



# **PatchXpress® Commander Software**

Version 2.0.2

## **Release Notes**

April 2013

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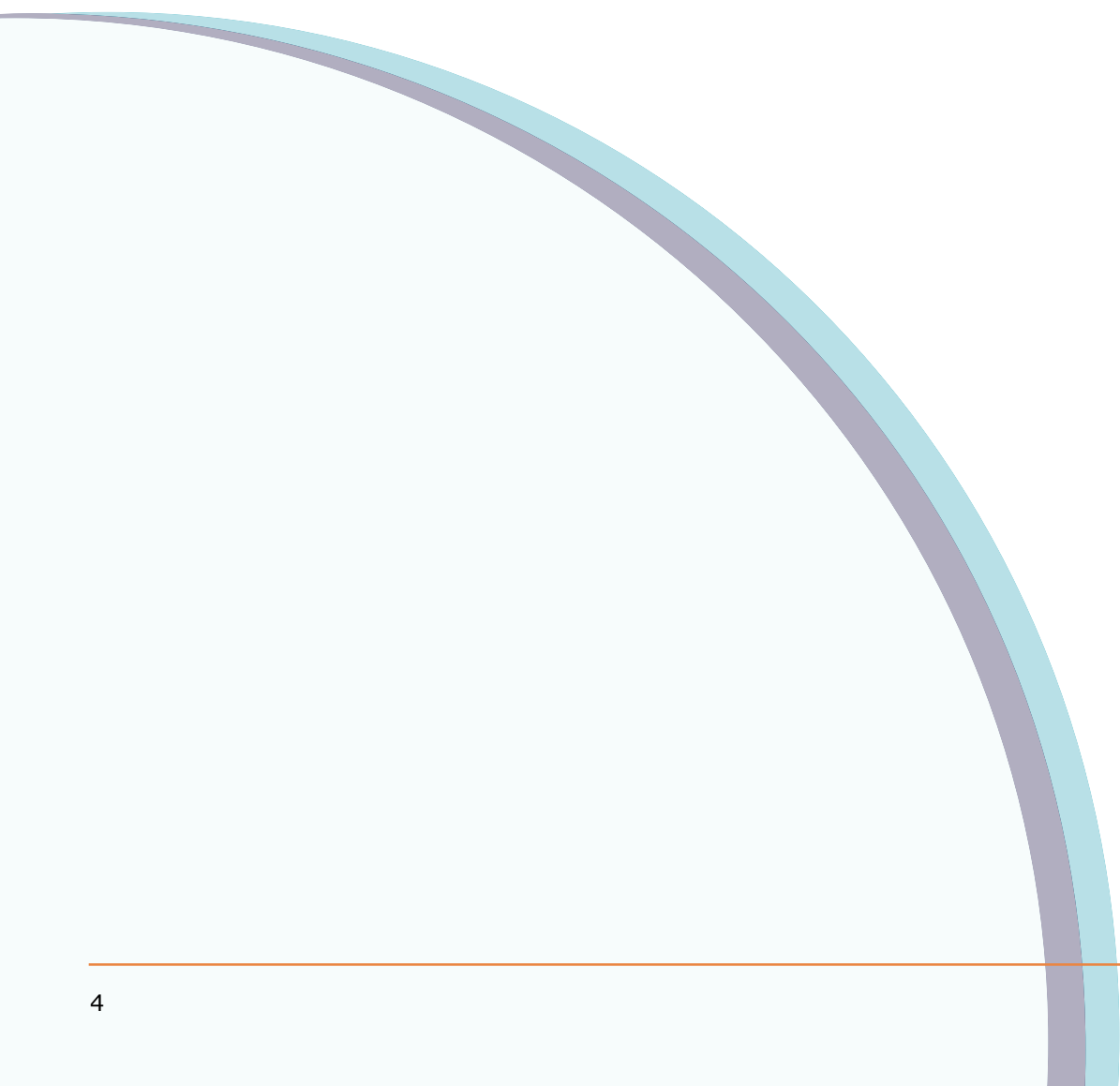
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# PatchXpress Commander Software General Information

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## Introduction

PatchXpress® Commander Software controls Molecular Devices PatchXpress® 7000A Automated Parallel Patch Clamp System.

