

Bluetooth Headphone Pairing on the IFE

Design Guidelines and Standards

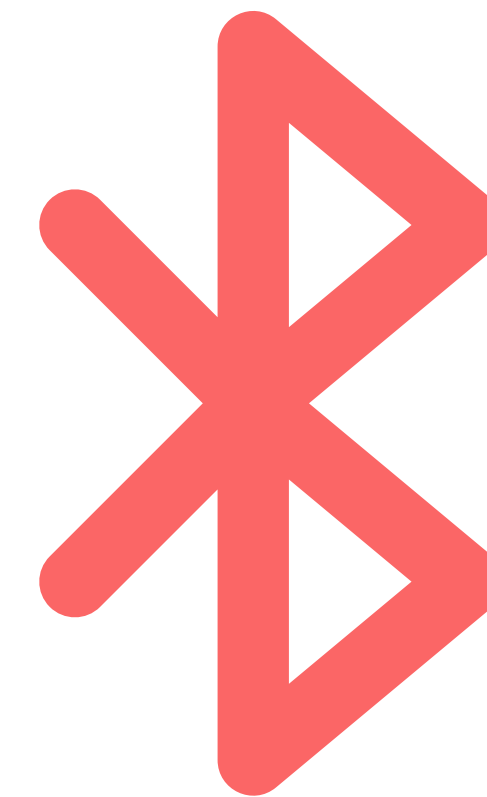


Overview

When adding Bluetooth Headphone functionality to an interactive the following list of patterns and scenarios need to be designed for.

- Feature Awareness
- Connection State Representation
- Discover Nearby Devices
- Discovery Timeout (no action within time limit)
- Pair to Selected Device
- Forget Previously Connected Device
- Connection Lost / Reconnect
- Logo Usage

This guideline covers best practices and workflow for the above patterns.

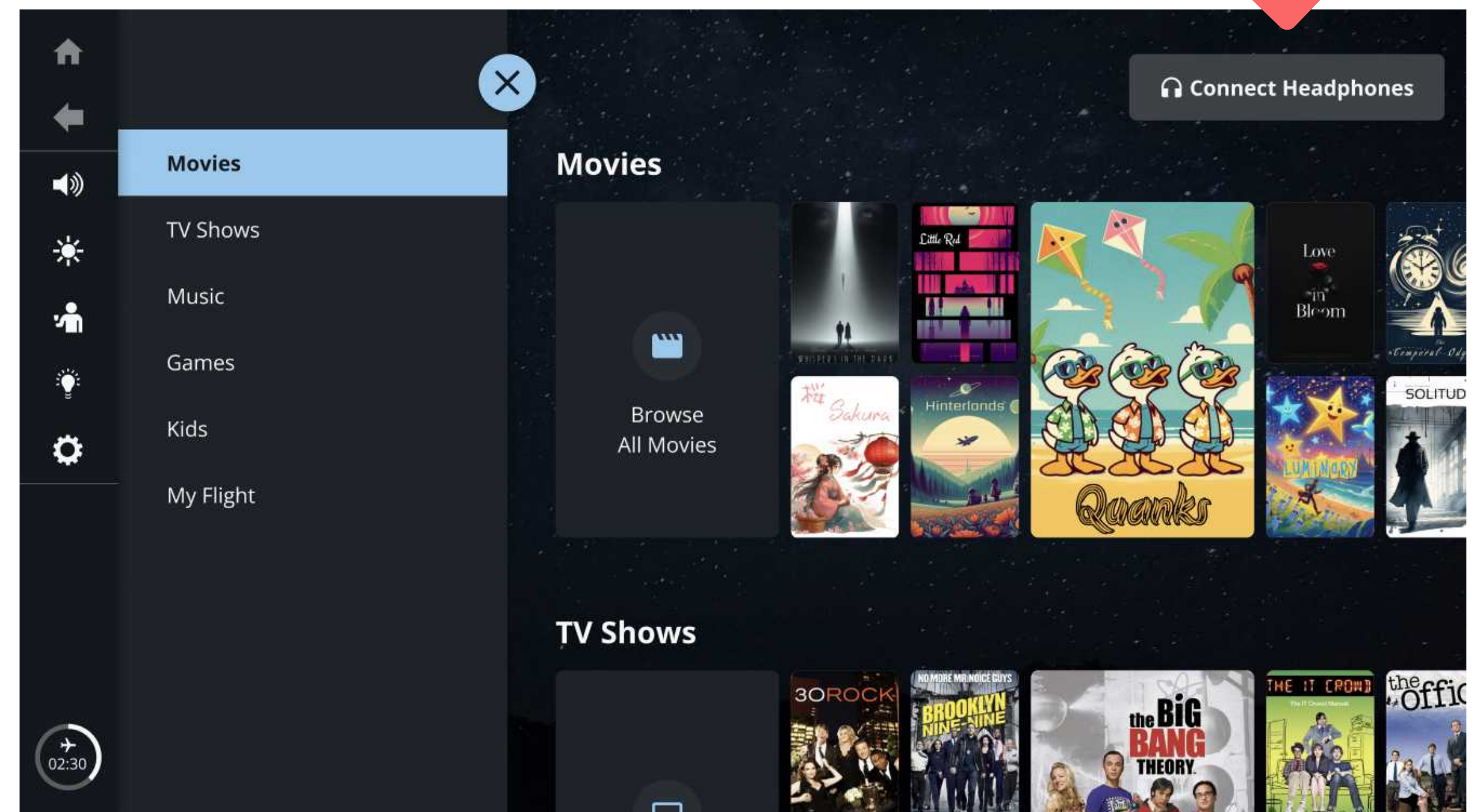


Feature Awareness

It is important to make sure the user is aware that Bluetooth audio is available on this system and where to access it. It's recommended to make this a part of the onboarding flow as well as a feature at the top level of navigation.

