



# Hand Engine 1.5.2 Release Notes

<b>New version</b>	Hand Engine 1.5.2
<b>Previous version</b>	Hand Engine 1.5.1
<b>Deprecated versions</b>	Hand Engine 1.5.1
<b>Release date</b>	March 15th, 2022
<b>Operating system</b>	Windows 10, 64bit
<b>Meaning of icons</b>	+added, ^changed, !note, #fixed, -removed
<b>Requirement</b>	<p><b>**This functionality requires a glove firmware update v01.01.00 and dongle firmware update 01.01.02. This update is included in Launcher firmware bundle version 1.5.</b></p> <p><b>New Firmware Update Process via Launcher (Beta)</b></p> <p><a href="#">How to Update Your Mocap Pro Glove and USB Dongle Firmware via the StretchSense Launcher</a></p> <p><b>Legacy Firmware Update Process</b></p> <p><a href="#">Glove Firmware Update Process</a></p> <p><a href="#">Dongle Firmware Update Process</a></p>

## 1. Introduction

This document describes the new features, improvements and bug fixes included in software update 1.5.2 for Hand Engine

## 2. Main Features and Improvements

### File Name Change to Recorded Files\*\*

^ For both the files recorded to the PC and the SD card, when a recording is created, a date folder is created in the *Captures* folder. Every recording on that date produces a *Take* folder. The *Take* folder includes all files recorded for that take including FBX files, raw CSV files, calibration files and meta files for each performer for each active glove.

+ All files will have the *Performer* name appended to the file. For example, if there is a recording for a performer named John the files will be saved as P1L\_John.FBX or P1R\_John.FBX.

+ FBX file name is now referenced in Meta.json files. This can be used for automation purposes when reading Meta.json file.

+ Global Meta.json file added that provides information on all performers. This can be used for automation purposes when reading GlobalMeta.json file.

! *File name changes in detail (PC):*

- *P1*: files prefixed with *P1* relate to *Performer 1*. If you recorded with more than one performer during a take, the files will have the prefix P2, P3, etc.
- P1L\_**Performer**.FBX and P1R\_**Performer**.FBX: left hand only FBX and right hand only FBX respectively, as recorded in Hand Engine.
- P1FullBody\_**Performer**.FBX: left and right hand data recorded onto a single full-body skeleton, as recorded in Hand Engine.
- P1L\_**Performer**.CAL and P1R\_**Performer**.CAL: left hand calibration data and right hand calibration data respectively.
- P1L\_**Performer**.CSV and P1R\_**Performer**.CSV: left hand raw data and right hand raw data respectively.
- P1LMeta\_**Performer**.JSON and P1RMeta\_**Performer**.JSON: left hand metadata and right hand Metadata data respectively, includes information about time and date of take, take name, file references and all settings used.
- **TakeName**GlobalMeta.JSON: contains metadata for all performers and profiles in a take, includes information about time and date of take, take name, file references, and all settings used for all performers.

! *File name changes in detail (SD Card):*

- P1LSD\_**Performer**.CSV/P1RSD\_**Performer**.CSV: Left hand raw data and right hand raw data respectively, recorded on the SD card onboard the glove (only data for that glove is recorded).
- P1LMetaSD\_**Performer**.JSON/P1RMetaSD\_**Performer**.JSON: Left hand metadata and right hand metadata respectively, recorded on the SD card onboard the glove (only data for that glove is recorded).

## 3. Minor Changes

^ Updated Knowledge Base and Support links under Help menu.

^ Updated firmware check.

^ Updated recording triggers for *WiFi Bridge Application* to match new firmware requirements.

^ Updated file trigger to only create one file instance when repeated start capture and stop capture signals are sent to Hand Engine.

+ Batch processing has been updated to account for the updates to file name.

^ Performer name is appended to files created from batch processing.

+ Re-enabled ability to record raw sensor capacitance data to a raw data file (raw data .csv file only) even without a glove calibration.

+ Frame rate is now streamed when remapping is enabled to fix issues when recording simultaneously in platforms like *Motion Builder*.

+ Force update of jam sync when connecting to source.

^ Jam synced glove timecode is now streamed via TCP instead of the *Hand Engine* master timecode. This reduces timing variations that might occur over the wireless transmission of data to *Hand Engine*.

+ Pass performer name to SD card in TAG to append performer name to files saved to SD card.

+ Added SD card status response to Logger file that prints to the console.log success or failure of recording.

+ Added SD card retry of 500ms. After 3 attempts recording will be triggered.

+ Enabled SD card recording if no calibration is present.

#### 4. Bug Fixes

# Fixed an issue when using WiFi app simultaneously with SD card recording triggering that would lead to no files being recorded onto the SD card. Requires latest WiFi app available on [Google Play Store](#).

# Fixed an issue where *Hand Engine* would persist upon exit and require ending processes in *Task Manager*.

# Fixed *OptiTrack Motive* timecode listener to fix buffering of timecode data.

# Ignore *Vicon* trigger at time events to fix an issue where if a remote system sends duplicate start record trigger commands, the system will create multiple folders with same take name and will write files to split between each folder.

# Update FPS rate to match setting in *Hand Engine* which fixed an issue where recorded FPS metadata was not imported when loading a FBX file into third party software.

# Fixed an issue with the character definition of the full body FBX as the character was missing 2 spine joints, left and right shoulders, neck and left and right toes.

# Fixed an issue where SD card recording did not work when the connection input was switched between the USB input and the WiFi App input without power cycling the glove.

# Fixed an issue that prevented PFullbody.fbx from being generated if only a right glove was connected.

# Fixed an error when dealing with recording of Fullbody.fbx sometimes not working depending on whether both hands had been trained.

# Fix to add .json file extension to meta file .

#### 5. Known Issues

Performance issue with the pinky splay being overly sensitive when using *Express Calibration*.

Switching between *Express* and *Hybrid Mode* with only an *Express* pose trained in your profile may lead to thumb performance issues. We recommend capturing at least 3 extra poses if intending to use *Hybrid* with *Express Calibration* tuning.

Batch exporting left and right raw files to full body FBX can on rare occasions lead to data being written on only one hand.

Clicking the *Scan* button does not auto-assign a COMPORT. After clicking scan the user must first select the COMPORT they would like to use from the dropdown list then click the 'on' switch.

When manually exporting, recorded CSV files will use the *Take Name* set in *Hand Engine* rather than the *Take Name* used in the CSV file name.