The following topics are included in this chapter:

- [Computer System Requirements on page 5](#)
- [Installing PatchXpress Commander Software on page 6](#)
- [Activating the PatchXpress Commander Software License on page 6](#)
- [Uninstalling PatchXpress Commander Software on page 7](#)
- [Starting the Software on page 7](#)

## Computer System Requirements

PatchXpress Commander Software version 2.0.2 can be installed on a computer with the following system specifications.

### Minimum Requirements

#### Software

- Windows XP Professional, 32-bit
- Windows 7, 32-bit

#### Hardware

- Computer that has a 1.3 GHz or faster processor
- 2 GB SDRAM or above
- 160 GB or above of available hard disk space
- 1024 x 768 or higher-resolution display
- CD Drive

## Installing PatchXpress Commander Software

1. Double-click the **PatchXpress\_2\_0\_x.exe** PatchXpress Commander Software installation file. A Welcome to the PatchXpress Commander Software Setup Wizard dialog is displayed.
2. Click **Next**.
3. In the **License Agreement** dialog box, select **I accept the terms of the license agreement**, and click **Next**.
4. In the **Destination Folder** dialog, the **Install PatchXpress 2.0 to** field displays the default installation directory. To change the installation directory, click **Change**, navigate to the desired directory, then click **OK**.
5. Click **Next**.
6. In the **Select Program Folder** dialog, leave the displayed default **Program Folder** settings. Select **Anyone who uses this computer** to make PatchXpress Commander Software available to all users on the PatchXpress® 7000A Automated Parallel Patch Clamp System host computer, then click **Next**.
7. The **Completing the installation process** dialog appears. Click **Next** to start the installation.
8. When the installation is complete, click **Finish** to exit the wizard.

## Activating the PatchXpress Commander Software License



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**Note:** If the PatchXpress license is not activated after the trial period expires, experiments will no longer run. The Demo software remains functional.

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To activate the PatchXpress Commander Software license:

1. Start the PatchXpress Commander Software application.
2. Click **Settings > License Configuration**.
3. If you have internet connectivity, type the provided **Product Key** in the field and click **Activate Online**, and then follow the on-screen instructions.

4. 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

## Uninstalling PatchXpress Commander Software

1. Click **Start > Control Panel** and double-click on **Add or Remove Programs** from the Windows **Control Panel** dialog.
2. Find **PatchXpress 2.0** in the list of currently installed programs and click **Remove** to initiate the uninstall process.
3. Click **Next** when prompted to **Uninstall** PatchXpress Commander Software.
4. In the **Configuring the PatchXpress Commander Software installation** dialog, Click **Next**.
5. When the installation is complete, the **Completing the installation process** dialog appears. Click **Finish** to exit the wizard.