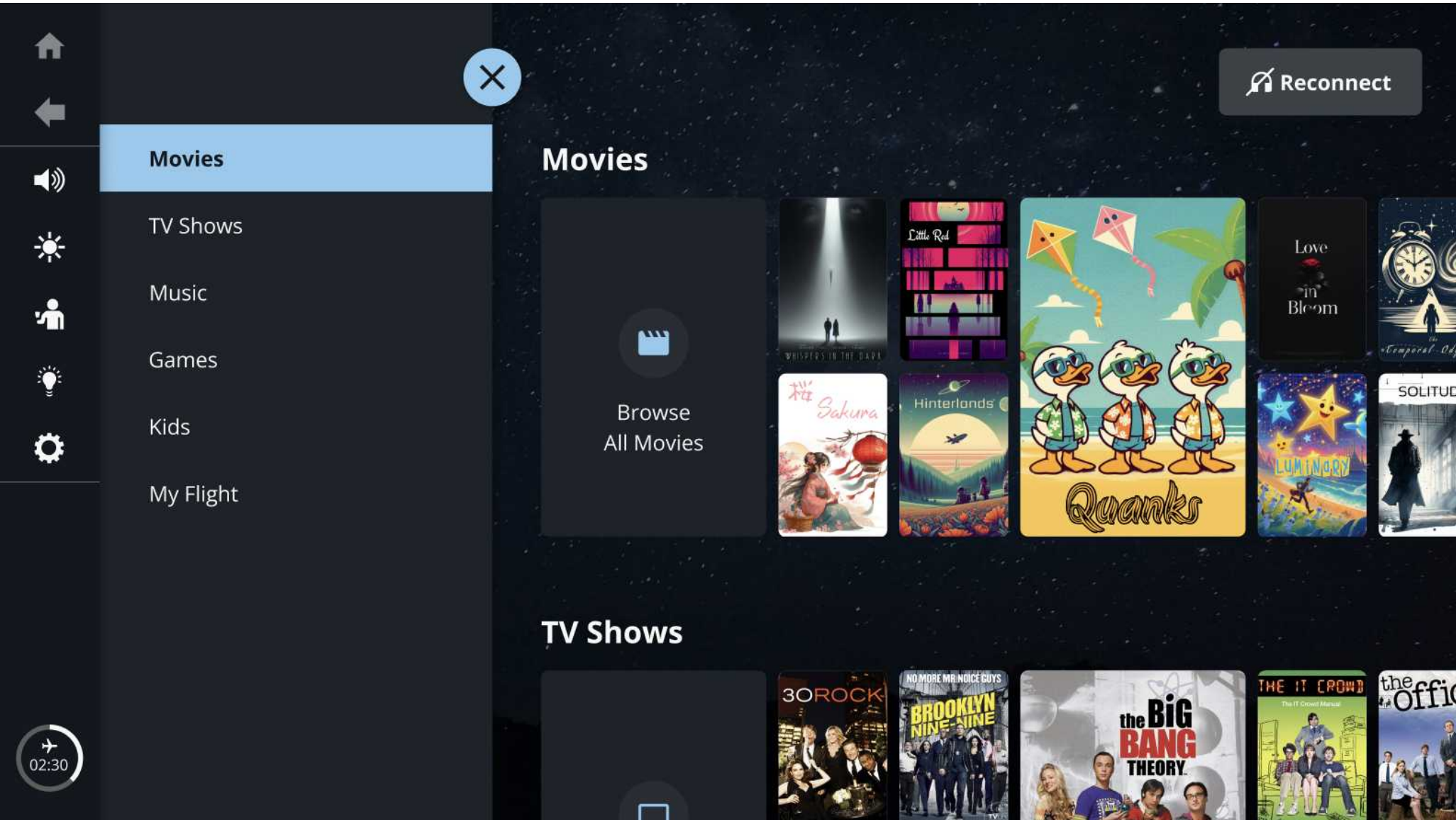
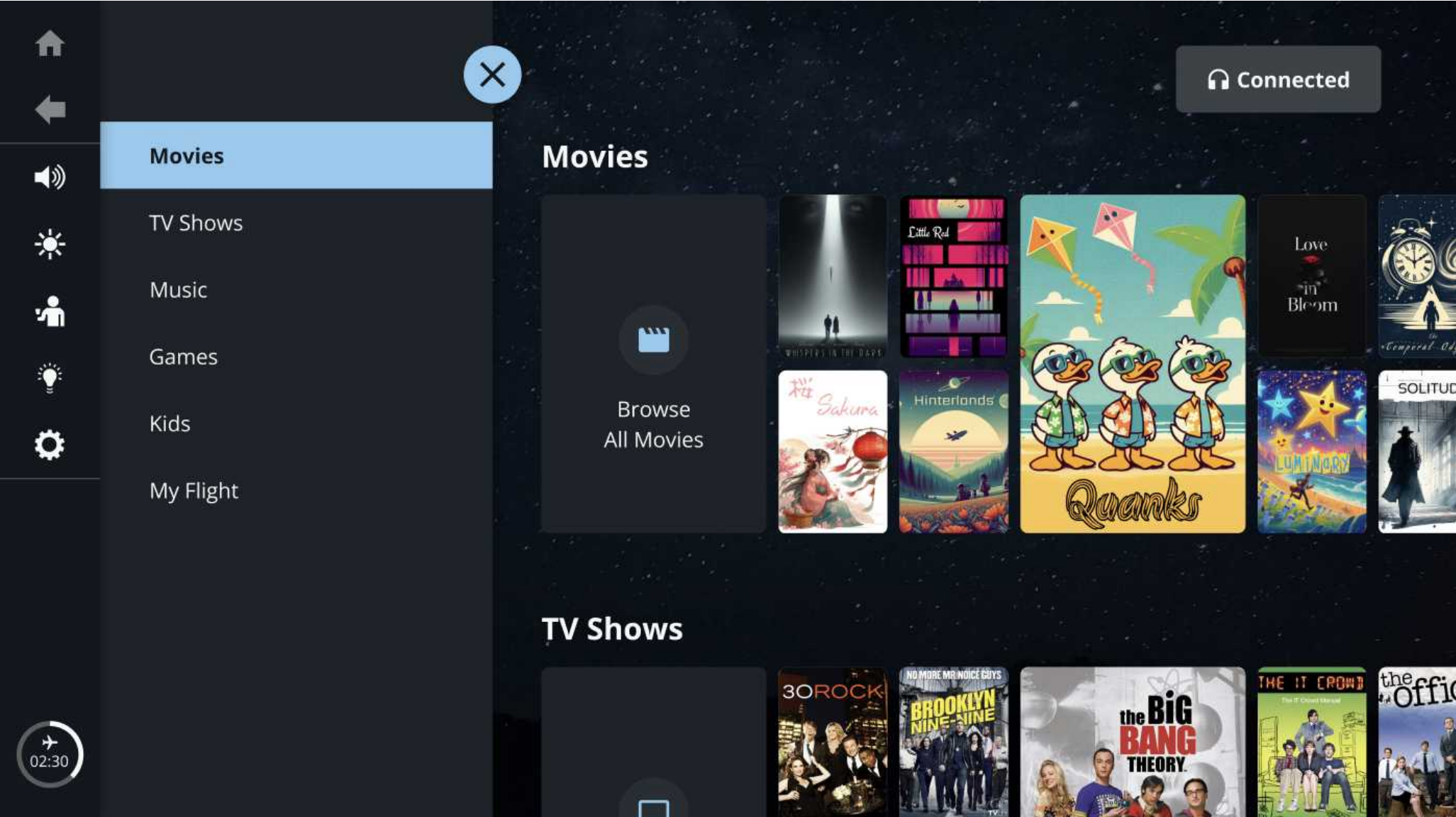
✗ DON'T

