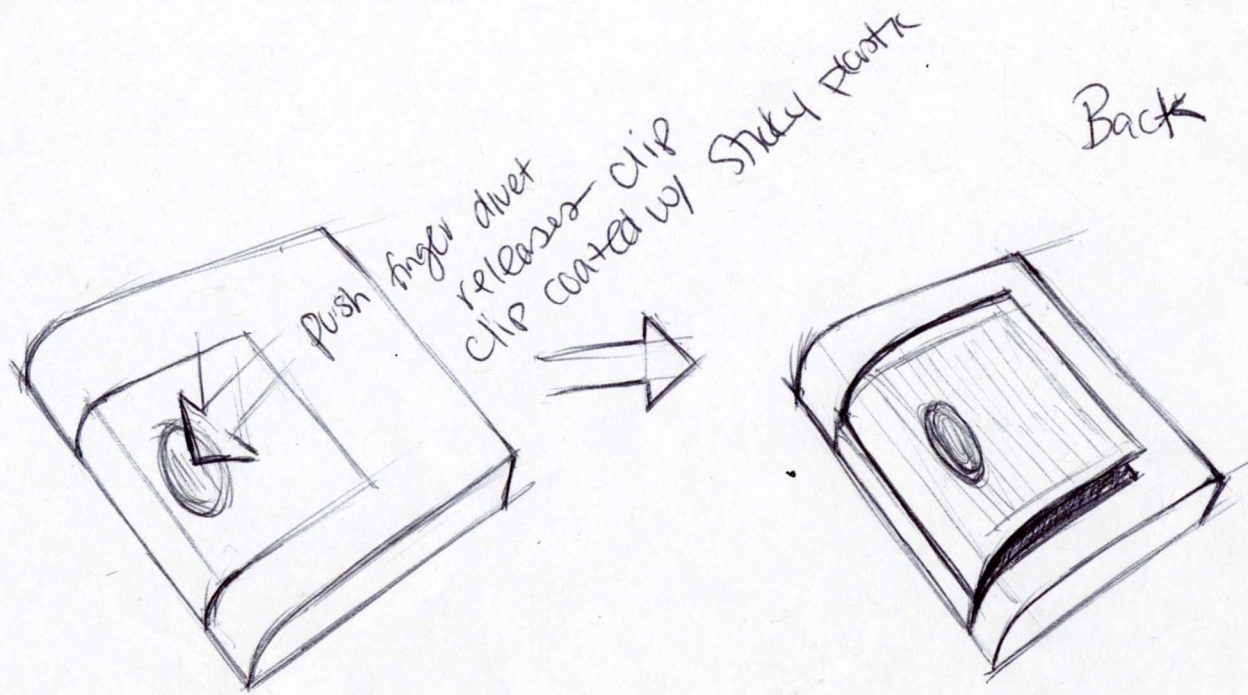


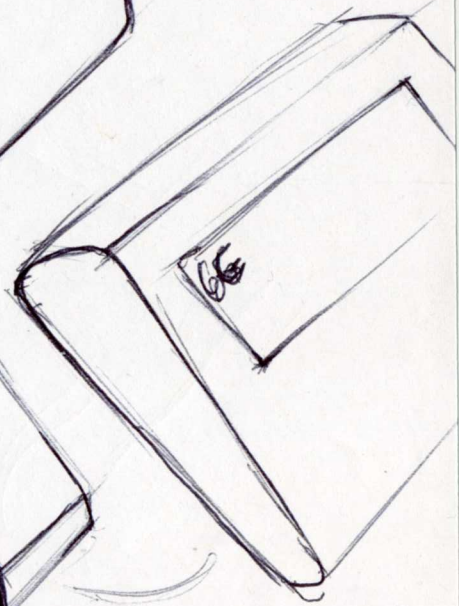
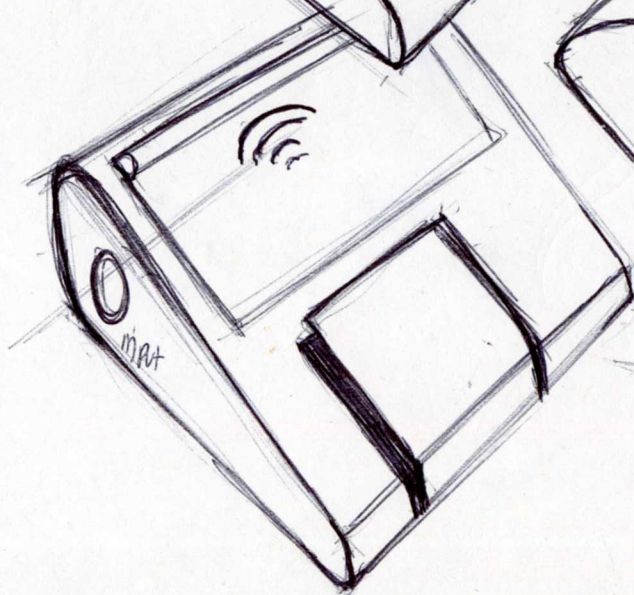
