ScreenWorks®

System Control Software

Software Version 5.0.1

Software Release Notes

MOLECULAR DEVICES

Software Version 5.0.1
January 2020

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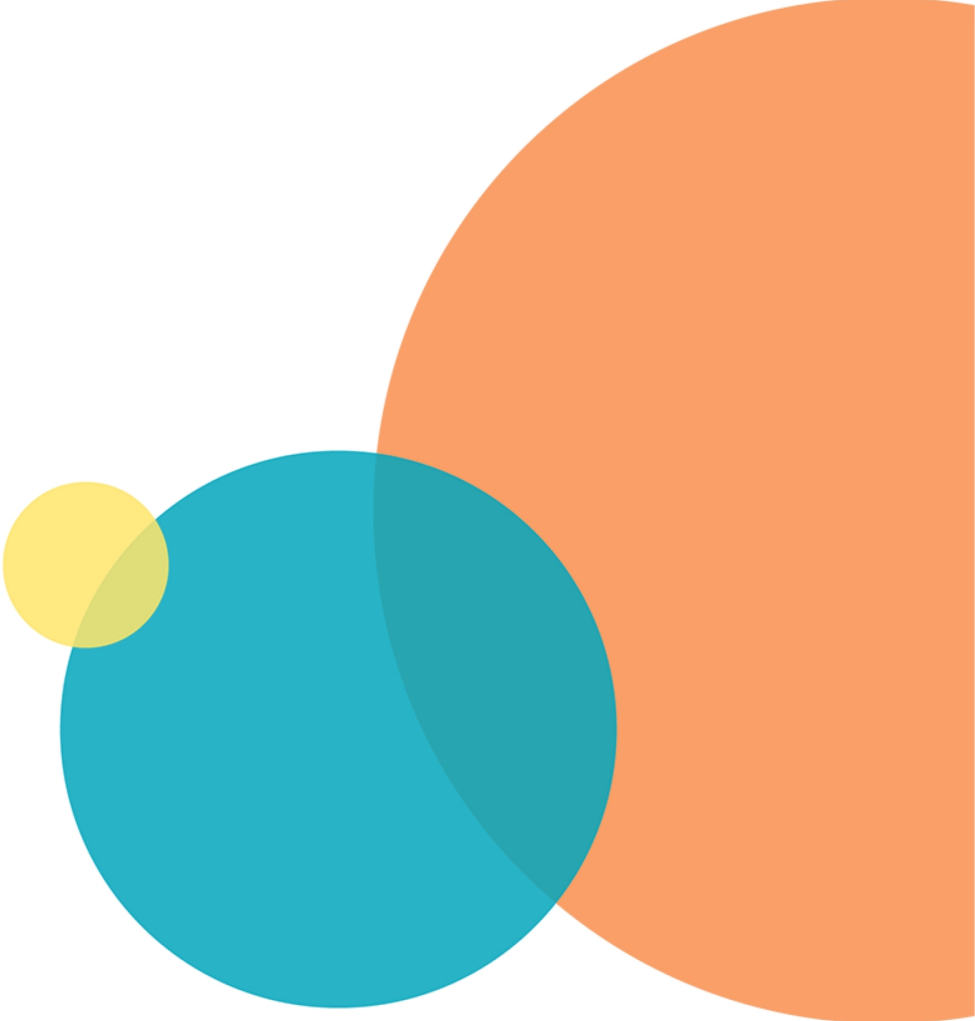Molecular Devices, LLC is ISO 9001 registered.
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Chapter 1: ScreenWorks Software Version 5.0.1 Release Notes

1

The version 5.0.1 update is a minor release. Included are a summary and details of the changes incorporated in this revision as compared to version 5.0, the last general release of the software.

The following topics are included in this chapter:

- ScreenWorks Software Version 5.0.1 Summary
- Modifications Made in ScreenWorks Software v5.0.1 on page 7
- Issues Addressed in ScreenWorks Software v5.0.1 on page 7

For computer requirements, software update instructions, and other related details, see ScreenWorks Software General Information on page 13.

