



# **DataXpress® Software**

Version 2.2.1

## **Release Notes**

April 2013

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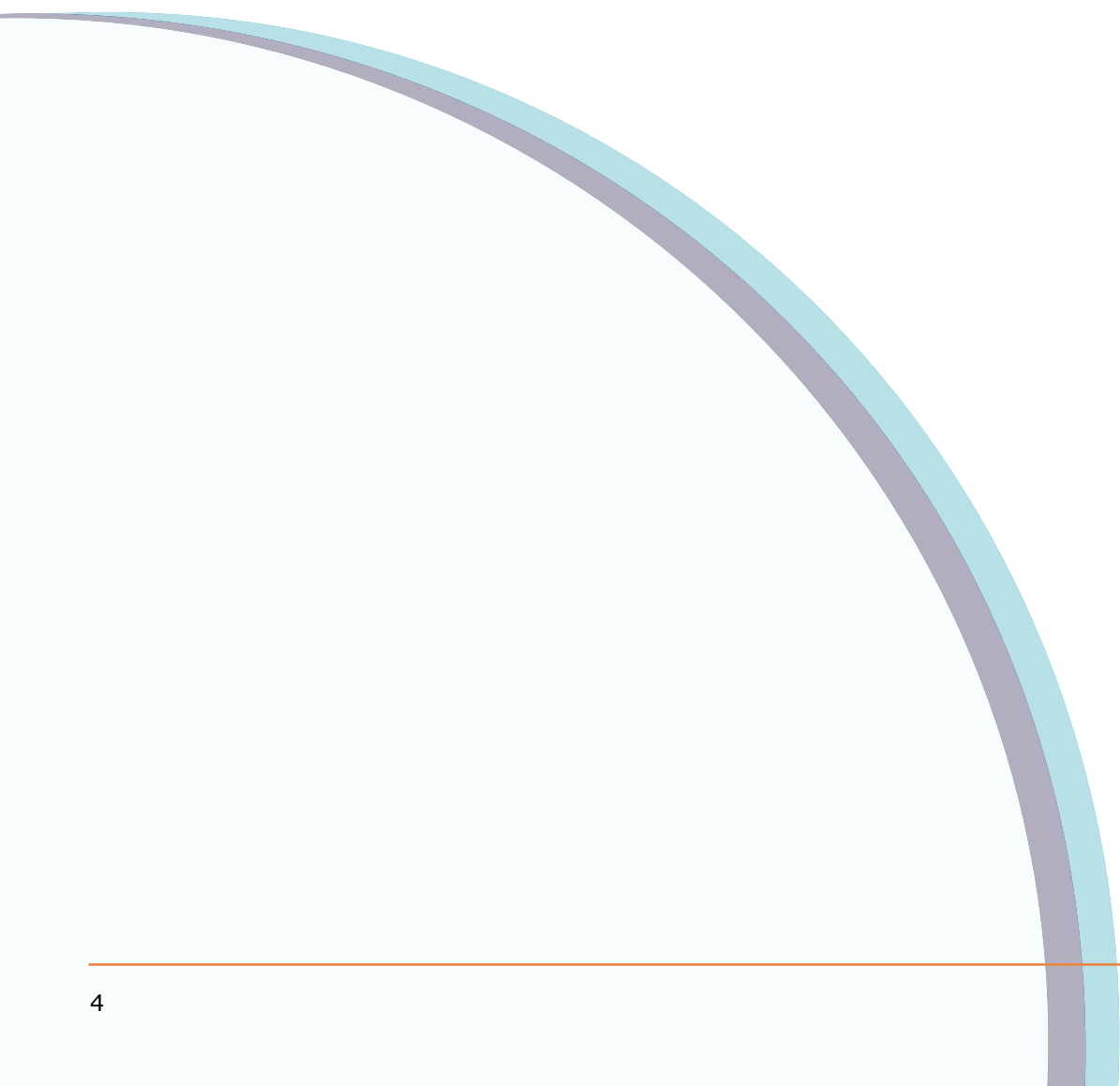
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## Introduction

DataXpress® Software is a database and analysis program for recordings generated by the PatchXpress®7000A Automated Parallel Patch Clamp System.