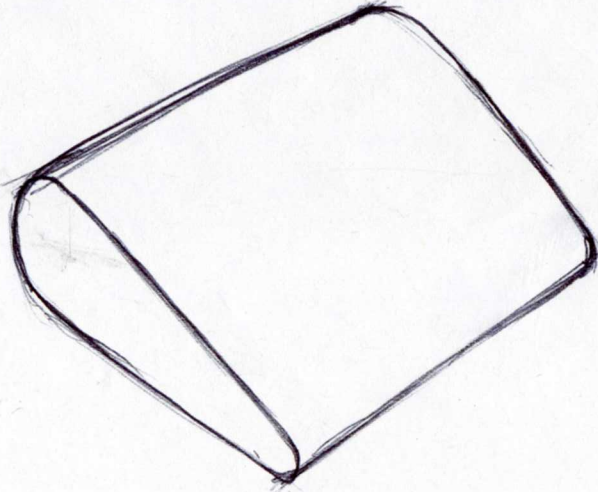
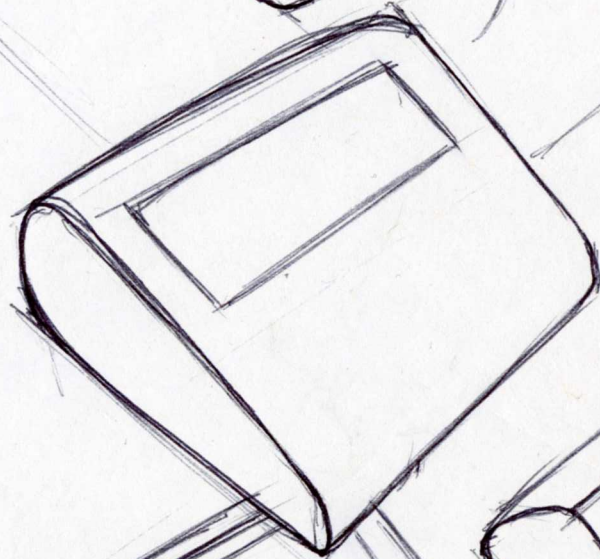
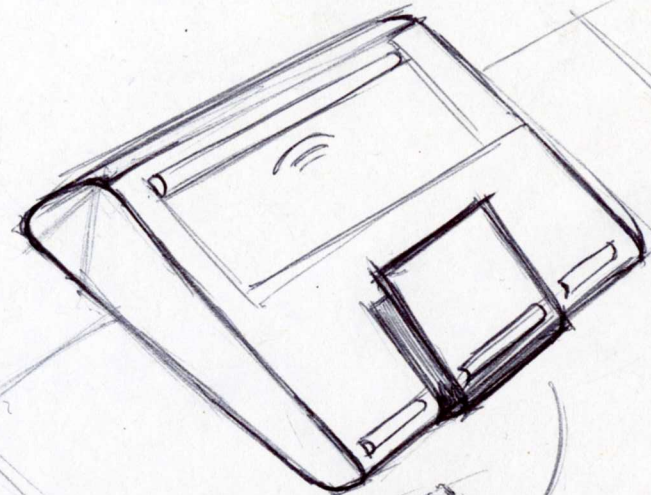
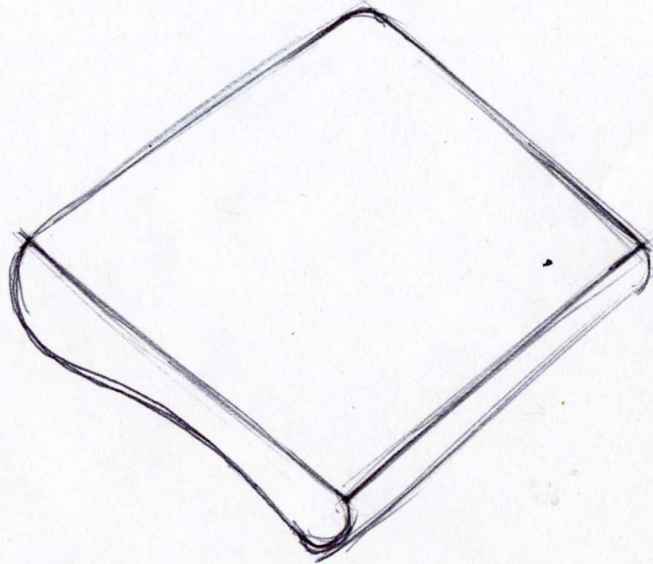


