Issues with previous design:

- Too many buttons. All the top buttons are faster ways to start specific items, but do not say how long they cook ahead of time. Despite having this microwave for years, I still have no idea how long the microwave will run for any of those except for popcorn.
- Extra buttons also redundant. Simply typing in a time to cook does the exact same thing but you know what you are going to get ahead of time. I do not trust the auto features because I cannot control them.
- Express cook only goes to 6 minutes. No reason it cannot go to nine.
- No "timed cook" button which allows you to cook for a specific amount of time. Pressing start cooks for 30, pressing 1-6 start cooking immediately too. I often cook beans and soup for 2:30, which means pressing express cook 2, which starts the cooking, then I have to press "add 30 seconds". I cannot cook for 2:45, or any increments of 15 for that matter, without manually ending the sequence.
- Kitchen timer, another common use case, is bundled in with a bunch of useless buttons like auto defrost, time defrost, and memory. This makes it difficult to find.
- Clock ad AM/PM have no business being on the keypad. Easy to spot, but you only need to adjust them a few times a year.
- I never touch the power button and I have no way of knowing how high the power is.

Common use cases

- Heat soup/beans for 2:30
  - 2
  - Start
- Heat frozen vegetables for 7:00
  - 7
  - 0
  - 0
  - Start
- Add 30 seconds- cook just a little longer.
  - Start
- Cook popcorn for 2:30 – 2:45
  - Popcorn
  - Start
  - Open with 15 seconds left (depending on popping)
  - OR 2
  - Start
  - Start again if necessary.
- Set a non-cook timer, usually 20 minutes for rice on the stove.
  - Kitchen Timer
  - 2
  - 0
  - 0

- o 0
- o Start
- "2 start" sounds like it should cook for either two seconds or 2 minutes, but NOT 2 minutes 30 seconds. As much as I enjoy the "add 30 seconds" button, it makes certain interactions vague.

Support User

- Most support comes through a lot of text. Most of the functionality comes through the secondary text (express cook, +30 seconds) and not the primary text. The buttons do what they say they do, but which to press can be confusing since they do exactly what they say.

User feedback

- Microwave beeps with same pitch each time you press a button.
- Light is on inside the oven when food is cooking, or the door is open.
- Oven whirrs while it cooks.
- Timer display on top shows how much time you input or how much time is left.
- Timer beeps when it is finished.

Common mistakes

- While I am very fluent with the design, I struggle to cook longer than 6 minutes since there is no express button.
- If I forget something in the microwave and do not hear it beep, I will see cold food inside hours later when trying to do something else. This usually happens with my parents' coffee.
- I can never remember how long the popcorn button goes for and if I need to add 30 seconds.
- I always take too long to find the "kitchen timer" button.

Suggest improvements.

- Remove all buttons which cook for unknown amount of time.
- Only 5 non-number buttons
    - o Power controls the power.
    - o Clock sets the clock.
    - o Timer sets a non-cook timer.
    - o Stop stops what the microwave is doing.
    - o Start begins a timer/sets the new clock input.
- No more express. Cooking for a time means typing in that time. No more ambiguity about which buttons you need to press to cook for X time.
    - o Cook 2:30- 2 3 0 start.
    - o Cook 7:00- 7 0 0 start.
    - o Cook 2:45- 2 4 5 start.
    - o Cook 30- 3 0 start.
- No "cook" button implies just start typing to cook. Before, you searched for a manual cook time button and found none before devising a strategy with express. Everything is manual time cook.
- Clock face gives extra information. What does the time describe? Before, you had no idea from a far, only from context clues. Should tell you directly