Bury the bluetooth connection deep in the navigation under settings, or some place that requires active searching from the passenger.



Connection State

Provide a clear representation to the user of the bluetooth connection state, so that it is always clear whether the audio is being routed to Bluetooth or not. This should be presented in the same context alongside the volume controls.



Discover Nearby Devices

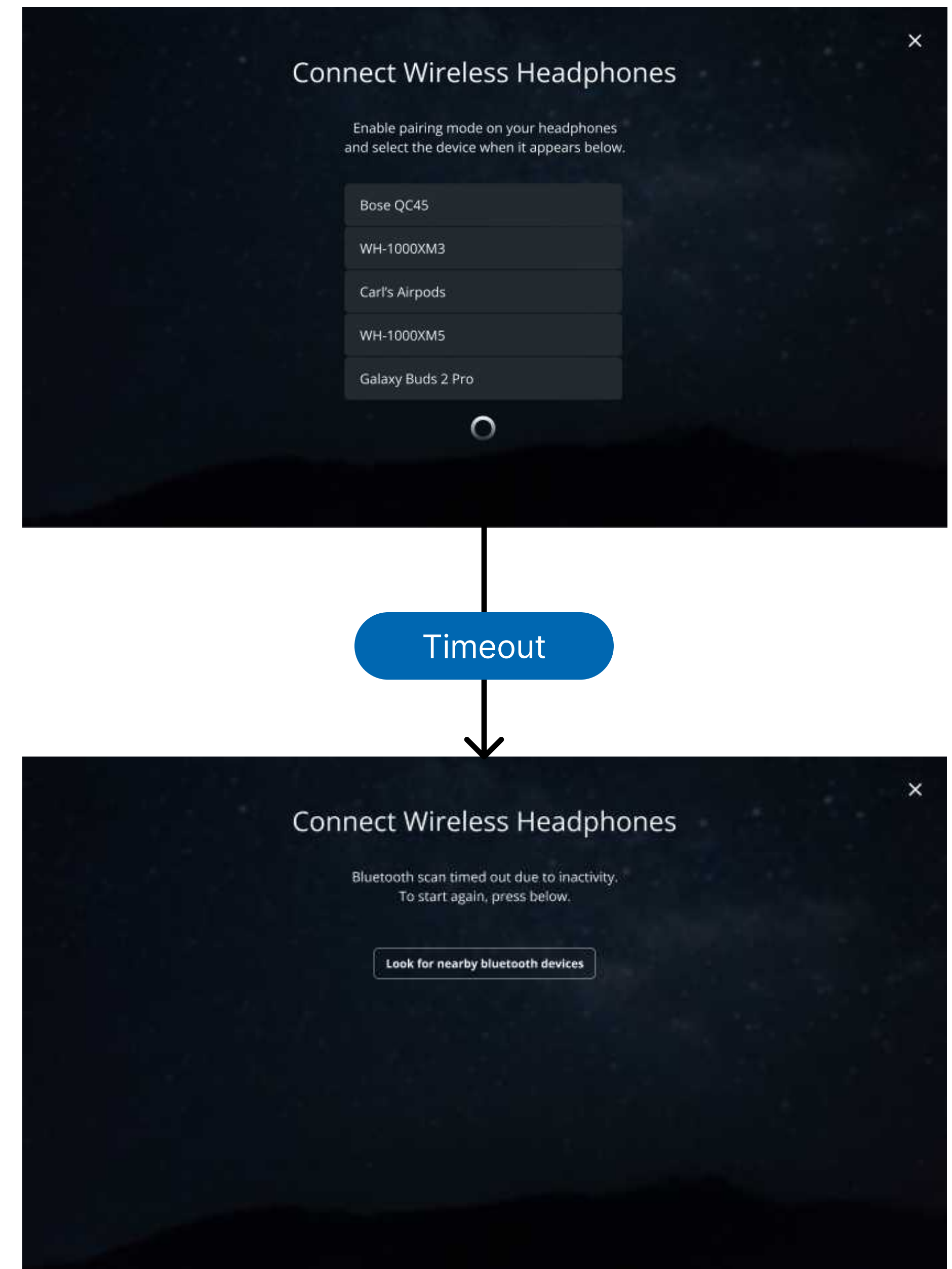
When pairing is initiated, display nearby detected devices in a dynamically populated list. Provide an activity indicator on screen (spinner) to show that the discovery is actively running.

