

# Facelink User Guide - English

Hi there, I'm Slashscreen, and this is Facelink, a VtubeStudio plugin designed to allow VTubeStudio to read a data stream from the iFacialMocap app. This guide is meant to help anyone who wants to use it... use it! So let's get started.

If you have anything you would like me to add, please send me a message on [Twitter](#).

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# System Compatibility Guide

## HARDWARE REQUIREMENTS:

- About 8 MB of hard drive space
- Internet access
- Any modern x86 CPU (If you are using windows and are not using a tablet, you have an x86 CPU.)
- Any Apple device with FaceID:

### iPhone

iPhone 13 Pro Max  
iPhone 13 Pro  
iPhone 13 mini  
iPhone 13  
iPhone 12 Pro Max  
iPhone 12 Pro  
iPhone 12 mini  
iPhone 12  
iPhone 11 Pro Max  
iPhone 11 Pro  
iPhone 11  
iPhone XS Max  
iPhone XS  
iPhone XR  
iPhone X

### iPad

iPad Pro 12.9-inch (4th generation)  
iPad Pro 12.9-inch (3rd generation)  
iPad Pro 11-inch (2nd generation)  
iPad Pro 11-inch

## SOFTWARE REQUIREMENTS:

- [VTubeStudio](#) (Version with plugin support)
- iFacialMocap for iOS (Available on app store, paid)
- Windows 10

## SETUP

This is the guide for setting up Facelink.

- 1) Download and unzip [the latest release of Facelink](#) to somewhere on your computer. You probably also want to make a shortcut to the app .exe on your desktop for ease of use.
- 2) Download iFacialMocap and VTubeStudio.
- 3) In VTubeStudio's general settings, scroll down and turn on the API system. It should be automatically configured for port 8001. If it isn't, set it to 8001. If, for whatever reason, you cannot use port 8001, refer to the section on the config file for instructions on how to use another port.
- 4) Have both iFacialMocap and VTubeStudio open, and launch facelinkrs.exe. It may be helpful to set iFacialMocap's "optimize for long time streaming" setting in the in-app settings menu.
- 5) Facelink will guide you through the rest of the setup process, which is as follows:
  - a) Set language (English, German, and Japanese are available)
  - b) Configure your IP address. If you want to read the instructions again, they will be in the "Internet configuration" section of the manual. Don't worry, this IP address is only for your device's local network connection; if anyone sees this, they won't be able to track you.
- 6) You're ready to go!

## FAQ AND TROUBLESHOOTING

### FAQ

- Will my phone/tablet work with Facelink?
  - Please refer to the hardware compatibility guide.
- Will my language be available?
  - If you want to translate Facelink for your language, I welcome you to do so! Simply fork the github repository and in `messages.json`, add a new line with the two letter code of your language (ex. "es", "id") and add your translation. You will have to put a comma after the German line, though.
- How do I get it to work with my model?
  - Launch Facelink once, and let it perform the first time setup with VtubeStudio. Close Facelink, and all of the custom parameters should now be exposed for you to use. In you model's settings, manually link each desired parameter with its counterpart in Facelink.
- What does the "RS" mean? RuneScape?
  - Unfortunately not. It means Rust, the language I wrote this tool in. I named it that to differentiate it from the first version of the app, which was written in Python, which was... let's just say it wasn't exactly user-friendly.
- Why did I have to change my iPhone's IP Address?
  - Normally, if you leave your house (god forbid) or otherwise disconnect from the network, your phone will be assigned a new address when you reconnect. This is bad, because then Facelink will have the wrong IP address and will break. Setting it this way means your phone has a static local IP address- this means that it won't get reassigned new IPs all the time.

### HELP

- iFacialMocap won't connect! What should I do?
  - provided that the IP address is correct, your computer's firewall may be blocking the port iFacialMocap needs to communicate. Refer to the guide in "Internet configuration" for how to open the firewall.
- It keeps telling me that there was an error reading the config file?
  - Be sure not to move it out of the folder it came in. It's looking for the config file.

## CONFIGURATION AND FILE STRUCTURE

Facelink's folder contains a few files other than the executable. For full transparency, let's break them down:

- facelink\_rs.exe: Facelink.
- config.json: The configuration file. Details on how to edit it below.
- messages.json: The file containing all of the translations for Facelink's (admittedly hackneyed) translation system. Don't touch this, please.
- Params.json: Contains a JSON-serialized version of userresources/params.csv. Facelink uses this to perform VTubeStudio's first time setup.
- userresources: The directory containing the manual and stuff users may need.
  - user\_manual\_en: You're reading it!
  - user\_manual\_jp: Japanese manual.
  - user\_manual\_de: German manual.
  - params.csv: For Live2D rigging. All facial parameters that Facelink tracks can be easily imported into your project, with default, min, and max values.

