

documentation

Designing a time keeping interface.

To start my process, i first started by doing research on different existing time keeping interfaces to see what exists and collated what i liked. After this i dissected each of the interfaces of what i found to see what i liked and could take inspiration from to design my interface.

My research:

01. the sundial

Known as the sun clock, the sundial uses sunlight to cast a shadow over the 'gnomon' (pointer) and onto the dial, which is a flat, numbered plate.

The babylonians invented the sundial, and the egyptians refined it. The greeks, and later the romans, adopted it for public use in squares.

Before sundials, obelisks and even stonehenge were used as 'shadow' clocks to measure the sun's position and tell whether it was morning or noon.



02. the incense clock

This timekeeping device was used in temples and the chinese royal palace.

Burning incense sticks would gradually burn through threads placed on a trough, which triggered the metal weights to fall at regular intervals, causing a 'clang' to act as a time signal.



03. the candle

Besides incense clocks to keep track of time, the ancient chinese used marked candles to tell the time by engraving the length of a candle with evenly spaced markings. Although an ancient technology, candle clocks were used in medieval european churches.

Also, one could use a candle clock as an alarm clock by inserting nails into the wax; when the wax burnt down to the nail, the nail would fall onto a metal plate, making a loud noise.

04. the portable watch

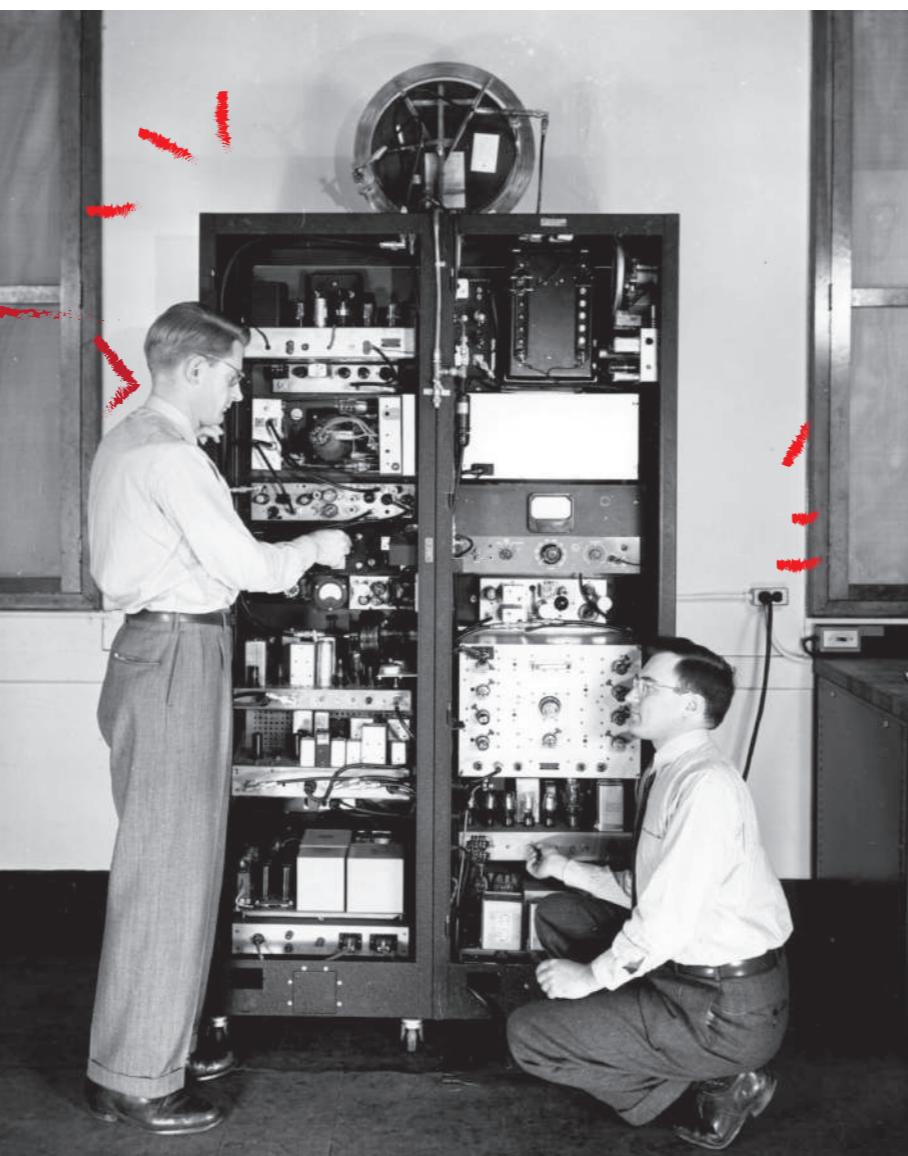
The first small-sized watch was invented in 1510 by peter henlein, a german horologist and watchmaker.