Discovery has a system timeout requirement and may not run indefinitely. After timeout has occurred with no device selected for pairing, clear the list and give the user the option to reinitiate pairing discovery or else exit the bluetooth feature.

Order the list of devices by signal strength so that those with the strongest signal appear at the top.

❌ DON'T

Do NOT continue to show a list of bluetooth devices after scanning has timed out. Doing so would misrepresent to the user which devices are actually available.

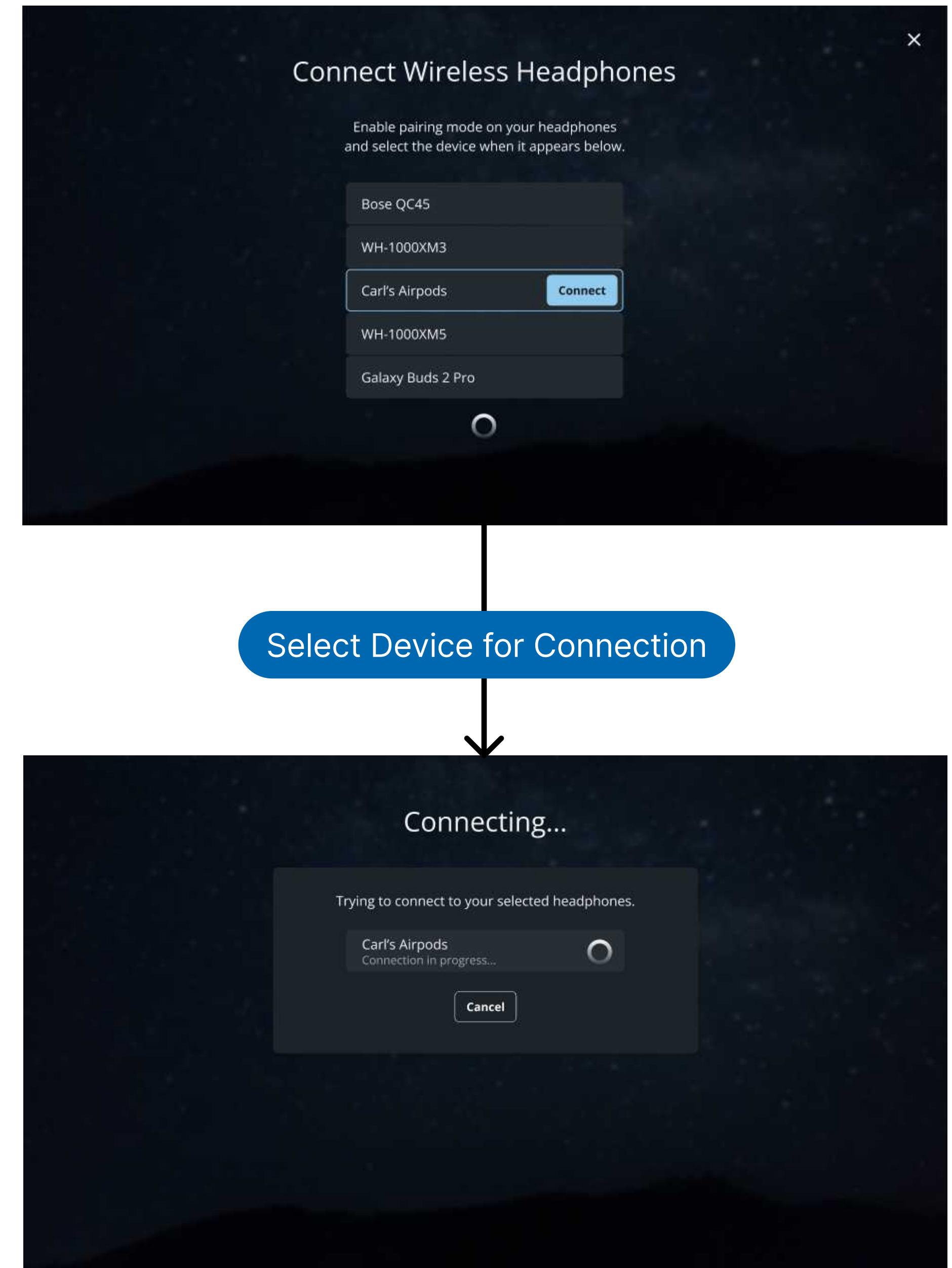


Pair Selected Device

When the user selects a device to pair with, transition to the connecting state or modal. Make sure that there is no possibility of attempting to connect to two devices at the same time.

