

Product Design for Universal Inclusion

considering the needs of the visually impaired

The visually impaired interact with an immensely different and difficult world in their day to day operations than those of us with full vision. I heard from a representative of the National Federation of the Blind of the debilitating designs of household electronics. With this in mind I took on the challenge of re-thinking the traditional flat, electric stove.

RESEARCH & USER TESTING



Building empathy

Blindfold activities helped build a deeper understanding of the subtle non-visual communications inherent in the design of products.



Knowing the market

Researching knobs, styles, technology, and interactions with blind user needs in mind developed awareness for design potential.



Testing assumptions

Interviews and initial prototype user-testing brought incredibly valuable insights while also involving the user in the design process.

KEY INSIGHTS

- 1 There are no tactile indicators on flat electric stoves for blind users to navigate burners.

When navigating a gas stove blind users often locate the burner by touch to guide pot placement.

- 2 Low vision users need to be close to text and light indicators, thus a central knob control could put users in risk of burning themselves.

- 3 Blind users will often hover a hand over the stove in order to tell if a burner is hot.

- 4 Audio cues such as clicks or the sound of the flame igniting become essential for low vision users.

- 5 Locating utensils while cooking can become difficult for the blind.

- 6 Ease of cleanliness is highly valued by stove users of all vision levels.

For viable success, the design must appeal to users of ALL vision levels and be a design that enables users as they age.



[my initial prototype with central knob panel]