The following topics are included in this chapter:

- [System Requirements on page 5](#)
- [Installation Instructions on page 6](#)
- [Uninstalling DataXpress Software on page 15](#)
- [Starting the Software on page 16](#)

## System Requirements

### DataXpress 2 Clients

DataXpress Software requires Windows XP Pro or Windows 7 operating systems. Most modern computers capable of running these operating systems are capable of running the DataXpress Software client software effectively.

DataXpress Software does not support operating system emulators (for example, VMWare).

### Database

The DataXpress Software database is created with Microsoft SQL Server 2008. The DataXpress Software database should place no significant additional burden on the database computers. If the database is likely to see heavy use from several clients at a time, high CPU and RAM is helpful.

### File Server & File Storage

The MDC File Server runs on Windows XP Pro or 7. Computers capable of running these operating systems are adequate for the file server.

A significant amount of hard-drive space is required for the computer on which the data files are to be stored. The storage location can be changed if it becomes full—the database keeps track of data files in multiple storage locations. If you set a new storage location, keep existing data where they are.

## Installation Instructions

### Overview

1. Installation of DataXpress Software 2.2.1 has the following major steps:
2. Install the key and supporting software.
3. Install MDC File Server.
4. Update DataXpress 1, if necessary.
5. Create the database.
6. Configure the database.
7. Create new users.
8. Import sample data.
9. Install DataXpress Software 2.2.1 clients on acquisition and other computers.
10. Configure the Importer.
11. Update pCLAMP 10, if necessary.

Ensure the following before starting DataXpress Software 2.2.1 installation:

1. All DataXpress Software 2.2.1 database, client, file server and file storage computers (including computers running acquisition programs that will link to the database) must be included in a domain in the local network. The network system administrator needs to do this before installation begins.
2. Microsoft SQL Server 2008 must be installed.  
**Have the login name and password for the database application**—this is needed during the DataXpress installation.

### Upgrade from DataXpress 1

If you already have a DataXpress 1 installation, you must create a new database for DataXpress Software 2.2.1—the DataXpress Software 1 database cannot be upgraded for DataXpress Software 2.2.1.

The DataXpress Software 2.2.1 database can be set up with the same instance of SQL Server 2008 used for the DataXpress Software 1 database.

Once DataXpress Software 2.2.1 is set up, you can, if you wish, continue to run both DataXpress Software 1 and DataXpress Software

2.2.1 beside each other—the clients of each version can run side by side on the same computer, each connected to their respective databases.

However, the best solution is most likely to transfer data from the DataXpress Software 1 database to the DataXpress Software 2.2.1 one, consolidating data in one location.

DataXpress Software 1.0.1.14 has two modifications designed to make this process easier:

- Export directly from the **Data Selector**: Export files without having to open them into a dataset.
- All versions of trials are automatically exported, and can be imported into DataXpress Software 2.2.1, where their status as different versions of the same trial is maintained.



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**Note:** DataXpress Software 1 versions prior to 1.0.1.14 do not export files in a form that they can be reliably imported into DataXpress Software 2.2.1.

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Before attempting to migrate DataXpress Software 1 data to the DataXpress Software 2.2.1 database, then, ensure that you have DataXpress Software 1.0.1.14 installed. Detailed instructions for migrating data between databases are provided below.

### **Transferring Data from DataXpress Software 1 to DataXpress Software 2.2.1**

The process to move data between the DataXpress Software 1 and 2 databases is basically two-step; you must first export data from DataXpress Software 1 to disk, and then import from disk into the DataXpress Software 2.2.1 database.