## Starting the Software

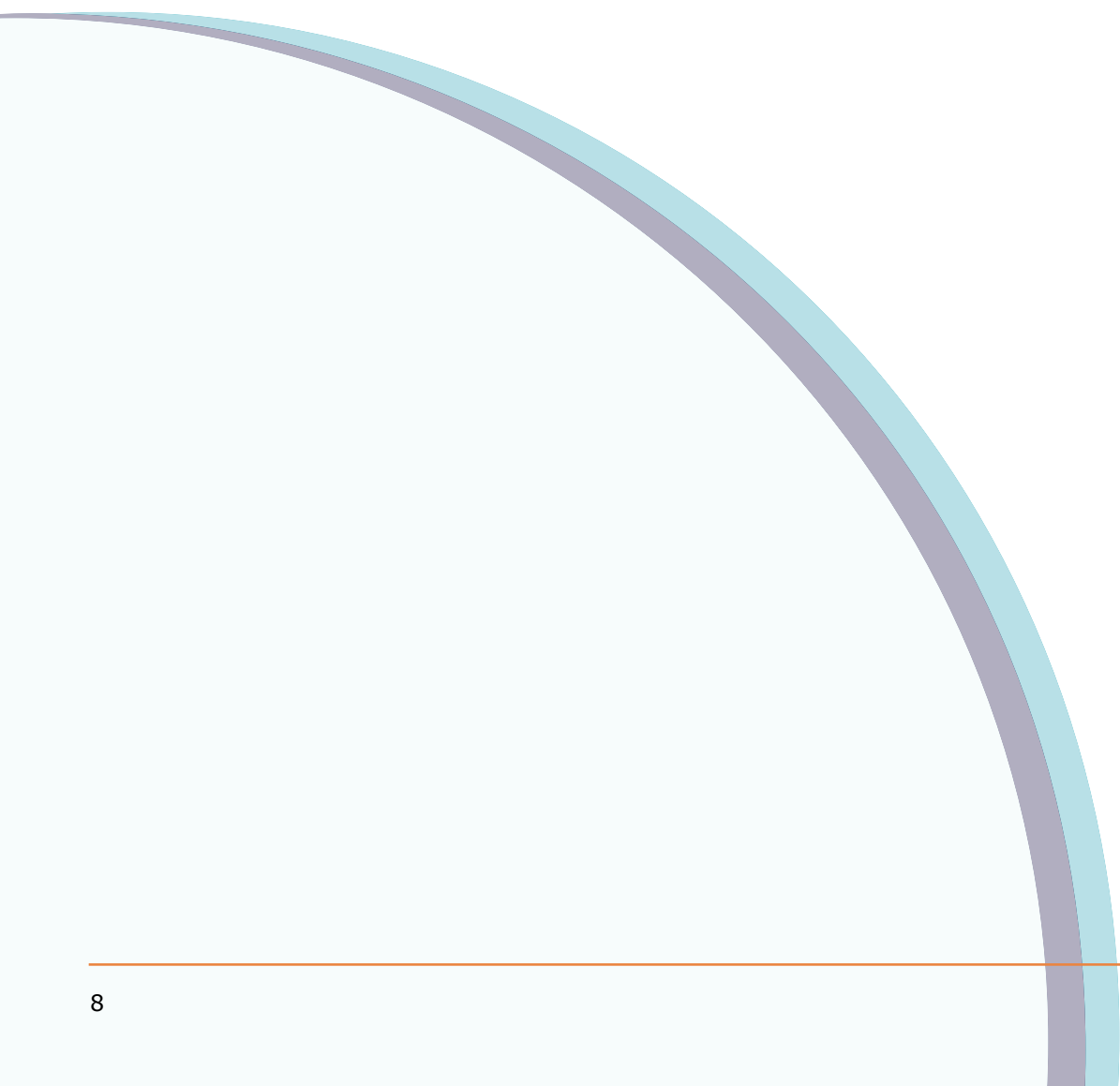
To start the software under normal conditions, wait for the connected instrument to complete its start-up sequence, and then double-click the **PatchXpress Commander Software** icon on your desktop to start the program. To start the program from the Windows Start menu, click **Start > All Programs > Molecular Devices > PatchXpress 2.0 > PatchXpress**.



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**Note:** You can start the **PatchXpress 2.0** with or without an attached instrument. When no instrument is attached you must run the **PatchXpress [Demo mode]** software, which simulates data.

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# PatchXpress Commander Software Version 2.0.2 Release Notes

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## Introduction

The PatchXpress® Commander Software version 2.0.2 update is a minor release. The following is a summary of the changes incorporated in this revision as compared to version 2.0.1, the last general release of the PatchXpress Commander Software.

## Issues Addressed

### **PatchXpress Acquired Data with P/N Leak Subtraction Enabled, Display Incorrectly**

Tracking ID: 12408

When data is acquired by PatchXpress 2.0 or 2.0.1 with the P/N Leak Subtraction enabled, the data are saved so that the sweep duration displays half of the actual value and the sampling rate displays double the actual value in DataXpress software or pCLAMP software.

