

MULTIPLEX SUSPENSION ARRAYS Bio-Plex Data Pro<sup>™</sup> Software Getting Started



## **BIO-RAD TECHNICAL SUPPORT DEPARTMENT**

The Bio-Rad Technical Support Department in the U.S. is open Monday through Friday, 5:00 a.m. to 5:00 p.m., Pacific Standard Time. Worldwide technical support is available on the Web at www.consult.bio-rad.com.

Phone:	1-800-424-6723, option 2
Fax:	1-510-741-5802
Email:	LSG.TechServ.US@Bio-Rad.com (U.S.)
	LSG.TechServ.Intl@Bio-Rad.com (International)
Web:	www.consult.bio-rad.com

## NOTICE

No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage or retrieval system, without permission in writing from Bio-Rad.

Bio-Rad reserves the right to modify its products and services at any time. This user guide is subject to change without notice. Although prepared to ensure accuracy, Bio-Rad assumes no liability for errors or omissions, or for any damage resulting from the application or use of this information.

The following are trademarks of Bio-Rad Laboratories: Bio-Rad, Bio-Plex, Bio-Plex Manager, and Bio-Plex Data Pro. Luminex, xMAP, and xPONENT are trademarks of Luminex Corporation. Windows and Excel are trademarks of Microsoft Corporation. Pentium is a trademark of Intel Corporation.

No rights or licenses under any of Luminex Corporation's patents are granted by or shall be implied from the sale or acquisition of this Bio-Plex system containing Luminex technology (the "System") to you, the end-user. By using this System, you agree that (i) the System is sold only for use with fluorescently labeled microsphere beads authorized by Luminex ("Beads"), and (ii) you obtain rights under Luminex's patents to use this System by registering this System with Bio-Rad in accordance with the instructions accompanying this System and purchasing a kit containing Beads.

Bio-Rad Laboratories, Inc. 2000 Alfred Nobel Drive, Hercules, CA 94547

Copyright © 2001–2011 by Bio-Rad Laboratories. All rights reserved.

# **Table of Contents**

	Welcome 4
1	Installing Bio-Plex Data Pro™ 1.0 Software 5
2	Changing Your Screen Resolution 6
3	Bio-Plex Data Pro <sup>™</sup> Software Licensing
4	An Overview of Bio-Plex Data Pro <sup>™</sup> Software
5	Analyzing Your Data
6	Deactivating Bio-Plex Data Pro <sup>™</sup> Software Licenses
7	Installing Bio-Plex Manager™ 6.1 Software
8	Installing the NetHASP Network License Manager
9	Uninstalling Bio-Rad Products

# Welcome

Thank you for purchasing Bio-Rad Bio-Plex® software.

Bio-Plex Data Pro<sup>™</sup> software meets your multiplex data analysis needs. Bio-Plex Data Pro software is a data management and data visualization tool designed to allow you to quickly draw conclusions about your biological study. It allows researchers to get answers to the complex questions that are at the heart of their research. You can easily manage data from many instrument runs, quickly making comparisons between experimental groups and drawing conclusions.

Bio-Plex Data Pro software is used together with Bio-Plex Manager<sup>™</sup> software to provide a seamless and integrated solution.

The major functions of Bio-Plex Manager software are:

- Evaluation of raw instrument data
- Optimization of standard curves and usable assay range
- Identification of outliers
- · Identification and resolution of problems with instrument runs

## **Packaging Checklist**

The software product you purchased will be in one of the following two configurations.

## **BIO-PLEX DATA PRO (1 CD)**

If there is one CD in the folder, then the folder should include the following:

- Bio-Plex Data Pro Software Getting Started Guide (this document)
- Bio-Plex Data Pro Software Installation CD. The activation code is located on the folder pocket. You will need this activation code to activate the Bio-Plex Data Pro license.

#### **BIO-PLEX MANAGER (2 CDS)**

If there are two CDs in the folder, then the folder should include the following:

- Bio-Plex Data Pro Software Getting Started Guide (this document).
- Bio-Plex Data Pro Software Installation CD. The activation code is located on the folder pocket. You will need this activation code to activate the Bio-Plex Data Pro license.
- Bio-Plex Manager Software Installation CD.
- Release Notes Bio-Plex Manager Software, Version 6.1
- A white envelope containing the Bio-Plex Manager USB Network Security HASP key. This HASP key is used to manage the Bio-Plex Manager user licenses. You will need this HASP key in section 8, Installing the NetHASP Network License Manager, on page 29.

# **1** Installing Bio-Plex Data Pro<sup>™</sup> 1.0 Software

Install Bio-Plex Data Pro<sup>™</sup> software as described in the following sections.

## **Bio-Plex Data Pro System Requirements**

Component	Minimum	Recommended
Operating system	Windows XP Service Pack 3	Windows 7 (32-bit or 64-bit)
Processor	Core 2, 2.6 GHz or higher	Core 4, 3.1 GHz or higher
Hard disk space	160 GB	500 GB
System memory	2 GB	8 GB
Videographic memory <sup>a</sup>	Not applicable	1 GB
Screen resolution	1280 x 1024	1920 x 1080
Screen colors	24-bit True Color	24-bit True Color
Other software	Internet Explorer 8.0 Microsoft Excel 2007	Internet Explorer 8.0 Microsoft Excel 2007

The following are the minimum and recommended system requirements for Bio-Rad Data Pro.

a. Bio-Rad recommends that you keep your video drivers up to date.

## **Installing the Bio-Plex Data Pro Software**

To install the software, insert the Bio-Plex Data Pro CD into the CD-ROM drive on your computer and follow the prompts. The installation should start automatically. If it does not, open a Windows Explorer window and click the CD drive icon. Then double-click *setup.exe* to install the software.

**Note:** You have the option of choosing a Typical or Custom installation. The only difference between the installation types is that Custom allows you to specify where the software is installed. The Typical option installs the product in Program Files/Bio-Rad/Bio-Rad Data Pro.

When the installation is completed, the Bio-Plex Data Pro icon appears on your desktop.

## **Luminex Output CSV Files**

Customers using xPONENT software (all versions) to run their Luminex system must convert their files before these files can be imported into Bio-Plex Data Pro. You must use Bio-Plex Manager 6.1 to convert the Luminex Output CSV files. Conversion of data files of other third-party software is not supported.

# 2 Changing Your Screen Resolution

Your computer screen resolution must be set to the minimum settings to correctly display the Bio-Plex Manager<sup>™</sup> and Bio-Plex Data Pro<sup>™</sup> interfaces. The status bar and some dialog boxes will not display properly at lower resolutions. If your display is currently set to a lower resolution, then follow the procedure for your operating system.

See Bio-Plex Manager System Requirements on page 27 and Bio-Plex Data Pro System Requirements on page 5 for the screen resolution settings.

#### WINDOWS XP

#### To change the screen resolution on Windows XP:

- 1. Go to the Windows Start menu, select Settings, and select Control Panel.
- 2. Open the Display control panel.
- 3. In the Display Properties dialog, select the Settings tab.
- 4. Drag the Screen Area slider to the right (toward More) until you have selected the desired setting. Click OK to accept the settings.