1. Ensure that you have DataXpress Software 1.0.1.14 installed.
2. Open DataXpress Software 1 (connected to the DataXpress Software 1 database).
3. Configure the **Data Selector** in a way that will allow you to sort between data you want to transfer, and data that you do not want to transfer.
4. Use attributes that correspond to relatively large quantities of data, to minimize the number of export operations you need to perform, for example., if all your data are PatchXpress Commander data, set **Acquisition Program** at the top of the hierarchy. This will give one 'PatchXpress Commander' node in the Data Selector, which will capture all the data in the database. Alternatively you can export entire projects or screens.

5. Select a node in the **Data Selector** for the data you want to export and open **File > Export**.
6. Configure to export trials, cell procedures, and experiments.
7. Select a directory to write the exported data to. Plainly this will need to be on a computer with adequate free disk space.
8. Click **OK** to start export. If you have selected a large quantity of data, export could take hours.



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**Note:** You may receive error notifications during export. Many of these are benign, indicating a file that the export regime was expecting, but which does not exist in the database, for example, where a trial may have been imported into the database without a cell procedure file, the 'missing' cell procedure file is reported.

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9. Open **DataXpress Software 2.2.1** (connected to the DataXpress Software 2.2.1 database).
10. Open **File > Import Data Files > Entire Folder**.
11. Select the folder where you exported the DataXpress Software 1 files.
12. Click **OK** to start import. Again, this process could take some time.

## Hardware Protection Key

DataXpress Software 2.2.1 requires a network key to operate. Install this and its support software first in order that you will be able to open and configure DataXpress Software 2.2.1 as soon as you install it later.

1. Attach the key to any computer on the network that has a free USB port (choose a computer that is likely to be on most of the time).
2. On the same computer, run the **NetHASP License Manager** installer from the CD (**lmsetup.exe**).
3. When prompted for installation type, select **Service**. Otherwise, accept defaults.
4. Select **Yes** to install **NetHASP device drivers** when prompted.
5. Select **Yes** to start the **license manager** when prompted.
6. You will be asked to reboot the computer after installation is complete.
7. Run **AKSMON32.EXE** if you wish to install this dongle-monitor program (not required). You can accept defaults for this installation.



## MDC File Server

The MDC File Server stores and retrieves data files. It runs as a service on the computer where it is installed, and is configured from a small managing application **File Server Manager**.

1. Select a networked Windows XP or 7 computer to install the file server.
2. Take note of the computer name; you will need it later for database configuration.
3. Any networked computer can be used. There may be a file retrieval time advantage if you put the file server on the same computer that the files will be stored on, removing a network link. Alternatively, if most DataXpress Software work will be done on one client computer, this computer could be used.
4. Run the **MDC File Server installer** from the CD (or double-click the file server installer executable, **FileServer-1\_1\_0\_nn.exe** if you have downloaded it to disk).
5. Follow the instructions in the installer: you can accept the default location to install the **File Server Manager**, or select another folder.
6. After installation is completed, open the **File Server Manager** from **Start > All Programs > Molecular Devices > MDC File Server > MDC File Server**.



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**Note:** If using the Windows 7 operating system, you must start the MDC File Server application (right-click) in **Run as administrator** mode.

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7. Click the **Select file directory** button, to open a **Browse** dialog to select the folder where you want to store data files.
8. The **Browse** dialog allows access to networked computers. If you select a computer other than the local one, ensure that you will have access permissions to it (at least, to the folder) at all times. See *DataXpress Electrophysiology Data Management and Analysis Software User Guide* "Appendix B: Remote File Storage" for instructions.
9. Type in a port number that the file server will use to communicate with client computers. The default port is **9200**.
10. Keep note of the port selected; it will be needed later for database configuration.
11. Click the **Start** button to start the service, and close the dialog.

## Create Database: SQL Server 2008

Create a new DataXpress Software 2.2.1 database with SQL Server 2008 using the DataXpress Software 2.2.1 installer, on the CD.

1. Go to the computer where SQL Server 2008 is installed.
2. Run the DataXpress Software 2.2.1 installer on the CD, or **DataXpress-2\_2\_n\_xx.exe** if you downloaded the installer executable.
3. At **Choose Setup Type**, select **Database and Client**.
4. Accept defaults for following dialogs (unless you have particular reason to change any of these settings) until the **Database Installation and Update** dialog opens.
5. In the **Database Installation and Update** dialog select **Create a new database on this computer**.
6. Select the name of the current computer in the **Computer > SQL Instance** field (likely the only option available) or, if the computer has two instances of SQL Server, select the name of the instance you wish to use.
7. Type in a name for the new database, for example, **DX2**.
8. Click the **Create** button.
9. You should see an advice dialog informing you that the database has been successfully installed. Click **OK**.
10. A second dialog opens, **Create Data Source**, to create a data source (connector) to the new database. The default data source name is the same as the database name. Unless you have particular reason to change this, we suggest you keep the default name.
11. Click the **Create** button.
12. Again, a dialog should inform you that the data source was successfully created. Click **OK**.
13. Click the **Next** button in **Database Installation and Update** dialog.
14. This completes creation of the DataXpress Software 2.2.1 database.

## Configure Database

Basic database configuration occurs the first time you connect to a new database with the client.

For the SQL Server installation, the DataXpress Software 2.2.1 client was installed on the SQL Server computer during creation of the database.

1. Double-click the DataXpress Software 2.2.1 icon on the desktop (or open from **Start > All Programs > Molecular Devices > DataXpress 2 > DataXpress 2.2**). The Authentication dialog opens.
2. In the **Connection** field, select the new data source that you just created, **DX2**.
3. Enter the login name and password for the database software, for example, for SQL Server. Click **OK**.
4. Two once-only setup options are now presented, to create passwords for two database 'roles'. These create passwords specific to the DataXpress database. In successive dialogs, enter passwords for roles 'Everyone' and 'Administrators'. As system administrator for the DataXpress Software 2.2.1 database you should keep note of these passwords.
5. DataXpress Software 2.2.1 opens, with a dialog informing you of the need to set up a file storage location. Click **OK** to open the **Storage Location** dialog.
6. The **Storage Location** dialog opens with one entry: **Database**.
7. It is possible to store all your data within the database, however we recommend using the MDC File Server (installation instructions provided above) to store data files outside the database. The following instructions explain how to connect to the file server.
8. In the **Storage Location** dialog click the **Create** button. The **Create Data Location Pointer** dialog opens.
9. Enter a name for the MDC File Server you are connecting the database to, to appear in the **Storage Location** dialog.
10. In the **Server Name** field, enter the name of the computer where you installed the MDC File Server.
11. In the **Port** field enter the port that you selected in the **MDC File Server Manager**. Click **OK**.
12. The file server details you entered now appear in the **Storage Location** dialog. Ensure that these are selected, and click **OK**.
13. You are now in DataXpress Software 2.2.1, logged on as the system administrator with the SQL Server login. See the **Status bar** for confirmation of your login details.

## Create New Users

Continuing from the last section, where you logged into the new DataXpress Software 2.2.1 database as the SQL Server database system administrator, you are now able to create new users specifically for the DataXpress Software 2.2.1 database.

1. Open the **Users** dialog from the **Database** menu. The system administrator is currently the only user. Click **Create**.
2. In the **New User** dialog, enter names and description for the new user. You must enter a unique login name and full name. The description is optional.
3. At the **User Type** field, select from **Read Only**, **Read/Write** and **Lab Head**. Lab Heads may additionally be made Administrators (in a further step, below).
4. Enter a password for the new user. Click **OK**.
5. The new user now appears in the **Users** dialog. Repeat the last steps to create other users. Close the dialog when finished.
6. To make a new user an administrator, open the **Groups** dialog from the **Database** menu.
7. Click on the **Properties** button for **Administrators**.
8. In the **Create/Modify Group** dialog click the **Add** button.
9. After a warning, the **Add Users** dialog opens, listing all Lab Head users (only Lab Heads can become Administrators).
10. Select the users you want to become **Administrators** (use the **Ctrl** key for multiple selection) and click **Select**.  
The selected users are now listed as belonging to the Administrators group in the **Create/Modify Group** dialog. Click **OK**.
11. If you wish, you can create standard user groups from the **Groups** dialog; click the **Create** button and select users.  
User groups are useful for data sharing, allowing you to share data with numbers of people in one command.
12. Close the **Groups** dialog. All the new users will now be able to log on to DataXpress Software 2.2.1.