The first model was a timepiece worn around the neck as a pendant. Jewelers made portable watches become luxury items transported in pouches and purses. By 1574, the first pocket watch was invented.



Apparatus built at the joint institute for laboratory astrophysics (jila) in 2008.

The strontium atomic clock is the most accurate timepiece ever invented by mankind since it uses laser beams and quantum gas to measure vibrations. This optical atomic clock lags 1 second every 15 billion years—I sure won't hold my breath to see that happening.



05. the atomic clock

Invented in 1948 by harold lyons and his colleagues at the u.s. National bureau of standards (now national institute of standards and technology, or ‘nist’), the first atomic clock used the ammonia molecule as the source of vibrations, laying the groundwork for new technologies, like cell phones and gps.

Later developments included the cesium clock (1955) built by the national physical laboratory in england, costing \$20,000 a timepiece, the rubidium atomic clock—a more affordable alternative—and the ultracold strontium

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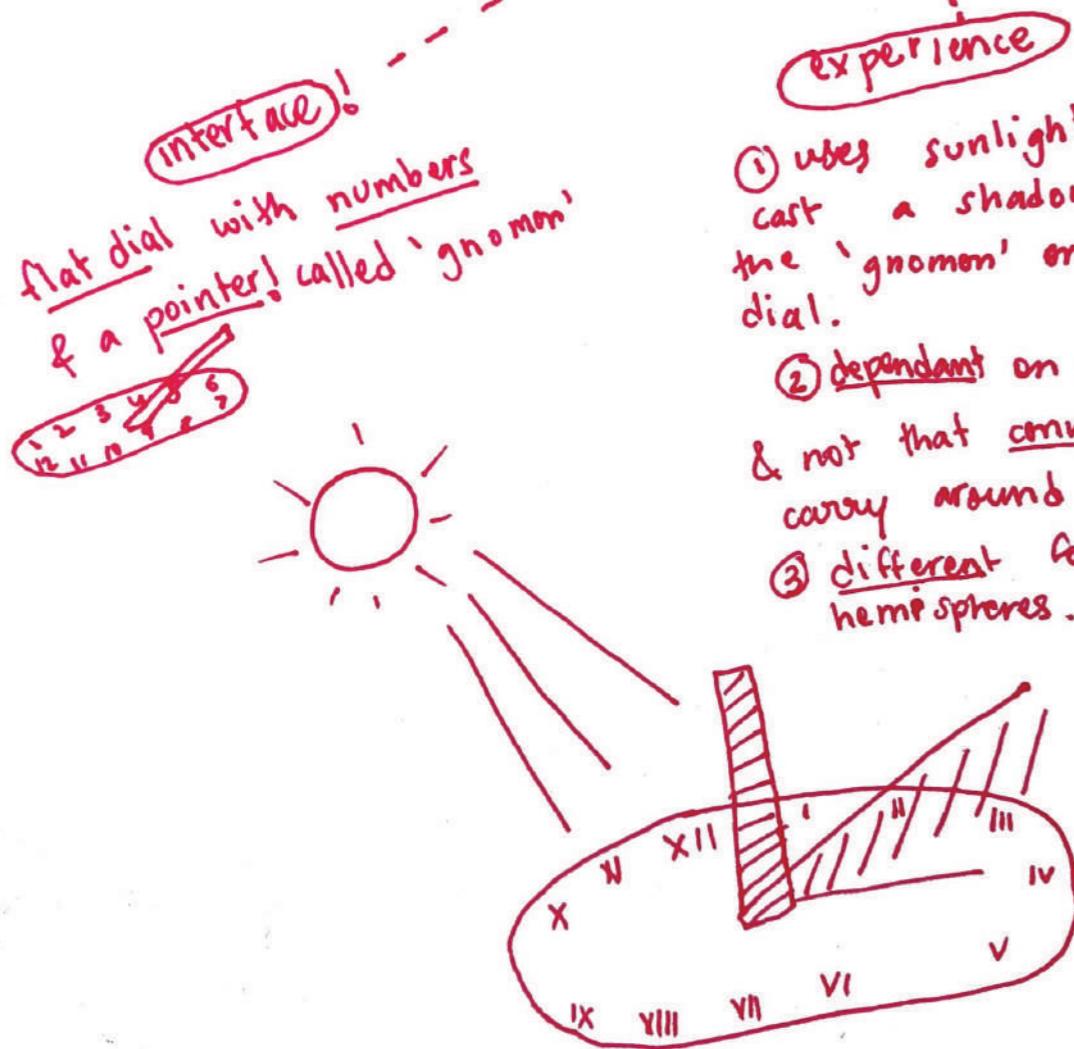