ScreenWorks Software Version 5.0.1 Summary

The version 5.0.1 update incorporates the following changes:

Table 1-1: Summary of version 5.0.1 changes

Tracking ID	Status	Functional Area	Description
SW51-23	Modified	Peak Pro 2.0 Analysis	Peak Pro 2.0 Analysis Displays Kinetic Reduction Type
SW51-29	Modified	Peak Pro 2.0 Analysis	Peak Pro 2.0 Analysis Dynamic Threshold Settings Improvements
SW51-48	Modified	Peak Pro 2.0 Analysis	Peak Pro 2.0 Analysis Auto Noise Rejection Improvements
SW51-17	Fixed	Plate Grid View	Well Saturation Warning Text Overlaped Other Text
SW51-30	Fixed	Peak Pro 2.0 Analysis	Peak Pro 2.0 Analysis Calculated CTD90 and Peak Decay Time for Very Wide Peaks Wrong
SW51-31	Fixed	Yellow Plate Signal Test	Camera Exposure Setting Issues After a Yellow Plate Signal Test
SW51-51	Fixed	Groups	Adding Groups With Certain Settings Caused Crash
SW51-55	Fixed	Peak Pro 2.0 Analysis	Peak Pro 2.0 Analysis Calculated Rise Time Values for Some Wells Wrong
SW51-58	Fixed	Peak Pro 2.0 Analysis	Peak Pro 2.0 Analysis Randomly Crashed
SW51-61	Fixed	Peak Pro 2.0 Analysis	Peak Pro 2.0 Analysis Displayed Inconsistent Peak Spacing Values

Table 1-1: Summary of version 5.0.1 changes (continued)

Tracking ID	Status	Functional Area	Description
SW51-64	Fixed	Peak Pro 2.0 Analysis	Removing Groups From Analyzed Data in Peak Pro 2.0 Analysis Caused Crashes
SW51-70	Fixed	Tools	Save Error Log Broken
SW51-79	Fixed	ICCD Luminescence Mode	On ICCD Instruments, Gate Setting for Luminescence Mode was Wrong

Modifications Made in ScreenWorks Software v5.0.1

The following explains the modifications made in version 5.0.1.

Peak Pro 2.0 Analysis Displays Kinetic Reduction Type

SW51-23

To be consistent with Peak Pro analysis 1.0, the selected Kinetic Reduction type in Peak Pro 2.0 analysis displays above the Plate Grid View next to the icon button.

Peak Pro 2.0 Analysis Dynamic Threshold Settings Improvements

SW51-29

In Peak Pro 2.0 analysis, there is a new Apply to all wells check box for the Dynamic threshold settings.

Peak Pro 2.0 Analysis Auto Noise Rejection Improvements

SW51-48

In Peak Pro 2.0 analysis, a new Auto Noise Rejection algorithm improves noise elimination.

Issues Addressed in ScreenWorks Software v5.0.1

The following explains the issues addressed and fixed in version 5.0.1.

Well Saturation Warning Text Overlaped Other Text

SW51-17

Fixed the issue where the well saturation warning message on the top of the plate grid covered the text Max Value RFU. It also cut off on the right side, displaying an incomplete sentence.

Peak Pro 2.0 Analysis Calculated CTD90 and Peak Decay Time for Very Wide Peaks Wrong

SW51-30

Fixed the issue where Peak Pro 2.0 analysis calculated CTD90 and Peak Decay time values wrong.

Camera Exposure Setting Issues After a Yellow Plate Signal Test

SW51-31

Fixed the issue where after running the Yellow Plate Signal Test, followed by a manual camera stabilization, and then a protocol, the stabilization still used the last exposure settings from the signal test, rather than the settings in the protocol.

Adding Groups With Certain Settings Caused Crash

SW51-51

Fixed the issue where adding a new group with certain values in number of rows or columns caused a crash.

Peak Pro 2.0 Analysis Calculated Rise Time Values for Some Wells Wrong

SW51-55

Fixed the issue where Peak Pro 2.0 Analysis calculated Rise Time values for some wells wrong.

Peak Pro 2.0 Analysis Randomly Crashed

SW51-58

Fixed the issue where Peak Pro 2.0 Analysis randomly crashed when changing settings.

Peak Pro 2.0 Analysis Displayed Inconsistent Peak Spacing Values

SW51-61

Fixed the issue where the Peak Spacing values selected in the Peak Pro 2.0 Analysis Configuration tab displayed differently in the Statistics table and the Plate Grid View.

Removing Groups From Analyzed Data in Peak Pro 2.0 Analysis Caused Crashes

SW51-64

Fixed the issue where after using Peak Pro 2.0 Analysis, deleting or modifying data caused crashes.

