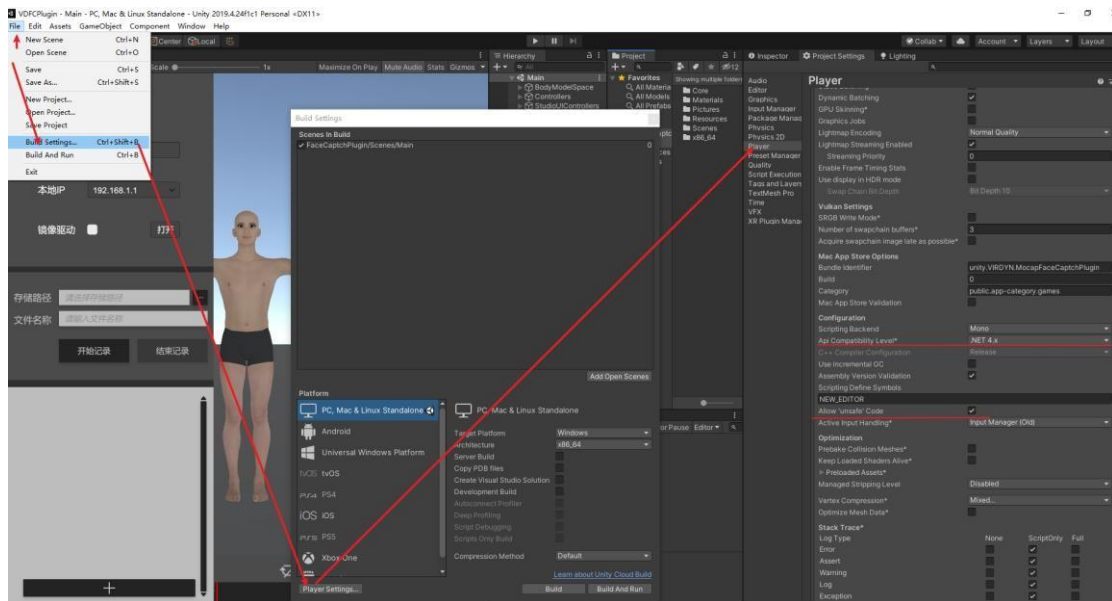# VDMocapFCPlugin Tutorial

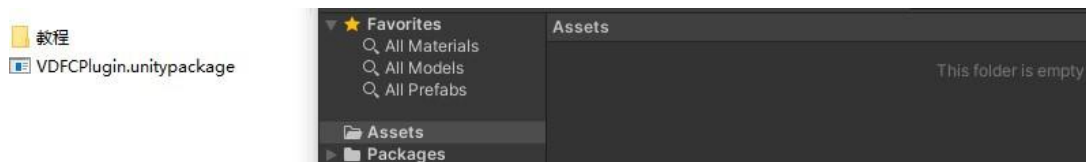## Unity Version Requirements：2019.4.24f1+