❌ DON'T

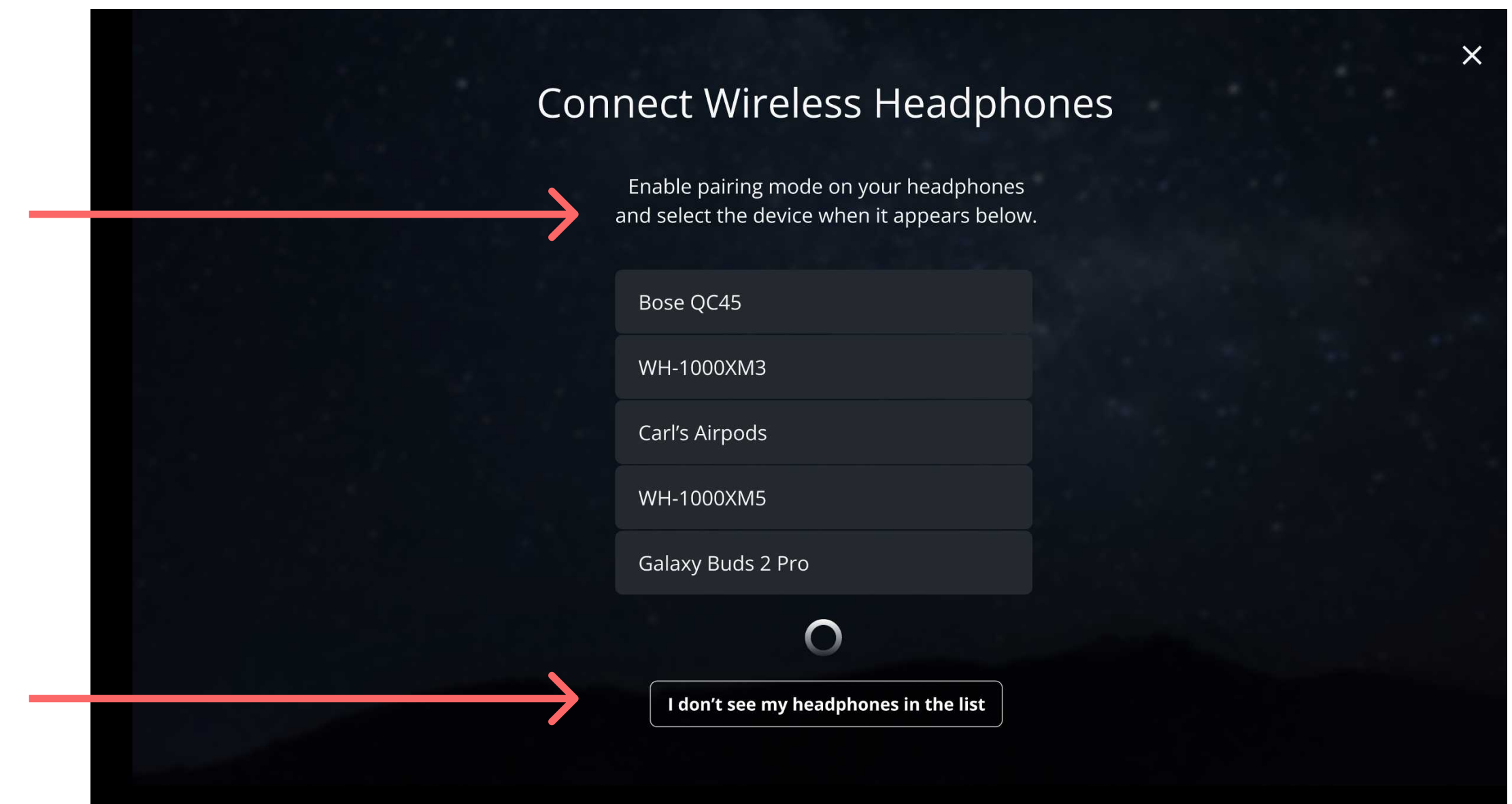
Allow the user to select other devices while attempting to connect to a bluetooth device.



Troubleshooting / Help

Pairing Bluetooth headphones to devices is something that the vast majority of users will only do rarely. Even avid users are likely to only initiate pairing on the somewhat rare occasions of buying a new device.

This leads to the situation where there may be high degree of user error. It is recommended to provide basic hints and tips to users to remind them that their device must be powered and in pairing mode for this to work. Consider providing basic instructions on how to put headphones into pairing mode using popular models as examples.



Example. Users are instructed to enable pairing mode on their headphones. The user is also given the option to learn more about why their headphones may not appear in the list.

