

# Unity plugin

- This project will help to integrate bHaptics' haptic devices into Unity environments.
- Current version is 1.4.1

## 1. Prerequisite

### **bHaptics Player needs to be installed (Windows 8.1, 10, Android)**

- The apps can be found at  
bHaptics webpage: <http://www.bhaptics.com>
- Android Appstore : <https://play.google.com/store/apps/details?id=com.bhaptics.player>

## 2. How to install

### **(1) Download from the Unity Asset Store**

- <https://www.assetstore.unity3d.com/en/#!/content/76647>

### **(2) Download the package file, then import it into a Unity Project**

- <https://github.com/bhaptics/tac-sharp/releases>

### **(3) Clone from the github repository, then open it in Unity**

```
git clone https://github.com/bhaptics/tac-sharp.git
```

## 3. Tutorial Videos

- Tutorials : [https://www.youtube.com/playlist?list=PLfaa78\\_N6dlvd0Ha0s0Y\\_LT62-Oqp8N2A](https://www.youtube.com/playlist?list=PLfaa78_N6dlvd0Ha0s0Y_LT62-Oqp8N2A)

## 4. How to use

### **(1) Default Test Scene**

```
>Go to Assets > bHapticsManager > Examples > open 1. Simple Example with  
TactSouce.scene  
Select the [bHaptics Manager] Prefab in the scene.  
Some example feedback effects are automatically loaded, ready for testing.  
You can check each feedback effect by pushing the corresponding button while  
playing in the editor.
```

### **(2) To apply to your own project, just add the [bHaptics Manager] Prefab to your scene.**

**(3) Then add TactSource to the GameObject in the inspector.**

## **5. Options in [bHapticsManager]**

### **(1) visualizeFeedbacks**

- Enable/disable visualization of haptic feedback

### **(2) LaunchPlayerIfNotRunning (Windows only)**

- Enable/disable launching bHaptics Player if it is installed and it is not running.

## **6. UWP Issues**

- Please check uwp-issue.pdf

## **7. Android Issues**

### **(1) Prerequisite**

- Make sure that all the android setting with unity must be finished.
- <https://unity3d.com/kr/learn/tutorials/topics/mobile-touch/building-your-unity-game-android-device-testing>
- The version of the Android device must be higher or equals to 4.3(API level 18) - <https://developer.android.com/guide/topics/connectivity/bluetooth-le>

**(2) If there is not a paired device, then the SDK will do nothing.**

### **(3) setting for AndroidManifest.xml**

- Please refer to AndroidManifest-bhaptics.xml
- If your project contains a custom AndroidManifest.xml file, copy

```
<service android:name="com.bhaptics.tact.ble.BhapticsService">
  <intent-filter>
    <action android:name="com.bhaptics.player.Service" />
    <action android:name="android.intent.action.MAIN" />
    <category android:name="android.intent.category.DEFAULT" />
  </intent-filter>
</service>

<activity android:name="com.bhaptics.tact.unity.HapticPlayerWrapper"
  android:label="@string/app_name"
  android:configChanges="fontScale|keyboard|keyboardHidden|locale|mnc|mcc|navigation|
orientation|screenLayout|screenSize|smallestScreenSize|uiMode|touchscreen">
  </activity>
```

- Otherwise, copy this file to this location in your project:

```
Assets/Plugins/Android/AndroidManifest.xml.
```

#### (4) Checkout how unity manage AndroidManifest.xml

- <https://docs.unity3d.com/2018.1/Documentation/Manual/android-manifest.html>

#### (5) How to install the bhaptics Player at Daydream standalone devices.

- <https://uploadvr.com/android-daydream-app-standalone-how-to/>

## 8. Notes

### (1) Migration to 1.3.1

- namespace changed from Bhaptics.Tac to Bhaptics.Tact

```
Bhaptics.Tac --> Bhaptics.Tact  
Bhaptics.Tac.Unity --> Bhaptics.Tact.Unity
```

### (2) Migration to 1.3.0

```
// from  
BhapticsManager.HapticPlayer.SubmitRegistered("BowShoot");  
  
// to  
BhapticsManager.HapticPlayer.SubmitRegistered(BhapticsManager.GetFeedbackId("BowShoot"));
```

### (3) Migration to 1.2.2

```
// from  
SubmitRegistered(string key, TransformOption option)  
  
// to  
SubmitRegisteredVestRotation(string key, RotationOption)  
  
// from  
SubmitRegistered(string key, float intensityRatio, float durationRatio)  
  
// to  
SubmitRegistered(string key, ScaleOption option)
```

### (4) Migration from 1.0.3 to 1.0.4

```
var hapticPlayer = FindObjectOfType<BhapticsManager>().HapticPlayer();  
  
// To  
var hapticPlayer = BhapticsManager.HapticPlayer;
```

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Last update of README.md: Oct 24th, 2018.

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