## Import Sample Data

It is a good idea to import the small amount of sample data provided on the CD. This can be used to demonstrate the sample macros automatically installed with the client. The macros can be a helpful guide when you create your own macros.

1. Log on as an administrator or Lab Head.  
Read/Write users can import data, but only when they have been given permission to the project or screen the data belong to. The sample projects and screens do not yet exist in the database, so permission cannot yet be given.
2. Go to the **File** menu, **Import Data Files > Entire Folder**.
3. In the **Browse** dialog, select the **Sample Data** folder on the CD. Click **OK**.
4. After a warning, the sample data are imported into the database.

## Install DataXpress Software 2.2.1 Clients (Including Acquisition Computers)

Now that the database is created and configured, you can install clients on other networked computers and create a data source to connect to the database.

Most importantly, install the DataXpress Software 2.2.1 client on your acquisition computers, running PatchXpress Commander. Once you have done this PatchXpress Commander will be able to log on to the DataXpress Software 2.2.1 database, sending their data directly to it. After this you will no longer be able to send data from these programs to the DataXpress Software 1 database.

This section has instructions for setting up a data source to the SQL Server database.

1. Go to a network computer where you want to install the DataXpress Software 2.2.1 client.
2. Run the DataXpress Software 2.2.1 installer on the CD, or **DataXpress-2\_2\_n\_xx.exe** if you downloaded the installer executable.
3. At **Choose Setup Type**, select **Client Only**.
4. Accept installer defaults unless you have reasons to change these.
5. Once the installation is complete, double-click on the **DataXpress Software 2.2.1** desktop icon to open the **Authentication** dialog.
6. There will not be a connection (for example, data source) on this computer to the new database that you created. However, you can make this connection from the **Authentication** dialog.

Click **New Connection**.

7. These instructions are for the SQL Server database.  
Select the **Microsoft SQL Server** option when prompted.
8. In the **New Database Connection** dialog, enter the name of the computer where you created the DataXpress Software 2.2.1 database.  
Also enter the SQL Server login and password, or the username and password of any of the new users you have created.  
Click the **Connect** button.
9. The bottom fields of the dialog are enabled when the dialog locates the SQL Server instance on the database computer. All the databases in that instance of SQL Server (that you have permission to) are listed.  
Select the new DataXpress Software 2.2.1 database (our suggested name is **DX2**).
10. The **New Data Source** field defaults to the same name as the selected database. We advise you keep this name, but you can change it if you wish.  
The data source is a link on the current computer, connecting to the selected database.  
Click **Create**.
11. You are returned to the **Authentication** dialog. The new connection (data source) should now be selected, but you can select it from the list box if not.
12. Enter a valid user name and password for the database, and click **OK**.

## Configure the Importer

After installation of the DataXpress Software 2.2.1 client on an acquisition machine, the Importer should send newly acquired data to the DataXpress Software 2.2.1 database without any further configuration. However you may want to change the default Importer settings to:

- Ensure the Importer is picking up files from the same folder that the acquisition program is delivering them to.
- Disable the creation of backup copies of files sent to the database.
- Set the action in case files fail to import.

Instructions for these steps are provided below.

1. On the acquisition computer, open the Importer from the desktop icon, and click **Configure**.

2. Set **Choose which application to import files from** appropriately.
3. The default folders in this section can usually be left as they are. On the PatchXpress Commander computer the default folder is **D:\PatchXpress\Data**. You only need to change these if you change them in the acquisition program.
4. In **Determine what to do with files after import**, the default setting deletes the original copy of files that have been successfully imported into the database.
5. You can save a copy of the files to disk elsewhere if you wish, for example to a corporate backup server. By enabling this option you end up with two copies of each file that is imported—one in the database and one on disk.
6. For files that fail to import, the default is to stop importing entirely, but you can choose to have the importer move problem files to another folder/disk location and continue importing.
7. Set a location to save **Importer log** files. A new file, containing the log history from the Importer, is written each time you clear or close the Importer.
8. You can select to have the Importer start each time the computer is started. Alternatively, the Importer is started when an acquisition program is opened on the computer, or you can stop and start the Importer manually.

