

BD Alaris™ Plus Editor and Alaris™ Plus Transfer Tool v4.5 Model: 1000SP02193

en Directions For Use



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1 Introduction

The BD Alaris™ Plus Editor is used to develop infusion data sets for Alaris™ Plus and Alaris™ Plus Guardrails™ infusion pumps. The data set is developed and approved by pharmacists, nurses and/or clinicians, and then uploaded to the Pumps by qualified users or service personnel.

The BD Alaris™ Plus Editor and Alaris™ Plus Transfer Tool are only compatible with:

- Microsoft Windows 10 64-bit Operating System
- Microsoft Word 2010 or later

Dedicated to Patient Safety

BD offers innovative, state of the art technology for safe medication delivery. Introducing our smart pump technology, we have a range of products to enhance patient safety at the point of care.

Infusion Systems

Our commitment to patient safety is evident in all our infusion products. Intelligent and highly responsive, the range of syringe and volumetric pumps deliver drugs and solutions with safety. The pumps offer a common user interface to further aid standardisation. The Guardrails™ Suite of safety software provides you with the power to identify, track and help prevent many of the most harmful IV medication errors.

Note: Any serious incident that occurs in relation to these Pumps should be reported to the manufacturer, and to the relevant local regulatory authority.

Intended Purpose

The PC-based BD Alaris™ Plus Editor allows each hospital to:

- Develop a best practice data set of IV medication dosing guidelines.
- Standardise and maintain a hospital's best practice guidelines for intravenous drug infusion delivered using the compatible Alaris™ Infusion Pumps with Plus software.
- Set default and maximum dose rate limits for up to 100 unique drug/concentration setups per platform for each profile created.
- Configure general pump settings.

The PC-based BD Alaris™ Plus Transfer Tool allows each hospital to:

- Quickly and easily upload data sets to compatible Alaris™ Plus Infusion Pumps based on hospital defined profiles.
- Download compatible Alaris™ Plus Infusion Pump event logs.
- Download Continuous Quality Improvement (CQI) data from compatible Alaris™ Plus Infusion Pumps.

Intended Users

The primary users of the BD Alaris™ Plus Editor software are predominantly internal BD specialists or hospital biomed and anaesthetists, working in conjunction with hospital pharmacists, nurses and/or other unit managers to define the drug list settings to be implemented in the data set.

Patient Target Groups

The BD Alaris™ Plus Editor is not directly used in patient care, and does not have any defined patient target groups. However, the data set generated from the Editor provides configuration settings and drug libraries to the Alaris™ Plus pumps. For details on compatible Alaris™ Infusion Pumps, refer to the 'Compatibility' table, and the following *Directions For Use* (DFUs):

- Alaris™ Syringe Pump (with Plus Software) Mk4
- Alaris™ GP (Guardrails™) Volumetric Pump (with Plus Software)
- Alaris™ VP Plus Guardrails™ Volumetric Pump

Clinical Benefits

The BD Alaris™ Plus Editor software enables both the drug list contents, and configuration settings for the compatible Infusion Pumps that affect the performance of the devices in each care area.

The BD Alaris™ Plus Editor software features medication dosing, concentration delivery rate and initial programming guidelines for up to 30 patient-specific care areas, referred to as *profiles*. Each profile contains a specific Drug Library and instrument configurations appropriate for the care area.

The BD Alaris™ Plus Editor software also provides the ability to customize the device configuration for parameters such as Patient Weight, Maximum Rate, Pressure Detection Threshold and Air-in-Line settings. These configuration settings for the compatible Infusion Pumps can be set for each profile within the hospital data set.

Conditions for Use

The BD Alaris™ Plus Editor is not directly used in patient care, and so has no defined conditions for use. However, the data set generated from the Editor provides configuration settings and drug libraries to the Alaris™ Plus pumps. For the Conditions for Use for the Alaris™ Plus pumps, refer to the following *Directions For Use* (DFUs):

- Alaris™ Syringe Pump (with Plus Software) Mk4
- Alaris™ GP (Guardrails™) Volumetric Pump (with Plus Software)
- Alaris™ VP Plus Guardrails™ Volumetric Pump

Indications

The BD Alaris™ Plus Editor is not directly used in patient care, and so has no defined indications. However, the data set generated from the Editor provides configuration settings and drug libraries to the Alaris™ Plus pumps. For the Indications for the Alaris™ Plus pumps, refer to the following *Directions For Use* (DFUs):

- Alaris™ Syringe Pump (with Plus Software) Mk4
- Alaris™ GP (Guardrails™) Volumetric Pump (with Plus Software)
- Alaris™ VP Plus Guardrails™ Volumetric Pump