Inside of the folder is a file called `config.json`; here's the anatomy, and how you can edit it if you really need to.

```
{
  "ip": "10.0.0.100", //Your phone's IP address
  "port": "8081", //The port for VtubeStudio's API. If you really need to
change the port, this is what to change.
  "lang": "en", //two-letter language code.
  "token": "" //don't touch this- this is the API authentication token
VtubeStudio uses. The program sets this for you.
}
```

## INTERNET CONFIGURATION

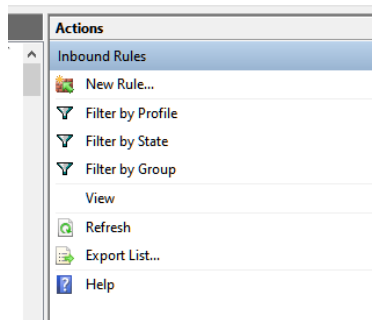
### Guide: How to manually set your phone's IP

- 1) Open settings, go to Wifi
- 2) Tap your currently connected network
- 3) Scroll down to the IP configuration section. Make note of your subnet mask and your Router IP. by default, your subnet mask should be 255.255.255.0, but this can change depending on the kind of network.
- 4) Set the IP Configuration to manual. Let's create a new local IPV4 address for your phone. IPV4 addresses are in the format X.Y.Z.A. Your new IP should match your router's IP in X, Y, and Z, but A can be any number of your choosing up to 255, excluding your router's A number. For example, my router's IP is 10.0.0.1, and my iPhone's IP address is 10.0.0.111.
- 5) Fill back in your router and subnet mask fields.
- 6) You're done!

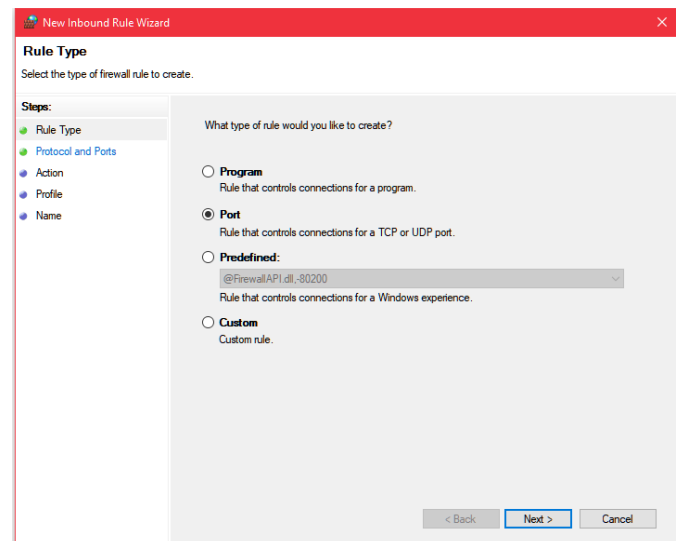
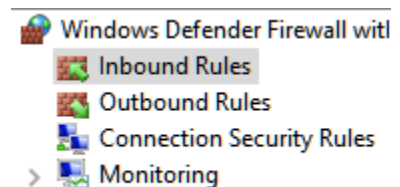
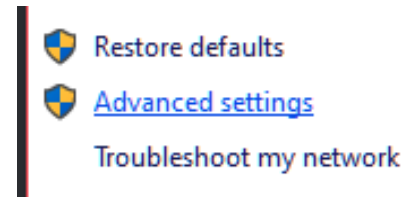
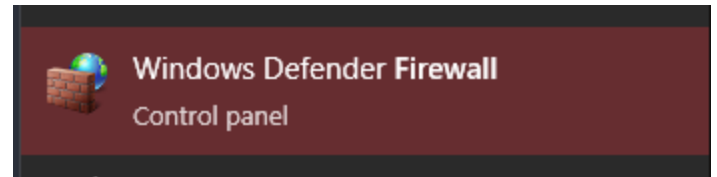
## Guide: How to open the firewall to let iFacialMocap through

There is the possibility that iFacialMocap will not be allowed through your computer's firewall. Let's fix that.