	Display Properties
	Themes Desktop Screen Saver Appearance Settings
	Drag the monitor icons to match the physical arrangement of your monitors.
	2
Arrange Icons By	
R <u>e</u> fresh	
Paste	Display: 1. Plue and Play Monitor so Mobile Intel(R) 965 Express Chipset Family V
Paste Shortcut	Screen resolution Color quality
Graphics Properties Graphics Options	Less More Highest (32 bit)
New +	1024 by 768 pixels
Properties	Videothis device as the onnary monitor.
P <u>i</u> operues	Extend my Windows desktop onto this monitor.
	Identify Troubleshoot Advanced
	OK Cancel Apply

Figure 1. Screen Resolution Dialog Box (Windows XP)

### WINDOWS 7

#### To change the screen resolution on Windows 7:

- 1. Right-click in your desktop, then click Personalize.
- 2. Click Display.
- 3. Click Adjust Resolution.

4. Click the Resolution drop-down list and move the slider until it displays the desired setting.

		×
🔾 🗸 💆 🖉 « Appear	ance and Personalization > Display > Screen Resolution - 4 Search Control Panel	٩
(	Change the appearance of your displays	
	2 3 1 Detect Identify	
C C	Display: Z. Acer B273HU 🔻	
F	Resolution: 1280 × 1024	
c c	Orientation: High	
1	Multiple display: - 1920 × 1080	
1	This is currently you Advanced settings	
	Connect to a projec	
	Make text and other	
N N	What display setting 1280 × 720	
	800 × 600 Ok Cancel Apply	

Figure 2. Screen Resolution Dialog Box (Windows 7)

5. Click OK.

# 3 Bio-Plex Data Pro<sup>™</sup> Software Licensing

This section describes the terms of the Bio-Plex Data Pro<sup>™</sup> evaluation period, the Bio-Plex Data Pro license, and how to activate your license online or offline.

## **Evaluation Period**

There is a 30-day evaluation period with Bio-Plex Data Pro. During the evaluation period, you have full access to all Bio-Plex Data Pro Plus product features. You may continue to use the product once the evaluation period ends on any projects already created. If the evaluation period ends and you have not activated your license, you will not be able to create new projects nor will you be able to import additional data into existing projects. All other features will continue to be available, and you can continue to use the sample projects.

## **Bio-Plex Data Pro Software License**

Each Bio-Plex Data Pro license is a five-user (5) license; you can have up to five computers with active licenses at any time. You can move a license from one computer to another by deactivating it on the first and activating it on the second computer.

## **Activating Your License Online**

You can activate your license at any time during the evaluation period.

Note: You must have Internet access in order to activate your license online.

#### To activate your license online:

- 1. Start Bio-Plex Data Pro.
- 2. In the Evaluate Bio-Plex Data Pro window, click Activate Bio-Plex Data Pro, then click Continue.

	Evaluate Bio-Plex Data Pro	
	Activate Bio-Plex Data Pro	
Contact Technical Support	Continue evaluation	
email: LSG_TEchServ_US@bio-rad.com		
Telephone:		
1-800-424-6723		
Hours:	- NALPFIRON LICENSING SERVICE -	

3. In the Activate Bio-Plex Data Pro window, enter the 18-digit activation code and click Activate.

The 18-digit activation code can be found in the Bio-Plex Data Pro software product folder pocket.

Conteres 2	Activate Bio-Plex Data Pro
Page 1	Please enter your activation code below and click activate.
	Activate License via Technical Support (Off-Line)
Contact Technical Support email: LSG_TechServ_US@bio-rad.com Telephone:	Please take a few moments to activate your product now. No personal data is sent during Activation. This product will attempt to use the Internet during activation. If you have a firewall or proxy server this may prevent this process. If prompted to unblock 'control activation.exe' please do so, Please enter your numeric license code in the box above and lick' activate'. The license activation
1-800-424-6723	code may be found in your product folder.
Hours: 8:00am - 5:00pm (PST)	NALPEIRON LICENSING SER     Activate     Exit

Once the license is activated, the following window is displayed.

Bio-Plex Data Pro License Manager	r	X
	Successful Activation	
Contact Technical Support		
email: LSG_TEchServ_US@bio-rad.com		
Telephone: 1-800-424-6723		
Hours: 8:00am - 5:00pm (PST)	NALPEIRON LICENSING SERVICE	t

4. Click Exit.

**Note:** You can activate your license while the application is being run in evaluation mode. Start Bio-Plex Data Pro in evaluation mode. To activate your license, select Manage License from the Help menu and follow the prompts.

## **Activating Your License Offline**

If you do not have Internet access or you want to activate your license offline, contact Bio-Rad Support at 1-800-424-6723 or LSG.TechServ.US@Bio-Rad.com (email) to request an activation certificate.

Once you receive the activation certificate, follow the procedure to activate your Bio-Plex Data Pro license.

#### To active your license offline:

- 1. Start Bio-Plex Data Pro.
- 2. In the Evaluate Bio-Plex Data Pro window, click Activate Bio-Plex Data Pro and click Continue.

Bio-Plex Data Pro License Manager		23
	Evaluate Bio-Plex Data Pro	
Contact Technical Support	<ul> <li>Activate Bio-Plex Data Pro</li> <li>Continue evaluation</li> </ul>	
email: LSG_TEchServ_US@bio-rad.com Telephone: 1-800-424-6723		
Hours: 8:00am - 5:00pm (PST)	- NALPEIRON LICENSING SERVICE Continue	•

3. In the Activate Bio-Plex Data Pro window, click the Activate License via Technical Support link.

Bio-Plex Data Pro License Manager	×
Constanting 1	Activate Bio-Plex Data Pro
	Please enter your activation code below and click activate.
	Activate License via Technical Support (Off-Line)
Contact Technical Support	Please take a few moments to activate your product now. No personal data is
email: LSG_TechServ_US@bio-rad.com	sent during Activation. This product will attempt to use the Internet during activation. If you have a firewall or proxy server this may prevent this process. If prompted to unblock 'control activation.exe' please do so, Please enter your
Telephone: 1-800-424-6723	numeric license code in the box above and click 'activate'. The license activation code may be found in your product folder.
Hours: 8:00am - 5:00pm (PST)	NALPEIRON LICENSING SER Back Exit
L	

4. Create a text file and copy and paste the Installation ID number from the Import Activation Certificate window into the file. Include the 18-digit activation code, which is found in the Bio-Plex Data Pro software product folder in the text file. Attach the text file in an email to Technical Support with the subject line: Request to Activate Bio-Plex Data Pro License.

Technical Support will process your email request and reply with a certificate and instructions for completing the activation process.

TROTON PA	Import Activation Certificate	
	Please enter your activation certificate below and click Import.	
2 084	Import	2
	Installation ID: 4908-0458-9038-4035-9350-3233-0018-7346	
Contact Technical Support	License Number:	
		_
email: LSG_TEchServ_US@bio-rad.com	Activation Certificates allow you to activate your license with the assist of Technical Support.	
Telephone: 1-800-424-6723	Please copy your license number together with the above Installation 1 and paste them in a email to Technical Support. Technical Support will process the actication request and send back an Activation Certificate.	
Hours:	- NALPEIRON LICENSING SERVICE	
8:00am - 5:00pm (PST)	Back	Exit

- 5. When you receive the certificate, return to the Import Activation Certificate window. Copy and paste the certificate information you receive from Technical Support into the text box.
- 6. Click Import.

The following window is displayed.