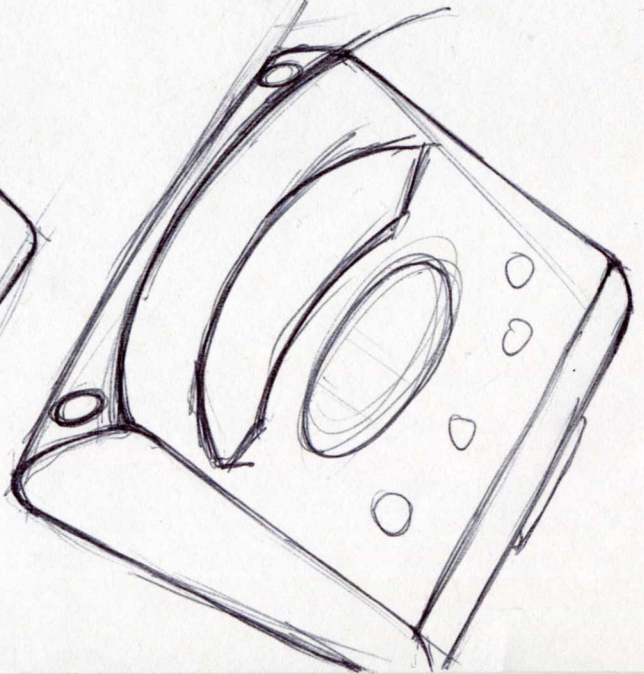
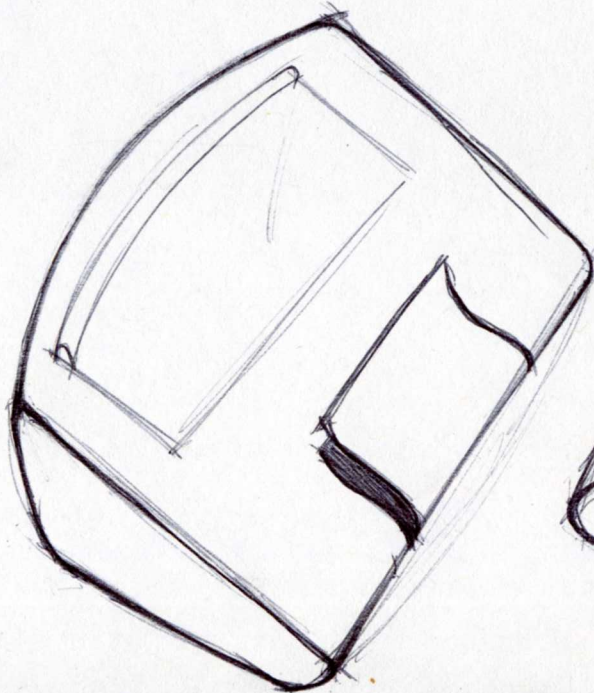
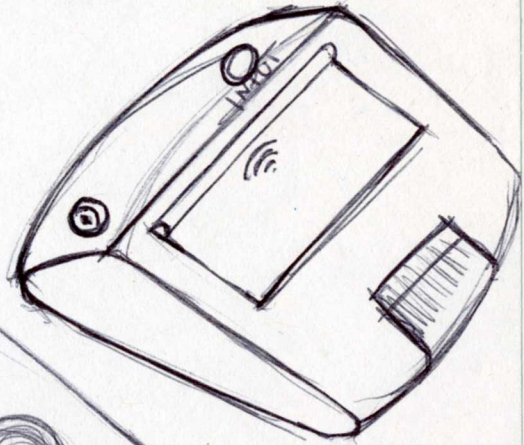