Contraindications

The BD Alaris™ Plus Editor is not directly used in patient care, and so has no defined contraindications. However, the data set generated from the Editor provides configuration settings and drug libraries to the Alaris™ Plus pumps. For the Contraindications for the Alaris™ Plus pumps, refer to the following *Directions For Use* (DFUs):

- Alaris™ Syringe Pump (with Plus Software) Mk4
- Alaris™ GP (Guardrails™) Volumetric Pump (with Plus Software)
- Alaris™ VP Plus Guardrails™ Volumetric Pump

About This Manual

The user must be thoroughly familiar with the BD Alaris™ Plus Editor (hereinafter referred to as *Editor*) described in this manual prior to use. Note that the screenshot images in this manual are for illustrative uses only.





Keep this Manual for future reference.

It is important to ensure that you only refer to the most recent version of the *Directions for Use* and *Technical Service Manuals* for your BD products. These documents are referenced on bd.com. Paper copies of the *Directions For Use* can be obtained free of charge by contacting your local BD representative. An estimated delivery time will be provided when the order is placed.

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Conventions Used in this Manual

Bold	Used for Display names, software commands, controls and indicators referenced in this manual, for example, Accept , Next , Finish .
'Single quotes'	Used to indicate cross-references made to another section of this manual. For example, See Chapter 3, 'Data Set Management'.
<i>Italics</i>	Used to refer to other documents or manuals. For example, Refer to the relevant <i>Directions For Use</i> (DFU) for further information. Also used to define custom terminology specific to a manual e.g. The BD Alaris™ Plus Editor (hereinafter referred to as <i>Editor</i>) ...
	Warning symbol. A <i>warning</i> is a statement that alerts the user to the possibility of injury, death, or other serious adverse reactions associated with the use or misuse of a Pump.
	Caution symbol. A <i>caution</i> is a statement that alerts the user to the possibility of a problem with a Pump associated with its use or misuse. Such problems may include Pump malfunction, Pump failure, damage to a Pump or damage to other property. The caution statement includes the precaution(s) that should be taken to avoid the hazard.
Note:	<i>Notes</i> contain supplementary information or emphasize a point or procedure.
User	Trained and qualified users who interact with the device. See 'Intended Users'.
Qualified Service Personnel	Trained and qualified personnel who perform service and repair activities, and upload and download data to the product.

Overview of Data Set Workflow

On a newly-installed BD Alaris™ Plus Editor, the initial workflow might be as follows:

1. From the Data Set icon and pull-down menu, create a new data set or open an existing one.
2. When a data set has been created, it must have at least one profile added to it. Profiles may be created from scratch, or copied from other profiles already present either in the current data set, or in any data set saved in the repository.
3. When a profile has been set up, it may have drugs added to it from the master drugs list, and profiles which include syringe pumps may have syringes from the master syringe list added.
4. Drug parameters are adjusted as per clinical requirements.
5. Steps 2–4 may be repeated as necessary.
6. The changes to a profile must be saved.
7. A Data Set Review Report is generated. The Data Set Review Report displays the four character Data Set ID.
8. The data set is checked and approved. If a data set has unsaved changes, starting approval will automatically opens a save dialog.
9. To complete approval, the Data Set Review Report must be checked by an authorised nurse, pharmacist or clinician. When this is done and any necessary local records generated, the data set can be marked as approved. To be approved, the data set must be free of all validation errors and the approval password for the Editor must be provided.
10. When a data set has been approved, it can be exported as a file and transferred to another computer if necessary. To export an approved data set, the Data Set ID from the review report must be provided.
11. An exported data set that has been saved to file can be uploaded to a compatible pump from any suitable computer with the BD Alaris™ Plus Transfer Tool installed.
12. As clinical or operational requirements change over time, the data set may need to be updated.
13. The data set is re-opened and updated as appropriate by repeating steps 2–4. Any changes to a data set automatically increase its version number and reset its status to unapproved.
14. The new data set is checked, re-approved, re-exported and then uploaded onto the pump as per steps 6–11. Note that the previous version remains accessible via the Editor's version control facilities, ensuring it is possible to revert to a previous version.
15. As clinical or operational requirements continue to change, new drugs, syringes and profiles can be added as needed.

Data Set Definition

A *data set* is defined as a collection of information that is required by the Alaris™ Plus Infusion Pump to operate.

Each data set comprises a collection of up to 30 unique *profiles*, each tailored to meet the needs of a specific therapeutic environment, a Master Drug List and a Master Syringe Library. The Master Lists are collections of standardised data used in the creation of profiles.

Master Drug List

The Master Drug List is predefined in the Editor allowing the creation of a standardised list of drugs and concentrations for each profile.