## pCLAMP

Trials modified in DataXpress Software 2.2.1 write the new trial versions in ABF 2 format.

These files require pCLAMP 10 or later, if they are to open into pCLAMP. Ensure that you update pCLAMP 10 to the latest version.

## Uninstalling DataXpress Software

1. Click **Start > Control Panel** and double-click on **Add or Remove Programs** from the Windows **Control Panel** dialog.
2. Find **DataXpress 2.2.1** in the list of currently installed programs and click **Remove** to initiate the uninstall process.
3. Click **Next** when prompted to **Uninstall DataXpress Software**.
4. In the **Configuring the DataXpress 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 **DataXpress Software** icon on your desktop to start the program. To start the program from the Windows Start menu, click **Start > All Programs > Molecular Devices > DataXpress 2 > DataXpress 2.2.1.**



## Introduction

The DataXpress® Software version 2.2.1 update is a minor release. The following is a summary of the changes incorporated in this revision as compared to version 2.1, the last general release of the DataXpress Software.

## Issues Addressed

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

Tracking ID: 12409

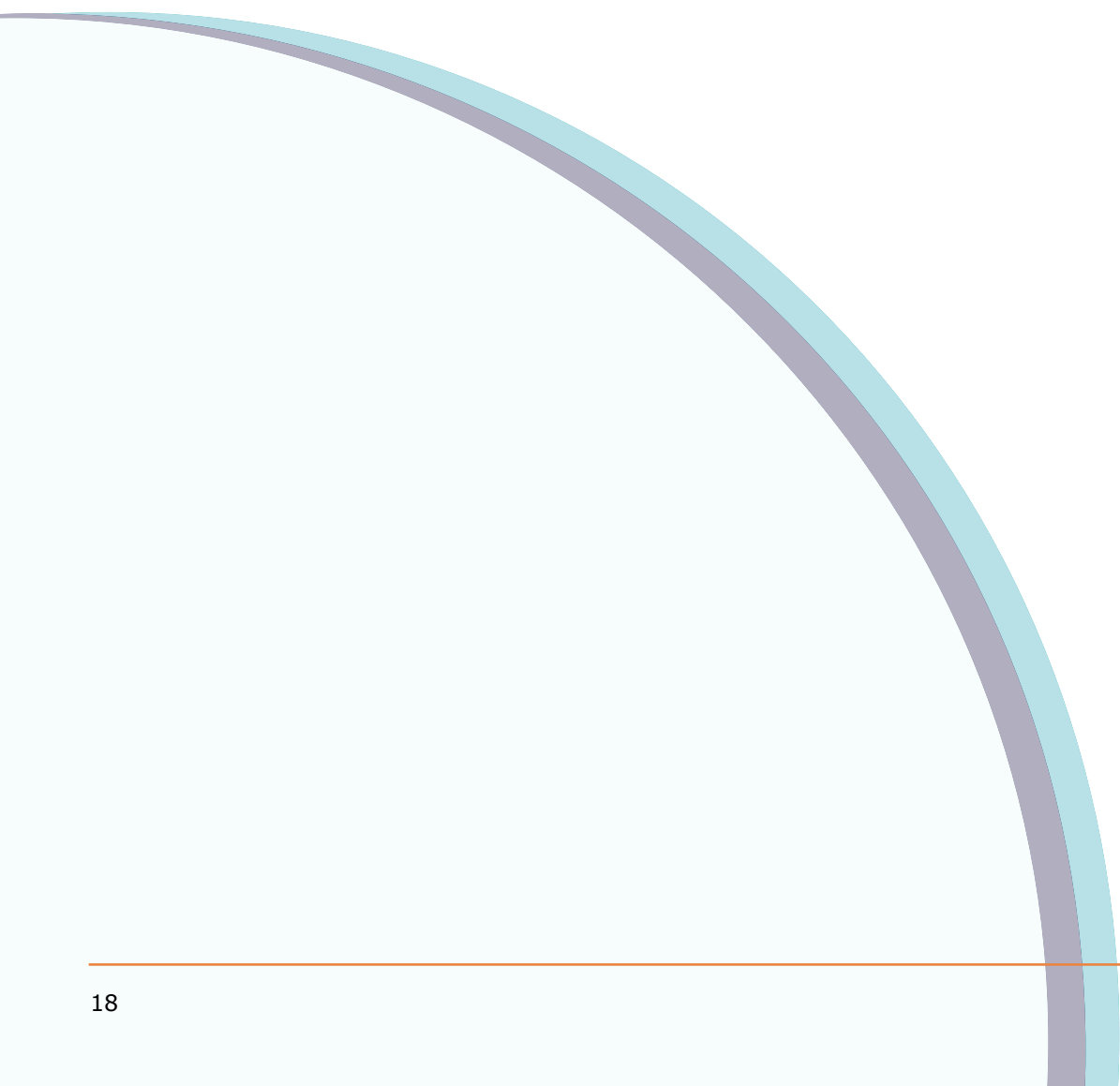
In DataXpress, for data acquired by PatchXpress 2.0 or 2.0.1 with the P/N Leak Subtraction enabled, the sweep duration displays half of the actual value, and the sampling rate displays double the actual value.