Successful Activation
$\checkmark$
LICENSING SERVICE

7. Click Exit.

# **4** An Overview of Bio-Plex Data Pro<sup>™</sup> Software

This section introduces you to Bio-Plex Data Pro<sup>™</sup>. It takes you through and gives you an overview of the product.

1. Start Bio-Plex Data Pro.

The Home view appears. In this view, you can create a new project or open an existing project. The navigation bar in the left pane displays the project workflow, starting at the top with Manage Data Sets and ending with Perform Analysis/Create Charts.

🧧 Bio-Plex Data Pro: Sa	ample Project 1
File Edit Data Vie	w Kelp
🕌 at 🐂 a	4 🔨 🎢 🔠 🔶 🕲 🕲
Manage Data Sets	
B	
Edit Samples Add Columns	
Add Columns	
	A New Project
View Results View Heat Map	- Herr Project
view rieat map	
	Copen Project
l li	
Perform Analysis Create Charts	Recent Projects
Create Charts	Sample Project 1
	Sample Project 2
BIORAD	
BIOHAD	

Figure 3. Home View

2. Click Sample Project 1 to open the example project shipped with Bio-Plex Data Pro.

The Manage Data Sets view displays the data sets in your project.

1 🖉 🕿 1	❹• 🔦 / 🔠 🔶	11 🔕	6					
	Name		Acquisition Time	Description	Imported Date	Imported by	Comment	
	1 Normal vs. Disease plasma 1		7/13/2011 4:08 PM		8/17/2011 5:39 PM			
lanage Data Sets	2 Normal vs Disease serum 1	vgupta	7/13/2011 4:26 PM		8/17/2011 5:39 PM	tyeck		
Add Columns View Results View Heat Map Perform Analysis Create Charts								

Figure 4. Manage Data Sets View

- 3. Select one of the data sets and right-click to open the context menu.
  - You can choose Edit Data Set to open the Edit Dataset dialog box, where you can edit the description of your data set.
  - You can choose Delete Data Set to remove a data set from your project.

🧧 Bio-Plex Data Pro: Sam	ple Project 1									- 0 <u>- X</u> -
File Edit Data View										
🔺 🗗 🕿 🖪	• 🖘 🏞 🎛 🌳	11 🔕	•							B
	Name	User Name	Acquisition Time	Description	Imported D	Date	Imported by	Comment		
	Normal vs. Disease plasma 1	vgupta	7/13/2011 4:08 PM		8/17/2011		neel auror I			1
Manage Data Sets	2 Normal vs Disease serum 1	vgupta	7/13/2011 4:26 PM		8/17/2011		Edit Data Set 🔓			
							Delete Data Set			
						Ø	Copy		Ctrl+C	
87							Copy Table to Clips	board		
Edit Samples Add Columns						_				-
Add Columns										
View Results View Heat Map										
Their make map										
Perform Analysis Create Charts										
Create Charts										
BIORAD										
				_	_	_				

Figure 5. Data Sets Context Menu



4. Click Perform Analysis/Create Charts in the navigation bar. Create Charts In this view, you visualize your results and view the results of common calculations.

r 🗗 🔁	** Help	۵ 🥥		FI Obs (	Conc In Ra	nge Ratio				
]	Start Here	- ( <b>î</b> )		Analyte	P-Value	P-Value Method	Fold Change	Avg	Std Dev	%CV
	Compare by Condition	Ţ	1	Hu FGF basic	0.00340	Kruskal-Wallis	0.885	142.31	60.17	42.2
anage Data Sets	compare by condition		2	Hu Follistatin	0.039	Kruskal-Wallis	0.592	270.19	104.75	38.7
,	Control <none></none>	•	3	Hu G-CSF	0.096	Kruskal-Wallis	1.66	510.18	700.90	137.3
			4	Hu HGF	4.398e-05	Kruskal-Wallis	1.07	362.82	144.27	39.7
	Statistical Test	- (1)	5	Hu Leptin	0.169	Kruskal-Wallis	0.709	4017.72	2789.96	69.4
Edit Samples	🔘 t-test / one-way ANOVA		6	Hu Osteopontin	0.021	Kruskal-Wallis	0.620	10540.93	3967.89	37.6
Add Columns	Mann-Whitney / Kruskal-Wallis		7	Hu PDGF-BB	0.00015	Kruskal-Wallis	2.70	3380.85	3006.64	88.9
			8	Hu PECAM1	0.869	Kruskal-Wallis	0.303	699.84	264.99	37.8
	Filter Results	- (i)	9	Hu Prolactin	0.057	Kruskal-Wallis	1.43	967.24	1311.37	135.5
	Filter by Condition	•		٠					1	1
View Results View Heat Map	Select All Clear All		(	Hu FGF ba	- 👄	🕂 🗰 🕯	1 2	Σο	Fill	Point
	🗸 # Name						Hu FG	F basic		
	8 Breast Cancer									
erform Analysis	S Colon Cancer									
Create Charts	8 Lung Cancer			250-						
	13 Normal				-				_	
				200-						
			E		- ă					
				150-						

Figure 6. Perform Analysis/Create Charts View

**Note:** In order to view results that are meaningful, you must label your samples with information from your experiment. This is done in the Edit Samples/Add Columns view.

#### **DATA OUTPUTS**

There are six types of data outputs. Click on the buttons in the toolbar to display your data in the desired output.

**Scatter Plot** — shows the results by biological replicates using the parameter you choose to draw your comparisons. The scatter plot allows you to view one analyte at a time.

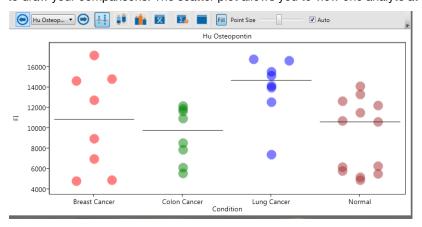


Figure 7. Scatter Plot

**Box and Whisker Plot** — shows the results by biological replicates using the parameter you choose to draw your comparisons. It displays pertinent statistical information for one analyte at a time.

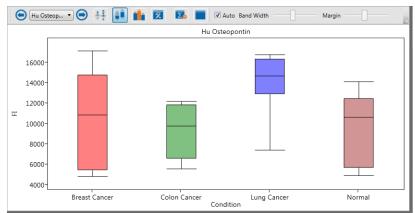


Figure 8. Box and Whisker Plot

**Bar Graph** — shows the results by biological replicates using the parameter you choose to draw your comparisons. You can select as many analytes as you like from the Analyte Table for comparison.

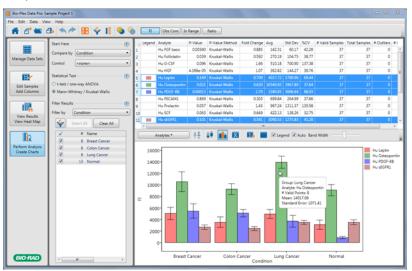


Figure 9. Bar Graph

Condition         # Samples         # Valid Samples         P-Value         P-Value         Mean         Std Dev         StV         Standard Error         Min         Q1           1         Normal         13         13           3093.81         2980.32         96.33         826.59         179.50         581.63         .           2         Perast Cancer         8         8         0.082         Mann-Whitney         0.709         5055.69         2955.24         58.51         1045.89         1316.75         2200.50
Colon Cancer 8 8 0.562 Mann-Whitney 0.190 3529.25 2650.83 75.11 937.21 696.00 1362.06
4 Lung Cancer 8 8 0.070 Mann-Whitney 0.684 4969.59 2213.98 44.55 782.76 1632.75 3412.88

Figure 10. Summary Table

**Export to Statistics Software** — displays the sample information used to generate the other outputs in a format that is convenient for import into statistical software packages.