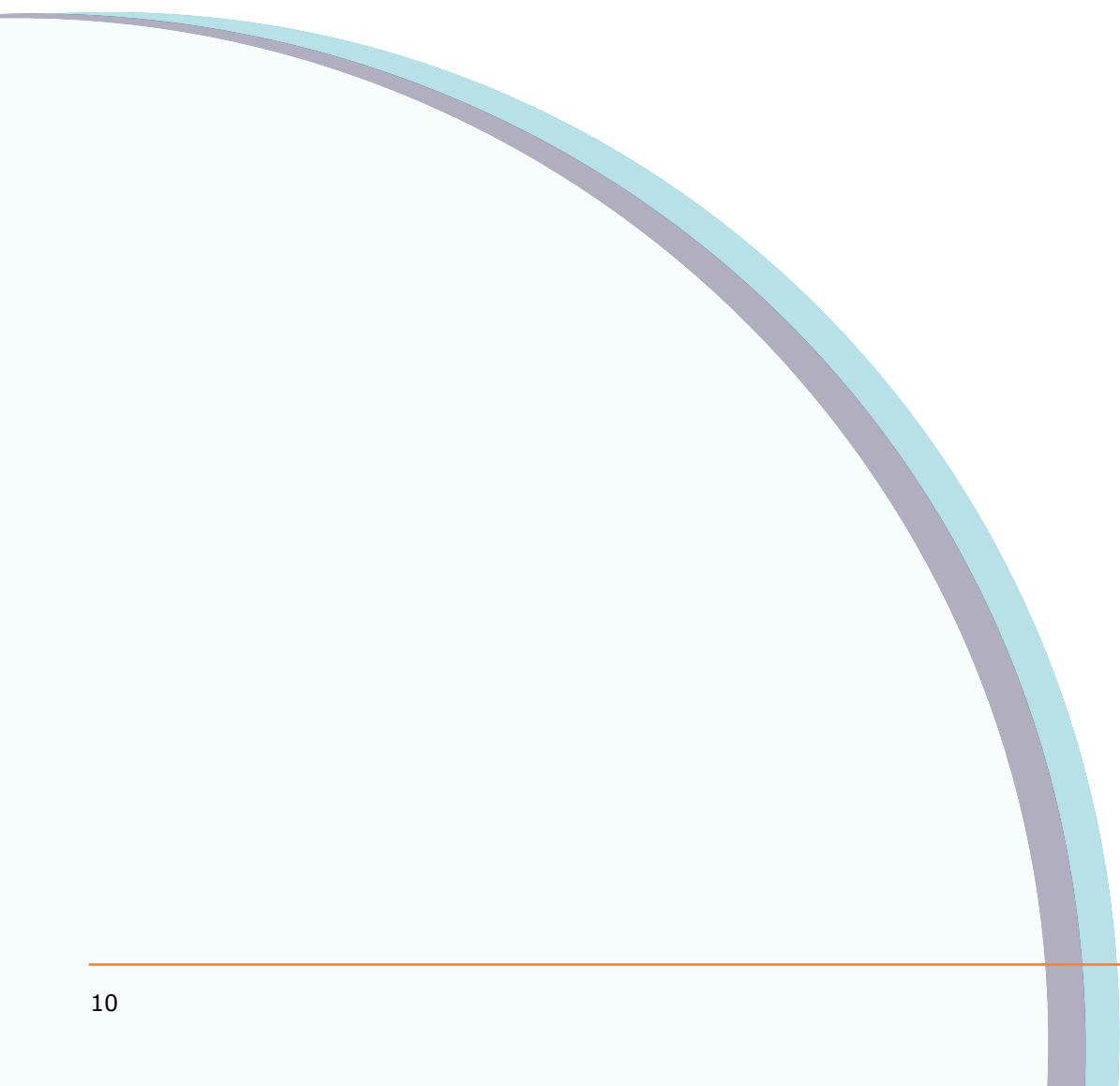
#### **Resolution:**

Data sets with the P/N Leak Subtraction enabled are saved so that the sweep duration and the sampling rate display correctly in DataXpress or pCLAMP.

Data sets acquired in PatchXpress software version 2.0 or 2.0.1 with the P/N Leak Subtraction enabled display correctly in DataXpress software version 2.2.1 and pCLAMP software version 10.3.2.

#### **Impact of fix:**

This fix has no impact on current workflow or data.