#### **Resolution:**

The issue is fixed in PatchXpress software version 2.0.2. 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.

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

This fix has no impact on current workflow or data.



## Introduction

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- New
- Modifications

## New

### **New Analysis Functionality to Exclude Cell Procedure**

**Analysis > Exclude Cell Procedures** functionality has been added to exclude cell procedures based on specified attribute or measurement thresholds in the cell procedure results.

### **New Analysis Functionality to Exclude Trials**

**Analysis > Exclude Trials** functionality has been added to exclude trials based on specified cell health (Rm, Ra or Cm) values, and if fewer than a specified number of trials are available for analysis.

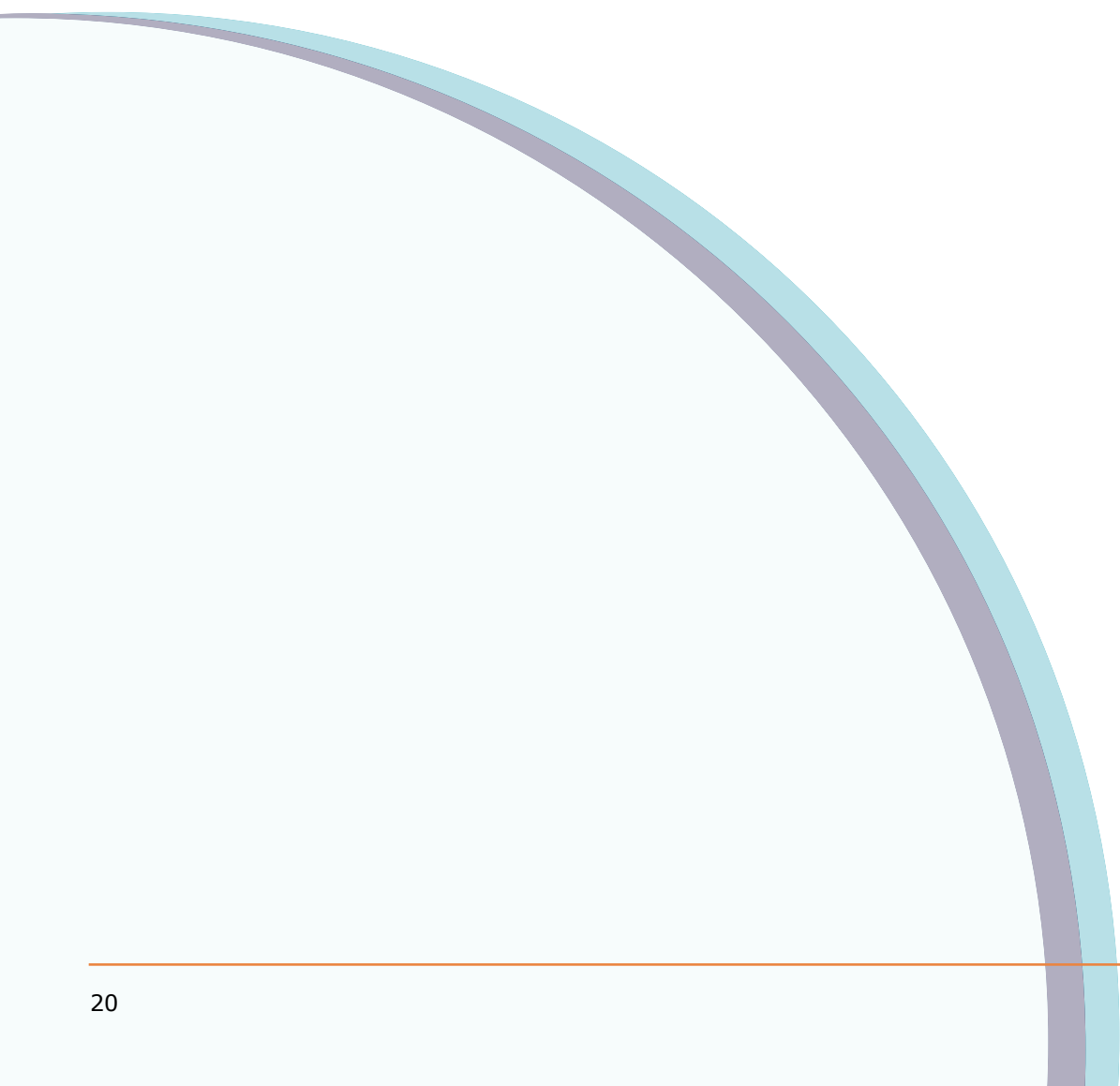
## Modifications

### **Added Save Graph to Export Results**

**Export Results > Save graph** has been added to allow the option of including graphs saved as .bmp files with the export.

### **Added the ability control whether to display the Rundown Correction dialog during a macro**

Controls have been added in the Rundown Correction dialog for setting conditions when the Rundown Correction dialog appears when launched by a macro.



## Introduction

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- [New](#)
- [Modifications](#)
- [Issues Addressed](#)