1	Normal	Breast Cancer	Colon Cancer	Lung Cancer
1	1088.50	6914.25	6539.00	3765.75
2	333.00	8459.00	1071.25	1632.75
3	2364.75	4843.25	696.00	4893.50
4	3978.00	1316.75	4639.50	7999.25
5	6588.00	9326.75	2370.00	3295.25
6	614.75	4106.50	8102.00	5672.50
7	1472.50	1661.50	2581.75	7977.00
8	3313.00	3817.50	2234.50	4520.75
9	548.50			
10	2923.75			
11	179.50			
12	7657.50			
13	9157.75			

Figure 11. Export to Statistics Software

**Sample List** — represents the data in the Results Table section. This can be used to reproduce the scatter plots in Microsoft Excel.

1	Sample Label	Data Set	Description	Condition	FI	
L	X14	Normal vs. Disease plasma 1	breast cancer	Breast Cancer	6914.25	
2	X15	Normal vs. Disease plasma 1	breast cancer	Breast Cancer	8459.00	
3	X16	Normal vs. Disease plasma 1	breast cancer	Breast Cancer	4843.25	
4	X17	Normal vs. Disease plasma 1	breast cancer	Breast Cancer	1316.75	
5	X18	Normal vs. Disease plasma 1	breast cancer	Breast Cancer	9326.75	
6	X19	Normal vs. Disease plasma 1	breast cancer	Breast Cancer	4106.50	
7	X20	Normal vs. Disease plasma 1	breast cancer	Breast Cancer	1661.50	
8	X21	Normal vs. Disease plasma 1	breast cancer	Breast Cancer	3817.50	
9	X22	Normal vs. Disease plasma 1	colon cancer	Colon Cancer	6539.00	
10	X23	Normal vs. Disease plasma 1	colon cancer	Colon Cancer	1071.25	
11	X24	Normal vs. Disease plasma 1	colon cancer	Colon Cancer	696.00	
12	X25	Normal vs. Disease plasma 1	colon cancer	Colon Cancer	4639.50	
13	X26	Normal vs. Disease plasma 1	colon cancer	Colon Cancer	2370.00	
14	X27	Normal vs. Disease plasma 1	colon cancer	Colon Cancer	8102.00	
15	X28	Normal vs. Disease plasma 1	colon cancer	Colon Cancer	2581.75	
	X29	Normal vs. Disease plasma 1	colon cancer	Colon Cancer	2234.50	

Figure 12. Sample List

5. Notice the "Compare by" and Control drop-down lists.

**Compare by** — changes how samples are grouped on the x-axis of the graphs and grouped for analysis in the summary table.

**Control** — chooses the biological replicate group for your experiment. This group is plotted on the left side of the graphs and results in the P-value for the pair-wise statistical tests being presented in the relevant views.

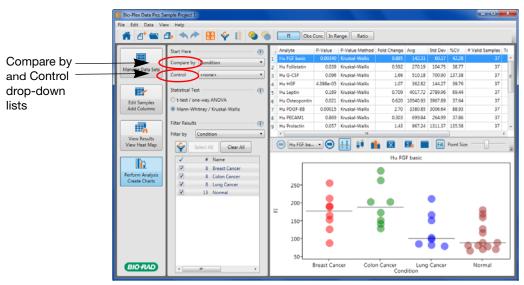


Figure 13. Compare by and Control drop-down lists



6. Click Edit Samples/Add Columns in the navigation bar.

In this view, you see a list of every sample in your project. Each sample is created from samples identified in Bio-Plex Manager<sup>™</sup> software. In this view, you add specific information from your experiment.

Bio-Plex Data Pro: Sa									
le Edit Data Vie		ielp	• I		Data Set 😑 <all :<="" data="" th=""><th>sets&gt;</th><th>• 👄</th><th>Add Column</th><th>•</th></all>	sets>	• 👄	Add Column	•
		Condition 💌	Matrix 🍟	Gender 💌	Data Set 🔹	Sample Type 💌	Description 💌	Sample Label 💌	
	1	Normal	Plasma	Male	Normal vs. Disease plasma 1	Unknown	Normal	X1	
Manage Data Sets	2	Normal	Plasma	Male	Normal vs. Disease plasma 1	Unknown	Normal	X2	
-	3	Normal	Plasma	Male	Normal vs. Disease plasma 1	Unknown	Normal	Х3	
	4	Normal	Plasma	Male	Normal vs. Disease plasma 1	Unknown	Normal	X4	
-	5	Normal	Plasma	Male	Normal vs. Disease plasma 1	Unknown	Normal	X5	
Edit Samples	6	Normal	Plasma	Male	Normal vs. Disease plasma 1	Unknown	Normal	X6	
Add Columns	7	Normal	Plasma	Female	Normal vs. Disease plasma 1	Unknown	Normal	X7	
	8	Normal	Plasma	Female	Normal vs. Disease plasma 1	Unknown	Normal	X8	
	9	Normal	Plasma	Female	Normal vs. Disease plasma 1	Unknown	Normal	X9	
View Results	10	Normal	Plasma	Female	Normal vs. Disease plasma 1	Unknown	Normal	X10	
View Heat Map	11	Normal	Plasma	Female	Normal vs. Disease plasma 1	Unknown	Normal	X11	
	12	Normal	Plasma	Female	Normal vs. Disease plasma 1	Unknown	Normal	X12	
	13	Normal	Plasma	Female	Normal vs. Disease plasma 1	Unknown	Normal	X13	
	14	Breast Cancer	Plasma	Female	Normal vs. Disease plasma 1	Unknown	breast cancer	X14	
Perform Analysis Create Charts	15	Breast Cancer	Plasma	Female	Normal vs. Disease plasma 1	Unknown	breast cancer	X15	
Create Charts	16	Breast Cancer	Plasma	Female	Normal vs. Disease plasma 1	Unknown	breast cancer	X16	
	17	Breast Cancer	Plasma	Female	Normal vs. Disease plasma 1	Unknown	breast cancer	X17	
	18	Breast Cancer	Plasma	Female	Normal vs. Disease plasma 1	Unknown	breast cancer	X18	
	19	Breast Cancer	Plasma	Female	Normal vs. Disease plasma 1	Unknown	breast cancer	X19	
	20	Breast Cancer	Plasma	Female	Normal vs. Disease plasma 1	Unknown	breast cancer	X20	
	21	Breast Cancer	Plasma	Female	Normal vs. Disease plasma 1	Unknown	breast cancer	X21	
	22	Colon Cancer	Plasma	Male	Normal vs. Disease plasma 1	Unknown	colon cancer	X22	
	23	Colon Cancer	Plasma	Male	Normal vs. Disease plasma 1	Unknown	colon cancer	X23	
	24	Colon Cancer	Plasma	Male	Normal vs. Disease plasma 1	Unknown	colon cancer	X24	
	25	Colon Cancer	Plasma	Male	Normal vs. Disease plasma 1	Unknown	colon cancer	X25	
BIO RAD	26	Colon Cancer	Plasma	Female	Normal vs. Disease plasma 1	Unknown	colon cancer	X26	

Figure 14. Edit Samples/Add Columns View



- 7. Click View Results/View Heat Map in the navigation bar.
  - In this view, you can do the following and view your results:
  - Filter your results by removing samples that meet specific criteria.
  - Sort your data and export tables.
  - Create heat maps of your results or custom tables.

