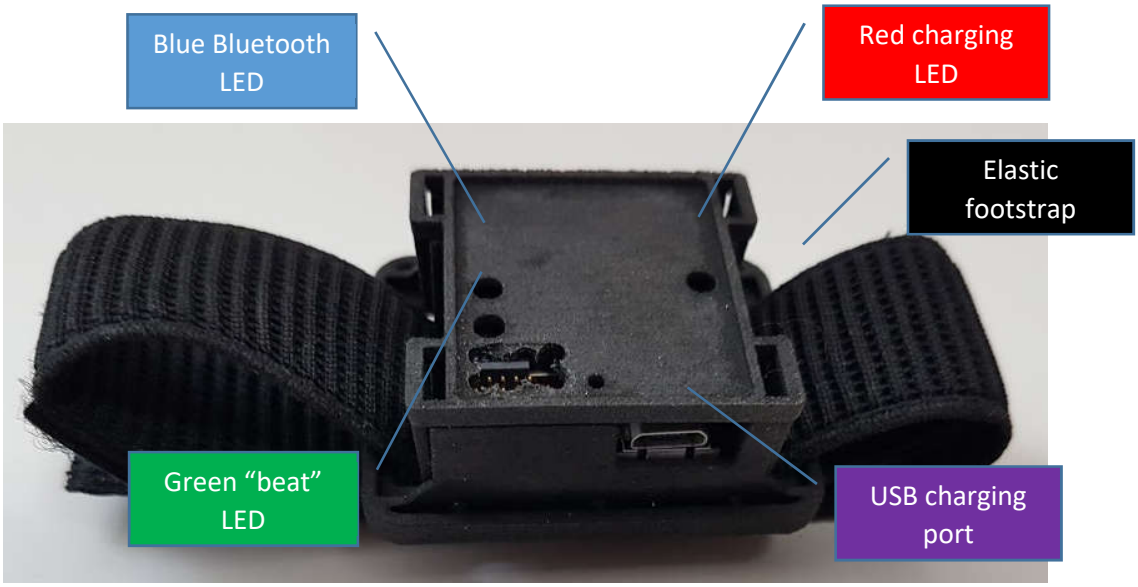
# HappyFeet User's Guide

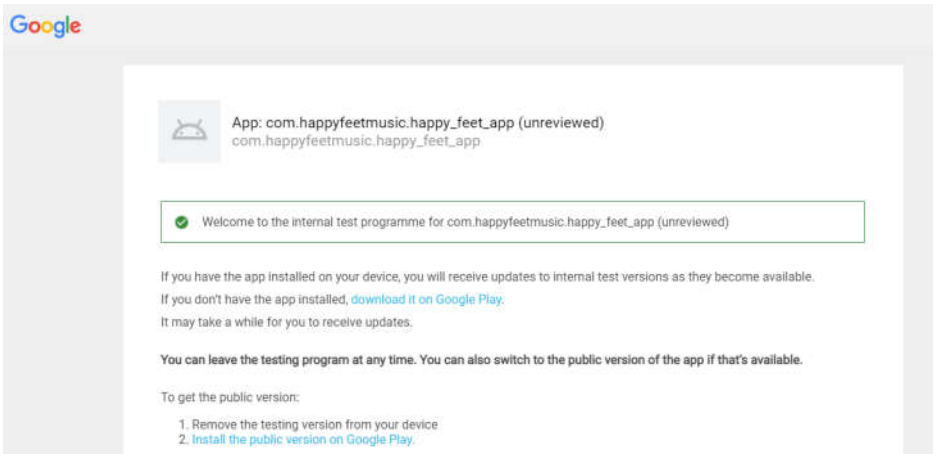
Thank you for purchasing Happy Feet, the foot-mounted, Bluetooth-enabled analog drum machine thingy!

First, let's get acquainted.