# PatchXpress Commander Software Version 2.0.1 Release Notes

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## Introduction

The PatchXpress® Commander Software version 2.0.1 update is a minor release. The following is a summary of the changes incorporated in this revision as compared to version 2.0, the last general release of the PatchXpress Commander Software.

- [Modifications Made](#)
- [Issues Addressed](#)
- [Known Issues](#)

## Modifications Made

The **Preferences** dialog has been renamed **Experiment Settings**.

## Issues Addressed

### **PatchXpress Commander Software freezes if user stops the experiment while the instrument is adding cells**

Tracking ID: 3969

During cell addition, if the user clicks to stop the experiment, the application becomes unresponsive.

#### **Resolution:**

Experiments can now be stopped if the liquid handler is active.

#### **Impact of fix:**

This fix has no impact on current workflow or data.

### **Issue with Log On As New User Button in PatchXpress Commander Software**

Tracking ID: 4226

The button to log on as a new user currently does not properly log off the current user to allow new users to log on.

**Resolution:**

Changing users is now correctly supported.

**Impact of fix:**

This fix has no impact on current workflow or data. The correct user is now recorded.

**Low Open Circuit Resistance Error 1582**

Tracking ID: 4403

In Demo mode, users might encounter an error message for low open circuit resistance.

**Resolution:**

Experiments can now be safely stopped at any stage.

**Impact of fix:**

This fix has no impact on current workflow or data.

**Cell Property Measurements are Incorrect After Changing Amplifier Mode**

Tracking ID: 5243

Running a procedure in Current Clamp mode might display a message in the log stating that the cell health test has failed.

**Resolution:**

The amplifier mode is now correctly taken into account.

**Impact of fix:**

This fix has no impact on current workflow or data.

**PatchXpress Commander Software login dialog falls behind the main window**

Tracking ID: 5248

When using the instrument, and the login dialog box is invoked either on startup or clicking the user dialog, in PatchXpress Commander Software, it is sometimes hidden behind the main window, which gives the impression that the software is not responding and causes confusion.

**Resolution:**

The login dialog is now displayed in the top left corner, and the Task bar icon has been changed to make it easier to identify.

**Impact of fix:**

This fix has no impact on current workflow or data.

**The Cell Property Log Might Have Wrong Entries in Current Clamp Mode**

Tracking ID: 5255

The cell property log entries (visible only in Verbose display mode) might have some incorrect fields. In Current Clamp mode, the Holding level should be displayed in the Ihold field, not the Vhold field.

**Resolution:**

The amplifier mode is now correctly taken into account.

**Impact of fix:**

This fix has no impact on current workflow or data.

**Cell Properties in the Raw View do not Display the Current Clamp Data**

Tracking ID:5256

The cell properties that are displayed in the Raw tab do not cover the data related to the Current Clamp mode.

**Resolution:**

The amplifier mode is now correctly taken into account.

**Impact of fix:**

This fix has no impact on current workflow or data.

**Channels with High Re Values Drop to Zero on Instrument at Times**

Tracking ID:5285

Sometimes channels with high Re are marked as zero.

**Resolution:**

Channels with high Re now display the correct resistance.

**Impact of fix:**

This fix has no impact on current workflow or data.

**Leak Corrected Data is not Available when Resistive Leak Subtraction is Enabled**

Tracking ID:5286

When Resistive Leak Subtraction is enabled, leak corrected data is not available.

**Resolution:**

Leak corrected data is now available.

**Impact of fix:**

This fix has no impact on current workflow. Leak corrected data is now available.

**Pneumatic Ra Correction is Applied During Current Clamp Mode**

Tracking ID:5300

Pneumatic Ra should not be applied when the amplifier is in current clamp mode.

**Resolution:**

Pneumatic Ra control is never applied in current clamp mode.

**Impact of fix:**

This fix has no impact on current workflow or data.

**Trial ABF Files do not Have an Annotation for the Amplifier Mode**

Tracking ID: 5301

Trial ABF files have annotations with information about amplifier and other settings, but not amplifier mode.

**Resolution:**

Amplifier mode has been added to the annotations.