Edit Data Vie		elp				~					
	10		I Y I		🔰 🌆 🏭 Analy	ytes 😑 Hu FGF	basic 🔹 💽	FI Obs (	Conc	Range F	latio
		Condition 💌	Matrix 🍟	Gender 💌	Data Set 🔹	Sample Type 💌	Description 💌	Sample Label 💌	FI 💌	FI %CV 💌	FI Std D
	1	Normal	Plasma	Male	Normal vs. Disease plasma 1	Unknown	Normal	X1	79.50	0.889	
lanage Data Sets	2	Normal	Plasma	Male	Normal vs. Disease plasma 1	Unknown	Normal	X2	64.75	3.82	
-	3	Normal	Plasma	Male	Normal vs. Disease plasma 1	Unknown	Normal	Х3	69.50	9.16	
	4	Normal	Plasma	Male	Normal vs. Disease plasma 1	Unknown	Normal	X4	80.00	5.30	
	5	Normal	Plasma	Male	Normal vs. Disease plasma 1	Unknown	Normal	X5	77.25	3.20	
Edit Samples	6	Normal	Plasma	Male	Normal vs. Disease plasma 1	Unknown	Normal	X6	69.00	6.15	
Add Columns	7	Normal	Plasma	Female	Normal vs. Disease plasma 1	Unknown	Normal	Х7	126.50	1.68	
	8	Normal	Plasma	Female	Normal vs. Disease plasma 1	Unknown	Normal	X8	179.50	5.12	
	9	Normal	Plasma	Female	Normal vs. Disease plasma 1	Unknown	Normal	Х9	115.75	2.75	
View Results	10	Normal	Plasma	Female	Normal vs. Disease plasma 1	Unknown	Normal	X10	87.25	1.22	
View Heat Map	11	Normal	Plasma	Female	Normal vs. Disease plasma 1	Unknown	Normal	X11	87.50	5.66	
	12	Normal	Plasma	Female	Normal vs. Disease plasma 1	Unknown	Normal	X12	159.75	8.19	
	13	Normal	Plasma	Female	Normal vs. Disease plasma 1	Unknown	Normal	X13	169.50	6.26	
	14	Breast Cancer	Plasma	Female	Normal vs. Disease plasma 1	Unknown	breast cancer	X14	86.25	1.23	
erform Analysis Create Charts	15	Breast Cancer	Plasma	Female	Normal vs. Disease plasma 1	Unknown	breast cancer	X15	125.25	2.54	
Create Charts	16	Breast Cancer	Plasma	Female	Normal vs. Disease plasma 1	Unknown	breast cancer	X16	212.50	4.33	
	17	Breast Cancer	Plasma	Female	Normal vs. Disease plasma 1	Unknown	breast cancer	X17	256.50	1.38	
	18	Breast Cancer	Plasma	Female	Normal vs. Disease plasma 1	Unknown	breast cancer	X18	164.25	9.69	
	19	Breast Cancer	Plasma	Female	Normal vs. Disease plasma 1	Unknown	breast cancer	X19	191.25	2.77	
	20	Breast Cancer	Plasma	Female	Normal vs. Disease plasma 1	Unknown	breast cancer	X20	188.50	4.13	
	21	Breast Cancer	Plasma	Female	Normal vs. Disease plasma 1	Unknown	breast cancer	X21	152.75	2.08	
	22	Colon Cancer	Plasma	Male	Normal vs. Disease plasma 1	Unknown	colon cancer	X22	140.50	1.51	
	23	Colon Cancer	Plasma	Male	Normal vs. Disease plasma 1	Unknown	colon cancer	X23	202.75	8.89	
	24	Colon Cancer	Plasma	Male	Normal vs. Disease plasma 1	Unknown	colon cancer	X24	290.50	0.487	
BIO-RAD	25	Colon Cancer	Plasma	Male	Normal vs. Disease plasma 1	Unknown	colon cancer	X25	263.75	3.89	

Figure 15. View Results/View Heat Map View

## **Sample Projects**

Bio-Plex Data Pro comes with two sample projects. Use these sample projects to familiarize yourself with Bio-Plex Data Pro. The following is a description of these sample projects.

#### SAMPLE PROJECT 1

The samples in Sample Project 1 are of individuals who have been diagnosed with various cancers and whose blood was processed as serum and plasma. The gender of the individuals is known. This project includes several custom columns:

- Condition the values are Normal or one of several cancers.
- **Matrix** the values are Serum or Plasma.
- Gender the values are Male or Female.

In the Perform Analysis/Create Charts view, "Compare by" is set to Condition. The Plasma samples are excluded from analysis by default. You can click "Filter by" and select Matrix to see the list of samples.

The Sample Info section of Bio-Plex Manager is used to track all of the information that is pertinent to your experiment (in this example, Condition, Matrix, and Gender). When you begin working with your own projects, you will need to add the data you want to use to perform your analysis.

## SAMPLE PROJECT 2

The samples in Sample Project 2 were labeled as Normal, Breast Cancer, Lung Cancer, Colon Cancer, Ovarian Cancer, and Prostate Cancer. In the Perform Analysis/Create Charts view, "Compare by" is set to Description. Labeling samples with informative descriptions in Bio-Plex Manager can eliminate the need to label samples in Bio-Plex Data Pro if the experiment is relatively simple. In this example, we were interested only in whether the samples came from patients diagnosed with a specific type of cancer or were free of any cancer.

# 5 Analyzing Your Data

This section describes how to take data from Bio-Plex Manager<sup>™</sup> and analyze it using Bio-Plex Data Pro<sup>™</sup>.

## **Analyze Your Data in Bio-Plex Manager Software**

Before you use Bio-Plex Data Pro, first analyze the results of your run in Bio-Plex Manager. Bio-Rad recommends you do the following:

- 1. Run the Curve Fit Optimizer for all curves.
  - This algorithm optimizes most curves to create as broad a dynamic range as possible.
- 2. Review the messages in your optimization report.
- 3. Visually inspect your curves and ensure that your data is acceptable for your purposes.

## **Importing Your Data into Bio-Plex Data Pro Software**

There are two methods for transferring your data into Bio-Plex Data Pro:

- If you are viewing your results in Bio-Plex Manager 6.1, you can use the Export Results to Bio-Plex Data Pro function. The data are seamlessly exported from Bio-Plex Manager and imported to Bio-Plex Data Pro. You can create a new project and import the data into it, or you can import the data into an existing project.
- Create a new project and import data files in Bio-Plex Data Pro.

# Selecting Your Samples 🖯

The results files that are imported into Bio-Plex Data Pro contain different sample types. Typically, Standard and Blank samples are unnecessary and, sometimes, confusing. By default, these sample types are automatically excluded. Click Select Sample Type for Analysis to see how these sample types are filtered out. You can always include them by selecting them for inclusion.

## **Labelling Your Samples**

Before you can analyze your data, you must first label your samples with data from your experiments that are pertinent to your analysis. Sometimes the information entered in the description is sufficient to carry out the desired analysis, but usually you need to annotate your data.