Mapping my ideas

I jotted down my personal favourite interfaces, how it worked and what i liked about them in order to ideate my design.

The one that stood out to me the most was the incense clock and from the moment i came across it i knew i wanted to draw references from this in particular.

Sundial!



- ① uses sunlight to cast a shadow over the 'gnomon' onto the dial.
- ② dependent on weather & not that convenient to carry around
- ③ different for both hemispheres.



Find

andle

15 units of time

correlated from 8:00 - 20:00 to each hour

had words daybreak, 1st it dawn, morning evening

mark candles by engraving the length evenly of a candle spaced markings.



Incense

incense sticks
placed on a trough with
threads with metal weights

interface

experience

burning incense sticks would
burn through threads placed on a
trough, which triggered the
metal weights to trigger the
regular intervals to fall at
a time signal

- can be easily
disrupted by wind!

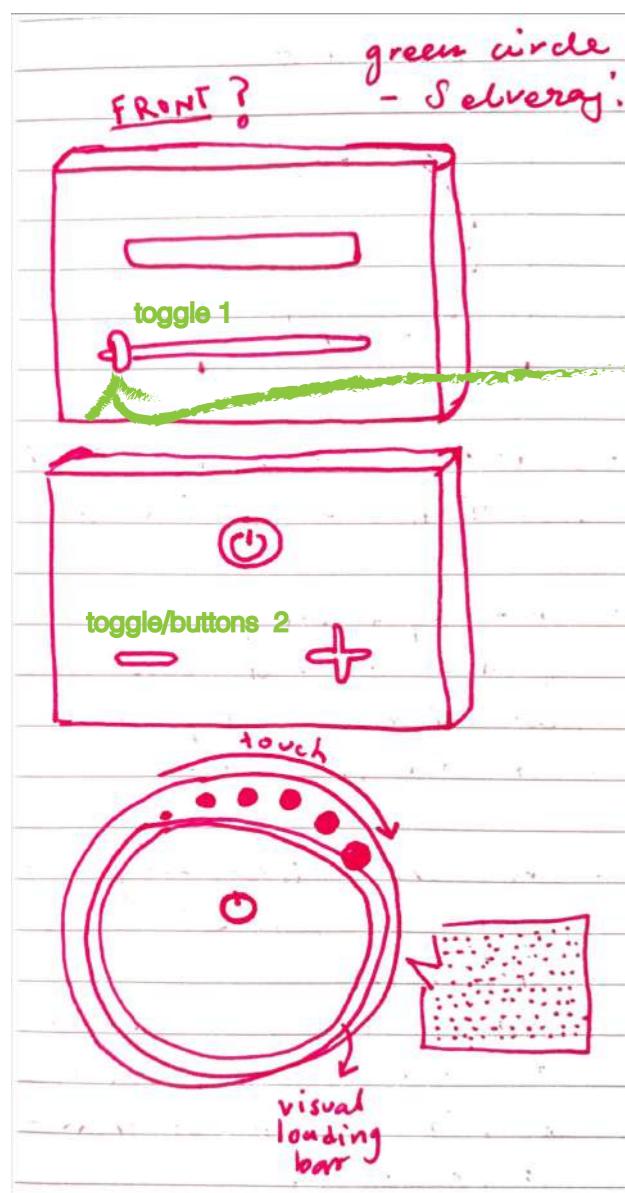
- length of the incense were
depending on the length of the
incense stick, you can measure
hours, minutes or days.