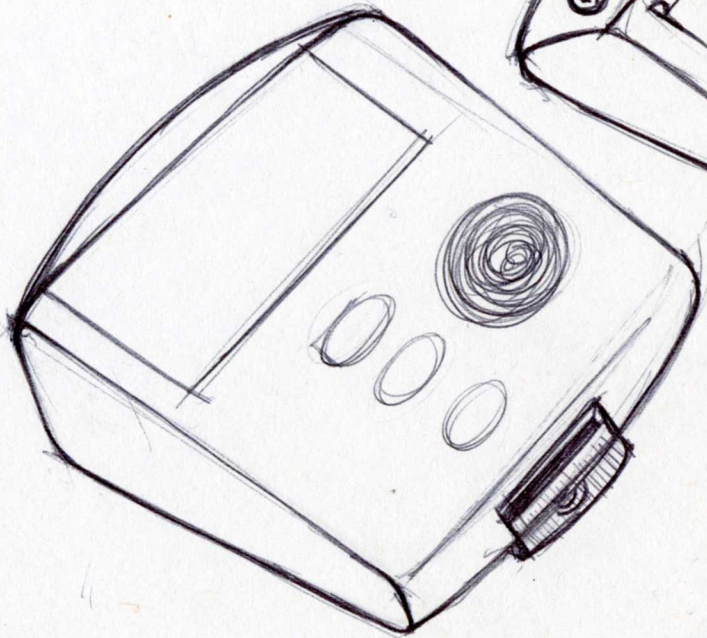
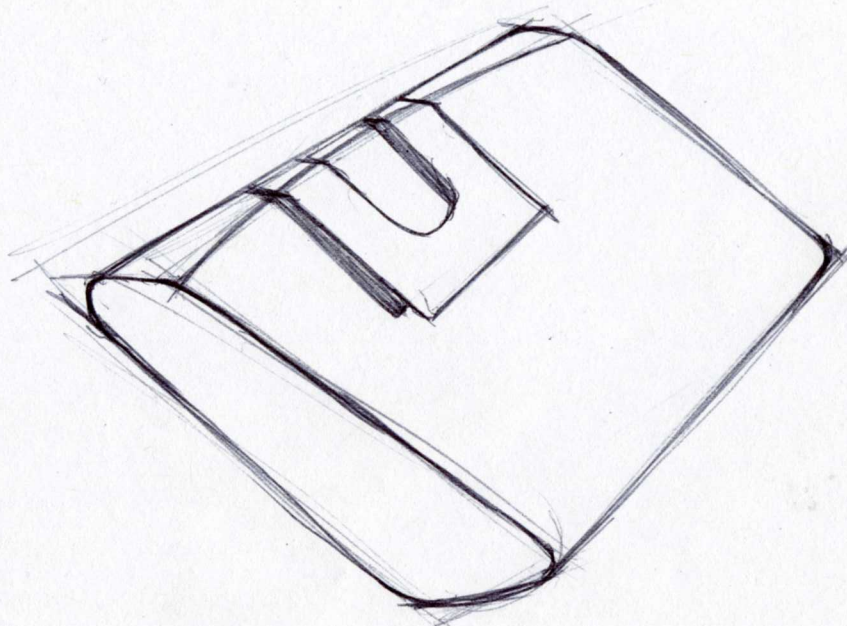
increased friction prevents slipping/balancing act