1. Open your project, then click Edit Samples/Add Columns

in the navigation pane.

2. Click Add Column Add Column in the toolbar to add a column to the table for each of the parameters you want to track for analysis.

These parameters can be experimental group (for example, Dosage, Concentration, or Time Point) or demographic (for example, Gender, Species, Strain) information.

Edit Samples Add Columns

3. Add sample data to the column by copying and pasting from a Microsoft Excel spreadsheet.

You can arrange the order of the columns by clicking the header and dragging the column to a new location in the table.



You can control the samples that are included in your analysis by filtering your data. Filters can be cleared at any time by clicking the Clear All Analysis Filters button.

## **Viewing Your Data in the Results Table**



- 1. Navigate to the View Results/View Heat Map view.
- 2. In the Results table, click the triangle in the column header to open the drop-down list. The drop-down list displays a list of the different sample types for that column.

🧾 Bio-Plex Data Pro: Sa	ample l	Project 1				-		x
File Edit Data Vie	ew H	elp						
🖌 🗗 🖿 🛛		s / [	<b>]                                    </b>		• 🖪	<b>h H</b>		Ŧ
		Condition 💌	Matrix 💌	Gender 🔹 🕇	Data Set	Ŷ	Sample Type	
	1	Normal S	ortina			sease plasma 1	Unknown	*
Manage Data Sets	2	Normal	0			sease plasma 1	Unknown	
	3	Normal	💡 Reset Sa	mple Lists to D	efault Sort	sease plasma 1	Unknown	
	4	Normal	None			sease plasma 1	Unknown	
	5	Normal	Ascending			sease plasma 1	Unknown	
Edit Samples	6	Normal	) Descending	1		sease plasma 1	Unknown	
Add Columns	7	Normal Fi	- Iter	,		sease plasma 1	Unknown	=
	8	Breast Can	~			sease plasma 1	Unknown	
	9	Breast Can	Y Selec	t All	ar All	sease plasma 1	Unknown	
View Results	10	Breast Can	1	# Name		sease plasma 1	Unknown	
View Heat Map	11	Breast Can	<b>V</b>	8 Breast Can	cer	sease plasma 1	Unknown	
	12	Breast Can	1	8 Colon Can	cer	sease plasma 1	Unknown	
	13	Breast Can	<b>V</b>	8 Lung Cano	er	sease plasma 1	Unknown	
	14	Breast Can	<b>V</b>	L3 Normal		sease plasma 1	Unknown	
Perform Analysis Create Charts	15	Breast Can				sease plasma 1	Unknown	
	16	Colon Can	<		+	sease plasma 1	Unknown	
	17	Colon Can				sease plasma 1	Unknown	
	18	Colon Can		Close		sease plasma 1	Unknown	
	19	Colon Cancer	Plasma	Female	Normal vs. [	Disease plasma 1	Unknown	
	20	Lung Cancer	Plasma	Female	Normal vs. [	Disease plasma 1	Unknown	
BIO RAD	21	Lung Cancer	Plasma	Female	Normal vs. [	Disease plasma 1	Unknown	Ŧ
		•					+	

3. Select and clear the check boxes to include or exclude the desired samples.

Note: When a filter is applied, the filtering is carried throughout the entire project.

You can also view your data as a heat map, a graphical representation of data that enables you to quickly identify the intensity readings and to find patterns in the data. For more information on heat maps, see the *Bio-Plex Data Pro User Guide*.

## **The Perform Analysis/Create Charts View**

When you select a parameter in the "Compare by" drop-down list, a list of sample types is displayed. You can include or exclude the sample types from the Filter list.

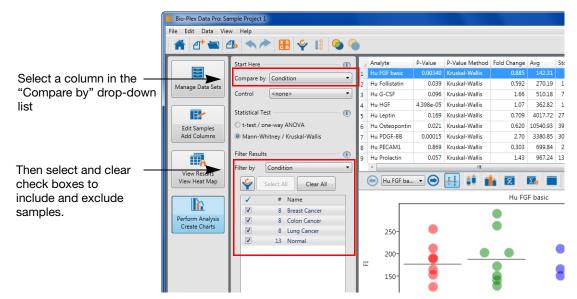
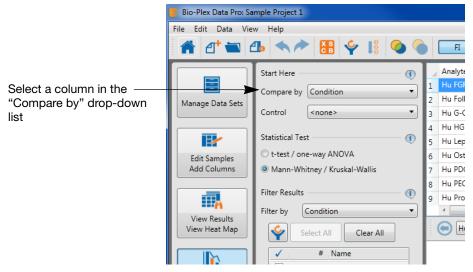


Figure 16. Filtering Samples in the Perform Analysis/Create Charts View

## **Analyzing Your Data in Bio-Plex Data Pro Software**



- 1. Click Perform Analysis/Create Charts.
- 2. From the "Compare by" drop-down list, choose the parameter you want to see on the x-axis on the charts in the Analyte Charts and Tables pane.



3. If you have a control in your experiment, select this group from the Control drop-down list.

	Start Here	4	A
Select a group in the	Compare by Condition	1 2 3 4 5	H H H
	t-test / ore Lung Cancer (8)     Mann-Whi Normal (13)  Filter Results  Filter by Condition	6 7 8 9	H H H H

Review the results using the different display options.
 TIP: When you use the bar graph, you may select as many analytes for comparison as you like.

## **Analyzing Your Data Using Other Tools**

There will be instances when you want to perform an analysis that is not supported by Bio-Plex Data Pro, or when you want to verify the results using other software tools. There are two primary ways to do this:

- Statistical software packages the Export to Statistics Package table is automatically generated in the Perform Analysis/Create Charts view. You can copy your table, plot, or graph to the clipboard and paste the data into the statistical software application. The Export to Statistics Package table is updated when you change the "Compare by" and Control choices.
- **Microsoft Excel** you can perform additional calculations by copying the Group Statistics table in the Perform Analysis/Create Charts view to Excel. You can also produce custom tables in the Results table (View Results/View Heat Map view) by using the filter and sort functions in the column headers.

## For More Information about Bio-Plex Data Pro

You can get more information about Bio-Plex Data Pro from the following sources:

- *Bio-Plex Data Pro User Guide* which is available on your Bio-Plex Data Pro Software Installation CD as a PDF file. This guide is also available from the Help menu in the application. Click Help, then click View Online Help.
- Bio-Plex Data Pro updates, training resources, tutorials are available on the Bio-Rad Laboratories web site. From any view in the application, click Help, then click Go To Resources and Updates to download available resources.

## 6

## Deactivating Bio-Plex Data Pro<sup>™</sup> Software Licenses

Once the license is deactivated, you may continue to use Bio-Plex Data Pro<sup>™</sup> on any existing projects. However, you will not be able to create new projects or import additional data into existing projects.

You can deactivate your license online or offline.

#### To deactivate Bio-Plex Data Pro licenses online:

- 1. From the Help menu, click Manage License.
- Click Yes and click Continue.
   A message confirms that the license has been successfully removed.
- 3. Click OK.

#### To deactivate Bio-Plex Data Pro licenses offline:

- 1. From the Help menu, click Manage License.
- 2. In the De-Activate Bio-Plex Data Pro window, click the De-Activate License via Technical Support link.

