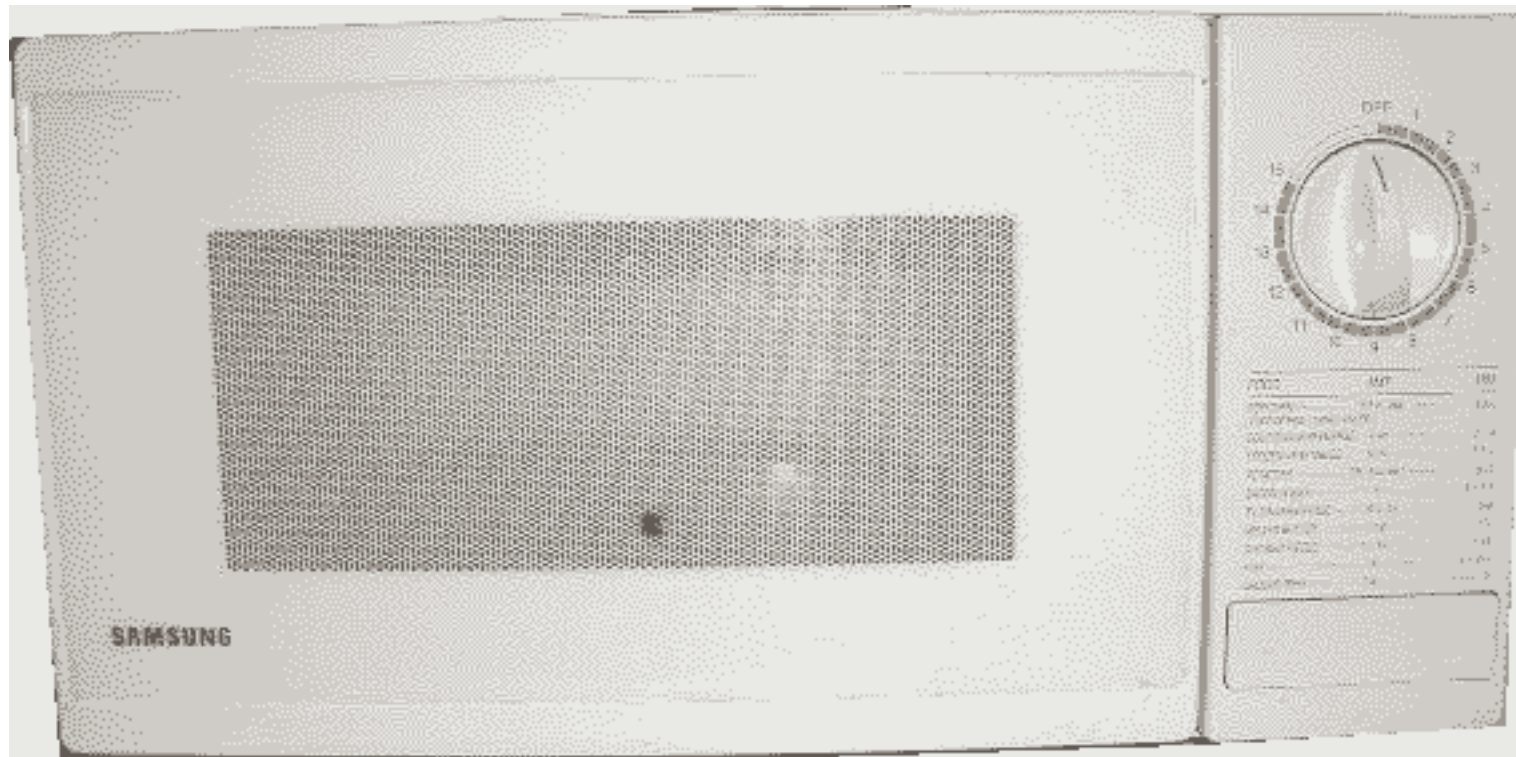


2. Microwave Redesign

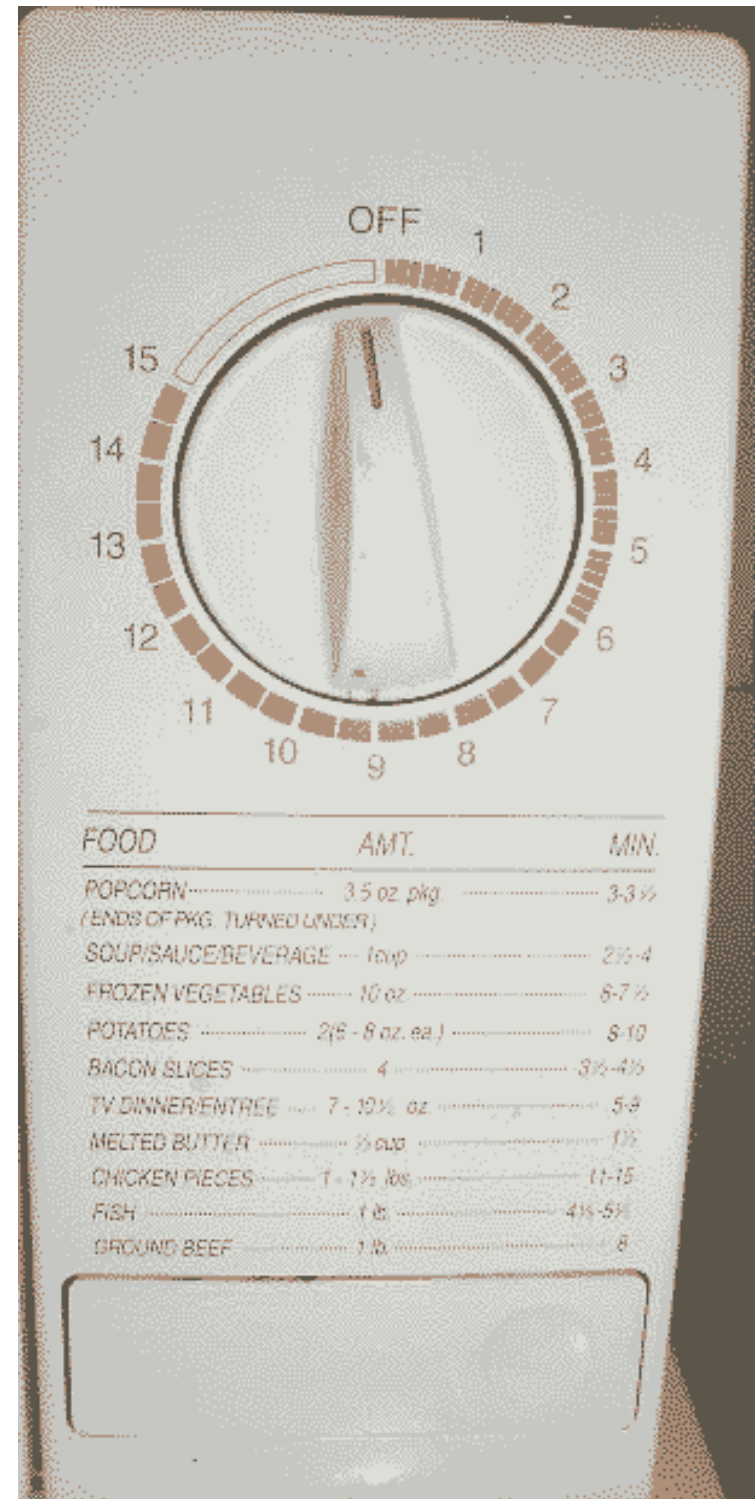
Hans Steiner
Designing Digital Products

Samsung Microwave

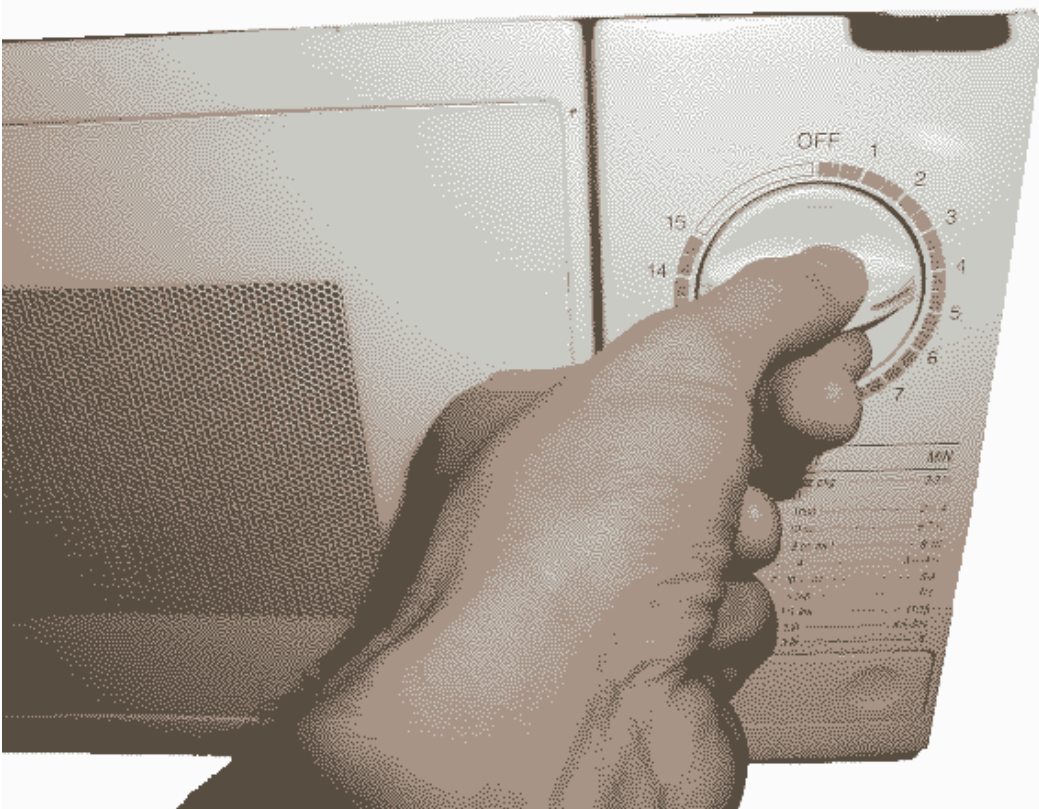
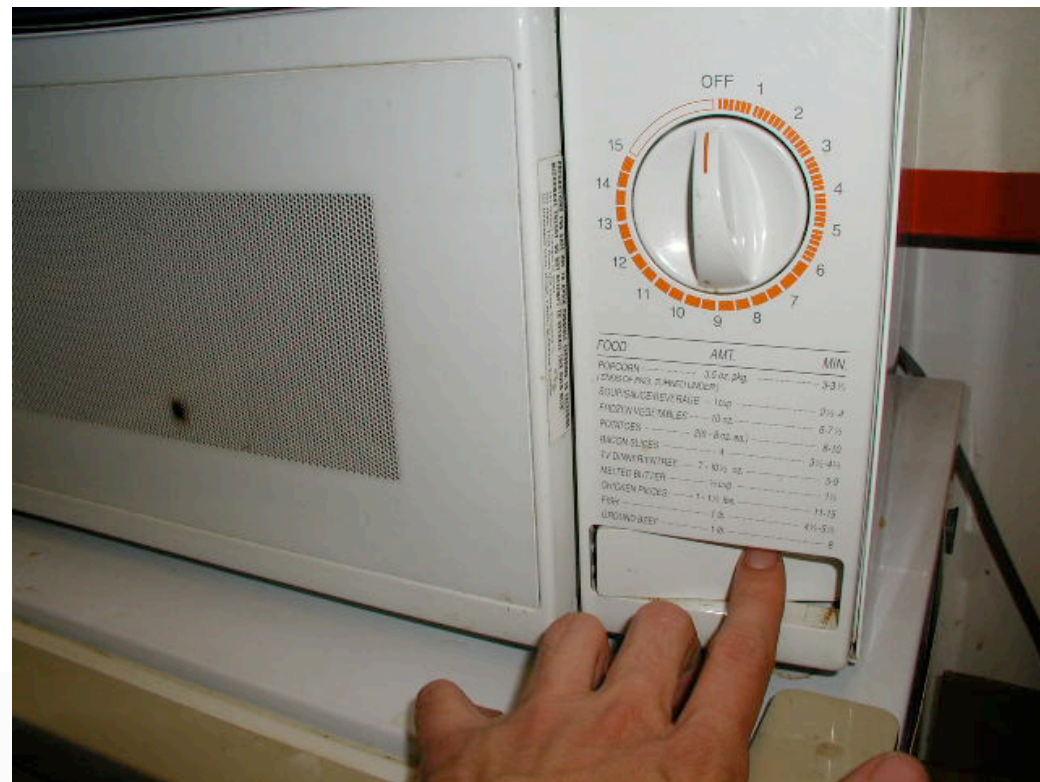


This microwave as two controls:

- time dial
- open button



opening the door --->



<-- setting the timer

Visibility

timer knob

- placed in a prominent location on top corner
- colored ring highlights the knob and its action
- numbers around the ring imply timer
- knob handle is prominent, turning it is very visible
- all white color makes knob hard to distinguish
- colored marker on handle to serve as time pointer

open button

- outline is the only thing that distinguishes the button from background
- all white color makes knob hard to distinguish
- small detent in button highlights spot to press, pointing to lever action
- button obviously goes in when pressed

Affordances

- knob looks like a classic egg timer
- button has small detent to mark area to be pressed

Mapping

- The knob is mapped to the power-on/power-off (light, microwave), the timer, and the finished bell.
- The button is mapped to power-off (light, microwave) and door opening.
- The light and microwave remain off when door is open.