1. Project Setting:

Open File->Build Settings->Player Settings, Other Settings under Player Settings column, set Api Compatibility Level to . mode on, as shown in the following figure.
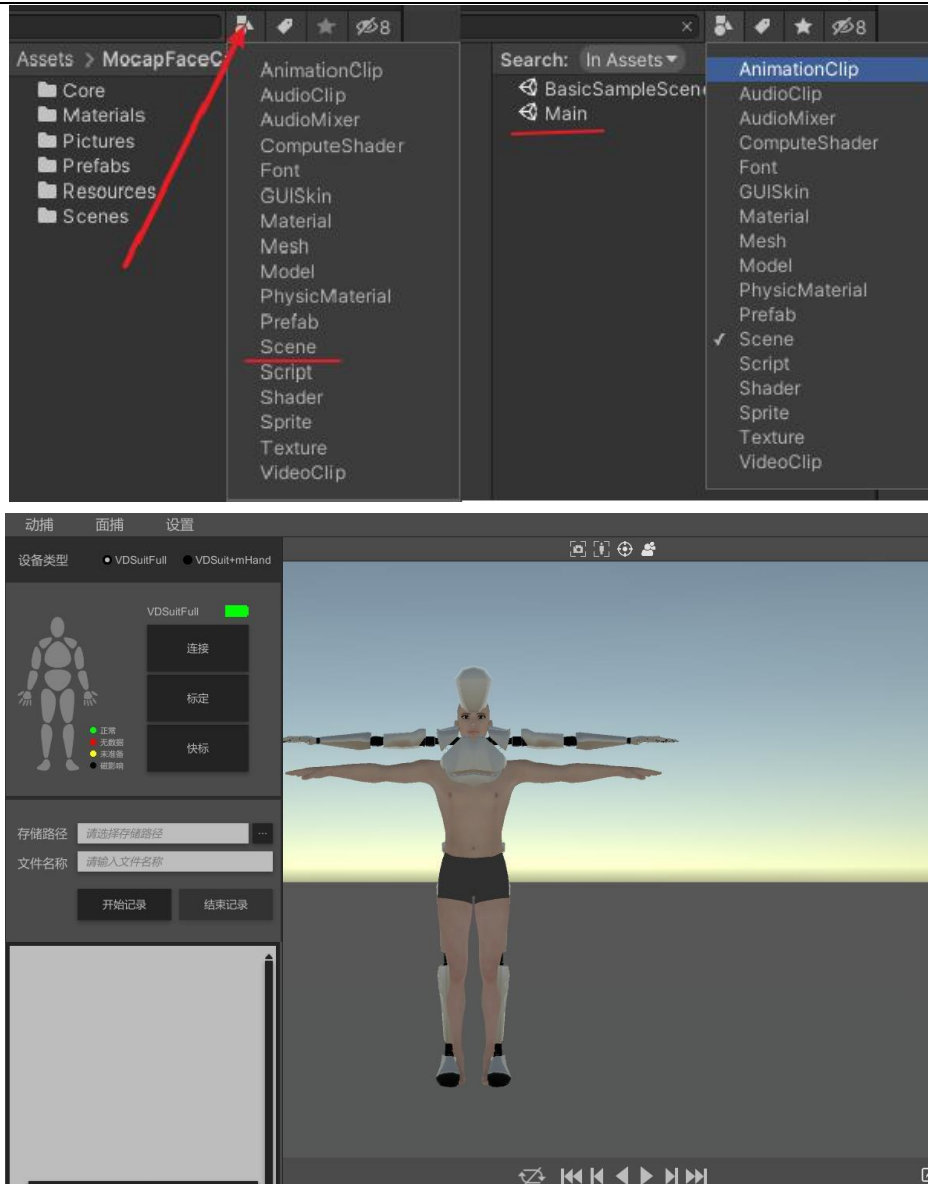

2. Add Plugin:

Drag the VDMocapFCPlugin.unitypackage to the Asset folder and import it, as shown in the following image.

3. Open Sample Scenario:

First click on the Show Scenes Only button, then select the sample scene "Main"
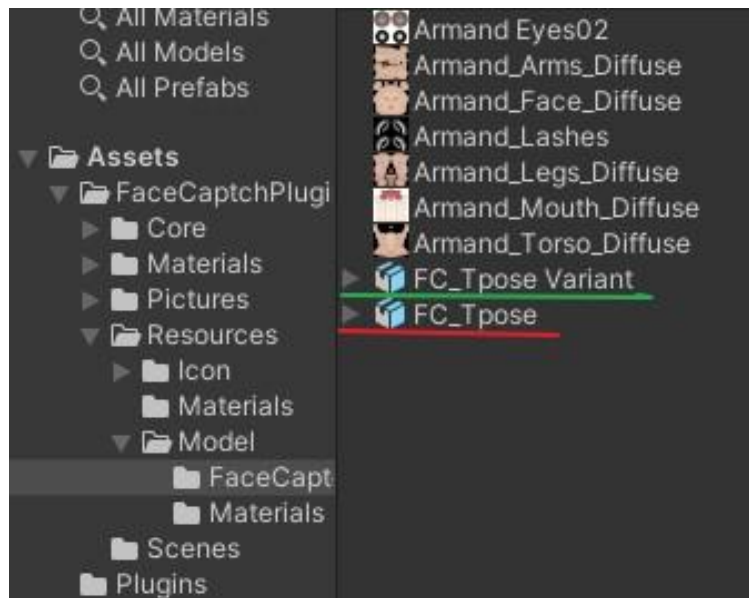
4. Model Binding:

1. Model making requirements:

Please follow Virdyn Model Binding Specification.pdf

2. Model Import:

Import the model made according to the modeling requirements directly into the Assets folder, such as the red line; if the model node name is not standardized, you can also edit the node name according to the specifications and save it as a prefabricated body for subsequent use, such as the green line, as shown in the following

figure.