Contraction of the second seco	De-Activate Bio-Plex Data Pro This application has already been activated do you want to de-activate? License Number: 111111-333333-222222
Contact Technical Support email: LSG_TEchServ_US@bio-rad.com Telephone: 1-800-424-6723 Hours: 8:00am - 5:00pm (PST)	De-Activate License via Technical Support (Off-Line) De-Activation allows you to return your license to the server for storage and a re-use. This allows you to quickly and easily move the license to an alternate machine. If you plan to keep using this machine but wish to re-format using Windows there is no need to move the license. Once de-activated your program will no longer run on this machine until you re-activate or install the software on a new machine and run the activation process on the new one. This product will attempt to use the Internet during de-activation; if you have a forwall of prove senset this may never this concert. If promoted we have a forwall of prove senset this may never this concert. If proved the never the senset the senset of the proved the senset of the proved the senset the senset of the proved the proved the proved the senset of the proved th

 In the Export De-Activation Certificate window, click Export. The text box is populated with a long string of numbers. This is your de-activation certificate.

Bio-Plex Data Pro License Manager		x	
Contact Technical Support email: LSG_TEchServ_US@bio-rad.com Telephone: 1-800-424-6723 Hours: 8:00am - 5:00pm (PST)	Export De-Activation Certificate		
	Please enter License Number and click 'Export' to generate your De-Activation Certificate.		
	License Number: 010101-101010-1010		
	Export 2928317160978368485901660776 0245069565844230026039109381 63443507045624751305654754 6242503148905014400738397895 0422291549135554985262849588 300398730730562		
	Use the browser to return the De-Activation Certificate		
	De-Activation Certificates allow you to de-activate your license with the assistance of Technical Support.	<b>^</b>	
	Please enter your license number and click 'Export' to generate your De- Activation Certificate.	Е	
	Paste the De-Activation Certificate in an email and send it to Technical	-	
	NALPEIRON LICENSING SERVICE		

4. Copy the contents of the text box into a text file. Attach the file to an email to Technical Support with the subject line: Request to Deactivate Bio-Plex Data Pro License.

**Note:** The number of available licenses will not be updated until Technical Support processes the deactivation request. Technical Support will send a confirmation once the license is deactivated.

# 7 Installing Bio-Plex Manager<sup>™</sup> 6.1 Software

If you purchased Bio-Plex Manager 6.1<sup>™</sup>, follow the instructions in this section for installing the software.

Install, or reinstall, Bio-Plex Manager 6.1 software as described in the following sections. If you need to upgrade your software from a previous version, see the *Bio-Plex Manager 6.1 Software Upgrade and Configuration Guide* to determine the part number of your upgrade kit.

## **Bio-Plex Manager System Requirements**

Following are the minimum and recommended system requirements for Bio-Plex Manager 6.1.

Component	Minimum	Recommended
Operating system	Windows XP (XP Professional required for running Security Edition) or Windows 7 (32-bit)	Windows XP Professional
Processor	Pentium 4 or equivalent, 2.8 GHz	Core 2, 2.6 GHz or higher
Hard disk space	80 GB	160 GB
System memory	1 GB	2 GB
Screen resolution	1024 × 768 (Windows XP) 1280 × 1024 (Windows 7)	1280 × 1024
Screen colors	256 colors	24-bit True Color
Ports for connecting instrument (required for Instrument Control license only)	1 RS232 serial port and 1 USB port	1 RS232 serial port and 1 USB 2.0 port
Port for connecting the HASP key	1 USB port	1 USB 2.0 port
Other software	Internet Explorer 6.0 or later	Internet Explorer 8.0
	Microsoft Excel 2003 or later	Microsoft Excel 2007

**NOTE:** For Windows 7, the workstation version of Bio-Plex Manager 6.1 can be run only on Windows 7 (32-bit); it is not compatible with Windows 7 (64-bit).

## **Installing Bio-Plex Manager Software**

To install the software, insert the Bio-Plex Manager Software CD into the CD-ROM drive on your computer.

#### NOTES

- Before installing Bio-Plex Manager 6.1, we recommend that you first uninstall any existing version of Bio-Plex Manager on your computer.
- We recommend that you turn off any antivirus protection software before installation. Such software, if active, can greatly slow the progress of the installation. If you are unable to turn off your antivirus protection software, allow 15 minutes for complete installation. Do not cancel the installation during this period.

The Bio-Plex Manager Installation Program opens, displaying a navigation screen for performing the installation.

Before you can use Bio-Plex Manager, your system administrator must install the Bio-Plex Manager License Manager software. For more information, see Installing the NetHASP Network License Manager on page 29.

## MICROSOFT.NET

Microsoft.NET is automatically installed on your computer when you install Bio-Plex Manager. It is required to support the logistic curve-fitting features of Bio-Plex Manager.

## **BIOPLEXDATA.MDB** FILE

During installation, you will be prompted to save the application database file *(bioplexdata.mdb)* to a location on your hard drive or a file server. This database file contains logs of calibration, validation, and instrument operations activity for your instrument.

You can save the *bioplexdata.mdb* file to any folder on your computer. The default location is the Bio-Plex Manager application folder. If your computer is connected to multiple instruments, each instrument must have a separate *bioplexdata.mdb* file saved in a different folder.

For more information about the calibration, validation, and instrument operations logs in Bio-Plex Manager 6.1 Security Edition, see the Controlling the System chapter in the *Bio-Plex Manager Software* 6.1 User Guide.

**NOTE:** The *bioplexdata.mdb* file is not compatible with versions of Bio-Plex Manager earlier than 4.0. If you have an earlier version of the software, installing version 4.0 or later will copy the data from your existing database file (*bioplex.mdb*) into the new database. A copy of your old database will remain in the application folder.

## LUMINEX LXR DIRECTORY AND FILES

A directory called Luminex is automatically created in the Program Files folder on your computer during installation. Inside this folder is a folder called LXR that contains various applications for monitoring and communicating with the array reader and platform. A Windows service called LXService is also installed and started. This service enables automatic communication with the instrument when you open Bio-Plex Manager.

## HARDWARE PROTECTION KEY (HASP KEY)

A hardware protection key, also known as a HASP key, is required to run Bio-Plex Manager. The HASP key determines the license (Instrument Control, Desktop, or Network) and the edition (Standard or Security) of your Bio-Plex Manager. A complete list of HASP key part numbers and the software versions they enable is in the *Bio-Plex Manager 6.1 Software Upgrade and Configuration Guide*.

Instrument Control or Desktop HASP keys must be attached to a USB port on the computer running the software. Network HASP keys must be attached to a USB port on the network file server computer.

The HASP key has a driver that is automatically installed when you install Bio-Plex Manager.

## **Upgrading Bio-Plex Manager**

You can upgrade from versions 4.0, 5.0, and 6.0 of Bio-Plex Manager to Bio-Plex Manager 6.1. Before you install Bio-Plex Manager 6.1, you must first uninstall your existing version of Bio-Plex Manager. See Uninstalling Bio-Rad Products on page 33 for more information on uninstalling your software.

# 8 Installing the NetHASP Network License Manager

If you ordered Bio-Plex Manager<sup>™</sup> 6.1, the product folder will include the Bio-Plex Manager Software CD and an envelope containing the hardware protection key, also known as a HASP key.

You may install Bio-Plex Manager on as many computers as you like. The HASP key supports five (5) users at any one time.

Work with your information technology group or the person who manages your network to install the HASP key and related software. Refer to the following sections for detailed instructions.

