

# HBComposer v1.0.7b

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## Description

**hbcomposer** is a command-line tool which provides frame composing functionalities for Hasselblad RAW files. Current supported composing operations are *average* and *median*.

Some of the advantages to implementing composition in post-production with photo editors are:

- The composed file is still a native non-demosaiced Hasselblad RAW, therefore it retains the full quality, size and native properties of the source files it is derived from.
- Composing a big number of 50/100mpx files exported as lossless TIFF can be very memory consuming.
- Composing exported JPEGs would be less memory-hungry, but it may lead to a quality loss.

## Supported Platforms & Requirements

- **macOS version 11.0 or later.** Both *Intel* and *Apple Silicon* architectures are supported. Tested with *Sequoia 15.3* on *Apple Silicon M3 MAX SOC* and *Monterey 12.6.5* on *Intel 2023 i5 Architecture*.
- **Java Runtime Environment (JRE) 11 or later** must be installed on your system. Tested with *OpenJDK 11.0.2*, *OpenJDK 11.0.25* and *OpenJDK 23.0.1*.

## Installation

Unzip the downloaded file and place the resulting folder with its contents in a location of your choice.

## Usage

The application is run from the command line (CLI) as follows:

```
$ cd <path-to-hbcomposer>
$ ./hbcomposer <operation> <extension> <src-folder>
```

where:

- **<operation>** is the operation to be performed. Supported operations:
  - **average**: average the pixels of all raw images in the source folder. You can also use **avg** or **mean** equivalent names.
  - **median**: calculate the pixel median of all raw images in the source folder. You can also use **med** equivalent name. This operation may be slow with a large number of images.
- **<extension>** file type to be processed: either **3fr** or **fff**. The tool will only search for files of the specified type in the indicated folder. **Currently only 3fr extension is supported.**
- **<src-folder>** is the path to the folder containing the RAW files to be composed. The output file will be saved in the same folder. If the folder contains spaces, it must be enclosed in double quotes.

### Usage sample

```
$ cd ./hbcomposer
$ ./hbcomposer avg 3fr /Users/jdoe/Pictures/2025-01-01/RAW/image1-frames/
```

The composed file will be saved in the same folder as the input files. The name will be **FA.3FR** for the **average** and **FM.3FR** for the **median**. Such files are automatically excluded from the composition by the tool, so you can keep them in the folder in case you need to re-run the tool. They will be overwritten if they already exist.

### Important Notes

- ***The tool is still in early beta version. Please use it with caution and always keep a backup of your files!***
- *Composing 3FR files coming from X2D-100c and CFV-100c produces a 100% compliant 3FR file.*
- *Composing 3FR files coming from X2D-50c and CFV-50c produces 3FR file which is not 100% compliant, some RAW editors may complain.*
- *Current version of **hbcomposer** does not update the preview/thumbnail images contained in the produced 3FR file. This may lead to some editors not displaying the preview/thumbnail image correctly until the file is edited and the preview updated.*
- *The current version does not support Hasselblad RAW files with the **.fff** extension.*
- *As the tool takes all 3FR files in the specified folder, it is recommended to prepare a folder containing only the files to be composed.*

- *Image metadata of the output composed file come from the first processed source file.*