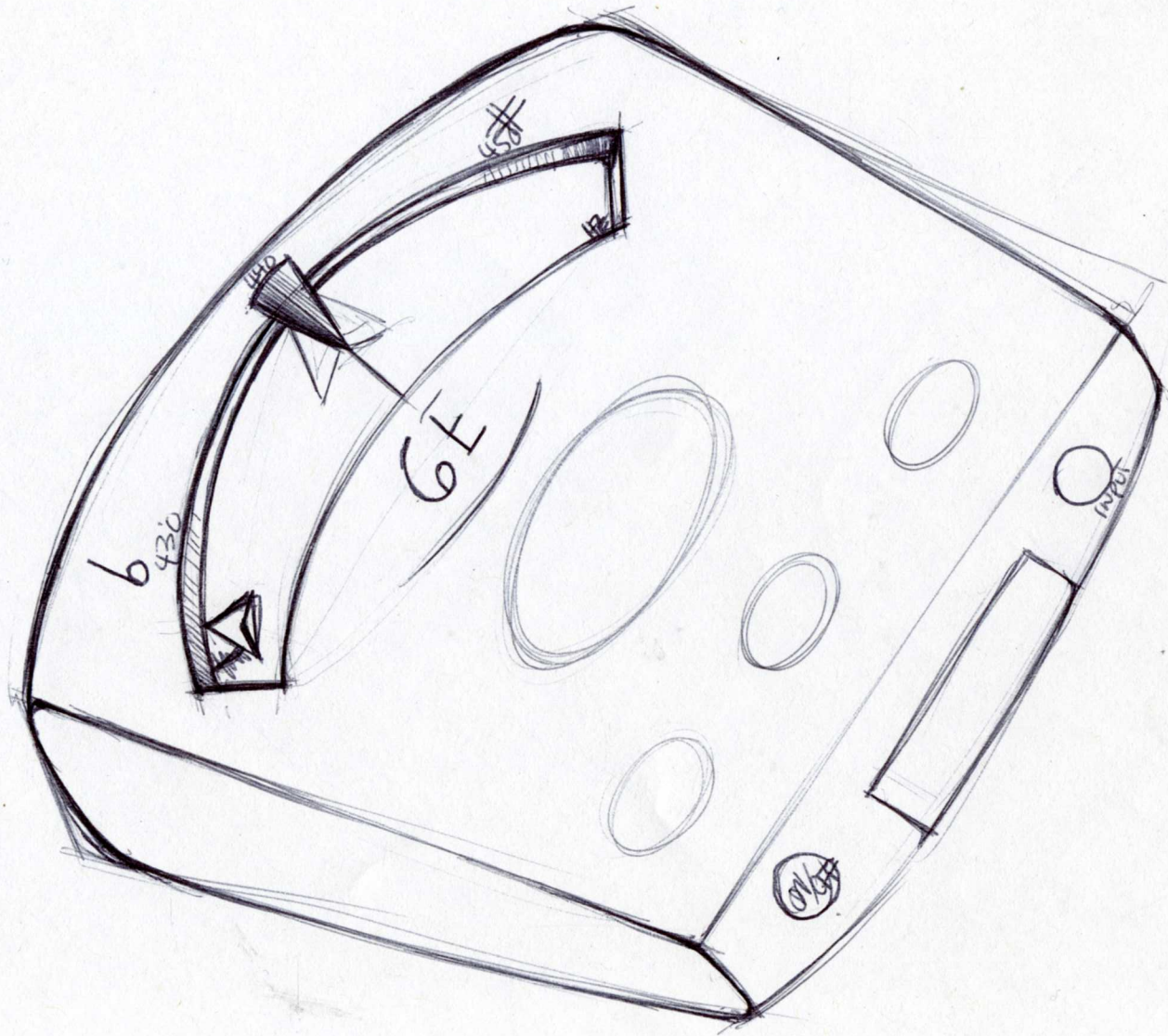


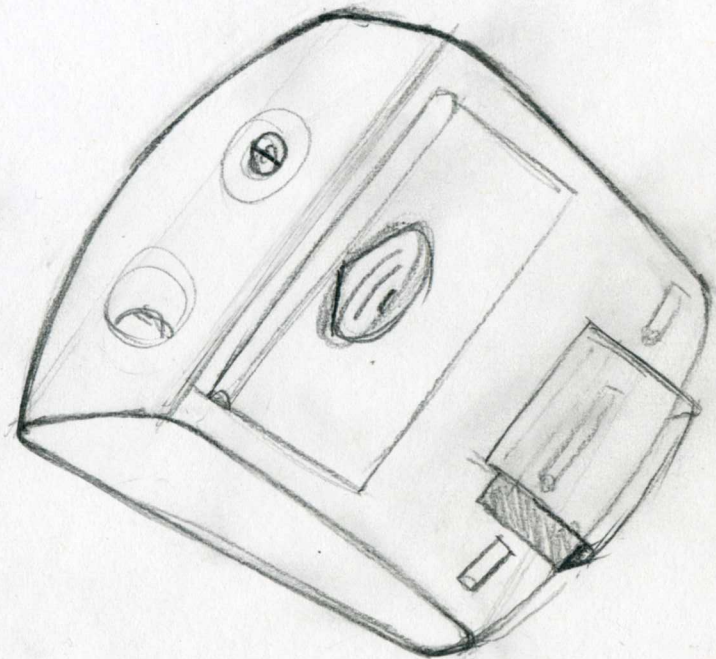
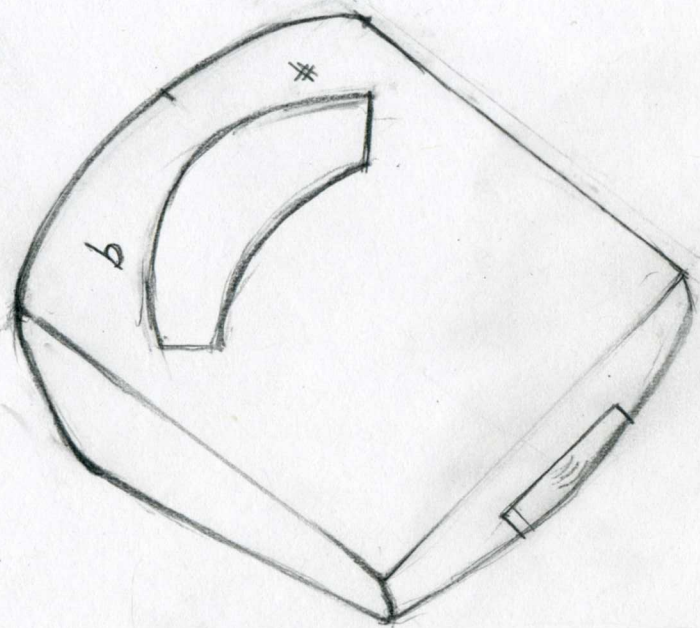