Connection Lost

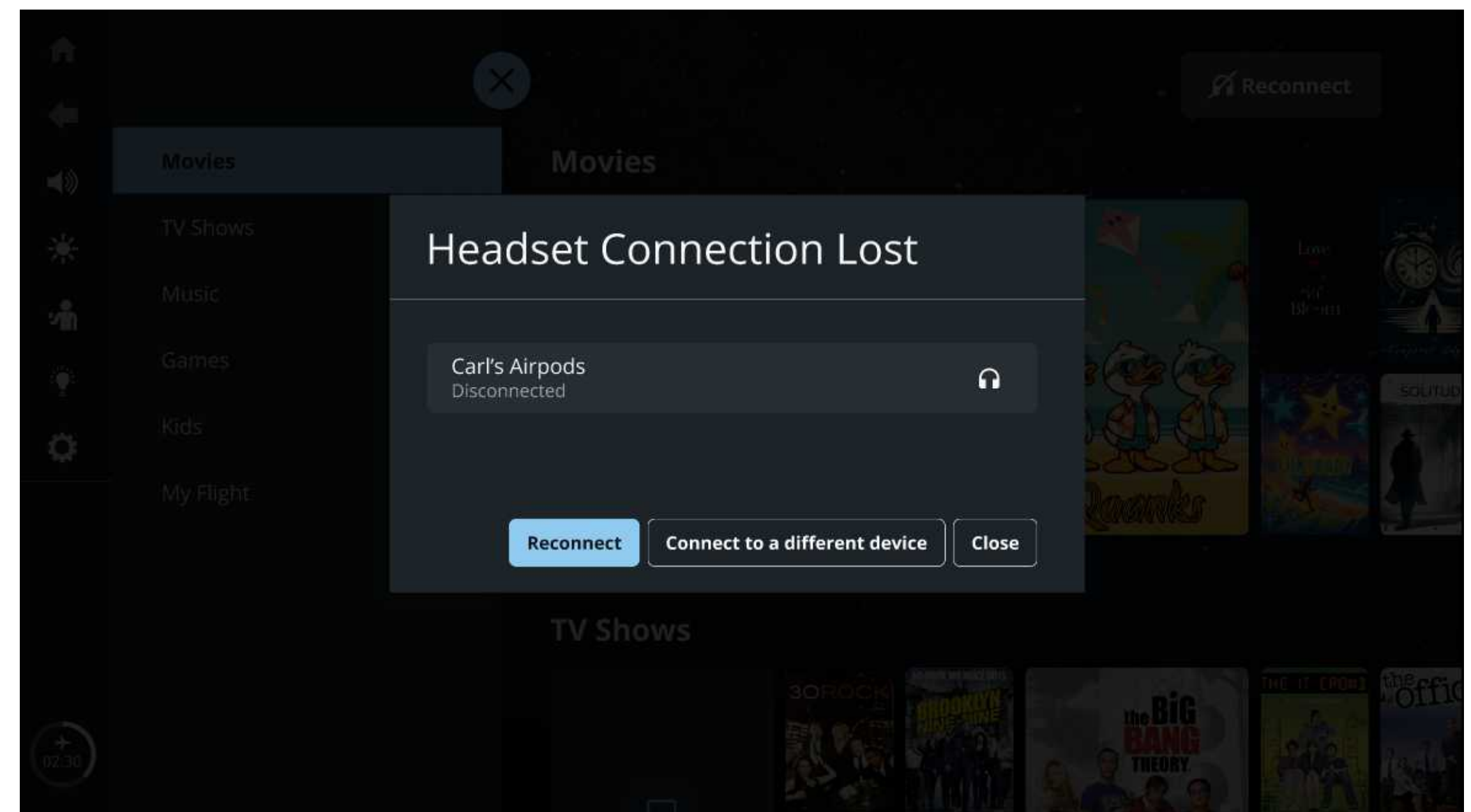
Notify the user when a bluetooth connection is unexpectedly lost. (This could be due to the loss of battery power, turning the headphones off or the passenger walks away from the seat.)

Attempt to reconnect periodically in the background while a) this pop-up is present and b) the screensaver is not active. If reconnect happens automatically, then hide the notification.

Options:

- Reconnect (change to pairing modal)
- Connect to a different device
- Close

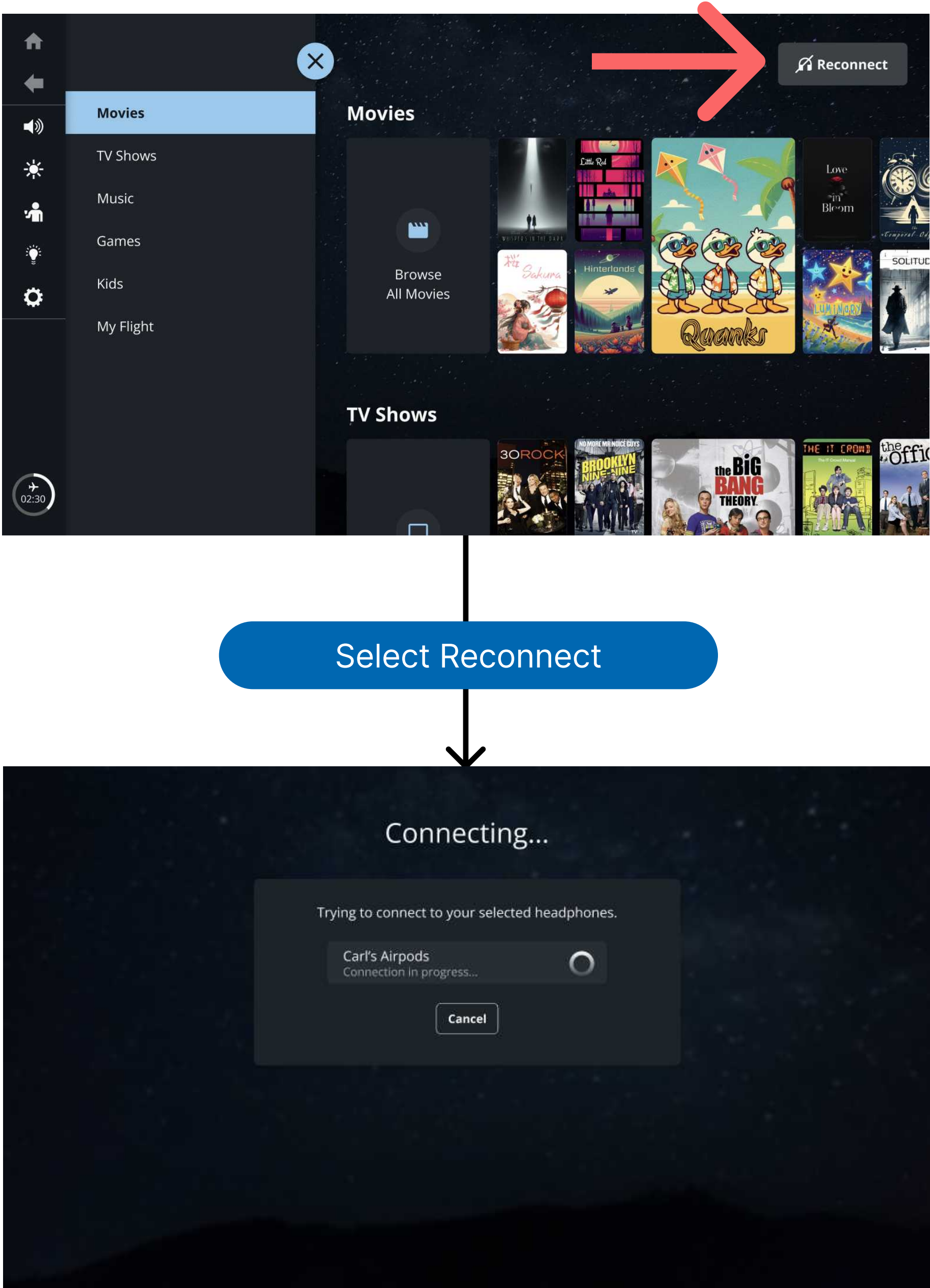
The 'Close' option will cause attempts to reconnect in the background to stop.