**Impact of fix:**

This fix has no impact on current workflow or data.

## **Find Threshold Step: Add Amplitude Threshold**

Tracking ID:5565

The Find Threshold step is sometimes falsely triggered by low amplitude responses.

### **Resolution:**

A new field for amplitude has been added.

### **Impact of fix:**

No more false triggers are recorded.

## **Hide Unused Controls in Hardware & Fluidics and Maintenance Dialogs**

Tracking ID: 5828

Some options in the Hardware & Fluidics and Maintenance dialog are no longer needed.

### **Resolution:**

Redundant options have been removed.

### **Impact of fix:**

This fix has no impact on current workflow or data.

## **Opening an Invalid Protocol Crashes PatchXpress Commander**

Tracking ID: 6070

If an invalid protocol file is opened, the application might crash.

### **Resolution:**

Invalid protocols now display an error message.

### **Impact of fix:**

This fix has no impact on current workflow or data.

## **No Detailed Message to the User When Config File Cannot be Found or Has Errors**

Tracking ID: 6101

If the config file is missing or has errors, an empty error dialog is displayed.

### **Resolution:**

An appropriate error message now appears.

**Impact of fix:**

This fix has no impact on current workflow or data.

**In PatchXpress 2.1, the PatchXpress.cfg is being copied to the 2.0 folder**

Tracking ID:6169

The config files (\*.cfg) are read from the PatchExperiment folder which is confusing.

**Resolution:**

The config files are now read from the PatchXpress folder.

**Impact of fix:**

This fix has no impact on current workflow or data.

## Known Issues

**Selecting “Anyone Who Uses This Computer (all users)” During Installation Results in an Error Dialog**

Tracking ID: 6573

On some computers, selecting **Anyone Who Uses This Computer (all users)** during the installation procedure results in an error dialog.

**Workaround:**

Run the installer again and select **Only for me (current user)**.



# PatchXpress Commander Software Version 2.0 Release Notes

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## Introduction

The PatchXpress® Commander Software version 2.0 update is a major release. The following is a summary of the changes incorporated in this revision as compared to version 1.7, the last general release of the PatchXpress Commander Software.

- [New Functionality](#)
- [Modifications Made](#)
- [Issues Addressed](#)
- [Known Issues](#)

## New Functionality

### License Management

The PatchXpress Commander Software is license-protected, and requires activation within 30 days after installation. Both Online and Offline activations are available.

### Current Clamp Amplifier Mode

Current Clamp Amplifier mode is added to measure cell voltage.

### Holding Level

Holding level is added to the Procedure dialog as a Step type to change the Holding Potential or Holding Current, depending on the selected Amplifier mode.

### Find Threshold

Find threshold is added to the Procedure dialog as a Current Clamp mode Step type to determine the action potential threshold of a cell.

### Event Duration Measurement

The Event duration measurement is added to the Measurements tab of the Edit Protocol dialog to measure the time difference between the beginning, and the end of the stimulus response determined by the specified percentage of the peak amplitude.

## **Membrane Voltage Added to View Settings Dialog**

V<sub>m</sub> (membrane voltage) measurements for each channel, plotted against experiment time, is added to the Cell Health tab for use in Current Clamp mode.

## **Modifications Made**

### **Waveform Tab**

The Waveform section is moved from the Trial Setup tab to a unique Waveform tab in the Edit Protocol dialog. The new Waveform tab contains the fields for the waveform description.

### **Waveform Preview**

The Waveform Preview window is added as a part of the Trial Setup tab and the Waveform tab in the Edit Protocol dialog.

### **Interface Icon Updates**

Graphical interface icons have been revised.

## **Issues Addressed**

### **Procedure editor assertion when validating procedures that include loops**

Tracking ID: 3837

If a procedure contains loops, it often displays a debug assertion (pStep is a NULL pointer) if a new step is inserted.

#### **Resolution:**

When a new step is inserted in a procedure containing loops, no debug assertion displays.

#### **Impact of fix:**

This fix has no impact on current workflow or data.