Save Error Log Broken

SW51-70

Fixed the issue where the Save error log option produced a blank file.

On ICCD Instruments, Gate Setting for Luminescence Mode was Wrong

SW51-79

Fixed the issue where, on ICCD instruments, the gate setting for Luminescence mode incorrectly locked at 6% when it should have been 100%.

Chapter 2: ScreenWorks Software Version 5.0 Release Notes

2

The version 5.0 update is a major release. Included are a summary and details of the changes incorporated in this revision as compared to version 4.2.1, the last general release of the software.

The following topics are included in this chapter:

ScreenWorks Software Version 5.0 Summary

The version 5.0 update incorporates the following changes:

Table 2-1: Summary of version 5.0 changes

Tracking ID	Status	Functional Area	Description
TET-15	New	Read Mode	Added the Ability to Sample up to 50 Points per Cardiomyocyte Calcium Peak
TET-16	New	Read Mode	Added the Ability to Capture up to 6,000 Samples per Experiment
TET-84	New	Camera	Added High Speed Camera Support With Continuous Stabilization
TET-111	New	Data Analysis	Added ScreenWorks Peak Pro Software Version 2.0
TET-7	Modified	Protocols	Simplified Drag and Drop Steps in Protocols
TET-24	Modified	Peak Pro 1 Kinetic Reduction	Alphabetized List of Standard Deviations in Peak Pro 1.0 Analysis
TET-85	Modified	Error Messages	Improved Error Messages
TET-6	Fixed	Analysis Tab	Slow Screen Refresh With Large Data Files
TET-13	Fixed	Group Statistics Graph Tab	Missing Graphs in Group Statistics
TET-64	Fixed	Signal Test and Protocol Test	No Screen Refresh in Signal Test and Protocol Test
TET-80	Fixed	Protocols	Stopping a Running Protocol Causes Software Crash

Table 2-1: Summary of version 5.0 changes (continued)

Tracking ID	Status	Functional Area	Description
TET-104	Fixed	System Memory	Out of Memory Error

New in ScreenWorks Software v5.0

The following new features are included in version 5.0.

Added the Ability to Sample up to 50 Points per Cardiomyocyte Calcium Peak

TET-15

Added the ability for ScreenWorks Software to provide up to 50 sample points per peak for a cardiomyocyte beating at 120 beats per minute or two beats per second.

Added the Ability to Capture up to 6,000 Samples per Experiment

TET-16

Added the ability for ScreenWorks Software to capture up to 6,000 samples per experiment. The HS EMCCD camera in HighSpeed mode captures 6,000 samples in 60 seconds.

Added High Speed Camera Support With Continuous Stabilization

TET-84

Added high-speed and high-sensitivity camera support (sampling rate up to 100 Hz) with continuous camera stabilization.

Added ScreenWorks Peak Pro Software Version 2.0

TET-111

New advanced peak detection and event characterization measurements and analysis functionality for high-speed and high-sensitivity data analysis and data export. Requires the purchase of a separate software module license.

Modifications Made in ScreenWorks Software v5.0

The following modifications were made in version 5.0.

Simplified Drag and Drop Steps in Protocols

TET-7

In protocol editor, a new step icon automatically gets placed at the end of the list of protocol steps, by dragging the new step icon anywhere on the work area.

Alphabetized List of Standard Deviations in Peak Pro 1.0 Analysis

TET-24

The list of Standard Deviation options in ScreenWorks Peak Pro Software version 1.0 is now alphabetized.

Issues Addressed in ScreenWorks Software v5.0

The following explains the issues addressed and fixed in version 5.0.

Slow Screen Refresh With Large Data Files

TET-6

Fixed the issue where, in the Analysis tab, clicking in a well on the plate map causes a slow screen refresh.

Missing Graphs in Group Statistics

TET-13

Fixed the issue where, in the Group Statistics Graph tab, after a data acquisition, you must refresh the Group Statistics Graph window to view the graph.

No Screen Refresh in Signal Test and Protocol Test

TET-64

Fixed the issue where during signal test or protocol signal test, when the cursor was left positioned over the dialog box, the screen would not refresh.

Stopping a Running Protocol Causes Software Crash

TET-80

Fixed the issue where clicking Stop during a protocol run caused the software to freeze or crash.

Out of Memory Error

TET-104

Fixed the issue where if multiple large data files that contained image files were opened, the out of memory message displayed, and the ScreenWorks Software had to be restarted.

Chapter 3: ScreenWorks Software General Information

3

Use ScreenWorks System Control Software to define and run experimental protocols, and control the FLIPR® Penta High-Throughput Cellular Screening System.

The following topics are included in this chapter:

- Computer System Requirements
- Installing ScreenWorks Software
- (Optional) Activating the ScreenWorks Peak Pro License on page 14
- Uninstalling ScreenWorks Software on page 15
- Starting the Software on page 16
- Understanding Online Mode vs. Offline Mode on page 16
- Obtaining Support on page 17

Computer System Requirements

The ScreenWorks Software Version 5.0 requires the following computer specifications:

Table 3-1: ScreenWorks Software Computer Requirements

Item	Description
CPU	2.5 GHz, quad processor or faster
Operating system	Windows 10, 64-bit Windows 7, 32-bit and 64-bit older systems supported
Memory	16 GB RAM 4 GB RAM minimum
Data Connection	10/100 Ethernet port
Storage	500 GB hard drive

Installing ScreenWorks Software

As of version 3.1, the installer automatically uninstalls the old software version as long as it is the same major release (3.1 to 3.2). If you are replacing ScreenWorks Software version 3.2 or version 4.x with version 5.0, manually uninstall the old software. See Uninstalling ScreenWorks Software.

Use the following procedure to upgrade your ScreenWorks Software when needed.

To install the software:

1. Double-click the **ScreenWorks_5_0_x.exe** ScreenWorks Software installation file. A **Welcome to the ScreenWorks Setup Wizard** dialog is displayed.
2. Click **Next**.
3. In the **License Agreement** dialog, select **I accept the terms of the license agreement**, and click **Next**.

4. In the **Online/Offline Mode** dialog, designate the default mode in which you want the software to start.

   - In **Online**, ScreenWorks Software automatically looks for a connected instrument when the software is started.
   - In **Offline**, ScreenWorks Software does not automatically look for a connected instrument.

5. Click **Next**.

6. In the **Destination Folder** dialog, the **Install ScreenWorks 5.0 to** field displays the default installation directory. To change the installation directory, click **Change**, navigate to the desired directory, then click **OK**.

7. Click **Next**.

8. In the **Select Program Folder** dialog, leave the displayed default **Program Folder** settings. Select **Anyone who uses this computer** to make ScreenWorks Software available to all users on the FLIPR Penta System host computer, then click **Next**.

9. In the **Configuring the ScreenWorks** installation dialog, if you want to make any changes, click **Back** to go to the previous screen, otherwise click **Next** to start the installation.

10. When the installation is complete, the **Completing the installation process** dialog appears. Click **Finish** to exit the wizard.

(Optional) Activating the ScreenWorks Peak Pro License

The ScreenWorks® Peak Pro™ Software functionality is license-protected. The software license activation enables the Peak Pro analysis functionality any time after the trial period expires. The following Peak Pro analysis licenses are available for purchase:

- ScreenWorks Peak Pro Software version 1.0—adds additional Kinetic Reduction Configuration types
- ScreenWorks Peak Pro Software version 2.0—adds a new Peak Pro 2.0 Analysis dialog and support for high-speed and high-sensitivity data

Note: There is a one time 14-day Peak Pro trial usage option in the Help menu. When the trial period expires, the Peak Pro 1.0 analysis functionality disappears, the Peak Pro 2.0 analysis functionality disables, and the Help menu trial option is inactive. The rest of the ScreenWorks Software version 5.0 remains functional.

To activate the ScreenWorks Peak Pro Software software license:

1. Start the ScreenWorks Software.

2. Click the **Help** tab.

3. Click **Software License**.

4. If you have not started the available 14-day Peak Pro trial, the option to start the 14-day Peak Pro trial, or enter the product key appears. Click **Yes**.

   After the trial expires, only the option to provide a software license product key appears.

5. If you have internet connectivity, type the provided **Product Key** in the field and click **Activate Online**, and then follow the on-screen instructions.

6. If you do not have Internet connectivity, click **Activate Offline** and follow the on-screen instructions. Activate Offline requires the following:
   - Your product key
   - A separate computer with Internet connectivity
   - A USB drive for transferring files between the computers
7. Restart ScreenWorks Software to finish the license activation.

Uninstalling ScreenWorks Software

The following is the recommended method for removing ScreenWorks Software from a Windows-based computer because it also removes related information from the Windows Registry.

To uninstall ScreenWorks Software:

1. Open **Control Panel.**
2. Depending on your Windows operating system:
   - Windows 7—Click **Add or Remove Programs**
   - Windows 10—Click **Programs and Features**
3. In the list that displays, select **ScreenWorks**.
4. Click **Remove** or **Uninstall**.
5. Follow the on-screen instructions to finish uninstalling the software.

Starting the Software

You can start the ScreenWorks Software with or without an attached instrument. When no instrument is connected, you are working offline and you cannot acquire data. As long as you can open an existing data file, you can use the software offline.

- To start the software under normal, online conditions, wait for the connected

  instrument to complete its startup sequence, and then double-click the
  ScreenWorks icon on your desktop.
- To start the software from the Windows Start menu, click **Start > All Programs > Molecular Devices > ScreenWorks 5.0**.

Understanding Online Mode vs. Offline Mode

The software has two startup modes:

- Online—the software is connected to the instrument.
- Offline—the software is disconnected from the instrument.

The default start-up mode is determined during software installation in the **Online/Offline** dialog. Regardless of the startup mode, pipettor head and tip washer type must always match.

> **Note:** To be able to select either mode while generating protocols, you must install the software in Offline mode.

When the software is open, you can switch modes by selecting from the **Instrument** menu, **Go Online** or **Go Offline**.

> **Note:** Switching modes after the software is opened does not change the software startup mode chosen at the time of installation. To change the default startup mode, the ScreenWorks Software must be reinstalled.

About Online Mode

When started in Online mode, ScreenWorks Software checks for instrument connections. If no connections are sensed, you are notified. You can then either check the connections and attempt to connect again, or choose to run the software in Offline mode.

Create new protocols in Online mode.

When ScreenWorks Software starts in Online mode and connects to the instrument, the default installation configuration file is overwritten using the current instrument settings and plate library information.

If you are working in Online mode and then switch to Offline mode, the instrument setup configuration is remembered as the last setting.

About Offline Mode

When ScreenWorks Software starts and no instrument connection registers, you are notified and can then either check the connections and attempt to connect again in Online mode, or choose to run the software in Offline mode.

When ScreenWorks Software starts in Offline mode, you can configure the following hardware options:

- Camera Type
- Pipettor Format

Protocols created in Offline mode with hardware settings that do not match current hardware settings are flagged. You must change the hardware settings to match those in the protocol in order to run it.

Obtaining Support

Molecular Devices is a leading worldwide manufacturer and distributor of analytical instrumentation, software, and reagents. We are committed to the quality of our products and to fully supporting our customers with the highest level of technical service.

Our Support website, www.moleculardevices.com/service-support, has a link to the Knowledge Base, which contains technical notes, software upgrades, safety data sheets, and other resources. If you still need assistance after consulting the Knowledge Base, you can submit a request to Molecular Devices Technical Support.
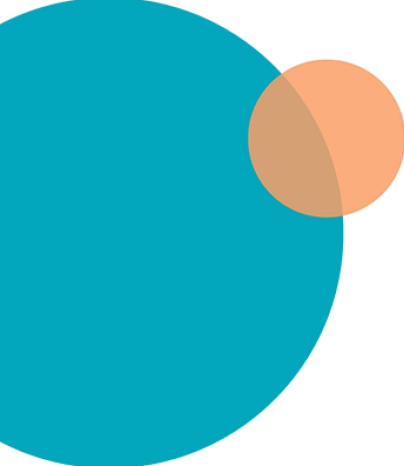
You can contact your local representative or Molecular Devices Technical Support at 800-635-5577 (North America only) or +1 408-747-1700. In Europe, call +44 (0) 118 944 8000.

Please have your instrument serial number or Work Order number, and your software version number available when you call.

WARNING! BIOHAZARD. It is your responsibility to decontaminate components of the instrument before you return parts to Molecular Devices for repair. Molecular Devices does not accept items that have not been decontaminated where it is applicable to do so. If parts are returned, they must be enclosed in a sealed plastic bag stating that the contents are safe to handle and are not contaminated.

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