

[1] LMQ - Voice Commands

Test dates: 2/10, 2/13, 2/15

Test design: Amber Weber

Test facilitation: Amber Weber, Darby Vernon

Data analysis: Amber Weber

Test design

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[Google Doc](#) - Test plan

[Google Form](#) - Complete results

[DropBox](#) - Full user testing videos

Executive Summary

- Top 5 feature selection:
 1. Free drive
 2. Racing
 3. Character interactions
 4. Acting studio
 5. Memory/Velocity-based driving/Distance-based driving all tied
- + If they could add one more feature (aside from top 5)
 - Watch with me was chosen the most when picking an additional feature
 - “For the kids” was a frequent response
- 73.7% | 14 participants chose driving with the app, over voice command driving and character interactions, as their favorite activity of the play session
- 56.3% | 9 participants prefer the velocity-based, over distance-based, driving method
 - a. Some would like to choose between the 2 modes depending on where they are, what size room they are in, etc.
- 55.6% | 10 participants chose drive commands, over character interactions, as their preferred activity of the two
 - a. Participants would prefer character interactions, over voice command driving, if it was a more in-depth experience/more content and conversational
 - b. If the voice command features were not as responsive as Darby was during the play sessions, participants would rather have character interactions over voice command driving

Test subjects

- 19 total participants
- 78.9% | 15 internal employees - adults

- 21.1% | 4 external employees friends and family - young children (12 & younger)
 - 11, 9, 7 & 5 years old - all male
- 73.7% | 14 male
- 26.3% | 5 female

Data analysis

Familiarity with products

- **Sphero:** very familiar
- **RC Products:** not very to middle range familiarity
- **VUI systems:** not very to middle range familiarity
 - Specific VUI systems: Siri, Alexa, Cortana, Spidey, Google Home
 - Bad experiences with VUI, especially Siri

Frequency for app updates

- 47.4% | 9 participants say once/month
 - More often is okay if there are major feature updates
- 52.6% | 10 participants have varied responses

Variations of commands - please see [videos](#) or the [Google form](#) for specific wording in both velocity-based and distance-based sections of the play tests.

Voice command driving questions

- Reading from the list provided
 - Do I have to say 'Go, drive' every time?
 - Do I say what's in the brackets...?
 - Do I say 'Go, drive, forward' or just 'Forward'?
- Wake command
 - Is he ready or do I need to engage him like Spidey?
 - Is there a keyword/command?
- Other
 - How to distinguish commands (slower vs slow down, faster vs move faster).
 - Do I say faster while it's driving?
 - Not sure what flip does. (asked by multiple participants)
 - Why does he drive backwards at an angle rather than straight back? (asked by multiple participants)
 - Can I drive him outside? I would expect to be able to since he's an RC car.

Velocity-based voice command driving specifics

- 66.7% | 10 participants say he moves at just the right speed
- 20% | 3 participants say he moves too fast

Distance-based voice command driving specifics

- 46.7% | 7 participants say he does not move a far enough distance

- 33.3% | 5 participants say he moves a far enough distance

Which driving method was preferred

- 56.3% | 9 participants chose velocity-based driving
- 18.8% | 3 participants chose distance-based driving
- 25% | 4 participants chose other
 - Would like to choose between the 2 modes depending on where they are, what size room they are in, etc. (some participants who chose a specific drive method they liked better mentioned this as well)

Expectations vs inclusion

- 88.9% | 16 participants did not expect this feature to be included with LMQ
- 100% | 19 participants want this feature to be included with LMQ (before telling them it was Darby driving..)

We are sheep....

- 73.9% | 14 participants read the first character interaction provided to them (fun fact)

Character interactions observations

- Some participants tried responding after the “Want to play” and/or “Let’s have some fun” animations.
 - “Sounds like I can give more input.” “Play music.” or “Say something funny!”
 - “I would expect additional content.”
 - “Race.”
 - “Drive.”
 - “Let’s drive!”
 - “Drive around.” “Play a game.” “Do a trick.”
 - “Do a donut, left.” “Do a left donut.”
 - “What choices do I have? What can we do?” “Let’s go race.”
 - “I don’t know, what can you do?”
 - “What are we gonna play?”
 - “I don’t know what to say now....” (11yr old)

Favorite interactions

- 42.1% | 8 participants chose “Let’s have some fun.”
- 36.8% | 7 participants chose “Say your catchphrase.”
- 10.5% | 2 participants chose “What time is it?”

