

# **CES Device Use Cases:**

## **Turn on Device (UC1)**

### **Primary Actor:**

- User

### **Goal in Context:**

- To activate an off-state device when pressing the power button

### **Scope:**

- System

### **Level:**

- Sub-function

### **Stakeholders and Interests:**

- User
- Device

### **Precondition:**

- The device is in the state of “off”.

### **Minimal Guarantee:**

- The device activates

### **Success Guarantee:**

- The device responds and activates after the power button has been pressed and held

### **Trigger:**

- The power button is pressed and held

### **Main Success Scenario:**

1. User presses the power button
2. The device activates
3. Device deactivates after 2 minutes if device receives no interaction

### **Extensions:**

2a) The device does not activate after the on button is pressed

3a) The device receives interaction within 2 minutes of being pressed

## **Turn off Device (UC2)**

### **Primary Actor:**

- User

### **Goal in Context:**

- To deactivate an on-state device when pressing the power button

### **Scope:**

- System

### **Level:**

- Sub-function

### **Stakeholders and Interests:**

- User
- Device

### **Precondition:**

- The device is in the state of “on”.

### **Minimal Guarantee:**

- The device deactivates

### **Success Guarantee:**

- The device responds and deactivates after the power button has been pressed and released by the user

### **Trigger:**

- The power button is pressed and released

### **Main Success Scenario:**

1. User presses the off button
2. The device deactivates

### **Extensions:**

2a) The device does not deactivate after the off button is pressed

### **Ending Session/Soft Off (UC3)**

#### **Primary Actor:**

- User

#### **Goal in Context:**

- To deactivate an on-state device that is during or close to finishing a session

#### **Scope:**

- System

#### **Level:**

- Sub-function

#### **Stakeholders and Interests:**

- User
- Device

#### **Precondition:**

- The device is currently undergoing a session

#### **Minimal Guarantee:**

- The device deactivates

#### **Success Guarantee:**

- The device will scroll through the graph from 8 to 1 with a gradual reduction of CES stimulus until the device fully deactivates

#### **Trigger:**

- A session has ended
- The power button has been pressed and held during a session
- Critically low battery during a session

#### **Main Success Scenario:**

1. During a session, the user presses the power button.
2. The device activates "Soft Off" and scrolls through the graph and gradually reduces CES stimulus
3. The device deactivates

#### **Extensions:**

- 2a) The device does not scroll through the graph
- 2b) The device does not gradually reduce CES stimulus
- 3a) The device does not deactivate

#### **Variations:**

- 1a) The device is finishing a session
- 1b) The device becomes critically low on battery

### **Selecting Session (UC4)**

#### **Primary Actor:**

- User

#### **Goal in Context:**

- To select and start a session

#### **Scope:**

- System

#### **Level:**

- Sub-function

#### **Stakeholders and Interests:**

- User
- Device

#### **Precondition:**

- The device is on and not currently undergoing a session

#### **Success Guarantee:**

- Users are able to start a session

#### **Main Success Scenario:**

1. User selects start session from the main menu
2. User selects a duration
3. User selects a mode
4. User presses enter to start a session

#### **Variations:**

- 1a) User can select intensity at any time before 4)

### **Battery Level (UC5)**

#### **Primary Actor:**

- Device

#### **Goal in Context:**

- Graphically displays the current device power level

#### **Stakeholders and Interests:**

- Display
- Device

#### **Precondition:**

- The device is powered on

#### **Success Guarantee:**

- The display shows the correct battery level

#### **Main Success Scenario:**

1. The graphic is displayed throughout operation
2. Upon powering the device on, the battery level is displayed
3. The graphic reflects the consumptions during session period

#### **Variations:**

- 1a) The graphic notifies of low or warning for critically low level
- 1b) The device will gradually shutdown during session when warning appears
- 1c) The device will not operate once warning pop ups on start

### **Testing Connection (UC6)**

#### **Primary Actor:**

- Device

#### **Goal in Context:**

- To determine the connection to the left and right ear

#### **Scope:**

- System

#### **Level:**

- Sub-function

#### **Stakeholders and Interests:**

- Ear Wire
- Device

#### **Precondition:**

- The device powered on and session started

#### **Main Success Scenario:**

1. Detect connections from both ears
2. Allow the session to start when connection is excellent or okay
3. Prevent the device to start when no connection is detected on either ear

### **Intensity Selection (UC7)**

#### **Primary Actor:**

- User

#### **Goal in Context:**

- Change the intensity to desired level

#### **Scope:**

- System

#### **Level:**

- Sub-function

#### **Stakeholders and Interests:**

- User
- Device

#### **Precondition:**

- The device must be turned on

#### **Success Guarantee:**

- The intensity level is tuned based on the set level

#### **Main Success Scenario:**

1. The user select the desired level of intensity
2. The user starts the session with selected intensity
3. The session perform the selected intensity in session

### **Record Session (UC8)**

#### **Primary Actor:**

- Device

#### **Goal in Context:**

- To record an undergoing session and save it to the users sessions

#### **Scope:**

- System

#### **Level:**

- Sub-function

#### **Stakeholders and Interests:**

- User
- Device

#### **Precondition:**

- The device powered on and session is undergoing

#### **Main Success Scenario:**

1. UC7
2. User presses the record button

### **Replay Session (UC9)**

#### **Primary Actor:**

- Device

#### **Goal in Context:**

- To replay a recorded session

#### **Scope:**

- System

#### **Level:**

- Sub-function

#### **Stakeholders and Interests:**

- User
- Device

#### **Precondition:**

- The device powered on and a session has been recorded

#### **Main Success Scenario:**

1. UC8
2. The user selects Review Session in menu
3. User selects a session that has been recorded in the session list
4. User starts the selected session

## **Multiple users (UC10)**

### **Primary Actor:**

- Device

### **Goal in Context:**

- To switch between users

### **Scope:**

- System

### **Level:**

- Sub-function

### **Stakeholders and Interests:**

- User
- Device

### **Precondition:**

- The device is powered on

### **Main Success Scenario:**

1. The user selects Login/out in the menu
2. The user selects a user

# Use Case Diagram:

