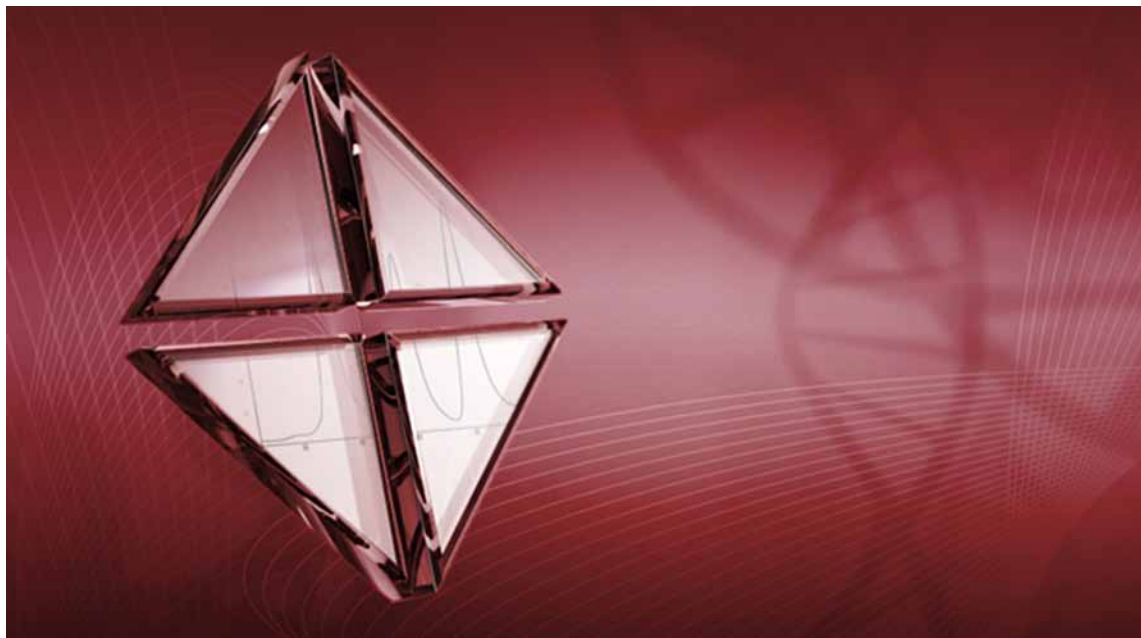


UNICORN™ 6.4

System Control Manual



Page intentionally left blank

Table of Contents

1	Introducing UNICORN System Control	5
1.1	About this manual	6
1.2	About System Control of UNICORN	7
1.3	Important user information	8
1.4	Associated documentation	9
2	General UNICORN operation	10
2.1	Log on and log off routines	11
2.2	Help functions	13
3	The System Control module	15
3.1	System Control module overview	16
4	How to perform a run	18
4.1	Connect to system	19
4.2	Start a method run	21
4.3	Monitor a run	26
4.4	Manual system control	34
4.5	Method queue, Design of Experiments, Scouting and BufferPro runs	37
5	System Settings	41
6	Troubleshooting	44
	Index	48

Page intentionally left blank

1 Introducing UNICORN System Control

About this chapter

This chapter contains:

- A general introduction to **System Control** using the UNICORN software.
 - Information about the user documentation for UNICORN, including an overview of related documents describing the use of the software.
-

Software declaration of conformity

UNICORN 6.4 is technically compatible with all relevant sections of FDA 21 CFR Part 11. A part 11-system assessment checklist is available on request from your local GE representative.

In this chapter

This chapter contains the following sections:

Section	See page
1.1 About this manual	6
1.2 About System Control of UNICORN	7
1.3 Important user information	8
1.4 Associated documentation	9

1.1 About this manual

Purpose of this manual

The purpose of the UNICORN System Control Manual is to provide a guide describing the general system control functions in UNICORN. It includes general operation, system settings and instructions on how to perform a chromatography run. It covers the features and tools included in the **System Control** module of the UNICORN software with practical instructions.

The manual covers the following:

- general UNICORN operation, including log on and log off.
- how to perform a run
- how to change system settings.

Refer to the instrument's Operating Instructions for further information on how to perform a run.

Note: *The UNICORN System Control Manual does not describe the functions of every command in all panes and dialogs of the user interface. Refer to the online help for information about commands that are not described in this manual. The online help in the **System Control** module is accessed either by clicking help buttons in software dialogs, by pressing the **F1** key, or selecting **Help:Help for System Control**.*

Typographical conventions

Menu commands, field names and other text items from the software are quoted exactly as they appear on the screen, in a bold italic typeface:

*Example: **Method Navigator***

Controls on the instrument, computer or keyboard keys are shown with a bold, regular typeface:

*Example: Press the **Delete** key.*

Text that the user must either type exactly as shown in the manual, or that UNICORN displays as a response (not a regular part of the graphic user interface), is represented by a monospaced typeface within quotation marks:

Example: "Connection change"

File system paths are represented by a monospaced typeface:

Example: C:\Program Files\GE Healthcare\UNICORN

1.2 About System Control of UNICORN

Introduction

This section is a brief introduction to the control system used in UNICORN.

What is UNICORN?

UNICORN is a complete software package for:

- control and supervision of chromatography systems.
 - evaluation and analysis of the results from separation runs.
-

Description of the *System Control* module

The **System Control** module is used to start, monitor and control a chromatography run. Runs can be performed in three different ways, as listed below:

- Using a preprogrammed method without any manual interactions.
 - Interact with the instrument during a method run by performing manual instructions.
 - Perform manual runs. This approach may be useful for simpler procedures such as priming tubing with buffer.
-

1.3 Important user information

Read this before running *System Control*



All users must read the entire *Operating Instructions* before installing, operating or maintaining the chromatography system, and running *System Control*.

Always keep the *Operating Instructions* at hand when operating ***System Control***.

Do not operate the chromatography system in any other way than described in the user documentation. If you do, you may be exposed to hazards that can lead to personal injury and you may cause damage to the equipment.

1.4 Associated documentation

Introduction

This section describes the user documentation that is delivered with UNICORN.

User documentation

The user documentation listed in the table below is available from the **Help** menu in UNICORN and as printed books.

Document	Main contents
UNICORN Method Manual	Overview and detailed descriptions of the method creation features in UNICORN. Instructions on how to use the software. Workflow descriptions for common operations.
UNICORN Evaluation Manual	Overview and detailed descriptions of the evaluation features in UNICORN. Instructions on how to use the software. Workflow descriptions for common operations.
UNICORN Administration and Technical Manual	Overview and detailed description of network setup and complete software installation. Administration of UNICORN and the UNICORN database.
UNICORN System Control Manual	Overview and detailed description of the system control features in UNICORN. Includes general operation, system settings and instructions on how to perform a run.
UNICORN Online Help	Dialog descriptions for UNICORN (from the Help menu).

2 General UNICORN operation

About this chapter

This chapter includes a description of general UNICORN operation which includes log on and log off UNICORN, how to structure files and folders and how to use the Online Help.

In this chapter

This chapter contains the following sections:

Section	See page
2.1 Log on and log off routines	11
2.2 Help functions	13

2.1 Log on and log off routines

Start UNICORN and log on

Follow the instructions below to start UNICORN and log on to the program. A valid e-license must be available for the workstation. See UNICORN Administration and Technical Manual for more information about e-licenses.

Step	Action
------	--------

- | | |
|---|---|
| 1 | Double-click the UNICORN icon on the desktop. |
|---|---|

Result: The **Log On** dialog opens.

Note:

*If there is no connection to the database it is still possible to log on to UNICORN and control a running system. The **Log On** dialog will give the option to start **System Control** without a database. Click **Start System Control** to proceed to the next **Log On** dialog.*

- | | |
|---|------------------------------|
| 2 | In the Log On dialog: |
|---|------------------------------|

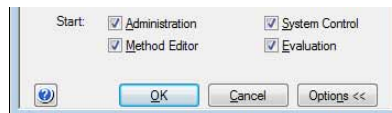
- select **User Name**.
- and
- enter **Password**.

Note:

*It is also possible to select the **Use Windows Authentication** checkbox and enter a network ID in the **User Name** field.*



- click the **Options** button, and select which UNICORN modules to start.

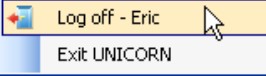
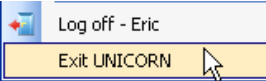


- click **OK**.

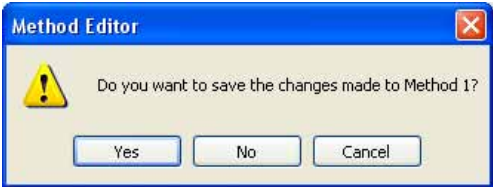
Result: The selected UNICORN modules open.

Log off or exit UNICORN

Follow the instruction below to log off or exit UNICORN. This can be performed from any of the UNICORN modules.

If you want to...	then...
log off UNICORN	<div>on the File menu, click Log off.</div> <div></div> <div>Result: All open UNICORN modules close and the Log On dialog opens.</div>
exit UNICORN	<div>on the File menu, Exit UNICORN.</div> <div></div> <div>Result: All open UNICORN modules close.</div>

Note: If an edited method or result is open and not saved when you try to exit or log off UNICORN, you will see a warning. Click **Yes** to save, **No** to exit without saving, or **Cancel** to stay logged on.



2.2 Help functions

Default installation folders

The default path to the program files folder where UNICORN is installed in a 32-bit installation of Windows® 7 is `C:\Program Files`. The default path to the folder where UNICORN is installed in a 64-bit installation of Windows 7 is `C:\Program Files (x86)`.

In this manual the file path to the installation folder is shown as follows:

Example: `Program Files Path\GE Healthcare\UNICORN\`


Replace Program Files Path with the correct path for your version of Windows.

The help viewer application

As part of the UNICORN software installation, a special viewer for the online help will be installed. This application, the **MadCap™ Help Viewer**, is accessed from the UNICORN user interface either by clicking help buttons in dialogs, by pressing the **F1** key or by clicking **Help** menu items.

By default, this application will place a shortcut icon on the desktop. If you cannot log on to UNICORN, you can open the online help using this shortcut.

To start the UNICORN online help:

Step	Action
1	Double-click the shortcut icon. 
2	On the File menu, click Open .
3	Browse to the folder <code>Program Files Path\GE Healthcare\UNICORN\UNICORN 6.4\Documentation\Help\Chromatography</code>
4	Select the file <code>Manual.mchelp</code> .
5	Click the Open button. <i>Result:</i> The online help portal page opens.

2 General UNICORN operation

2.2 Help functions

Note: *Sometimes Windows may need to register the MadCap Help Viewer as the application for files of the type .mchelp before it will recognize calls from help buttons in UNICORN 6.4. If that happens, you may need to open the viewer manually as described above. It should only be necessary to do this once for a new Windows user profile.*

3 The System Control module

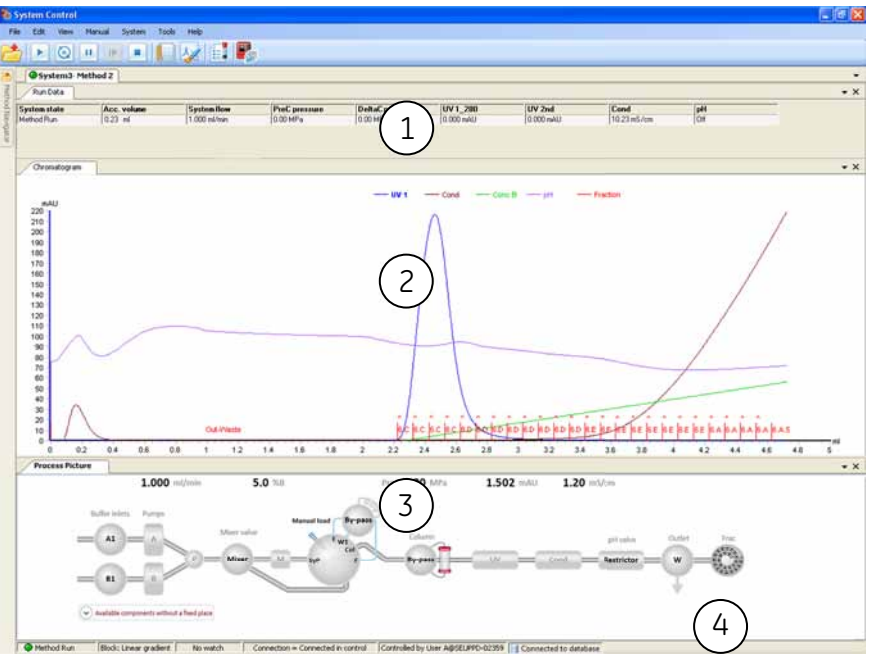
About this chapter

This chapter gives an overview of the **System Control** module.

3.1 System Control module overview

Illustration of the *System Control* user interface

The illustration below shows the different panes and areas of the *System Control* module.

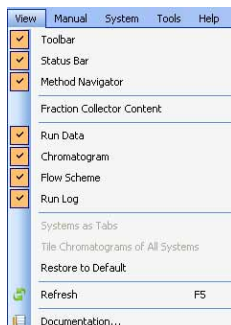


Part	Description
1	Run Data: Presents current run data values.
2	Chromatogram: Illustrates data as curves.
3	Process picture: Illustrates the current flow path.
4	Status bar: Shows information on instrument and database connection.

Select panes to display

The following instruction describes how to display panes:

- | Step | Action |
|------|--------------------------------|
| 1 | On the View menu. |
| 2 | Select which panes to display. |



Result: Selected panes will be displayed on the screen. The **Method Navigator** with folders and methods will be displayed at the left side.

Instrument states

Information about the status of instrument connections and chromatography runs are displayed as states. The different states are displayed in the **System Control** module in **Run Data** and in the **Status** bar.

4 How to perform a run

About this chapter

This chapter includes a description of how to use the **System Control** module to connect to a system and how to perform and monitor a run.

In this chapter

This chapter contains the following sections:

Section	See page
4.1 Connect to system	19
4.2 Start a method run	21
4.3 Monitor a run	26
4.4 Manual system control	34
4.5 Method queue, Design of Experiments, Scouting and BufferPro runs	37

4.1 Connect to system

Connect instrument to UNICORN

Follow the instruction below to connect the instrument to UNICORN.

Step	Action
------	--------

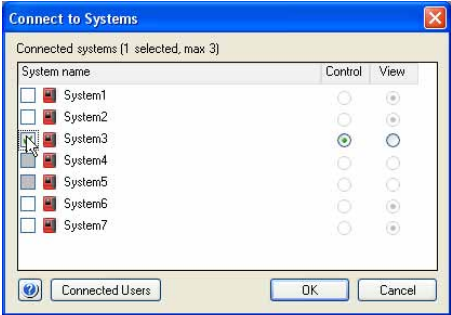
- | | |
|---|--|
| 1 | In the System Control module, <ul style="list-style-type: none">click the Connect to Systems button, |
|---|--|




or

- on the **System** menu, click **Connect to Systems**.

Result: The **Connect to Systems** dialog opens.

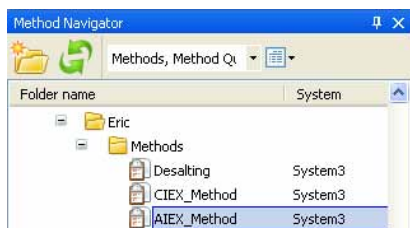


Step	Action
2	<p>In the Connect to systems dialog:</p> <ul style="list-style-type: none">• Select a system by selecting the check box in front of the name.<ul style="list-style-type: none">- To control the selected system, click the Control option button.- To view runs on the selected system, controlled by another user, click the View option button.• Click OK. <p>Note: <i>Instruments that are turned off or disconnected from the network appear dimmed and cannot be connected.</i></p> <p>Tip: <i>To view the users currently connected to systems, either in control or view mode, click the Connected Users button.</i></p> <p>Result: UNICORN states Connection = Connected in control or Connection = Connected in view in the status bar in the lower part of the System Control window.</p> 

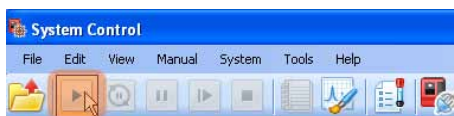
4.2 Start a method run

Select a method to run

Step	Action
1	In the Method Navigator pane in System Control , select the method to run.



- 2
- click the **Run** button in the toolbar,



or

- on the **File** menu click **Run**.

Result:

- If a **Start Protocol** was chosen when the method was created, the first dialog of the **Start Protocol** opens. Default is **Result Name and Location**.
- If no **Start Protocol** has been chosen, the **Select Columns** dialog opens.
- If **Column type Any** was chosen in the **Method Settings** phase, the **Select Columns** dialog does not open and the run starts immediately.
- If **Column Logbook** is not activated the **Select Columns** dialog does not open and the run starts immediately.

The Start protocol

The table below describes the different dialogs of the **Start Protocol** that can be selected in the **Method Settings** phase when a method is created. Some dialogs are system specific.

Dialog	Description
Fraction collector	Displays the Fraction collector setup; tube type and position.
Variable List	Displays a list of all method variables and allows changing of variable values.
Scouting	Displays a list of all scouting parameters and allows: <ul style="list-style-type: none"> • Changing of parameter values. • Inserting or removing scouting parameters. • Inserting or removing scouting runs.
Text instructions	Displays the text instructions of the method
Notes	<ul style="list-style-type: none"> • A start notes tab allows adding of free text. • A method notes tab allows viewing of text added at method creation. <p>Note: <i>Run and Evaluation Notes will be available for adding of free text during method run and evaluation respectively. All notes will be present in the documentation in Evaluation.</i></p>
Gradient	Displays the gradient programmed for the method. The X-axis shows the theoretical duration of the method.
BufferPro	Displays Q-inlet positions, used for BufferPro, and descriptions for preparation of stock solutions included in the selected BufferPro recipe.
Column	Displays the column type chosen for the method as well as column run parameters and ordering information. <p>Note: <i>To get information about the chosen column position, see Variable List.</i></p>

Dialog	Description
Evaluation	Displays a list of available evaluation procedures. Selected procedures will be run at the end of the method run. The selected evaluation procedures may be edited from this list. See UNICORN Evaluation Manual for more information.
Method information	<ul style="list-style-type: none"> • A properties tab displays information about creation and modification of the method: dates and users. • A method duration tab displays information about approximate run time and volume. • A signature tab displays information about method signatures, if applicable.
System Settings	Displays a list of current system settings.
Calibration	Displays a list of the latest performed calibrations.
Questions	<p>Displays predefined questions and reminders.</p> <p>Note: <i>Questions are defined when the method is created in the Method Editor.</i></p>
Changeable Batch ID	<p>Allows the user to change the Batch ID.</p> <p>Note: <i>The Batch ID is displayed in the beginning of the run log.</i></p>
Result Name and Location	<p>Displays run info, result location and name. Allows:</p> <ul style="list-style-type: none"> • Changing result location by using the browser. • Changing name of Design of Experiment or Scouting directory. • Changing of result name.

Navigate in the Start protocol

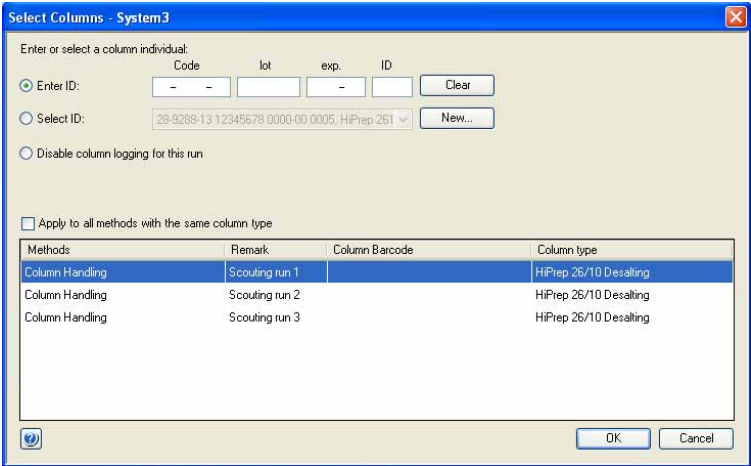
Step	Action
------	--------

- | | |
|---|---|
| 1 | Make the necessary changes in the displayed dialog. |
| 2 | To proceed to next dialog, click Next . |

Step	Action
3	<p>In the last displayed dialog in the start protocol, click Start.</p> <p><i>Result:</i> The Select Columns dialog opens.</p> <p>Note:</p> <p><i>If Column Logbook is not activated or column type Any was chosen in the Method Settings phase, the run starts immediately.</i></p>


Column handling and method start

- The instruction below assumes that:
- **Column Logbook** is activated.
 - A **Column type** has been selected when the method was created.
 - A valid column license is used.
- To register a column, see UNICORN Method Manual.

Step	Action
1	<p>Click Start on the last page of the Start Protocol.</p> <p><i>Result:</i> The Select Columns dialog opens.</p> 

Step Action

2 Select or enter a column ID according to one of the following options.

If you want to...	then...
select a column from a list	select Select ID and select the column to be used from the list.
enter column ID manually	select Enter ID and manually enter the column code in the Code box.
enter column ID using the 2D Barcode scanner	<ul style="list-style-type: none">• select Enter ID• make sure the cursor is in the first position of the Code box of the dialog.• point the Barcode scanner towards the data matrix tag on the column.• press and hold the trigger to create a beam.• when the Barcode scanner beeps, the column ID is registered and displayed in the dialog box. 

3 Click **OK**.
Result: The run starts.

4.3 Monitor a run

Introduction

This section describes the data shown in **System Control** during a run, and the procedure to customize the view of the different panes. It also describes how to enable alarm and error notifications.

You can follow the ongoing method run in the **System Control** module.

- The current system state is shown in the **System state** box in the **Run Data** pane. For example, it may state **Method Run**, **Wash** or **Hold**.
- Selected curves are shown in the **Chromatogram** pane.
- The current flow path is shown in the **Process Picture** pane.

To find an overview of the **System Control** user interface, see *Section 3.1 System Control module overview, on page 16*.

Pump wash

Note: *If a pump wash is included in the method and an **Alarm and Error** state occurs, click **Continue** twice to return to **Run** state.*

Open the Customize dialog

To customize displayed information and data in the different panes:

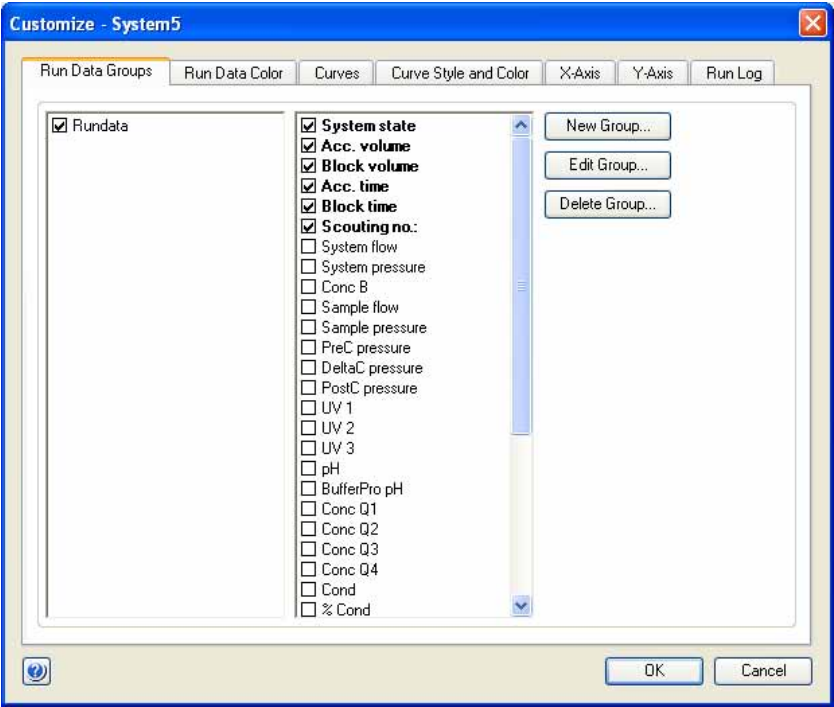
- Click the **Customize** button in the Tool bar.



or

- Right-click in the different panes (except **Process Picture**) and click **Customize**.

Result: The **Customize** dialog is opened.



Note: Further information about the settings in the **Customize** dialog can be found in the Online Help.

Customize Run data

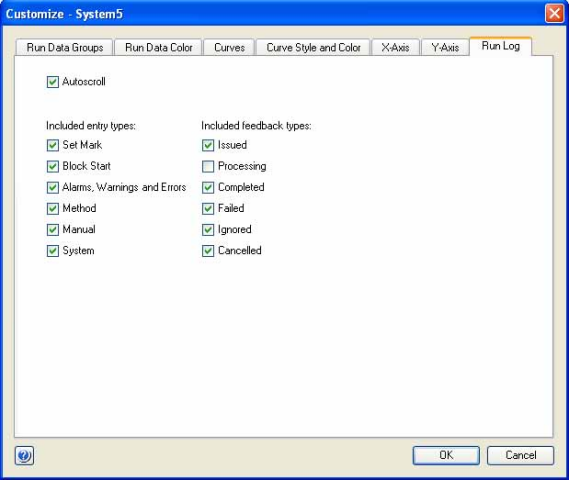
Tab in <i>Customize</i> dialog	Customization
Run Data Groups	Selects which run data to display in the Run Data pane.
Run Data Groups buttons: <ul style="list-style-type: none">New GroupEdit GroupDelete Group	Standardize displayed run data by creating run data groups.
Run Data Color	Changes color of displayed data.

Customize Chromatogram

Tab in <i>Customize</i> dialog	Customization
<i>Curves</i>	Chooses curves to be displayed.
<i>Curve style and color</i>	Customizes the appearance of the displayed curves.
<i>X-axis</i>	Chooses base unit (time or volume) and set axis scale.
<i>Y-axis</i>	Sets scale for the different curves and select which axes to display.

Customize Run Log

The **Run Log** pane displays registered actions during the run.

Tab in <i>Customize</i> dialog	Customization
<i>Run Log</i>	<div><p>Selects what to display in the log.</p><p>Note: <i>All information in the run log is saved. The selections define what is displayed.</i></p></div>

Select and zoom a curve in the chromatogram

The following instructions shows how to select a curve and to zoom in the chromatogram.

Command	Instruction
Select a curve	<ul style="list-style-type: none"> Position the mouse marker over a curve name: The curve line becomes bold to facilitate the identification of desired curve. Click the curve: The corresponding legend text is shown in bold type and the Y-axis scale changes to the unit applicable for the curve.
Zoom	<ul style="list-style-type: none"> Click and hold the left mouse button with the pointer positioned in the top left corner of the area you want to zoom in on. Drag the pointer downwards and to the right. A dotted rectangle marks the selected area. Select the area you want to zoom in on, and release the left mouse button. (The text Zoomed mode is shown in the chromatogram) To reset zoom, right-click and click Reset zoom. To reset the last zoom action, right-click and click Undo zoom.
Right-click menu options	<ul style="list-style-type: none"> Right-click and click options and actions. See <i>Online Help</i> for information.

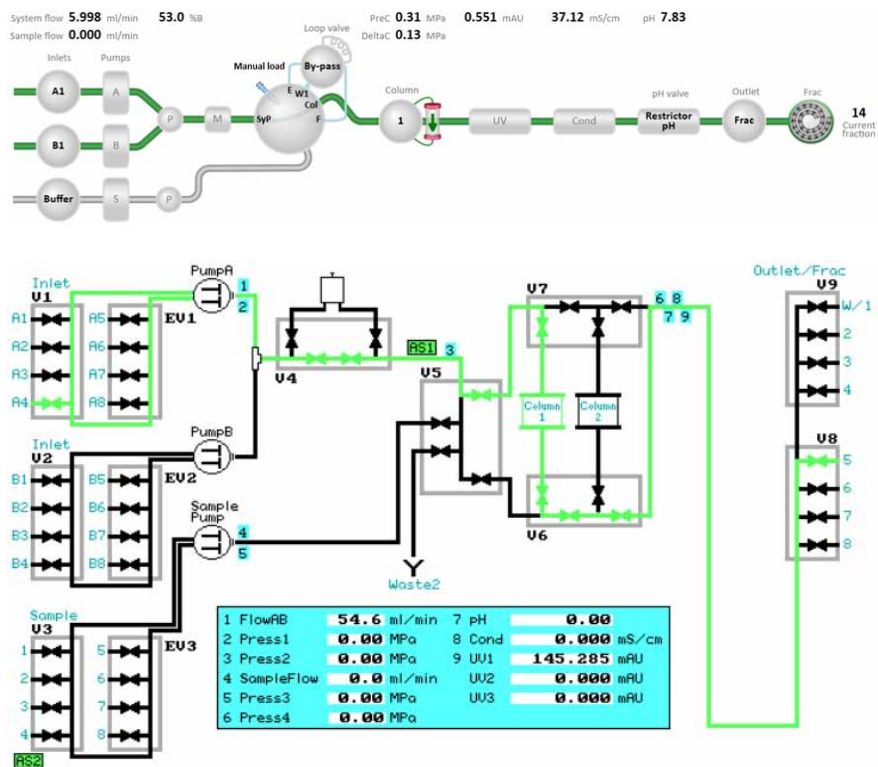
The Process Picture pane

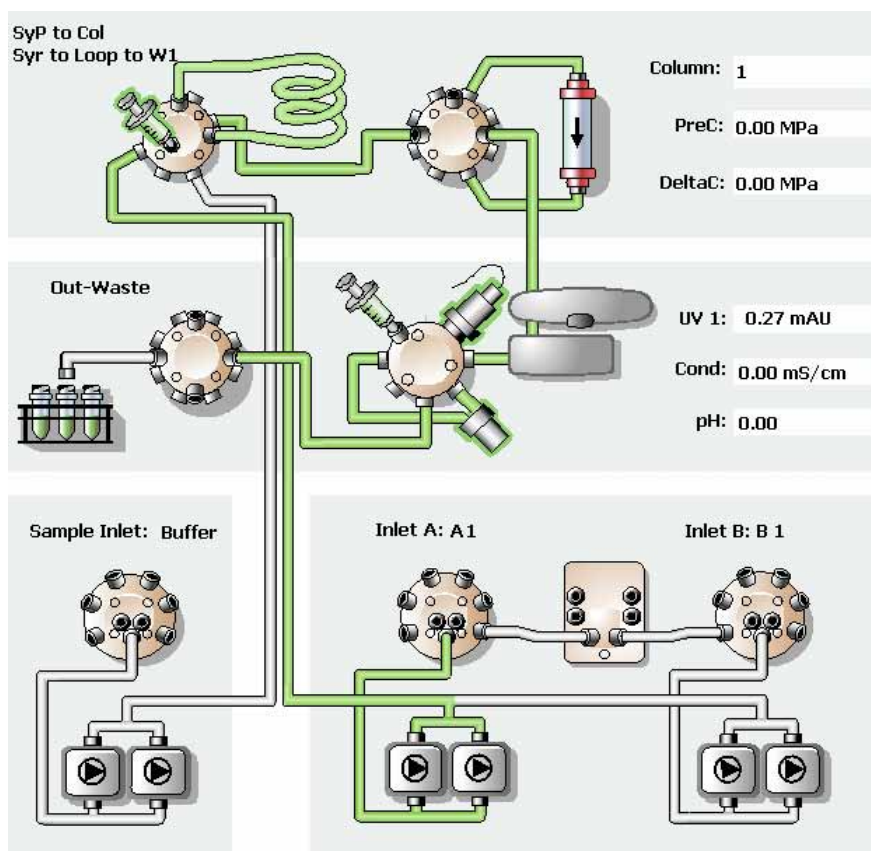
The **Process Picture** pane shows the current flow path during the run. Color indication is applied and real-time data from monitors are shown.

The following illustrations show three examples of process pictures.

4 How to perform a run

4.3 Monitor a run





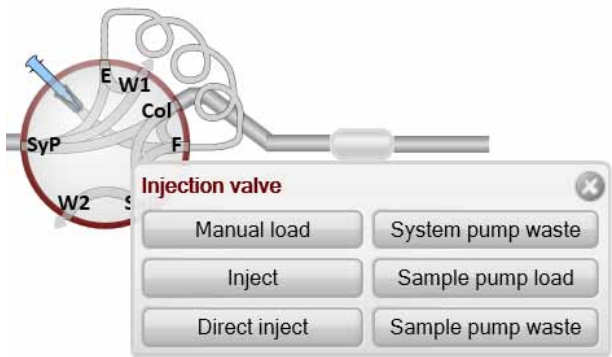
The following table describes how color indicates used flow paths.

Color	Indication
Green	Open flow path
Gray	Closed flow path

Actions in the Process Picture pane

For some systems it is possible to interact with the **Process Picture** pane.

- To open a related instruction, click or double-click on the component depending on the system. For some systems a pop-up toolbar is shown. Instructions can be given from the pop-up toolbar of each component.



- To find associated instructions for the component, right-click on the component and click **Instructions**.
- To display a detailed picture with explanations, for example for a valve, right-click on the component and click **Show Details** or **Detailed picture** depending on the system.

See *Perform manual instructions during a method run*, on page 35 for more information.

Alarm, warning and error notification

Alarms, warnings and errors might be displayed during the run. For more information see *Error messages and alarms*, on page 47.

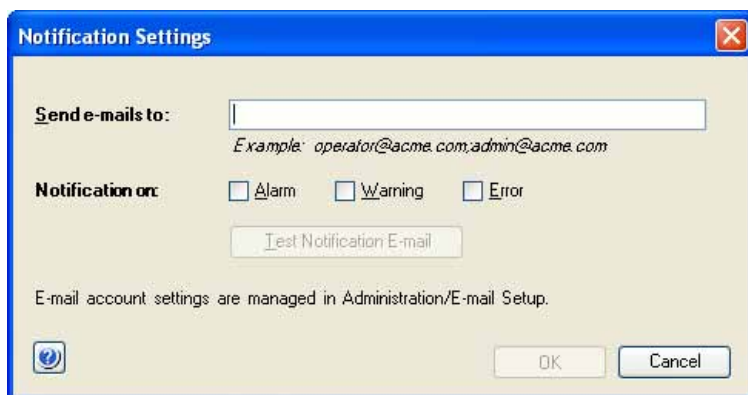
If an alarm, a warning or an error occurs during the run, it is possible to get a notification sent to a specified e-mail address.

Note: This e-mail address setting is only for alarms, warnings and errors and differs from the e-mail address settings made in the **Administration** module.

Follow the instructions to enable notifications for alarms, warnings and errors.

Step	Action
1	In the System Control module, on the System menu, click Notification Settings . <i>Result:</i> The Notification Settings dialog opens.

Step	Action
2	<ul style="list-style-type: none">• Type in the e-mail address in the Send e-mails to field. Separate multiple addresses with a semicolon.• Select for which occurrences notifications should be sent in the Notification on check boxes.• Click Test Notification E-mail to test if the e-mail settings are correct.• Click OK.



The image shows a 'Notification Settings' dialog box with a blue title bar and a red close button. It contains a text field for 'Send e-mails to:' with an example address 'operator@acme.com;admin@acme.com'. Below this are three checkboxes for 'Notification on': 'Alarm', 'Warning', and 'Error'. A 'Test Notification E-mail' button is positioned below the checkboxes. At the bottom, there is a note: 'E-mail account settings are managed in Administration/E-mail Setup.' and two buttons: 'OK' and 'Cancel'.

Notification Settings

Send e-mails to:
Example: operator@acme.com;admin@acme.com

Notification on: ☐ Alarm ☐ Warning ☐ Error






E-mail account settings are managed in Administration/E-mail Setup.

4.4 Manual system control

The toolbar

To hold, pause, continue or end a run, use the buttons in the tool bar.

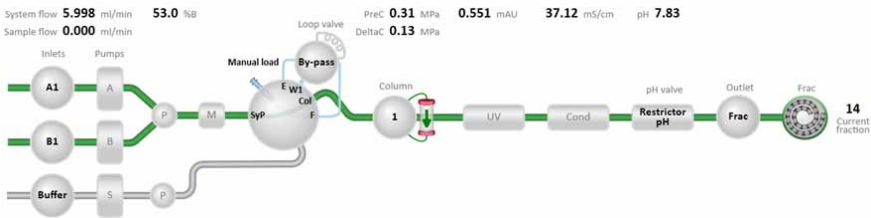
The following table describes the function of these buttons.

Button	Function
Hold 	Suspends the execution of the method, while liquid is still pumped at the current flow rate and eluent concentration.
Pause 	Suspends the execution of the method and stops all pumps.
Continue 	Resumes a held or paused run. If the system is in the state Wash , or when Alarms and Errors have been acknowledged, the system returns to the previous state.
End 	Terminates the run.
Run 	Starts a new method run, selected in the method navigator. If a another method run is ongoing, a method queue will be created and the new run will start when the ongoing run has ended.

Manual Instructions

To open the **Manual Instructions** dialog, use one of these options:

- On the **Manual** menu, click **Execute Manual Instructions**.
- or
- Click or double-click on a component in the **Process Picture** (only available for some systems).



- or
- Double-click the arrows beside a selected data in the **Run Data** pane.

System 5 - Method 2						
Run Data						
System state	Acc. volume	Block volume	Acc. time	Block time	Scouting no.:	System flow >>
Method Run	4.73 ml	2.50 ml	4.92 min	2.50 min	0	1.000 ml/min
DeltaC pressure >>	UV 1.280 >>	Cond >>	Column position >>	Outlet >>	Inlet A >>	Inlet B >>
0.01 MPa	-0.157 mAU	6.83 mS/cm	1	Frac	A1	B1

Note: For some systems it is possible to open the most relevant instruction by clicking or double-clicking on a component in the **Process Picture** or in the **Run Data** pane. By right-clicking, there is an option to select one instruction from a group of instructions associated with the component.

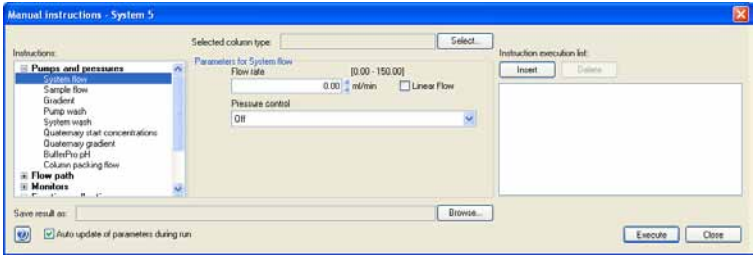
Perform manual instructions during a method run

The following instruction is an example of how to manually interact with an ongoing method run. The example shows how to increase the system flow.

Step	Action
1	Open the Manual Instruction dialog according to the above instruction.
2	In the Instructions list, select instruction group Pumps and pressures and instruction System flow .

Step Action

- 3 Enter a new **Flow rate** value.



- 4 To execute several instructions at the same breakpoint, select and edit an instruction and click **Insert**. Repeat for several instructions.
- 5 To update parameter fields during method run, check the **Auto update...** box.
- 6 To perform the instructions, click **Execute**.

4.5 Method queue, Design of Experiments, Scouting and BufferPro runs

Introduction

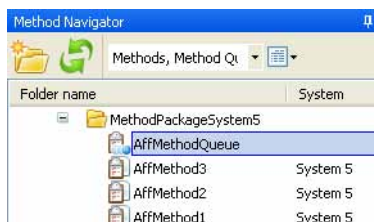
This section describes how to start method queues, Design of Experiment runs and Scouting runs. Some preparations before a BufferPro run are also described.

Run Method queues

A method queue with a number of methods is created in the **Method Editor**. See UNICORN Method Manual for information.

The following instruction describes how to start and monitor a method queue that was created in the **Method Editor**.

- | Step | Action |
|------|--|
| 1 | In the Method Navigator in System Control , select the method queue and click the Run button. |



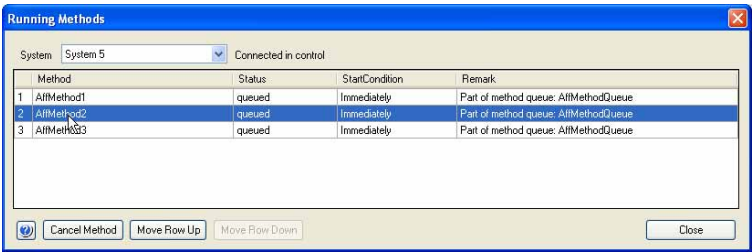
- | | |
|---|---|
| 2 | Click to start Immediately , or At time . |
|---|---|



Result: The Start protocols will be displayed for all methods in the method queue.