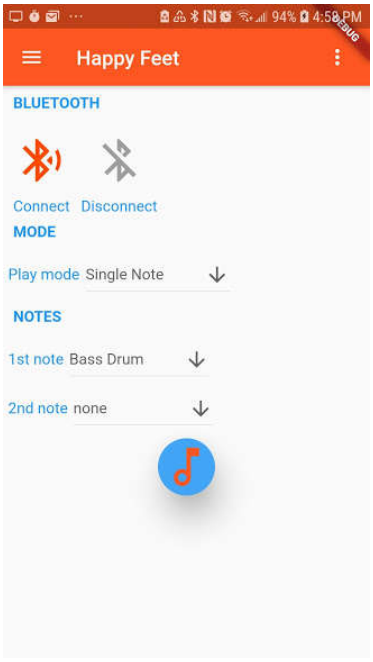



## Getting Started

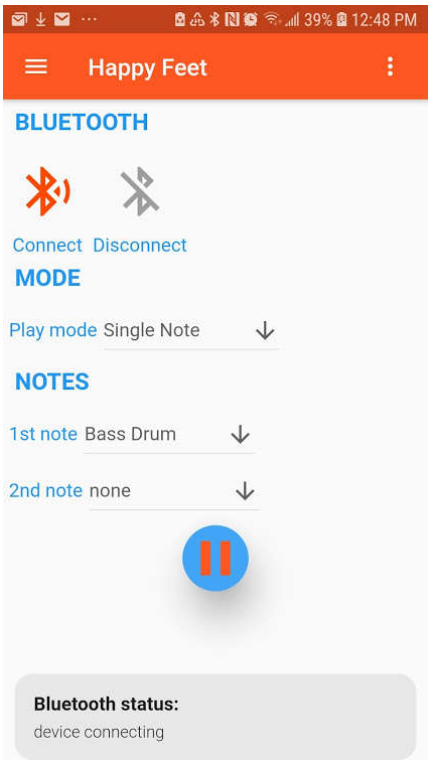
1. What you'll need:
    a. HappyFeet
    b. USB cable (provided)
    c. An iOS or Android phone or tablet
    d. (optional) speaker and cable to connect to phone/tablet
2. Connect the USB cable to the charging port and to a USB charger or port on a computer. The red charging LED will light while charging and go out when the HappyFeet battery is fully charged.
3. Once the battery has some charge, the Bluetooth LED will flash slowly (every 5s) indicating that HappyFeet is advertising on Bluetooth i.e. ready to connect with a phone or tablet.
4. Install the HappyFeet app from your app store or the download link on our website. (If you're a tester, you will be emailed a link to download an early version of the app.)
    a. Apple App Store
    <insert app store image>
    b. Play Store



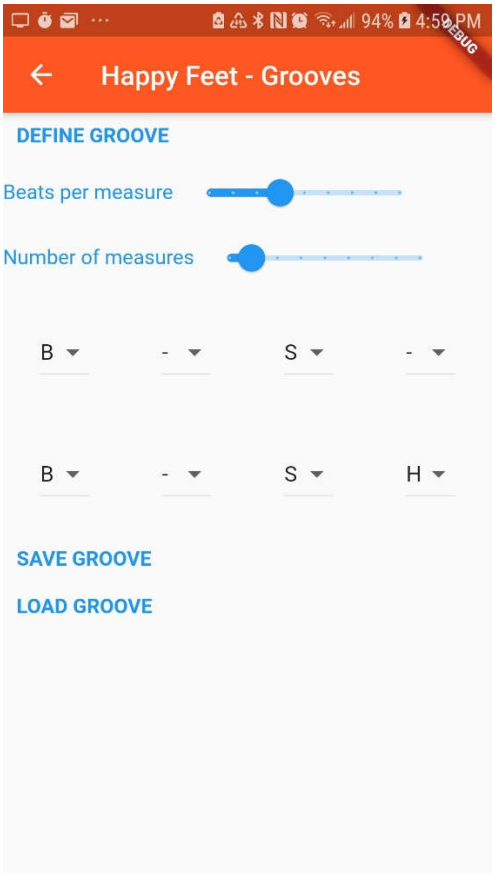

5. Open the Happy Feet app.




6. The app will ask for permissions. This is needed for it to use Bluetooth.
7. Make a Bluetooth connection by hitting the connect button. A window will pop up momentarily at the bottom of the screen showing the status of the Bluetooth connection.