Other interactions for LMQ, suggested by participants

- More of a conversation/lead into other content and experiences
 - How was your day LMQ?
 - How are your tires feeling?
 - How far have you driven [today]?
 - How fast can you go?
 - Tell me a story.
 - Say something funny.
- More unique/different responses for the same question
 - Or gets annoyed with you if you keep saying the same thing.

- Sound effects
 - When driving; similar to racing sounds
 - When doing donuts/drift; show the amazing experience - “Whooo!” “Hang on!”
- Magic 8 ball, yes/no questions
- Dances/plays music
- More tie-ins to the move
 - How many races have you won?
 - Who's your best friend?
 - How big is your pit-crew?
 - What's your favorite track/move/color?
 - Ask him about Jackson Storm
 - More content
 - More phrases/catchphrases
- Prompt the user to get up and play [during idle]
- Autonomous mode
 - Drives for 30 seconds then does something crazy
 - Patrol mode like BB-8

App driving observations

- Some participants that try aiming anticipate this will work as other Sphero products
 - Do not think the aim button does anything at all or isn't working
 - No [noticeable] feedback when pressing the aim button
- Some participants are confused by the action of pulling down on the joystick
 - Think that this will work as the reverse button does
 - Does not resemble typical RC controls
- Some participants are confused by the need to hold the reverse button down
 - Think it is/should be a toggle function
 - One participant that has used the toggle function for reverse before says this way [holding the button down] is much easier
- Most participants have trouble using drift and boost buttons
 - Not sure how to use/when to press these
 - No [noticeable] feedback when pressing these buttons
- Most participants say they just need to get used to the controls
 - It is a learning curve

Gauging fun: based on scale recordings during play tests and comparing percentages

- Participants appeared to be having most fun with
 1. App driving
 2. Velocity-based driving
 3. Character interactions

Favorite part about play session

- 73.7% | 14 participants chose driving with the app

Drive commands vs character interactions

- 55.6% | 10 participants chose drive commands
- 38.9% | 7 participants chose character interactions

- Some participants expected more of an experience with character interactions and would pick character interactions over drive commands if this was the case

Feature selection:

Top 5

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After telling the participants of our master plan (Darby controlling LMQ during voice commands)

- "If it took as long as Siri I would not be nearly as impressed."
- "I think some level of voice commands would still be awesome. Not involving driving, but the personal questions would still be an awesome feature that brings your interaction with him to life."
- "Don't even put it in if it's not as responsive as today."
- "Pushes me back to distance-based driving because if it's not super responsive, this would be easier to control."
- "I could see myself going back to the app with any type of delay. Kids may repeat the commands which can be a problem. Maybe combine app and command driving so if I'm driving on the app I can say 'Drift' rather than looking down at my screen."
- "If he doesn't understand me, I'll move to app driving." Would you still want this feature in the app?: "Yes, would still like to see it and hope that it works great."
- Would still want voice commands in the product.
- "Had to tell it to stop (repeatedly) but since you added the feature to stop on its own, I like that."
- "He would have to be really responsive, especially stop." Character interactions would still stay #3 for him, even if the response was delayed."
- "Character interactions - swapped with WWM. Still needs a way to get him to say Kachow."
- "Depends on the responsiveness. Character interactions: Depends on how this is done but this part is important to try and put in...contact Smart Toys for help!"
- "It's frustrating when they don't understand you and you have to repeat a bunch - I would just leave it out.. Character interactions: cool he talks to you but for me, the [app] driving is the fun part ..and what he's doing now [idle animations]."
- "[Voice command driving] didn't seem necessary to begin with. Character interactions: These could stay. If it's too frustrating, maybe just add push commands like BB-8's emote/animation panel/menu."
- "I would still want the feature. If he didn't understand, maybe he can do a flip and say What?"
- "(Keep it in?) Not really. I would use the app more [to drive]. Character interactions: I'm fine with it." Asked about price point: Mom "I'd probably pay under \$200" Asked son if he

would save up for it "Still too much to save for." Mom "He also might be a little too old for LMQ but nephew would beg for it (9 year old)."