#### **OVERVIEW OF THE NETHASP NETWORK LICENSE MANAGER INSTALLATION**

The basic steps to install the HASP key are:

- 1. Update the HASP drivers on the network license server that will be managing your Bio-Plex Manager software licenses.
- 2. Install the NetHASP License Manager software on the network license server.
- 3. If necessary, update the HASP configuration file on each of your client machines.

**Note:** For more information, see the *Bio-Plex Manager 6.1 Upgrade and Configuration Guide*. This guide can be found on the Bio-Plex Manager software CD or on the Bio-Rad website.

# Installing the NetHASP License Manager on the Network License Server

Install the network HASP key and License Manager software on a server that is *always on* and to which all PCs running Bio-Plex Manager have access.

**Note:** You must have Administrator privileges to install the HASP drivers and the NetHASP Network License Manager software on the network license server.

#### **INSTALL YOUR HASP DRIVERS**

Follow the procedure to install the HASP drivers on your network license server.

#### To install your HASP drivers:

- 1. Insert the Bio-Plex Manager Software CD in the CD-ROM drive of your network license server.
- 2. Double-click Hasp Utilities\HASPDRIVERS\HASPUserSetup.
- 3. In the Welcome window, click Next.
- 4. Accept the license agreement and click Next.
- 5. Click Next to begin the installation.
- 6. When the drivers have been successfully installed, click Finish.

#### INSTALL THE NETHASP LICENSE MANAGER ON THE NETWORK LICENSE SERVER

Locate the HASP key in the envelope included in your Bio-Plex Data Pro product folder. You will be instructed to insert the HASP key during this procedure.

#### To install the NetHASP License Manager:

- 1. Insert the Bio-Plex Manager Software CD in your CD-ROM drive if you haven't already done so.
- 2. Double-click Hasp Utilities\HASPSERVERS folder\Imsetup.

- 3. In the Welcome window, click Next.
- 4. Accept the license agreement and click Install.
- 5. In the Installation Type window, Service is selected. Accept this default and click Next.

🏞 Installation Type	×
HASP	Do you want to install HASP License Manager as an application or as a service?
	C Application (nhsrvw32.exe)
Aladdim	
	< <u>B</u> ack <u>N</u> ext > <u>C</u> ancel

- 6. In Choose Destination Location, accept the default location, or click Browse and choose a different location where the HASP License Manager will be installed. Click Next.
- 7. In Select Program Manager Group, accept the default or choose another program group. Click Next.
- 8. Click OK to start the installation.
  - When the HASP License Manager is installed, the following dialog box is displayed.

🏂 HASP License Manager	
HASP	HASP License Manager has been successfully installed. Do you want to start it now ? NDTE: HASP key must be attached to the system in order to start the HASP License Manager. © Yes © No
Aladdin	<u>Finish</u>

- While the dialog box remains on your screen, insert the HASP key in the USB port. When the light on the HASP key goes on, the installation is completed and the HASP key has been recognized.
- 10. Return to the dialog box on your screen. In response to the question "Do you want to start it now?" click Yes.
- 11. Click Finish.

## **Configuring Clients to run Bio-Plex Manager Software**

**Note:** System administrators may want to edit the NETHASP.ini file once and have their end users copy the file to the correct location on their client machines.

Start Bio-Plex Manager using the desktop shortcut. Often no additional configuration is required and you will be able to start the application successfully. If you get a message saying that the HASP cannot be found, then follow the procedure to configure the client.

## **GET THE NETWORK LICENSE SERVER ADDRESS**

You will need the address of the network license server in order to configure the clients that are running Bio-Plex Manager.

#### To get the network license server address:

- 1. On the server where the Net HASP License Manager is installed, click the Start menu, then click All Programs > Accessories > Command Prompt.
- 2. In the Command Prompt window, type ipconfig/all.



3. Scroll down the window to locate the IP address, and make a note of the address. You will need this address to configure the clients.

#### **CONFIGURE THE CLIENT**

If you are able to successfully start Bio-Plex Manager, no additional configuration is required. If you get a message saying that the HASP driver is missing, perform the procedure below.

You will need the address of the network license server.

#### To configure the client:

- 1. Open the NETHASP.ini file in the C:\Program Files\Bio-Rad\Bio-Plex Manager 6.1 directory in WordPad or NotePad.
- 2. Find the text NH\_USE\_BROADCAST = ENABLED in the file.
- 3. Change ENABLED to DISABLED. NH\_USE\_BROADCAST = DISABLED
- 4. Enter the IP address of the network license server where the NetHASP License Manager is installed. You may use a numeric address, a DNS alias, or a network station ID. For example:

NH\_SERVER\_ADDR = DD-dell551.genes.bio-rad.com

**Note:** The default port setting for the License Manager is 475. If the server on which the License Manager is installed is firewall enabled, then port 475 must be reserved for the License Manager. Contact Bio-Rad Technical Support if this conflicts with your existing network configuration.

# 9 Uninstalling Bio-Rad Products

Follow the procedure for your operating system to uninstall Bio-Plex Manager<sup>™</sup> or Bio-Plex Data Pro<sup>™</sup> from your computer.

**WARNING!** Uninstalling does not remove an active license from the active license count. Therefore, if you have an active Bio-Plex Data Pro license on a computer and you want to uninstall Bio-Plex Data Pro, first deactivate the license. Once the software is uninstalled, you will not be able to access the license. If you need to use a license that was not deactivated, contact Bio-Rad Technical Support for assistance.

#### To uninstall Bio-Rad products on Windows XP:

- 1. Click the Start menu, then click Add or Remove Programs from the list.
- 2. Click the name of the software program you want to uninstall.
- 3. Click Remove.

#### To uninstall Bio-Rad products on Windows 7:

- 1. Click the Start menu, then click Control Panel.
- 2. In the Programs section, click "Uninstall a program."
- 3. In the "Uninstall or change a program" window, find the name of the Bio-Rad software application you want to uninstall.
- 4. Select the application, then click Uninstall.

Bio-Plex Data Pro Software Getting Started Guide



Bio-Rad Laboratories, Inc.

Life Science Group 
 Web site
 www.bio-rad.com
 USA 800 424 6723
 Australia 61 2 9914 2800
 Austral 01 877 89 01
 Belgium 09 385 55 11
 Brazil 55 31 3689 6600

 Canada 905 364 3435
 China 86 21 6169 8500
 Czech Republic 420 241 430 532
 Denmark 44 52 10 00
 Finland 09 804 22 00

 France 01 47 95 69 65
 Germany 089 31 884 0
 Greece 30 210 777 4396
 Hong Kong 852 2789 3300
 Hungary 361 459 6100
 India 91 124 4029300

 Israel 03 963 6050
 Italy 39 02 216091
 Japan 03 6361 7000
 Korea 82 2 3473 4460
 Malaysia 60 3 2117 5260
 Mexico 52 555 488 7670

 The Netherlands 0318 540666
 New Zealand 64 9 415 2280
 Norway 23 38 41 30
 Poland 48 22 331 99 9
 Portugal 351 21 472 7700

 Russia 7 495 721 14 04
 Singapore 65 6415 3170
 South Africa 27 861 246 723
 Spain 34 91 590 5200
 Sweden 08 555 12700

 Switzerland 061 717 95 55
 Taiwan 886 2 2578 7189
 Thailand 66 2 6518311
 United Kingdom 020 8328 2000