## **Unloading SealChip activity stays In Progress after an Emergency Stop**

Tracking ID: 3895

When Emergency Stop is clicked during an experiment, the progress state continues to display Unloading SealChip even after the activity is completed.

### **Resolution:**

The progress state no longer displays unloading SealChip after the activity completes.

### **Impact of fix:**

This fix has no impact on current workflow or data.

## **Model Cell Mode Still Checks Master Controller Before Starting an Experiment.**

Tracking ID: 4016

Start an experiment with the model cell, but the application will not start if there are errors in the liquid handling in the master controller component.

### **Resolution:**

Running the experiment with model cells ignores errors and warnings in the master controller component. Errors and warnings still need resolving before conducting a non-model cell experiment.

### **Impact of fix:**

Enables the running of model cell experiments even when there are problems.

## **Known Issues**

### **PatchXpress Commander Software freezes if user stops the experiment while the instrument is adding cells**

Tracking ID: 3969

During adding cells, if the user clicks to stop the experiment, the application becomes unresponsive.

**Workaround:**

Manually shutdown the application and unload the SealChip.

**Issue with Log On As New User Button in PatchXpress Commander Software**

Tracking ID: 4226

The button to log on as a new user currently does not properly log off the current user to allow new users to log on.

**Workaround:**

Re-launch PatchXpress Commander Software to use a different login.

**Low Open Circuit Resistance Error 1582**

Tracking ID: 4403

In Demo mode, users may encounter an error message for low open circuit resistance.

**Workaround:**

Click OK to close the message dialog and relaunch the demo mode software.

**PatchXpress Commander Software login dialog falls behind the main window**

Tracking ID: 5248

When using the instrument, and the login dialog box is invoked either on startup or clicking the user dialog, in PatchXpress Commander Software, it is sometimes hidden behind the main window, which gives the impression that the software is not responding and causes confusion.

**Workaround:**

Click on the login icon in the taskbar in order to see the login dialog box.

**Cell Properties in the Raw View, do not Display the Current Clamp Data**

Tracking ID:5256

The cell properties which are displayed in the Raw tab, do not cover the data related to the Current Clamp mode.

**Workaround:**

None

**Channels with High Re Values Display Zero on the Instrument Sometimes**

Tracking ID:5285

Procedures on the instrument log some channels with very high Re values. Due the very high Re value, the software blocks those channels. The software also displays the Re vale as 0 at times, which is incorrect.

**Cell Property Measurements are Incorrect After Changing Amplifier Mode**

Tracking ID: 5243

Running a procedure in Current Clamp mode may display a message in the log stating that the cell health test has failed.

**Workaround:**

Ignore this message, since the cell health test is irrelevant in Current Clamp mode.

**The Cell Property Log May Have Wrong Entries in Current Clamp Mode**

Tracking ID: 5255

The cell property log entries (visible only in Verbose display mode) may have some incorrect fields. In Current Clamp mode, the Holding level should be displayed in the Ihold field, not the Vhold field.

**Workaround:**

No resolution at this time. This is a logging issue which will be resolved in the next release of PatchXpress.