3. Model Replacement:

Drag the model added in the previous step into the Hierarchy panel under the BodyModelSpace node to complete the binding, as shown in the following figure.
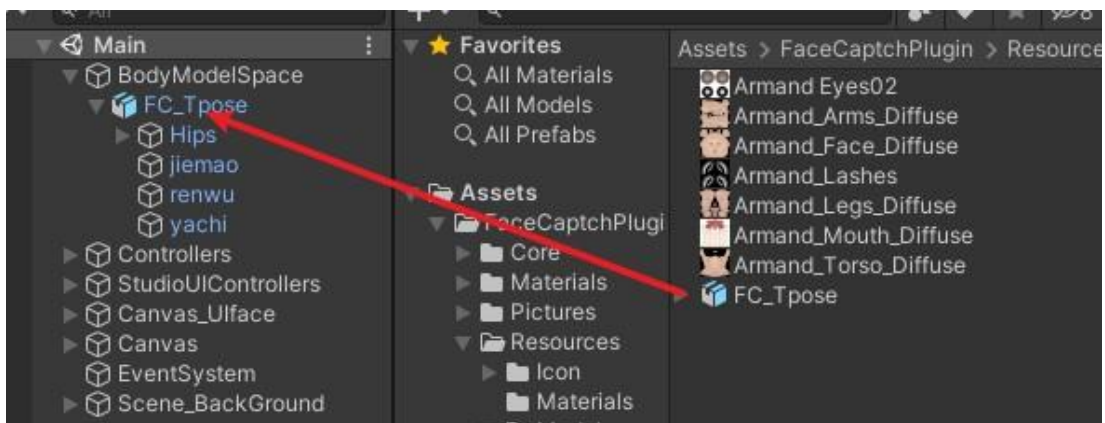

5. Software Data Reception:

1. Motion capture section:

1) Press "VDSuit Full User Manual.pdf" to wear the device, after the device is worn successfully click on the [Connect] button in the software after the device has been worn successfully to connect, as shown in the following figure
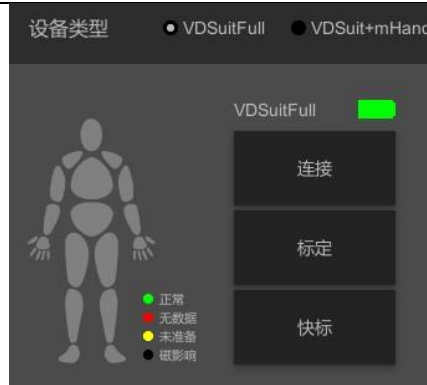
2) After successful connection, it will display the name of the connected device, the power level and activate the [Calibration] button

3) Click [Calibration] to calibrate the device as needed (calibration is required before each use), as shown in the figure below.
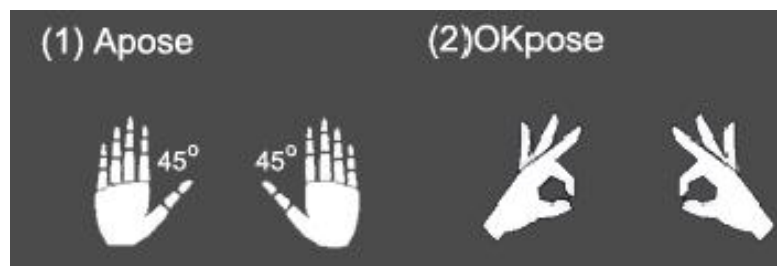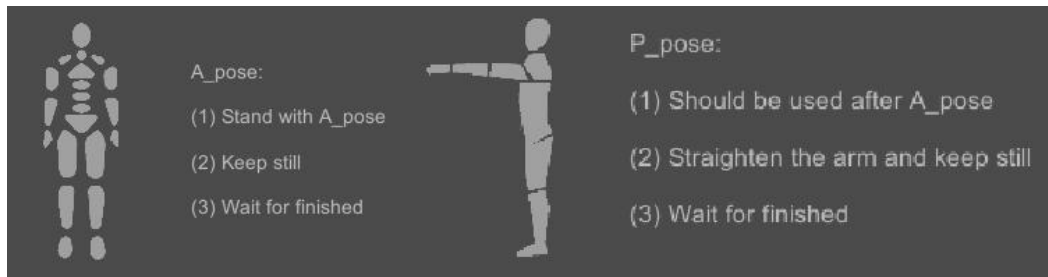
4) If the model shows an abnormal state after calibration, click the "Settings" button in the software to perform magnetic calibration according to the rules, as shown in the figure

5) After the successful implementation of the above steps can be used normally dynamic capture equipment.

Facial Capture Part:

1) Click the "Face Capture" button to open the receiving end of the face capture data, as shown in the following figure.
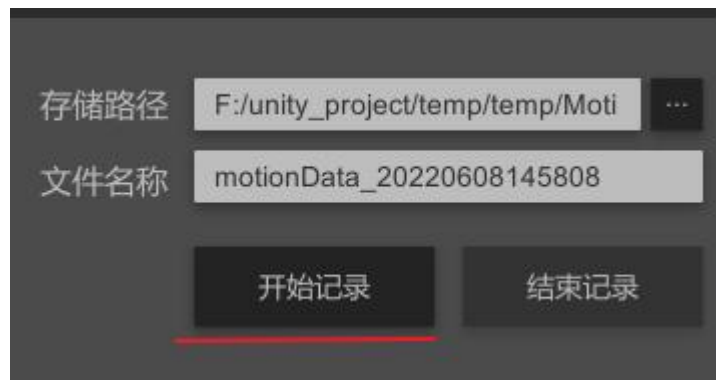

2) Open VDLiveFC, enter the local IP address (need to be under the same LAN), and click Connect to drive the model expression, as shown below.

