



## MACSQuant® Instrument short instructions

# File management

Before using the instrument for the first time, read the **MACSQuant Instrument user manual** and **MACSQuantify Software user manual**.

### Introduction

In addition to automatically saving data files, the MACSQuantify Software enables users to create and save various file types such as analysis templates and instrument settings for efficient use of the MACSQuant Instrument. This short instruction provides a brief description of the file types. It also explains how to transfer files from the instrument to a backup location or to a personal computer for data analysis.

### File types

File type	Saving options	Saving folder	Access via
<b>Workspace</b>	private	<b>prj</b>	<b>File &gt; Open</b> <b>File &gt; Copy</b>
<b>Instrument setting</b>	public and private	<b>device</b>	
<b>Experiment</b>	public and private	<b>experiments</b>	
<b>Analysis template</b>	public and private	<b>analyses</b>	
<b>Data file</b>	public or private	<b>data</b>	
<b>Analysis report</b> 21 CFR par 11 only	n/a	<b>data</b>	<b>File &gt; Copy</b>
<b>Other files</b>	n/a	<b>data</b>	
<b>Log files</b>	n/a	<b>log</b>	
<b>System audit trail</b>	n/a	<b>systemaudittrail</b>	
<b>Crash reports</b>	n/a	<b>crashrpt</b>	

**Table 1:** File types and saving options on the MACSQuant Instrument

To copy log files, system audit trails, and crash reports requires the MQ Administrator role.

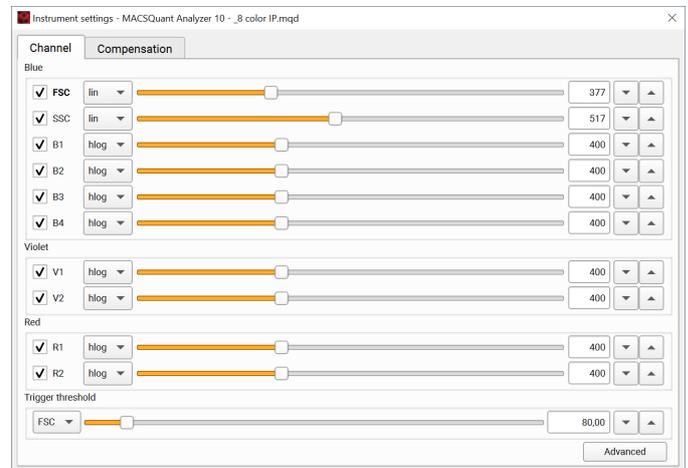
### Data file

MACSQuant data files (.mqd) are automatically saved when a measurement is started. The MQD file not only contains acquired data, but instrument settings, analysis template, and some experiment setting used to acquire it.

The instrument setting file and analysis template can be retrieved from each MQD file to save the information separately to use them for another acquisition or data analysis.

### Instrument setting file

Instrument setting files contain photomultiplier tube (PMT) gains, channel scales, compensation matrix, height, width, area, threshold selection, and annotations. The instrument settings can be saved and reloaded to use it with other samples.



**Figure 1:** The Instrument settings window

### Experiment file

Experiment files can be used if similar assays and samples are acquired repeatedly. An experiment file contains all information defined in the **Experiment** tab, for example, flow rate, mixing, uptake volume, and sample ID. The experiment file also contains information about the used instrument settings and analysis templates if applied.

Sample ID	Description	Flow rate	Auto	flow rate on	Mix sample	Mode	Uptake volume	Sample volume	Description	Fragment 1
A1	Comp	Med	No		Mix medium	Standard	50	200	Comp	
B1	Comp	Med	No		Mix medium	Standard	50	200	Comp	
C1	Full stain	Low	No		Off	Standard	100	200	Full stain	

**Figure 2:** The experiment table

Experiment files can also be generated in the PC version of the MACSQuantify Software and can be copied to the MACSQuant Instrument.

### Analysis template file

An analysis template is a predefined layout for acquired data and can consist of plots, statistics, tables, and a gating strategy.