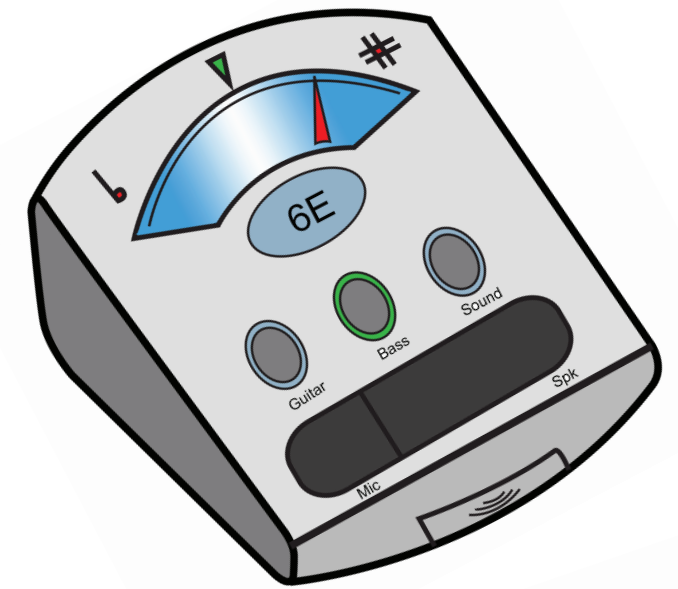






Korg Guitar Tuner

Rhoni Rakos 2009



Redesign



Front

Old Design



Back

Major Problems:

-Screen

Wastes space

Needle and text is hard to read

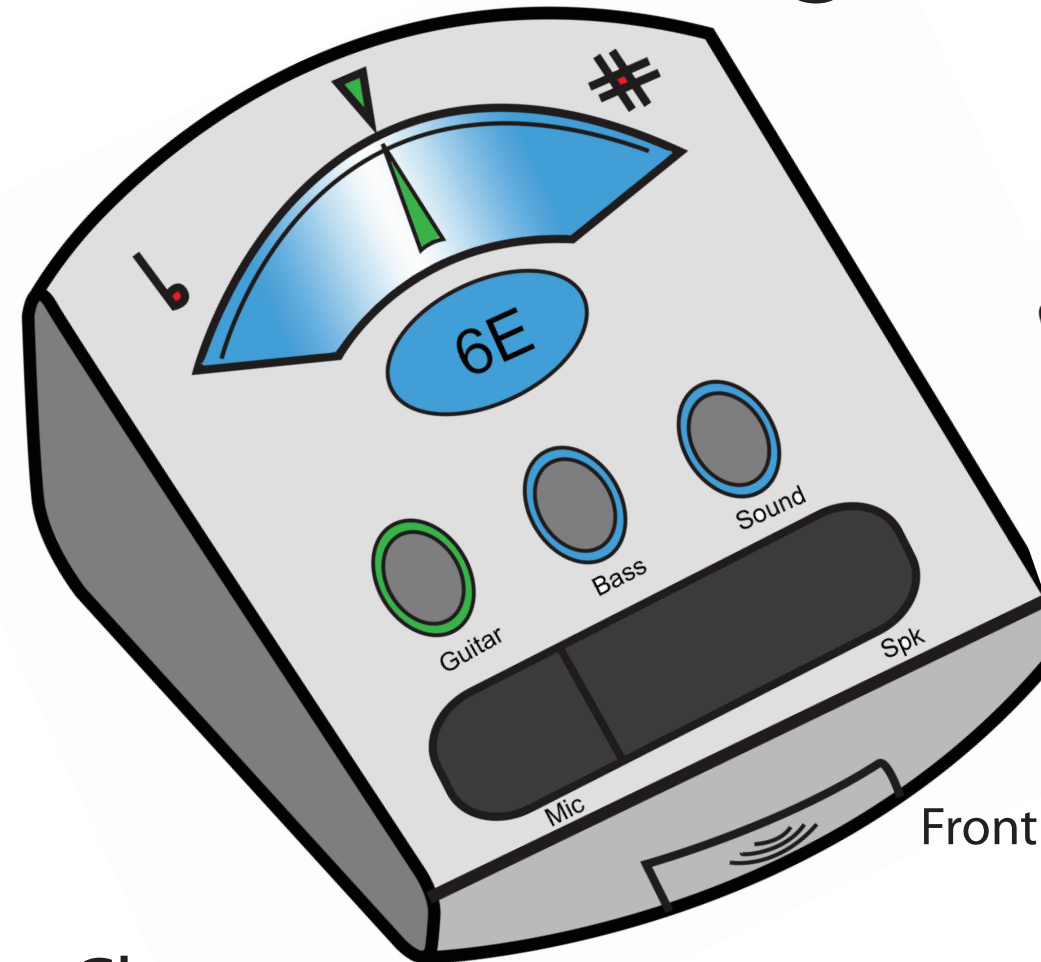
-Batteries are difficult to change

No indication of where they are located

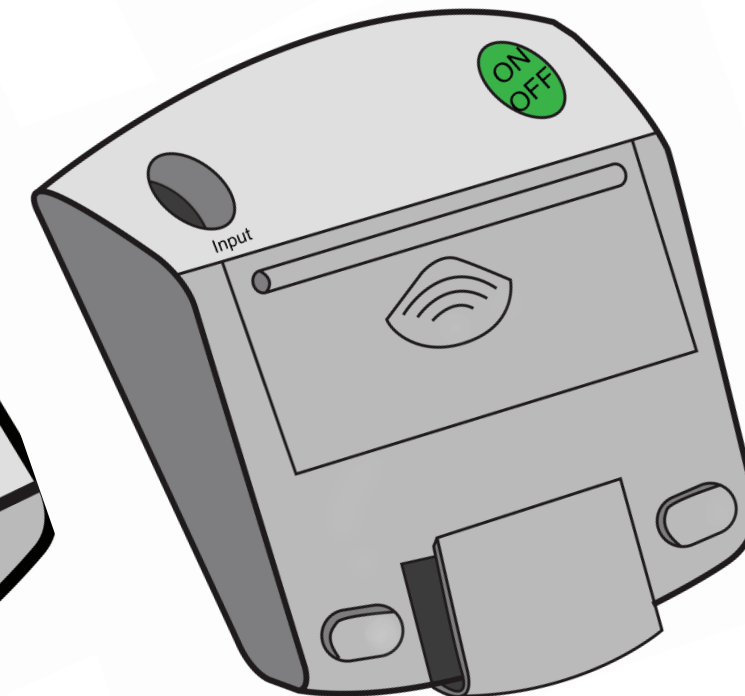
Physically difficult to open once located

-Hard to balance on guitar while tuning

Slips off or towards strings



Front



Back

Design Changes:

-Screen shapes makes better use of space

All text is easily visible and legible

Colors have consistent meaning and confirm expectations

Shape angles tuner towards user for ease of use

-Battery casing is visible and with clear indication of how to slide it open

-Slipage off guitar is prevented

Sticky plastic and "pop-out" clip that can attach to sound hole of guitar