metal balls

my ideas

Before i landed on my final idea, i came up with a few that didn't quite work but i thought including the concepts would help communicate how i finally came up with my final idea.

idea 1

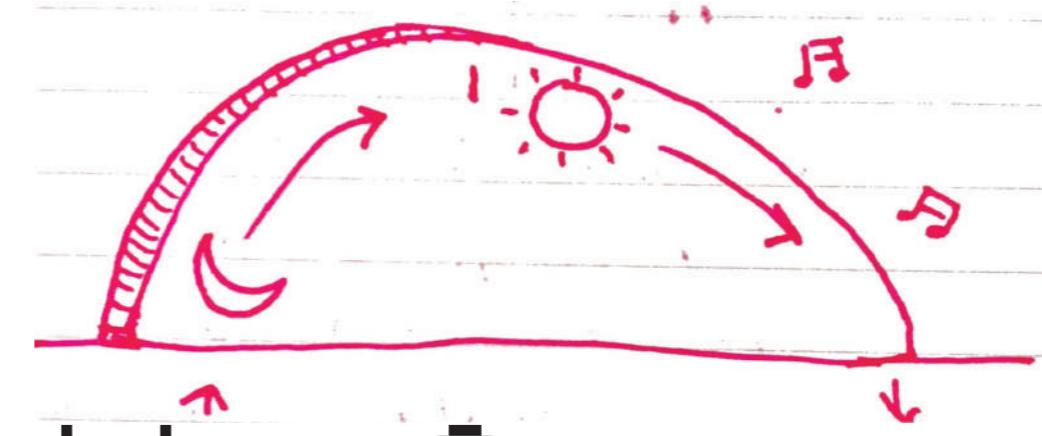


Essentialaly, this physical interace was supposed to be the size of a cassette, inspired from the pocket watch and worked soley on sound and light.

The toggles on the front are front are for the volume, accopanied by a power button.

The way this would indicate time is by a visual loading bar that has 12 segments and after each hour, one segment lights up. After each hour is completed, a chime plays indicating that one hour is over.

The **problem** with this however was that due to its size it would not only be confusing to tell time but it worked and looked more like a timer than a time telling interface.



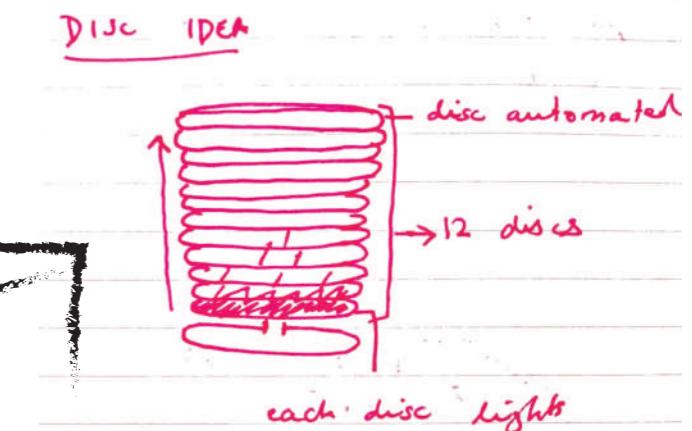
idea 2

The second interface idea i had was to create this semi circle standing screen that consisted of two elements- sound and visuals.

These visuals would include a sun and moon. as the sun rises the digital sun will rise and will continue to follow the course of the semi circle in order to show the day is passing, mid day the moon will also follow from the same place, and this way both the sun and moon will be in constant rotation to have a small digital day going on constantly.

