**Test Plan and Report**

**Product Name: BeatBox**

**Team Name:** BeatBoxers

07/23/23

### 8 Unique Instrument Channels

**8 Channels**: As a musician, I want to use up to 8 instrument channels so I can make more complex rhythms.

**Instrument Channel Play Button:** As a user, I want to create a beat so that I can hear it play back to me.

**8 Unique Instrument Channels (Pass)**

1. Click and activate a note on every instrument channel, so it forms a diagonal from the top left to bottom right of the screen.
2. Click each “play sample” / from the top down, remembering the order the different instruments play and making sure they are all distinct
3. Press the play button. Each instrument should play in sequence, starting from the top instrument.
4. Click and activate a note on every instrument channel, so it forms an X across the screen
5. Press the play button. Two instruments should play on every beat, but only the 4th and 5th columns should repeat the pair of notes that play

### Change Tempo

**Tempo Button:** As a musician, I want to change the tempo so I can create rhythms at different speeds.

**Change tempo (Pass)**

1. Click on tempo button

2. Delete the default tempo and type “60”

3. Press enter

4. Set one instrument to play every beat

5. User should hear the audio play at half the default speed, with one note per second

6. Click the tempo button again

7. Delete the default tempo and type “240”

8. Press enter

9. Set one instrument to play every beat

10. User should hear the audio play at double the default speed, at four notes per second (should complete the full loop every two seconds)

### Change Volume

**Volume Button:** As a musician, I want to change the volume of certain sounds so all the different sounds are balanced with each other

**Change volume (Pass)**

1. Click on the “play sample” button for a given channel and remember how loud it is

2. Click on volume button on the given channel

3. Click on the text field, delete the previous volume and enter “50”

4. Press OK

5. Click on the “play sample” button for the given channel

6. User should hear the channel as half as loud as the default

### Panning Knob

**Panning Knob:** As a musician, I want to change the panning of certain sounds so I can use spatial positioning to make the soundstage more immersive.

**Instrument Channel Panning Knob (Pass)**

(Requires headphones / stereo)

1. Click the instrument channel panning knob and drag to the right slightly

2. Click the “play sample” button

3. The audio should play mostly in the right ear of the user’s headphones

4. Click the instrument channel panning knob and drag it all the way to the right

5. Click the “play sample” button

6. The user should only hear the sample in the right ear of their headphones and while dragging, see a popup reading “Panning: #” next to their cursor, with the number increasing as they drag and capping at 100

7. Double click the panning button to reset it to center

8. Repeat, dragging to the left, with numbers decreasing to -100 in the popup and hearing the audio mostly or only in the left ear

### Instrument Channel Mute Button

**Mute Button:** As a musician, I want to mute sounds so I can focus on certain sections of my drum pattern at a time

**Mute Channel (Pass)**

1. Click the mute button on a instrument channel

2. Check the button is highlighted red

3. Click the “play sample” button on the channel

4. User should not hear audio from the muted channel

5. Activate some of the notes for the channel, and some from different instruments, and hit the play button

6. The user should not hear any of the notes from the muted channel play, but should still be able to hear the other instruments

7. Click the mute button on one of the other instrument channels that is still playing

8. The user should no longer be able to hear that instrument either

9. Click both the mute buttons again

10. The muted channels should revert back to their original volumes and the buttons are highlighted back to gray.

11. Hit the “play sample” button and play buttons again

12. The audio should now play the same way it did before

### Instrument Channel Solo Button

**Solo Button**: As a musician, I want to solo certain sounds so that I can see how one specific channel sounds clearly.

**Solo Button (Pass)**

1. Click the solo button

2. The Solo button is toggled when highlighted green.

3. User should be able to only hear sound from the instrument channel they selected

4. If the user presses the active solo button again, the solo button should highlight gray to indicate untoggled state.

5. Users should once again hear the sound bytes of all other instrument channels they selected at their original volume before the solo button was pressed.

6. If the user clicks on another solo button while there is already an active solo button playing, then the active solo button is untoggled and the recently pressed solo button is highlighted green.

7. The user should be able to only hear the sound from the recently toggled solo button

### Header Play and Stop Buttons

**Header Play and Stop Button**: As a musician, I want to make a drum beat and play it back, so I can make a basic rhythm.

**Header Play and Stop Button (Pass)**

1. For each row of Instrument Channels, click on instrument note squares in a recognizable pattern.

2. Click on Header Play Button

3. The user should hear the pattern that was described play on a loop

4. The user should see the column of notes that is currently playing change color, with silent notes turning darker gray and playing notes turning red. When the next column starts playing, they should revert to their original color

5. Click on Header Stop Button to stop playback

6. User should hear no playback coming from application, or any changes in color in the note grid

7. Click the play button again

8. Playback should reset from beginning

### Snapshot Save Button

**Snapshot Download**: As a musician, I want to download a “snapshot” of my drum pattern that I can re-upload and continue editing later so I can make quick and easy changes

**Snapshot Download** **(Pass)**

1. Create a pattern using any of the instrument channels and modify any of the instrument channel buttons and/or tempo

2. Click “Save Snapshot” button

3. The user should see a ZIP file containing the current presets (selected notes, tempo, volume, etc) of the current session downloaded onto their computer.

4. User should now have a zip file containing the data downloaded.

5. The user is able to open the ZIP file and see all their configurations in “user\_data.txt” and all their “.wav” files.

### Snapshot Load Button

**Snapshot Download**: As a musician, I want to download a “snapshot” of my drum pattern that I can re-upload and continue editing later so I can make quick and easy changes

**Snapshot Upload (Pass)**

1. The user can begin from any program state and click the “Load Snapshot” button

2. The user will be prompted to select a saved zip file from their hard drive that contains their downloaded audio clips and “user\_data.txt” presets file

3. All the previous presets (selected notes, tempo, volume, etc) from any previous session will be restored

4. User should now see all their saved presets loaded into the program exactly as the state of the program was originally saved

### Download Button

**Download Button:** As a musician, I want to download my drum loop so I can use it in a real song

**Download Button** **(Pass)**

1. Create a basic pattern, adjusting at least one instrument’s panning and volume
2. Click on “Download” button
3. The user should see that the instrument channels playback their work as the application records with one pass through.
4. The user should then see a file, “myAudio.wav”, downloaded onto their system the moment the playback finished
5. User should be able to play the file and hear the same exact track as they do on the website