Feedback

- timer knob physically turns
- bell rings when timer runs out
- when knob is turned, light and whirring sound turn on
- when button is pressed, light and whirring sound go off, and door opens

Core Interaction Problems

- open button's shape misrepresents its mechanism
- sloppy knob makes it tricky to tell the time left and when its done
- you cannot change the temp/power level
- you cannot set the time longer than 15 minutes

Core User Tasks

- setting the time
- setting the temperature
- setting the plate rotation speed
- starting the microwave
- stopping the microwave
- opening the door

Setting the Time

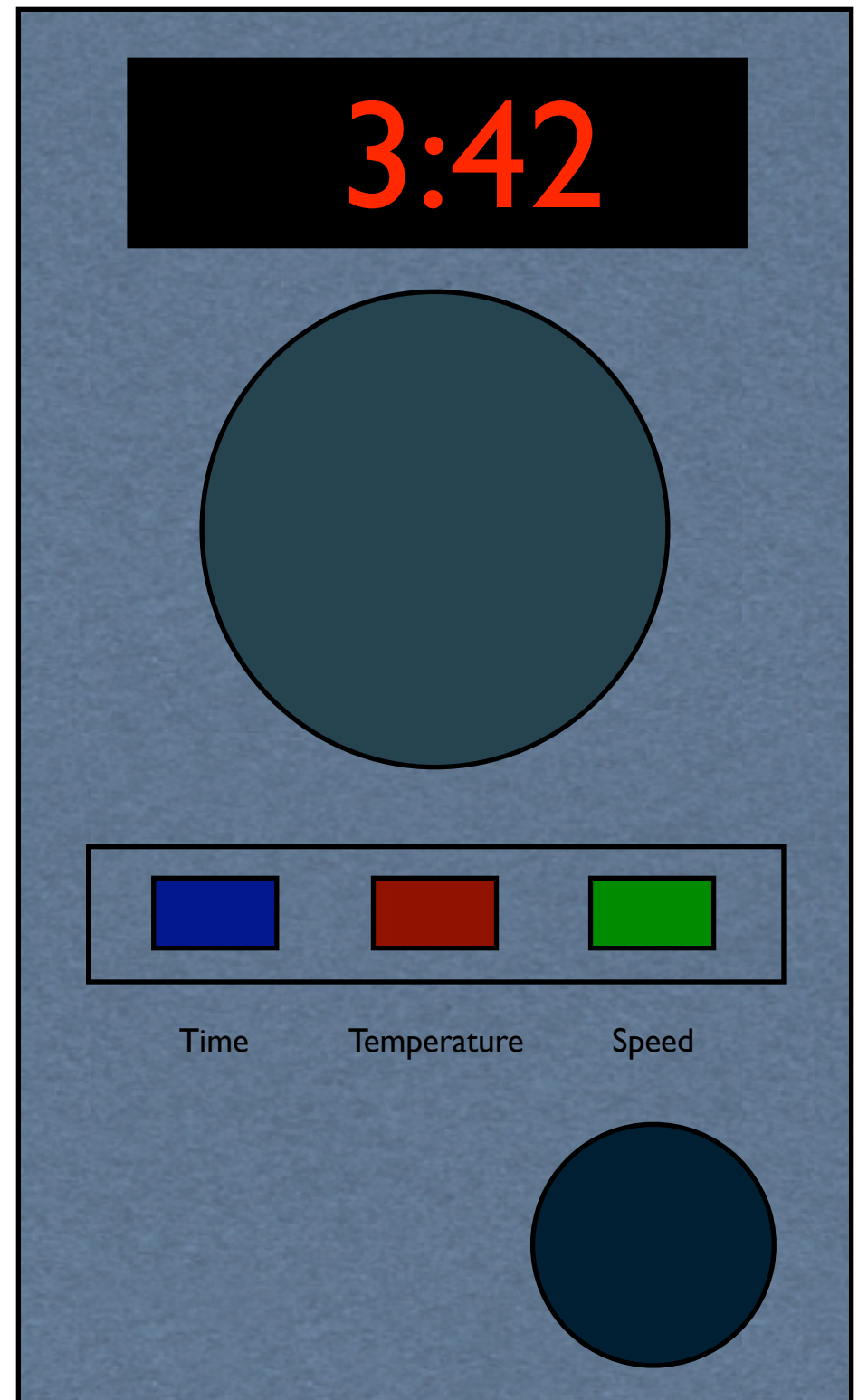
values are displayed digitally --->

continuous knob sets values --->

knob acts as start/stop button --->

composite switch where only one button
can be selected at a time --->

big button to push door open --->



Setting the Rotation Speed

percentage displayed in yellow inside circle --->

continuous knob sets values --->

knob acts as start/stop button --->

values displayed with light strips on knob in the color of the selected control --->

time display in blue outside of circle --->

composite switch where only one button can be selected at a time --->

big button to push door open --->