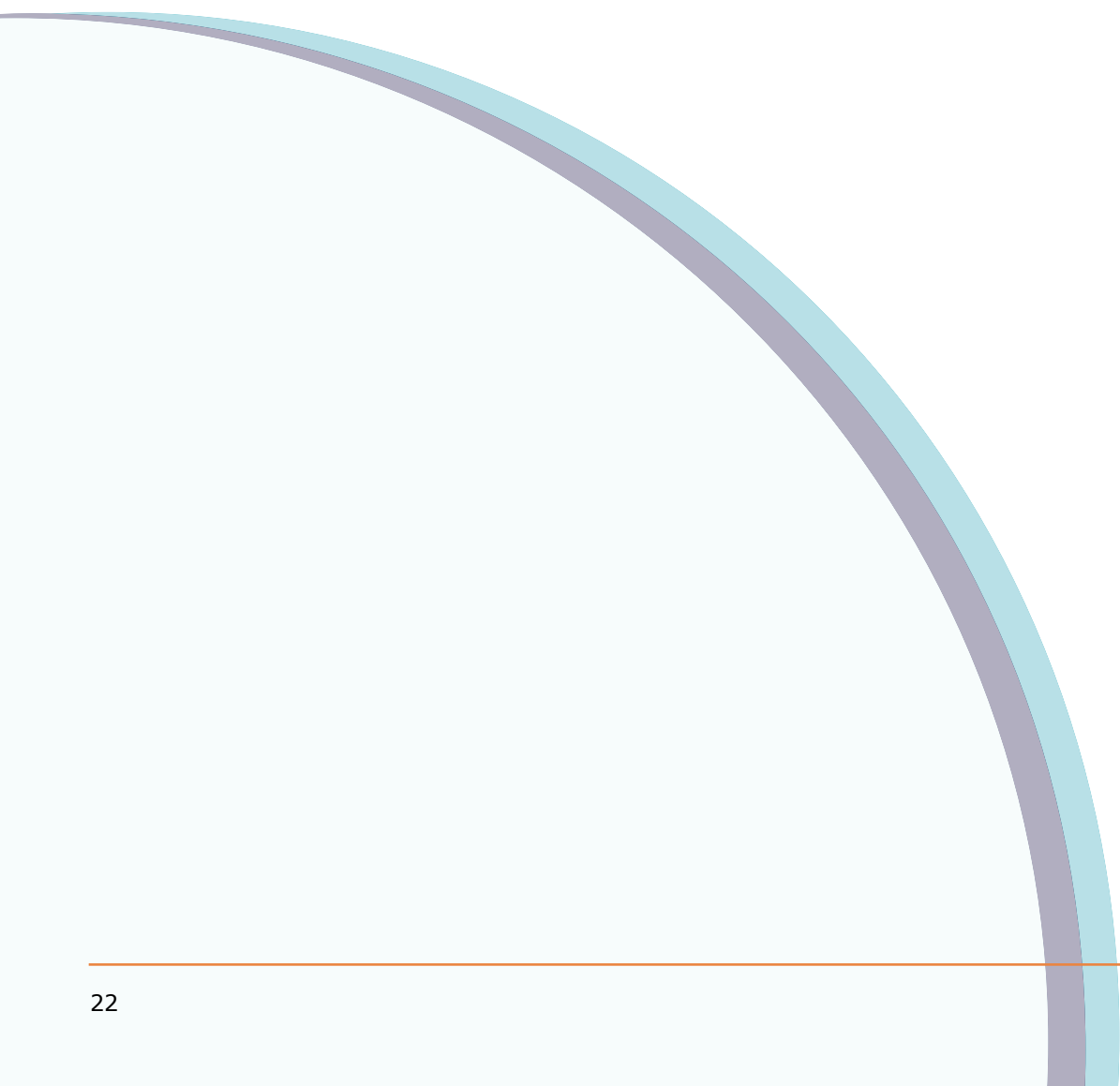
**Leak Corrected Data is not Available When Resistive Leak Subtraction is Enabled**

Tracking ID: 5286

When Resistive Leak Subtraction is enabled in Voltage Clamp mode, there is no Leak Corrected data available.

**Workaround:**

Use P/N Leak Subtraction instead of Resistive Leak Subtraction.



## Support Information

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### How to Obtain Technical Support

There are several ways to contact Molecular Devices:

- World Wide Web: <http://www.moleculardevices.com>
- Phone: +1 (800) 635-5577
- Fax: +1 (408) 747-3603

When you contact Technical Support, have the following information ready:

- A description of the problem including when it happened and what the system was doing when it happened.
- Screen captures of any error messages displayed.
- A description of any changes made to the system recently, such as updates, patches, or configuration changes.
- Your contact information.

For additional product and support information, see the Molecular Devices Knowledge Base at <http://www.moleculardevices.com/Support.html>.

### How to Obtain More Information

Additional information is available on the Web:

- For general information, go to the Molecular Devices web site: <http://www.moleculardevices.com/axon>
- To search the knowledge base, go to the Molecular Devices support site: <http://www.moleculardevices.com/support.html>
- For software updates, go to the knowledge base on the Molecular Devices support site: <http://www.moleculardevices.com/support.html>