- | | |
|---|---|
| 3 | Navigate through the Start protocol as described in <i>Navigate in the Start protocol</i> , on page 23. Click Start in the last page of the Start protocol . |
|---|---|

- | Step | Action |
|------|--|
| 4 | Select a column in the Select Columns dialog. See <i>Column handling and method start, on page 24</i> .
<i>Result:</i> The run starts. |
| 5 | To view the status of the method queue, on the System menu, click Running methods . |

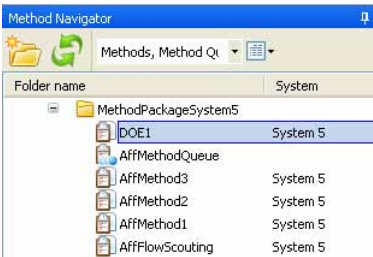


- | | |
|---|--|
| 6 | To cancel a method, or change method sequence, select the row of the method and use the buttons below the table. |
|---|--|

Run DoE or Scouting methods

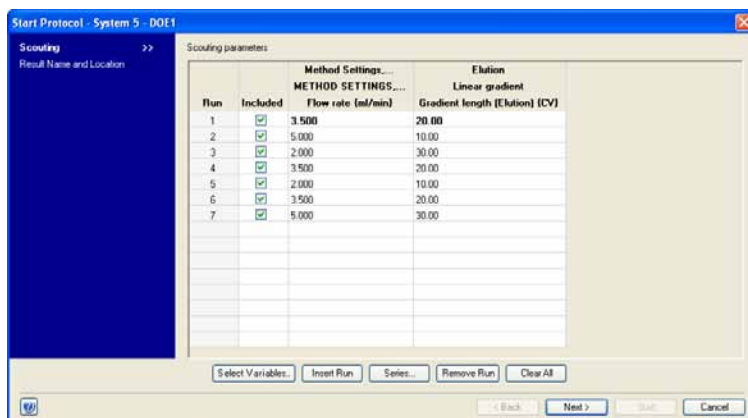
Design of Experiments (DoE) and Scouting methods are created in the **Method Editor**. See UNICORN Method Manual.
The following instruction describes how to start such a method.

- | Step | Action |
|------|---|
| 1 | In the Method Navigator in System Control , select the Scouting/DoE protocol and click the Run button. |



Step	Action
------	--------

- | | |
|---|---|
| 2 | If a Scouting scheme was selected in the Start Protocol , the scheme is displayed. The Scouting parameters can be edited, but the changes will not affect the method, only the run. |
|---|---|



- | | |
|---|--|
| 3 | <ul style="list-style-type: none"> Click Next. Click Start in the last page of the Start protocol. |
| 4 | Select a column in the Select Columns dialog. See <i>Column handling and method start, on page 24</i> .

<i>Result:</i> The run starts. |

Run a BufferPro method

For information on how to create **BufferPro** methods, see UNICORN Method Manual. **BufferPro** is a system specific function.

Step	Action
------	--------

- | | |
|---|---|
| 1 | Prepare stock solutions according to the BufferPro Properties of the method. |
| 2 | Prepare the instrument for a BufferPro run according to the instrument's user documentation. |
| 3 | Select the BufferPro method in the Method Navigator and click the Run button. |
| 4 | Navigate through the Start protocol as described in <i>Navigate in the Start protocol, on page 23</i> . Click Start in the last page of the Start protocol . |

Step	Action
5	Select a column in the Select columns dialog. See <i>Column handling and method start</i> , on page 24. <i>Result:</i> The run starts.

5 System Settings

About this chapter

Each installed instrument has a set of default parameter values, called system settings. The **System Settings** dialog in **System Control** is used to view and edit the system settings for the currently selected instrument before the run is started. This chapter describes how to edit the system settings.

Note: *System settings depend on the instrument configuration. The system settings shown in this section may differ from the settings that are applicable for your specific instrument configuration.*

Alternative paths for editing System settings

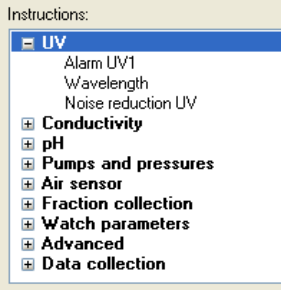
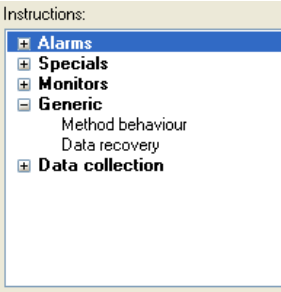
The parameter values defined in **System Settings** are used as default values.

Some of the instructions listed in the system settings are also available as method and manual instructions. When a run is started, the parameter values from the system settings are valid. If the same instruction is executed from the method or manually during a run, the parameter value of the new setting will be valid. Thus, it is always the parameter value of the instruction that was last executed that will be applied. When the run has ended, the parameter values are reset according to the system settings.

The effect of changing the system settings depends on when it is performed, as described in the table below. This section only describes settings available from the **Settings** menu item on the **System** menu.

Edit System Settings

Follow the instruction to edit the **System Settings**.

- | Step | Action |
|------|---|
| 1 | <p>In the System Control module, on the System menu, click Settings.</p> <p><i>Result:</i> The System settings dialog opens with the Instructions displayed. The instructions in the menu differ depending on the specific system. See examples of different menus below.</p> <div></div> <p>OR</p> <div></div> |
| 2 | <p>Select the instruction to edit from the list. Click the + symbol to show the instructions for each category. The instructions in each category differ depending on the system.</p> |
| 3 | <p>Select settings and choose parameter values for the selected instruction. Minimum and maximum values for each parameter are shown within brackets by each field. Click OK.</p> |
| 4 | <p>To return to the default values defined in the instrument configuration, click Set Parameters To Strategy Default Values.</p> |

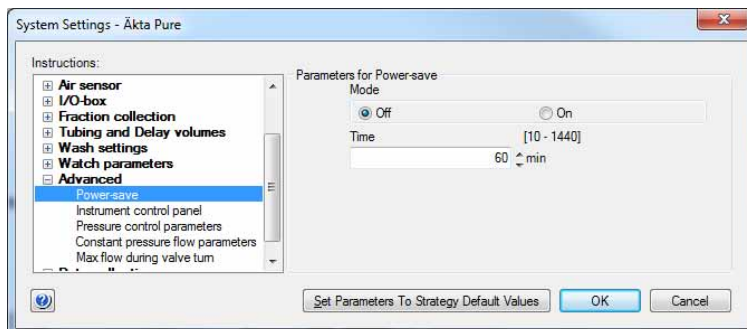
Note: *The System Settings are changed to new default values according to the above instruction. If you manually change any of these values for a run in the **Text Instructions** pane in **Method Editor**, or in the **Manual Instructions** dialog in **System Control**, the changes only affect the current run.*

Enable power-save

Follow the instructions to enable power-save for the instrument.

Note: *Power-save is a instrument specific functionality.*

Step	Action
1	In the System Control module, on the System menu, click Settings . <i>Result:</i> The System Settings dialog opens.
2	<ul style="list-style-type: none"> Select Advanced and select Power-save
3	<ul style="list-style-type: none"> Click On in the Mode field and enter the number of minutes in the Time field. <p>Note: <i>This is the time the instrument will be in state Ready before power-save mode is entered.</i></p> <ul style="list-style-type: none"> Click OK.



Note:

*This is the time the instrument will be in state **Ready** before power-save mode is entered.*

6 Troubleshooting

About this chapter

This chapter describes different operational scenarios which may arise in UNICORN, and how to solve the problems or consequences.

Tip: For additional advice concerning operational scenarios and possible solutions, refer to the UNICORN Information Letter. The UNICORN Information Letters are available at www.gelifesciences.com/unicorn.