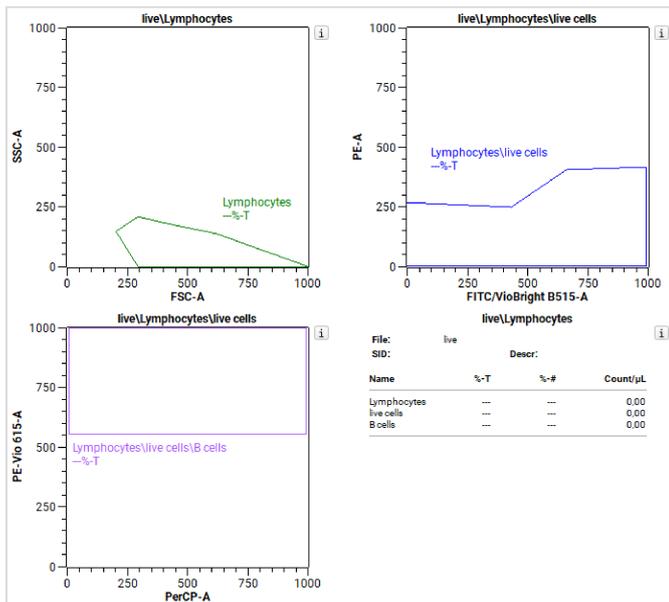


Figure 3: Example of an analysis template

### Workspace file

A workspace file combines file types including a link to the data files. It contains the following information:

- Sample list: samples currently shown in the sample list
- **Experiment** tab: currently shown experiment parameters
- Instrument setting: current instrument setting
- Analysis template: current analysis view and template if selected

Workspaces should only be used on a PC because instrument settings and sample lists can change on the MACSQuant Instrument.

## File management

Data can be transferred and removed from the MACSQuant Instrument to a remote storage location. Use the **Backup** or **Copy** function. The folder structure on the MACSQuant Instrument is automatically copied to the remote storage location.

### Copying files

Custom users can copy their own private and public files. An MQ Administrator can copy all files in private and public of every user including log files, crash reports, and system audit trails.

- 1 Insert a USB flash drive into a USB port of the instrument.
- 2 Wait for the device to be recognized.



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- 3 Go to **File > Copy...**

- 4 Select **To** from the left-hand side drop-down menu to copy files to the selected destination. Select **From** from the left-hand side drop-down menu to import files from an external source.

- 5 Select the destination from the right-hand side drop-down menu in the dialog box.

- 6 Select the file type.

- 7 Select the box next to the desired files or folders. Navigate to the folders or subfolders to locate the specific files.

- 8 Click **Copy**. A dialog window appears when all files are copied.

- 9 Select **Eject and close** or **Close**. If selecting **Close** ensure to eject the USB flash drive via **Copy > File** later for safe removal.

The files must be organized in the same folder structure as in the destination folder to be properly imported.

### Exporting FCS or CSV files

MQD files can be exported as FCS or CSV files. The settings for export can be defined in **Edit > Options > Software > Export**.

- 1 Right-click a data file in the sample list and select **Export sample...**
- 2 Select the desired file type from the drop-down menu.
- 3 Optional: Clear the box **Skip subpopulations** if you prefer a separate FCS file for each subgated population of events.

The FCS file is saved in the same folder where the original MQD file is located. It can be accessed via **File > Copy** in **Data files**. The CSV file can be accessed via **File > Copy** in **Other files**.

### Data backup to a remote storage location

- 1 Click the **Backup** button in the toolbar.
- 2 Select an available drive for backup and click **OK**.
- 3 Optional: Confirm deletion of files, if deletion of files was activated.

### Deleting files

For deletion of files, refer to **Deleting files** in the MQ Administrator chapter of the **MACSQuantify Software user manual**. Whether a user can delete files is defined in the user role assigned to a user. Check with your MQ Administrator to adhere to all local file management policies.