## New

### 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.

## Modifications

### Update to MDC File Server 1.1

A utility installed on the DataXpress server, has been updated to MDC File Server 1.1 for consistency with other Molecular Devices systems. It is backward compatible with MDC File Server 1.0.

## Issues Addressed

### License for DataXpress Software not working properly

Tracking ID: 3906

If no key is found and the user clicks to close the warning message dialog, the application remains fully functional. This only affects customers without a valid license key.

**Resolution:**

DataXpress Software is no longer fully functional when there is no key found and the warning message dialog is closed.

**Impact of fix:**

This fix has no impact on current workflow or data.

**Params file fields not displayed in DataXpress Software**

Tracking ID: 3801 and 4015

When data is exported to DataXpress Software, some of the values such as Chamber, Test Compound and Trial Numbers are not being displayed. Instead DataXpress shows <None> in these fields.

**Resolution:**

Now all values display as appropriate.

**Impact of fix:**

This fix has no impact on current workflow or data.

**DataXpress Software crashes while analyzing data**

Tracking ID:5180

When enabling and disabling the Peak Amplitude measurement, DataXpress Software occasionally crashes

**Resolution:**

DataXpress Software no longer crashes when Peak Amplitude is enabled and disabled.

**Impact of fix:**

This fix has no impact on current workflow or data.

## 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>