Master Syringe Library

The Master Syringe Library is a predefined list of syringes compatible with the Alaris™ CC and Alaris™ GH Plus Syringe Pumps.

Profiles

A *profile* is a unique set of pump configurations and best-practice guidelines for a specific population, patient type or care area.

Each profile consists of a pump configuration, a drug list and, for syringe pumps, a syringe library.

Up to 30 profiles can be defined for each data set.

Note: Non Guardrails™ data sets allow up to 30 profiles to be defined, however, only one profile is selected during transfer and uploaded to the pump.

Each profile comprises the following:

- **Profile Information** – The Profile Information is a set of user-defined configuration settings for the Pump.
- **Drug Library** – The Drug Library is a collection of infusion drug protocols, including user-defined infusion parameters.
- **Profile Syringe Library** – The Profile Syringe Library displays the enabled syringes selected from the Master Syringe Library.

Data Set Development Process

Data Set Development

A data set is developed for a hospital or subset of a hospital by gathering data set requirements from clinicians who may have input into the data set. The data set components as listed above are created and compiled by qualified users or service personnel.

Data Set Approval


















When the data set is ready for approval, a data set review report is printed. When all parties have signed the report, the data set can be promoted to *approved* status.




















Data Set Transfer

When a data set has been approved, it can be *exported* to a file ready for upload to the Pump. Files which have not been approved can be loaded and/or saved, but cannot be uploaded. The BD Alaris™ Plus Transfer Tool is used to upload the data set from a computer to the Pump.






Editor and Transfer Tool Icons

BD Alaris™ Plus Editor

Data Set Operations	
	The Data Set button allows the creation and management of data sets. See Chapter 3, 'Data Set Management' for further details.
Data Set Navigation	
	Home – Returns to the Editor Welcome page.
	Data Set – Provides access to Data Set Information, Version Control and Reports.
	Master Lists – Provides access to the Master Drug List and the Master Syringe Library.
	Profiles – Provides access to Profile Information, the Profile Syringe Library and the Profile Drug Library. The Profile Syringe Library does not appear unless the Profile includes syringe pumps.
Menu Bar	
	Undo – Undo previous operation. Not all operations can be undone.
	Redo – Allows a previous Undo action to be reversed (where applicable).
	Help – Accesses the application help file.
—	About... – Displays version and copyright information.
Status Bar	
	Save – Indicates that the data set has changed but not been saved. Clicking Save saves the current data set.
	Validation Error – Indicates that there are one or more errors in the current data set. Clicking the Validation Error icon displays a list of the errors. Double-clicking a specific validation error in the list navigates to the appropriate page on which the error can be corrected.
	New... – Allows creation of a new data set for a given pump model. Ctrl+N (CC/GH/GP/VP).
	Open – Allows opening of an existing data set, including conversion of data sets from previous editor versions.
	Close – Closes the currently open data set. The user is warned if they have unsaved data.
	Save As – Saves the currently open data set under a new name or in a new directory, allowing data sets to be transferred or cloned.
Data Store Management	
	Data Store Management – Allows data sets to be deleted from the repository, and new folders to be created and deleted for data sets. (Ctrl+M)
	Delete the selected data sets – This button allows deletion of data sets. This operation cannot be undone, and a confirmation dialog appears before the data set(s) are deleted. The currently open data set cannot be deleted until it is closed.
	Create a new folder – This button allows the creation of new folders and sub-folders, permitting data sets to be organised into groups. Data sets cannot be moved between folders; instead the data set must be opened and then the Save or Save As feature used to save a copy in the new location. Data sets loaded from file require Save ; data sets already in the repository require Save As .
Ins	New Folder... – A new folder can also be created by pressing the Insert key or by right-clicking an existing folder and selecting New Folder...
F2	Rename Folder... – A selected folder can be renamed by pressing F2 or by selecting Rename Folder... after right-clicking an existing folder.
Del	Delete Folder... – A selected folder, including all its sub-folders and data sets, can be deleted by pressing the Delete key or by selecting Delete Folder... after right-clicking an existing folder. This operation cannot be undone, and a confirmation dialog will appear. Deletion is not possible if the currently open data set is included within the selection.