Reconnect

When connection to headphones has been lost, the user needs a fast access option to reconnect.

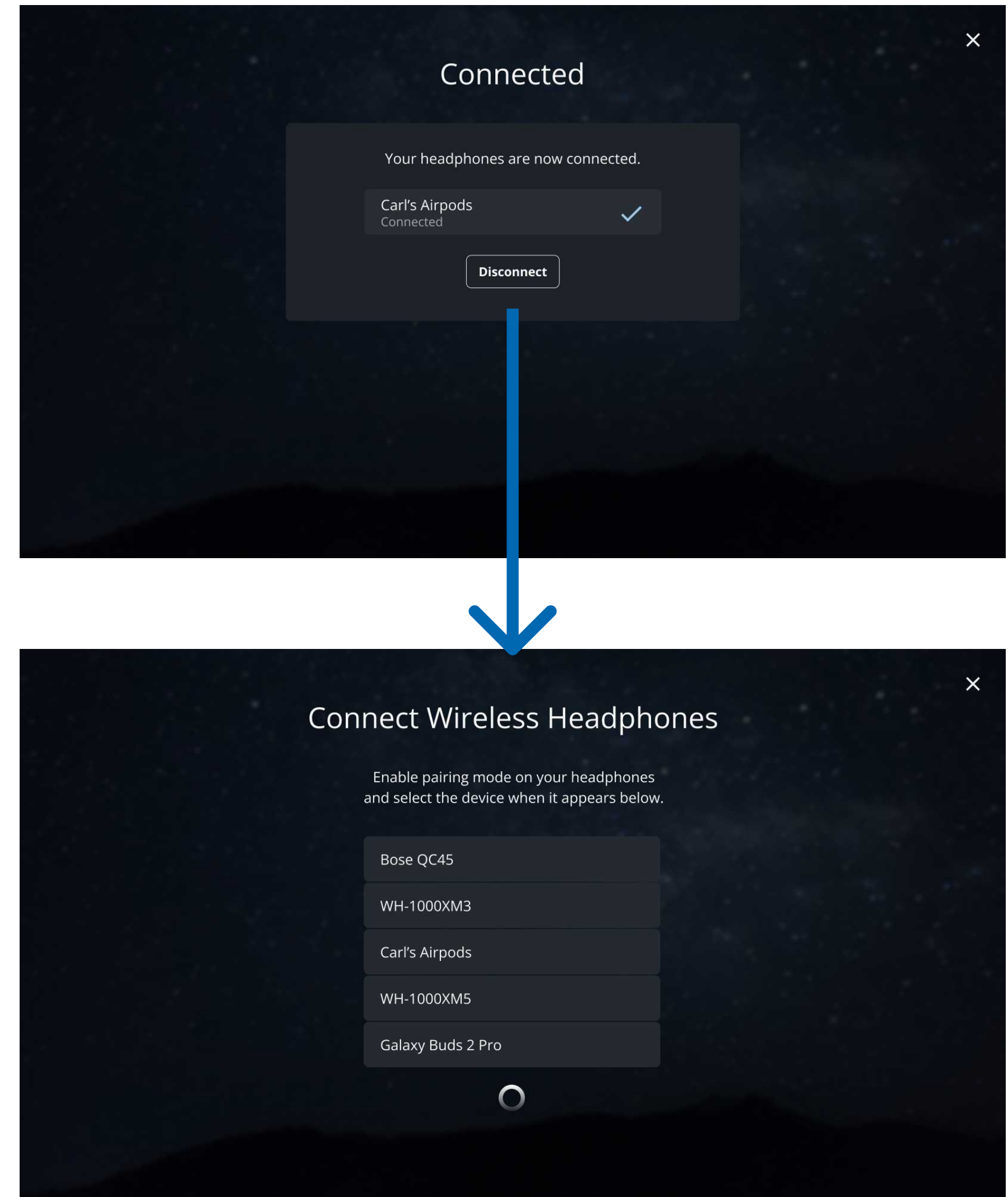
The reconnection dialog does not go through pairing again or ask the user to select a device. It attempts to restore connection to the previously paired device.



Forget Headphones

The option to forget a previously paired device is important to have. Possible reasons for this include paired to the wrong device, changing seats and wanting to be certain that no personal information has been retained.