The sound will includes things such as birds chirping to compliment the sun rising and crickets chirping to compliment the moon rising.

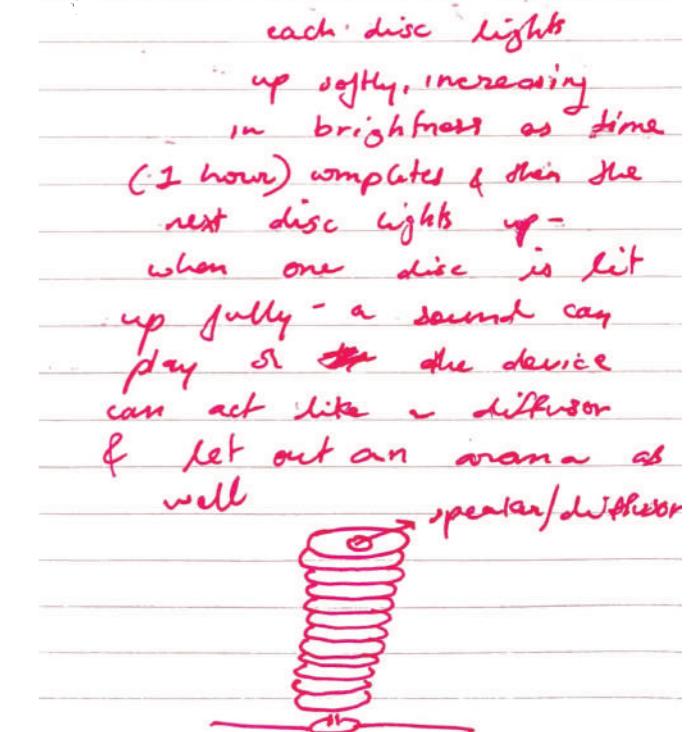
Why this didn't work is because it didn't draw insipiration from any of the interfaces from my research and didn't make much sense overall.



idea 3

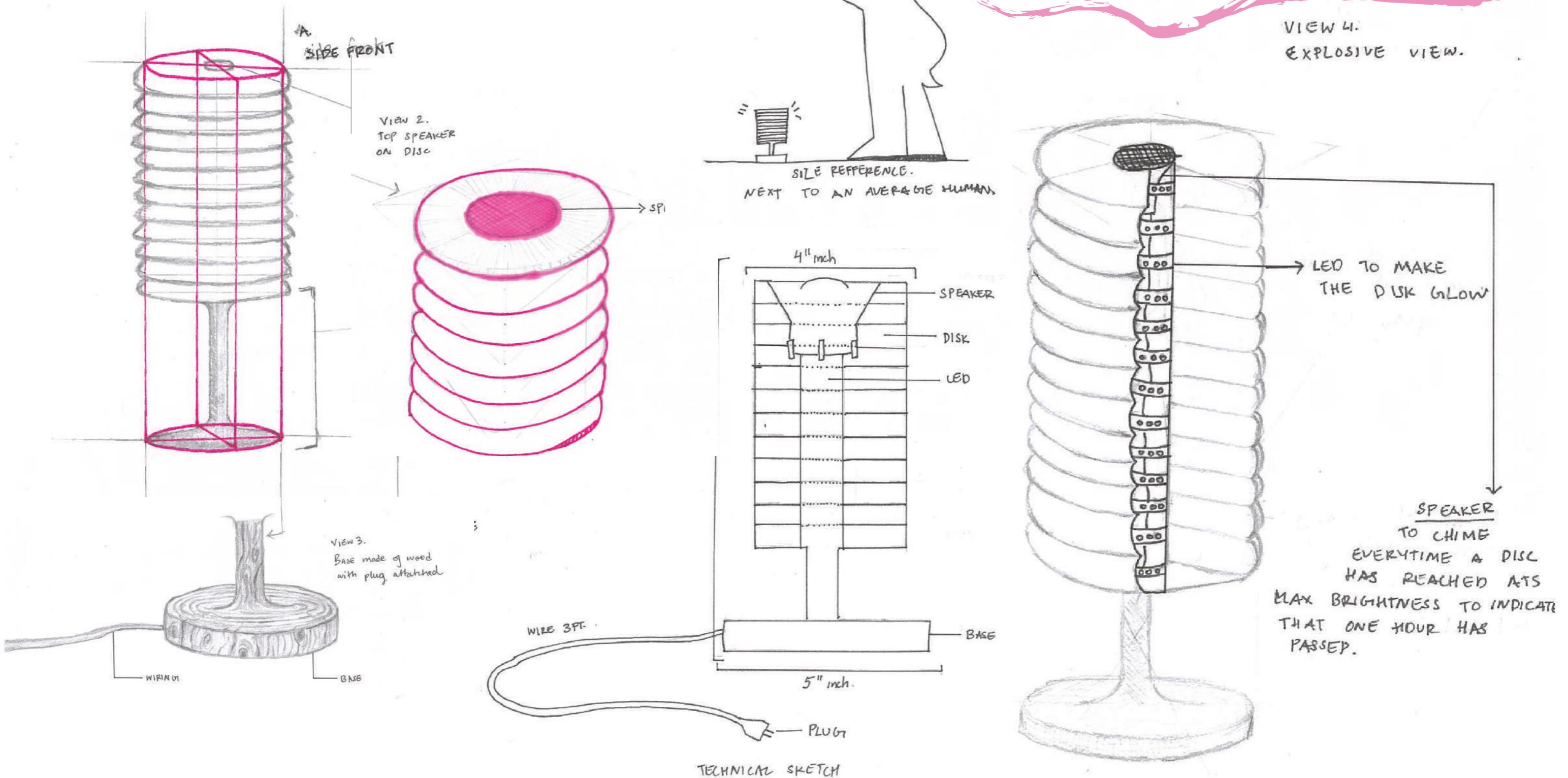
The idea of this infterface involves using light and sound to depict time. to briefly describe this, it uses 12 discs or 24 discs in which each disc represents one hour of the day. when one hour is done- the disc can either let out a scent to indicate that the time is up or it can play a chime or tune to indicate the same.

This is drawing inspiration from the incense clock but trying to modernise it in a manner to make it feasible for everyone to use without the risk of getting burnt or the the air diffusing it.

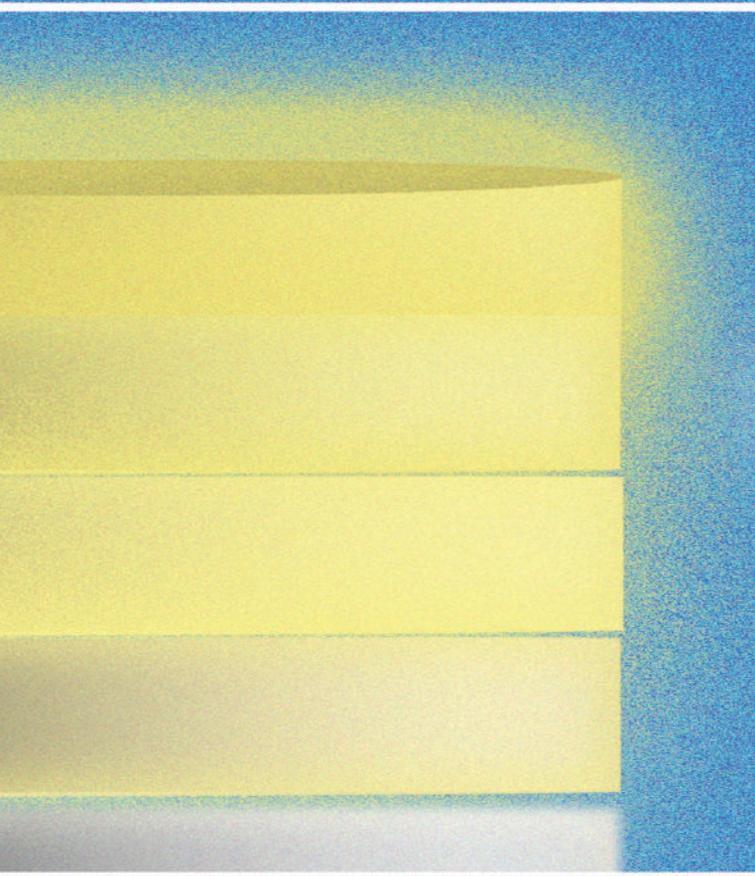
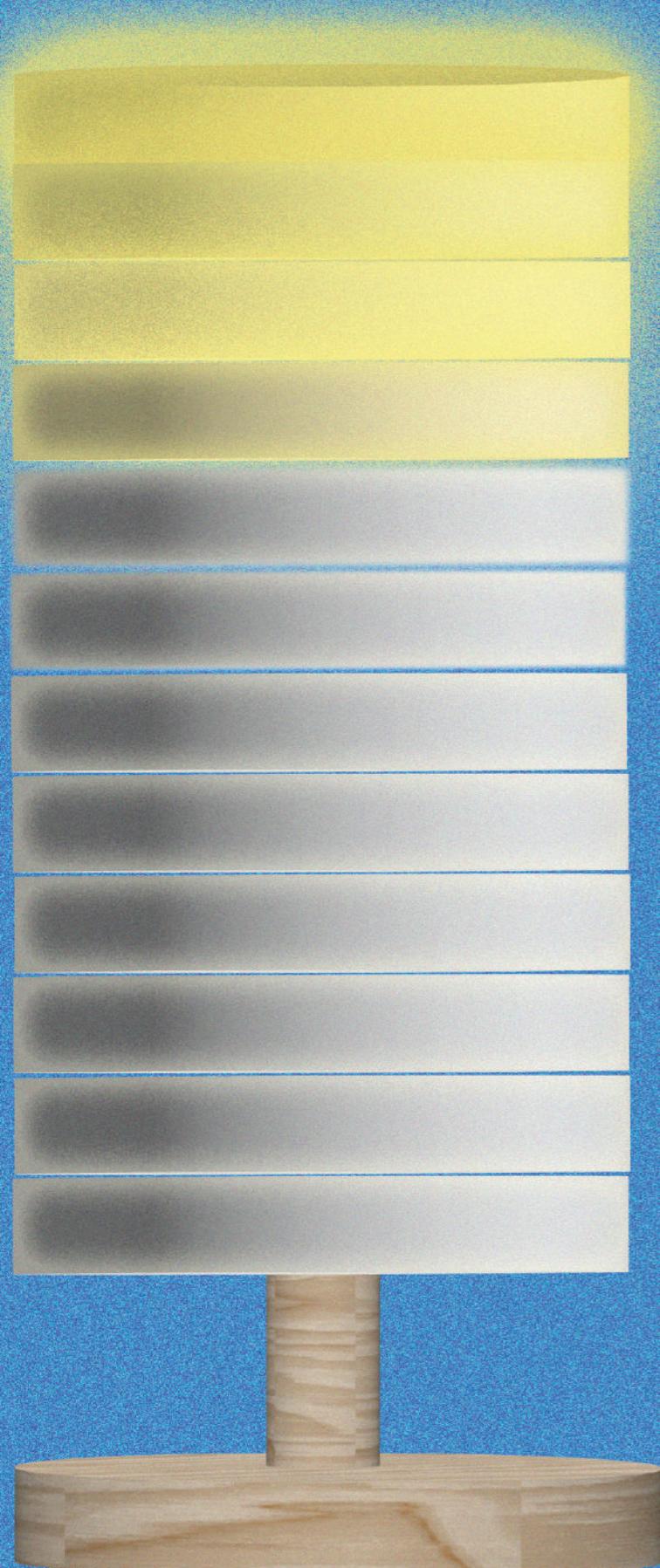


The Disk Way

This page will include how i iterated my disk interface idea that includes working sound and light to depict time. I have included technical sketches to visually communicate my idea in a clear and concise manner.



This interface involves time being represented through gradual lighting rather than burning incense. It has sleek discs like things divided into 12 segments to represent hours. Each disc lights up softly, increasing in brightness as time passes, to mark the completion of an hour a speaker in the interface emits a soft chime to indicate an hour is done. this way the interface completes 12 hours as one cycle, indicating two cycles as one whole day gone.



The clock that tells time through light!

This new device makes reading time so much more fun through its special sound and light technology!