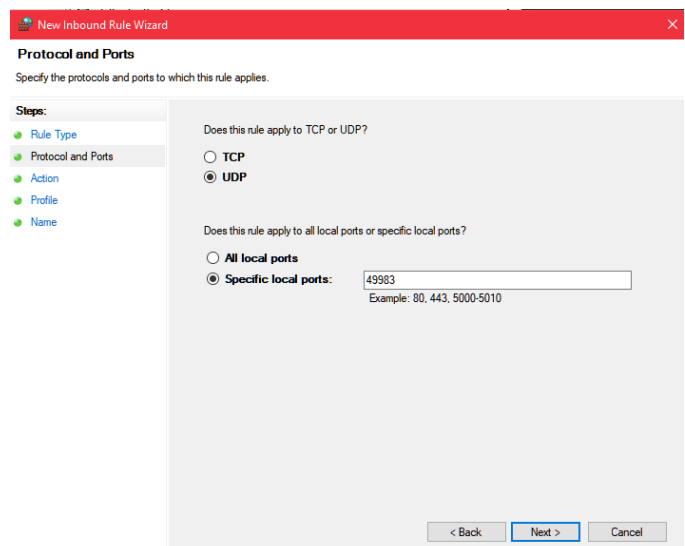
- 1) Open Windows Defender Firewall.
- 2) Go to Advanced Settings.
- 3) Select Inbound Rules
- 4) In the Actions panel, click New Rule.



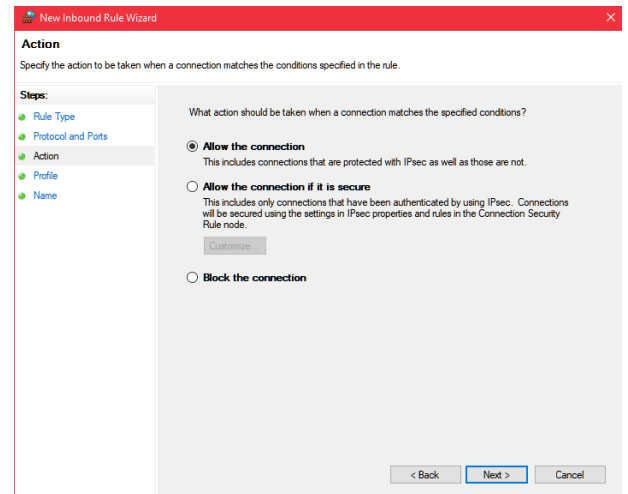
- 5) In the wizard, select Port.



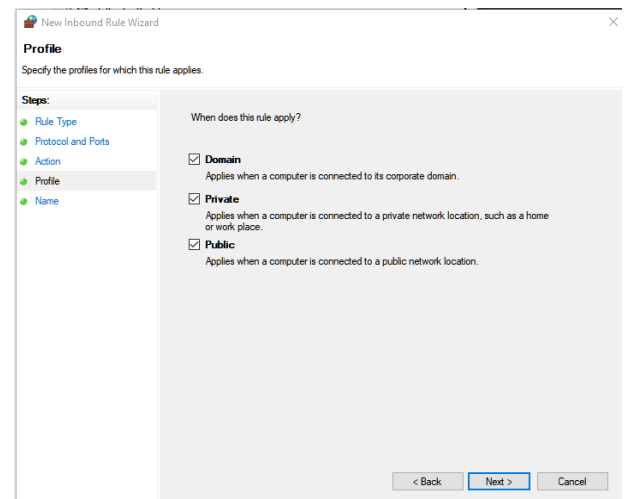
- 6) Click next, and select UDP, and Specific Local Ports. Type in 49983 for the protocol. This will open a connection for port 49983 in the data transmission protocol UDP- this is what we use to connect to iFacialMocap.



7) Keep as is.



8) Keep as is, unless you are using a laptop, in which case I would heavily suggest unchecking “Public”. This is because if you take your laptop to a hotel or a cafe or someplace with public wifi, someone also on that network could be testing ports on your computer for a way in to your machine. At home, your router blocks this port from the outside world, so unless you have a few mooching neighbors, this should present no real risk.



9) Give it a name.

Name:

iFacialMocap

Description (optional):

10) Congrats- you’ve opened the path for iFacialMocap to get through! If you’re still having problems, go into your phone settings, and allow iFacialMocap access to the Local Network (on its settings page in the settings app)



## RIGGING GUIDE

There's a lot of parameters to rig for here. As I have been setting up my own model for using this tool, I have discovered a few helpful tips for those trying to rig their own model to take advantage of this software.

### Parameters:

I have included a CSV file in the userresources folder with all the parameters to rig for already set up. Use it by going under Modeling>Bulk Setting of Model Parameters>Import and opening the CSV file in the Live2D editor.

### Visual Reference:

I found [this webpage](#) that offers a handy visual guide for what all the parameters do. Normal mouth opening should be about halfway up the scale- jawOpen 100 hurts to do for a long period of time.

### Euler Rotations:

Through trial and error, I have found that X is rolling your head side to side, Y is left-right, and Z is up-down, although I encourage you to experiment for yourself to verify my data. If you get them mixed up, simply swap which parameters Facelink affects.