In this chapter

This chapter describes the following scenarios:

- User access problems
- Unable to access UNICORN functions
- Unable to connect or locate chromatography systems or workstations
- A displayed error message or alarm is incomprehensible

User Access

Problem description	Solution
Username and password not accepted.	<ul style="list-style-type: none">• The UNICORN administrator should check if the user account is locked, for example after too many unsuccessful log on attempts.• The UNICORN administrator can try to set a new password.• If a password reset does not work, the user profile may have to be deleted and a new profile created.
The log on dialog is inactive and a password cannot be entered.	<ol style="list-style-type: none">1 Verify that no UNICORN window or module is opened.2 Log off from Windows and log on again.

Access to UNICORN functions

Problem description	Solution
The Execute manual instruction menu command in the System Control module is dimmed, that is you can establish a connection but cannot control the system.	<ul style="list-style-type: none"> • Check that no other user has a control mode connection. • Check that you have access rights to control the system manually.
The help viewer cannot be opened using help buttons or the F1 key.	<ol style="list-style-type: none"> 1 Open the MadCap help viewer from the Windows desktop icon. This is described in UNICORN Administration and Technical Manual. 2 Try the help button or F1 key again.
The Microsoft® Office Document Image Writer causes UNICORN to terminate.	This writer application will not work. Choose another option, for example a PDF writer application.
An error message is shown when a run is started, stating that not enough disc space is available.	1 GB of free disc space is required as headroom before a run can be started, to ensure that all data can be accommodated.
A user without access to the function Method Pause may still pause a method using a Timer instruction.	Access to the Timer instruction must also be disabled if users are not allowed access to the Method Pause function.
A user without access to the function Method End may still pause a method using a Timer instruction.	Access to the Timer instruction must also be disabled if users are not allowed access to the Method End function.
A manual run is started. A method run is then started and a start protocol opens. Before the start protocol is finished, an alarm is caused by the manual run. The start protocol cannot be completed and the method run cannot start at this point. This is because the alarm must be acknowledged first, but no message about this is issued.	Either stop the manual run which will allow the method run to start, or start another method. This will add the second method to the list of running methods and the first method is allowed to start.

System connections

Problem description	Solution
The connections are not available, i.e. the selection check box is dimmed.	<ul style="list-style-type: none"> • Check if the chromatography system has been deactivated. • Check that the power to the chromatography system is turned on. • Check the connection between the PC and the chromatography system.
<p>The connections are not available even though</p> <ul style="list-style-type: none"> • the connection between the PC and chromatography system appears to be correct • the power is turned on. 	<ol style="list-style-type: none"> 1 Switch off the chromatography system. 2 Exit UNICORN. 3 Shut down the instrument server computer. 4 Restart the chromatography system. 5 Restart the instrument server computer. 6 Log on to UNICORN.
A system is not available when you attempt to establish a connection.	<ul style="list-style-type: none"> • Check that you have access rights to the system. Access rights are not automatically assigned for a newly defined system. • The system may not be active. • Log off and log on again for access rights changes to be applied.
You receive the error message "Cannot connect to system..." in a network installation.	<ul style="list-style-type: none"> • Check that the local computer to which the system is connected is turned on and logged on to the network. • Check that the computer from which you try to establish a connection is logged on to the network. • Check that the limit of five simultaneous connections to the system has not been exceeded.

Problem description	Solution
You receive the error message " Warning, system occupied " when trying to connect.	This error message is displayed if a system is defined and active in two different database instances and is already connected in the other instance. It is not recommended to have a system defined and active in more than one database instance.
You are connected to a system but have no contact with the instrument. The system hangs at initialization.	<ul style="list-style-type: none"> • Check that the instrument is turned on. • Check that all cable connections are intact. • Check that the system is configured correctly, in System Properties and on the instrument display. • If the above actions do not help, try to restart both the instrument server computer and the instrument.
When attempting to connect to an instrument server, an error message is displayed stating that the client connecting and the instrument server are incompatible. In fact, it is the current instrument configuration which is incompatible with the client UNICORN installation.	Ensure that all client computer installations are compatible with the instrument configurations used.

Error messages and alarms

If a displayed error message or alarm is incomprehensible, contact your local GE representative.

Index

B

BufferPro
Run, 39

C

Chromatogram
Select and zoom, 29
Column
Column handling at method
start, 24
Connect
Connect to systems, 19

D

Documentation, 9
DoE
Run, 38

L

Log off
UNICORN, 12
Log on
UNICORN, 11

M

Manual system control, 34
Method queue
Run, 37

P

Panes
Display panes in **System Control**, 17
Prepare the system
Start UNICORN, 11
Process Picture
Actions in the process picture, 29

R

Run
BufferPro, 39
DoE, 38
Method queue, 37
Monitor a run, 26

Scouting, 38
Select a method, 21
Start protocol, 22

S

Scouting
Run, 38
Software installation
Help viewer application, 13
Start protocol
Dialogs, 22
States
Display in **System Control**, 17
System Control
Buttons, 34
Customize, 26
Display panes, 17
Instrument status, 17
Overview, 7
User interface, 16
System settings
Alternative paths, 41
Overview, 41
System Settings
Edit the settings, 42

T

Troubleshooting, 44
Access to UNICORN functions, 45
System or computer connections, 47
User access, 44

U

UNICORN
Exit, 12
Log off, 12
Log on, 11
Start, 11
User information, important, 8

Z

Zoom
Chromatogram, 29

Page intentionally left blank

For local office contact information, visit
www.gelifesciences.com/contact

GE Healthcare Bio-Sciences AB

Björkgatan 30

751 84 Uppsala

Sweden

www.gelifesciences.com/unicorn

GE and GE monogram are trademarks of General Electric Company.

UNICORN is a trademark of General Electric Company or one of its subsidiaries.

Windows and Microsoft are registered trademarks of Microsoft Corporation.

MadCap is a trademark of MadCap Software Incorporated.

All other third party trademarks are the property of their respective owner.

Any use of UNICORN is subject to GE Healthcare Standard Software End-User License Agreement for Life Sciences Software Products. A copy of this Standard Software End-User License Agreement is available on request.

UNICORN 6 © 2009 - 2014 General Electric Company

© 2009 - 2014 General Electric Company – All rights reserved.

First published Feb. 2014

All goods and services are sold subject to the terms and conditions of sale of the company within GE Healthcare which supplies them. A copy of these terms and conditions is available on request. Contact your local GE Healthcare representative for the most current information.

GE Healthcare Europe GmbH
Munzinger Strasse 5, D-79111 Freiburg, Germany

GE Healthcare UK Limited
Amersham Place, Little Chalfont, Buckinghamshire, HP7 9NA, UK

GE Healthcare Bio-Sciences Corp.
800 Centennial Avenue, P.O. Box 1327, Piscataway, NJ 08855-1327, USA

GE Healthcare Japan Corporation
Sanken Bldg. 3-25-1, Hyakunincho Shinjuku-ku, Tokyo 169-0073, Japan