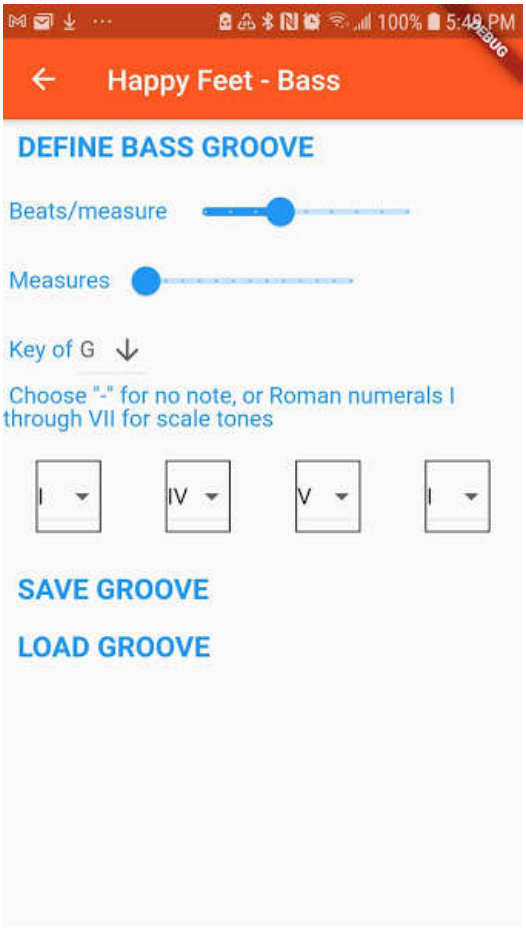

8. When a connection is established, the blue LED will flash faster at a 1s rate. Note that the connection may take a while to be established. <insert typical time>. <Note: it may take several tries to connect… bug that needs to be fixed!>
9. The default play mode is “single note” and that note is a bass drum. Turn on beats by pressing the musical note symbol at the bottom of the screen. This tells HappyFeet to send a Bluetooth message on each beat detected. Once this button is hit, the green LED will flash on each beat detection.
10. While in “single note” mode, you can change the note played by using the “1st note” dropdown menu. Try changing to snare drum for example, or cowbell (the world needs more cowbell).
11. You can have the note played alternate between two different notes by choosing “alternating notes” from the “play mode” dropdown menu. When in alternating notes mode, it will play the 1st note and then the 2nd note. Try a combination like kick drum and snare drum.
12. Groove mode is another play mode option. In groove mode, you can define a groove with multiple notes per measure and multiple measures. Choose the length of your groove using the two sliders for beats per measure and number of measures. Here’s a screenshot of a 4 beat per measure, 2 measure groove.




The notes in the groove are shown one measure per line, and each note has a pulldown menu. The pulldown choices are:

- - : no note to be played (the default when a new groove is started)
- B : bass drum
- K : kick drum
- S : snare drum
- T : tambourine
- C : cowbell

13. Another play mode to try is Bass mode. Select this from the “play mode” dropdown on the home screen.




Just like in groove mode, you can define a groove with a number of beats per measure and number of measures. But here you also define a key (G in the screenshot above). Each of the note dropdowns will let you choose a note in the key selected using their Nashville number (Roman numerals). For example, in the key of G, the notes in the major scale are: I = G, II = A, III = B, IV = C, V = D, VI = E and VII = F#. The groove on the screenshot has a bluesy feel since it uses the I-IV-V notes in the key.

## Coming Soon

We're working to add these features/capabilities:

- Status/progress indicator for the Bluetooth connection process
- Ability to save a groove
- Ability to load a groove saved earlier
- Guitar chord play mode
- Ability to share grooves to the cloud and load a shared groove, like and rate grooves
- Desktop versions of the app: iOS, Windows10

## Troubleshooting

| Problem | Solution(s) |
|---|---|
| Can’t install app | Email address used for testing is not a Google account. Needs to use your Google account (the one you use in the Play store). |
| | |
| App won’t run | Unsupported OS version. <which versions are supported?> |
| | |
| Won’t connect | Device does not have Bluetooth. Use a different device that has Bluetooth. |
| | |
| Connection drops | Too far away from phone or tablet |
| | Too many other Bluetooth connections to phone/tablet |
| | |
| Delay between foot tap and sound | Using a speaker connected via Bluetooth? Try connecting with a cable |
| | |
| No sound | Need to hit the pause and play buttons again. <bug?> |
| | The volume is turned down on your phone, tablet or external speaker. |

# Frequently Asked Questions

## Known Bugs/Limitations

- [Id001]: sometimes takes multiple tries to connect
- [Id002]: sometimes need to hit the play (music note) and pause button multiple times to enable playing.
- [Id003]: items on the hamburger (3 horizontal lines) and more (3dot) menus not yet working

## Technical Specs

- App compatibility
  - iOS:
  - Android:
- Bluetooth
  - TX power: a maximum peak power of 5.056-dBm EIRP (effective isotropic radiated power) <may be reduced to extend batter life, easy change in embedded software>
  - Frequency: 2400GHz to 2483.5GHz
- Certifications

| Regulatory Body | Specification | ID (if applicable) |
|---|---|---|
| FCC (USA) | Part 15C:2015 + MPE FCC 1.1307 RF Exposure (Bluetooth) | FCC ID: ZAT26M1 |
| | Part 15C:2015 + MPE FCC 1.1307 RF Exposure (802.15.4) | |
| IC (Canada) | RSS-102 (MPE) and RSS-247 (Bluetooth) | ID: 451H-26M1 |
| | RSS-102 (MPE) and RSS-247 (IEEE 802.15.4) | |
| ETSI/CE (Europe) | EN 300 328 V2.1.1 (Bluetooth) | |
| | EN 300 328 V2.1.1 (802.15.4) | |
| | EN 62479:2010 (MPE) | |
| | Draft EN 301 489-1 V2.2.0 (2017-03) | |
| | Draft EN 301 489-1 V3.2.0 (2017-03) | |
| | EN 55024:2010 + A1:2015 | |
| | EN 55032:2015 + AC:2016-07 | |
| | EN 60950-1:2006/A11:2009/A1:2010/A12:2011/A2:2013 | |
| Japan MIC | ARIB STD-T66 | No: 201-160413/00 |
| | JATE | D 16 0093 201/00 |

- Battery
  - Li polymer, 4.2V, 240mAh
  - Power consumption:
    - Advertising:
    - Full operation:
  - Expected battery life:

## Revision History

| Revision | Date | Author | Description |
|---|---|---|---|
| 0.1 | 2021-06-03 | JDT | Initial release to alpha testers |
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