

Earcons Concept

Definition

- **Icons** are visual symbols that represent actions (e.g., a gear icon for settings, an arrow for "share").
- **Earcons** are digital sound cues that convey meaning, such as a "whoosh" when an email is sent or a "ding" when one arrives.
- When VoiceOver is enabled, earcons provide audio feedback to confirm actions and help users understand changes on the screen.

Why Are Earcons Important On An iPad?

- Enhances navigation for blind or low-vision users.
- Confirms gestures and commands through distinct sounds.
- Provides subtle audio cues without disrupting the VoiceOver announcements. Example:
 - Swiping right through items triggers a "click" sound.
 - Selecting an item triggers a "double tone."
 - Activating a button that opens a new screen triggers two sounds:
 - Double tone (button activated)
 - Triple tone (new screen opened)

In the VoiceOver Playground lessons and games, earcons are embedded into lessons and activities, even before Chapter 7, allowing children to become familiar with them early on.

Prerequisites

Gestures required to recognize earcons used in the VoiceOver Playground Earcon lesson and game:

- 1-finger swipe right/left
- 1-finger double tap
- 3-finger swipe right/left
- 2-finger twist
- Double tap and hold (drag and drop)

How Does VoiceOver Announce Earcons?

- Each earcon plays a designated sound. VoiceOver does not announce earcons.
 - Earcons play simultaneously with VoiceOver announcements.
 - Not all gestures have earcons (e.g., the 1-finger swipe up/down with the rotor does not have an earcon).
 - Earcons are integrated into the VoiceOver Playground lessons and games.

Earcons

Earcons can be challenging to describe in writing. When explaining the earcon to the child, it may be easier to imitate the sound instead of using words to describe the sound. The following earcons are introduced in the VoiceOver Playground lessons and games:

- **Click:** Moving across items on the screen (swiping or dragging)
- **Click:** Moving through items on the screen while reading (2-finger swipe up/down)
- **Ascending 2-tone:** Moving to the next row (1-finger swipe right)
- **Descending 2-tone:** Moving to the previous row (1-finger swipe left)
- **Double tone:** Selecting or activating an item (double tap/split tap)
- **Triple tone:** Scrolling to next/previous page (3-finger swipe right/left/up/down)
- **Triple tone:** Navigating to the previous screen or exiting a popup menu (2-finger scrub)
- **Click:** Moving through rotor options (2-finger twist)
- **Ascending triple tone:** Dragging and dropping an item (1-finger double tap & hold)
- **Thunk:** Swiping past the first or last item on the screen (wrong action)
- **Thunk:** Using an incorrect gesture for an action (wrong action)

Note: The “click” to move across items on the screen is a quick and sharp click sound. The “click” indicating moving to the next/previous rotor is a mechanical click sound.

Lessons

Lesson 1: Earcon Introduction Activity

- **Goal:** Identify earcons associated with specific gestures and actions.
- **Screen Layout:**
 - Scene changes with each gesture.
 - Begins with a classroom door in the middle of the screen.
 - Notebook (agenda)
 - Two desks
 - Two rows of three cubbies
 - Open backpack.
 - Water bottle
 - Pencil
 - Teacher
- **Breakdown:** After each gesture, listen to the description of the associated earcon.
 - Double tap to let the teacher know you are waiting at the classroom door.
 - 3-finger swipe left to open your agenda.
 - Swipe right with one finger to choose the next desk.
 - 1-finger swipe right to move to the next row of cubbies.
 - 1-finger swipe left to move to the previous row of cubbies.
 - 1-finger swipe right (wrong action sound).
 - 2-finger twist to open your water bottle.
 - Double tap and hold (Drag and drop gesture)

By learning earcons, children can understand what is happening on the screen. This helps them navigate and interact with VoiceOver more efficiently, making digital experiences more intuitive and accessible!