Other Part:

1) Data recording and playback:

The software will record the current dynamic capture + surface capture data and finally generate MD data file, as shown in the following figure

Once you have finished recording, select Add an MD file, double-click the MD file to load it into memory, click the Play button, and the model's body movements and facial expressions will be driven by the MD data, as shown in the following figure.
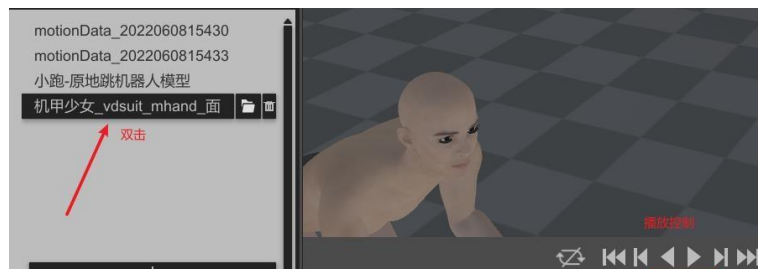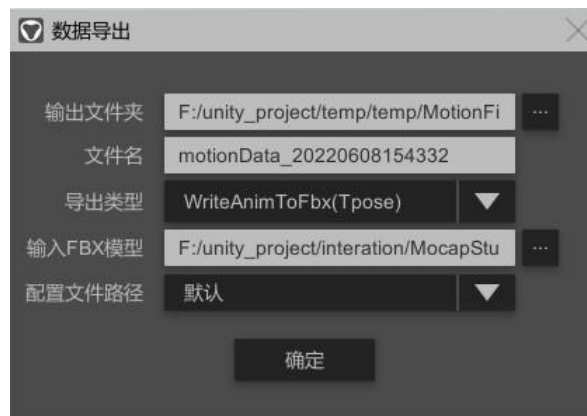

2) Data export:

Export bvh as shown in the following figure

Export FBX as shown in the following figure.

Write the MD data to the FBX as shown in the following figure.

1) Camera reset: the camera angle will return to the front position of the model

2) Model reset: the position of the model will return to the origin of the world coordinates

3) Camera tracking: the relative displacement of the camera and the model will remain unchanged

4) model switching: all sub-objects under the scene node

BodyModelSpace will be switched from top to bottom according to the index, with index interval of +1.

## 6. Motion Capture Algorithm Library:

1. Function:

The motion capture algorithm library is a library of functions for optimizing the effect of the real-time driver, which is called from within the device driver SDK. With the support of the algorithm library, the real time driver can get better results.

2. Usage:

Since the algorithm library is called internally by the device driver SDK, you only need to place the algorithm library in a specific path, but note that this path is not in Unity's project management framework and needs to be managed manually by the user.

Compile environment: Copy the vdsuit folder to the project root as shown below.
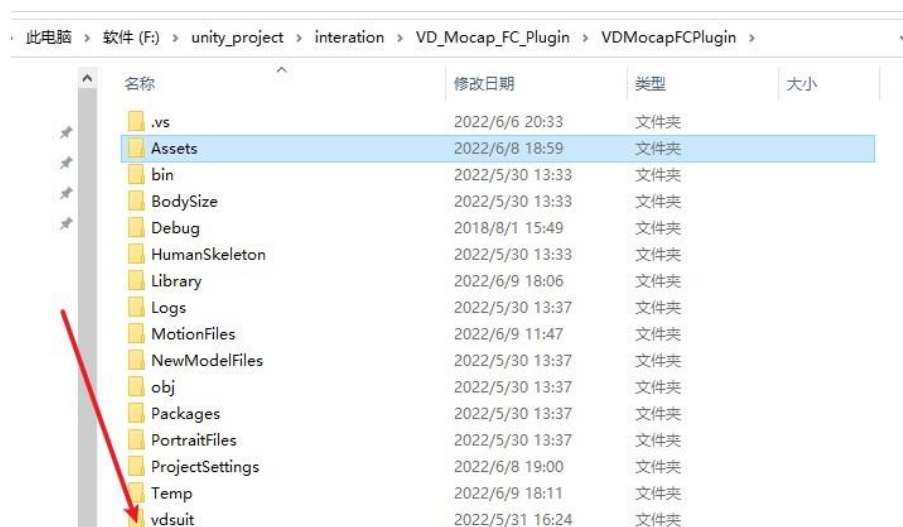
Publishing environment: Copy the vdsuit folder to the software root directory as follows.