Additionally, it is recommended that the IFE only ever retains information on one device at a time. So in the rare case that a passenger has two different set of bluetooth headphones and wishes to switch between them during the flight, then the first device will need to be forgotten before connecting to the second device

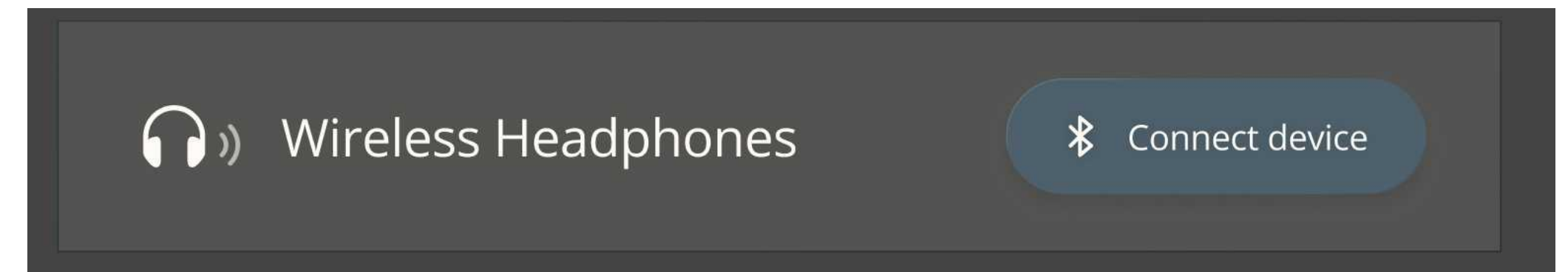


Logo Usage

Use of the Bluetooth logo is permitted. Panasonic is a licensee of the Bluetooth technology and granted rights to use the logo accordingly on customer programs. (The airline does not need to license separately.)

[Bluetooth logo usage requirements](#) must be followed. These permit use of the logo WITHOUT the trademark symbol for digital controls. (The trademark symbol is primarily needed for print.)

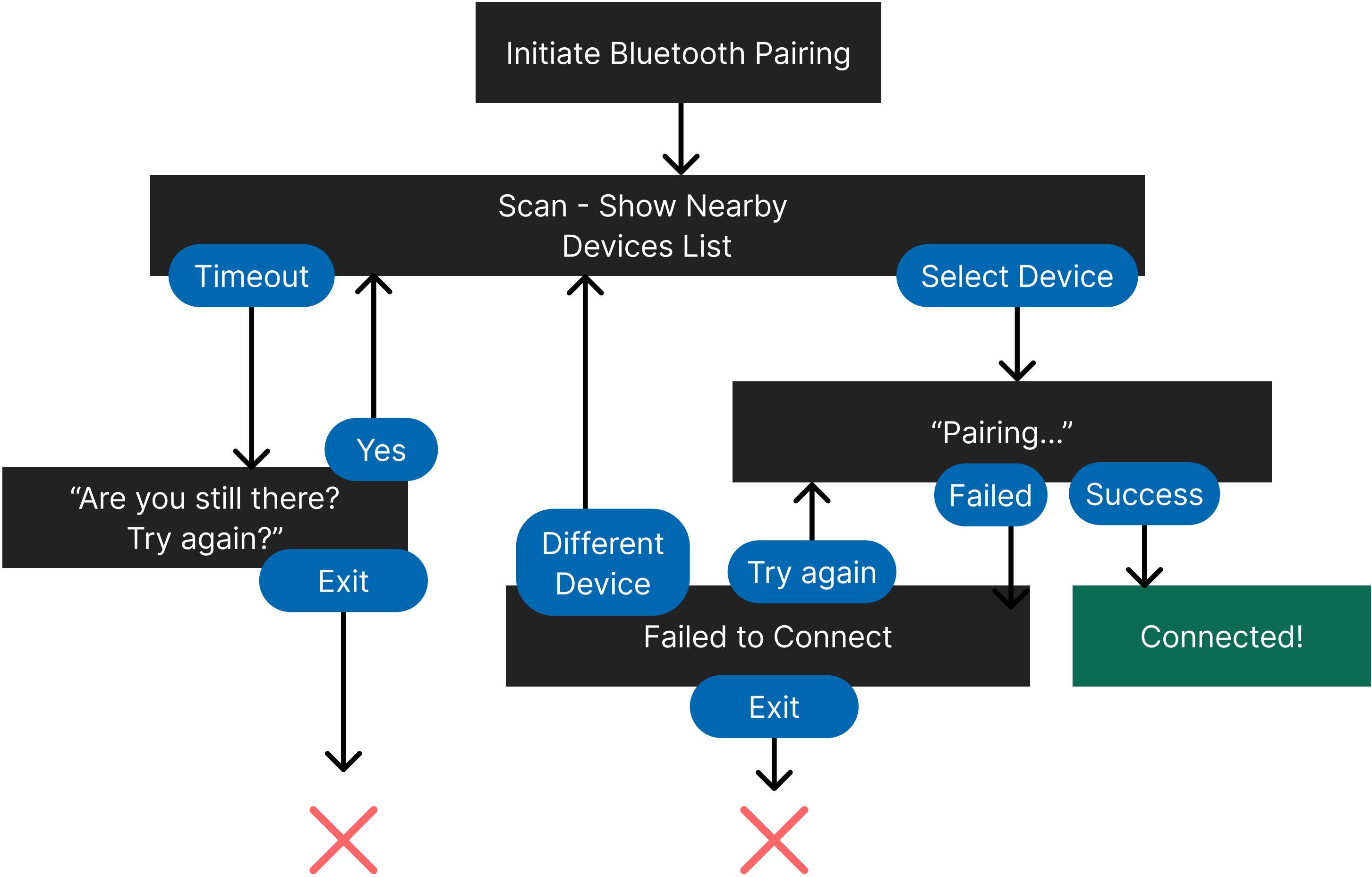
While Bluetooth logo usage is allowed, it is recommended to use a more descriptive icon to represent “wireless headphones”, since that is the only type of pairing via Bluetooth that the system supports.



*Example using both a descriptive icon
as well as the Bluetooth logo*

Workflow

Initial Pairing



Workflow

Connection Lost / Reconnect