Data Set – Views	
	Data Set Information – Includes the data set name, infusion platforms, unit settings and so on. Also includes a description field which is not uploaded to the Pump. Accessed by clicking Data Set in the Data Set Navigation pane and then selecting Data Set Information from the Views pane.
	Version Control – Accessed by clicking Data Set in the Data Set Navigation pane and then selecting Version Control from the Views pane.
	Version history available – This version of the data set has its change history available, and can be compared against other versions of the data set that also have change histories.
	Version history unavailable – This version of the data set has no change history available, and the View Differences feature is inactive. (Version history is only stored in the repository, and is not saved to file.) Approved data sets with no version history can be exported to a Pump, but cannot be altered. The Baseline Current Version command can be used to create a new unapproved copy of a data set with a new version number and version control reinstated.
	Reports – All reports are accessed by clicking Data Set in the Data Set Navigation pane and then selecting Reports from the Views pane.
Master Lists – Views	
	Master Drug List – To view the Master Drug List click Master Lists in the Data Set Navigation pane and then select Master Drug List from the Views pane. The Master Drugs List provides a list of drugs which can be selected for incorporation into a profile, and then customised within that profile.
	Add Alternate Name – Drugs may be assigned multiple alternate names.
	Edit Alternate Name – A separate dialog appears in which the alternate drug name may be edited. Changes are applied immediately if OK is selected. The Undo facility is available.
	Delete Alternate Name – A confirmation dialog appears before the alternate drug name is deleted, and the Undo facility is also available.
	Add Concentration – One or more custom concentrations may be provided for each drug. A Units Only concentration is denoted with dashes in place of the numbers, for example -- mg / -- ml. (The units displayed vary depending on setup.) Duplicate concentrations are not permitted.
	Edit Concentration – An existing concentration can be edited. Changes are applied immediately if OK is selected. The Undo facility is available.
	Delete Concentration – A confirmation dialog appears before the concentration is deleted, and the Undo facility is also available.
	Master Syringe Library – This is a predefined list of the currently supported syringes. To view the Master Syringe Library click Master Lists in the Data Set Navigation pane and then select Master Syringe Library from the Views pane.
Profiles – Views	
	Profile Information – This is accessed by clicking Profiles in the Data Set Navigation pane and then selecting Profile Information from the Views pane. The Profile Information option enables the creation and management of up to 30 profiles for each data set.
	Add Profile – When creating a new empty profile, a dialog appears requiring a name. Profile names can be changed later.
	Copy Profile – This button allows a profile from the current data set to be duplicated. The check box allows profiles from any data set in the repository to be copied, provided they are for a compatible infusion platform.
	Delete Profile – The current profile is deleted. A confirmation dialog appears before the profile is deleted, and the Undo facility is available.
	Profile Syringe Library – If the profile includes syringe pumps, then the Profile Syringe Library is available for completion. To access the Profile Syringe Library click Profiles in the Data Set Navigation pane and then select Profile Syringe Library from the Views pane.
	Drug Library – Every profile has a drug library associated with it. The drugs which may be selected are initially defined via the Master Drugs List . When copied into a profile, each drug setting can then be individually adjusted to suit the clinical requirements of the patient type or care area. These local adjustments do not affect the contents of the master drugs list. To access the Drug Library click Profiles in the Data Set Navigation pane and then select Drug Library from the Views pane.

BD Alaris™ Plus Transfer Tool

Actions	
	Data Set Upload – Allows an approved data set to be uploaded to a compatible Pump. (Ctrl+U)
	Event Log Download – Allows event log data to be downloaded from the selected Pump(s) either to a new file or added to an existing one (Ctrl+L).
	CQI Download (CC/GP/VP) – Allows CQI event log data to be downloaded from the selected Pump(s) either to a new file or added to an existing one. (Ctrl+Q)
Menu Bar	
	History – Toggles the History pane on and off.
	Help – Accesses the application help file.
—	About... – Displays version and copyright information.

Compatibility

This version of the BD Alaris™ Plus Editor and BD Alaris™ Plus Transfer Tool is compatible with Alaris™ Infusion Pumps with Plus software.

Product	SKU	Software Version
Alaris™ CC Syringe Pump with Plus software	8003MED01 8003TIG01 8003TIG03	4.x.x
Alaris™ GH Syringe Pump with Plus software	8002MED01 8002TIG01 8002TIG03	4.x.x
Alaris™ GP Volumetric Pump with Plus Software	9002MED01 9002TIG01 9002TIG03	2.x.x
Alaris™ CC Guardrails™ Syringe Pump with Plus Software	8003MED01-G 8003TIG01-G 8003TIG03-G	4.x.x
Alaris™ GH Guardrails™ Syringe Pump with Plus Software	8002MED01-G 8002TIG01-G 8002TIG03-G	4.x.x
Alaris™ GP Guardrails™ Volumetric Pump with Plus Software	9002MED01-G 9002TIG01-G 9002TIG03-G	2.x.x
Alaris™ VP Plus Guardrails™ Volumetric Pump	9003MED01-G 9003TIG01-G 9003TIG03-G	1.x.x
Alaris™ VP Plus Guardrails™ Volumetric Pump Canada	9003TIG01-G-CA 9003TIG03-G-CA	1.x.x

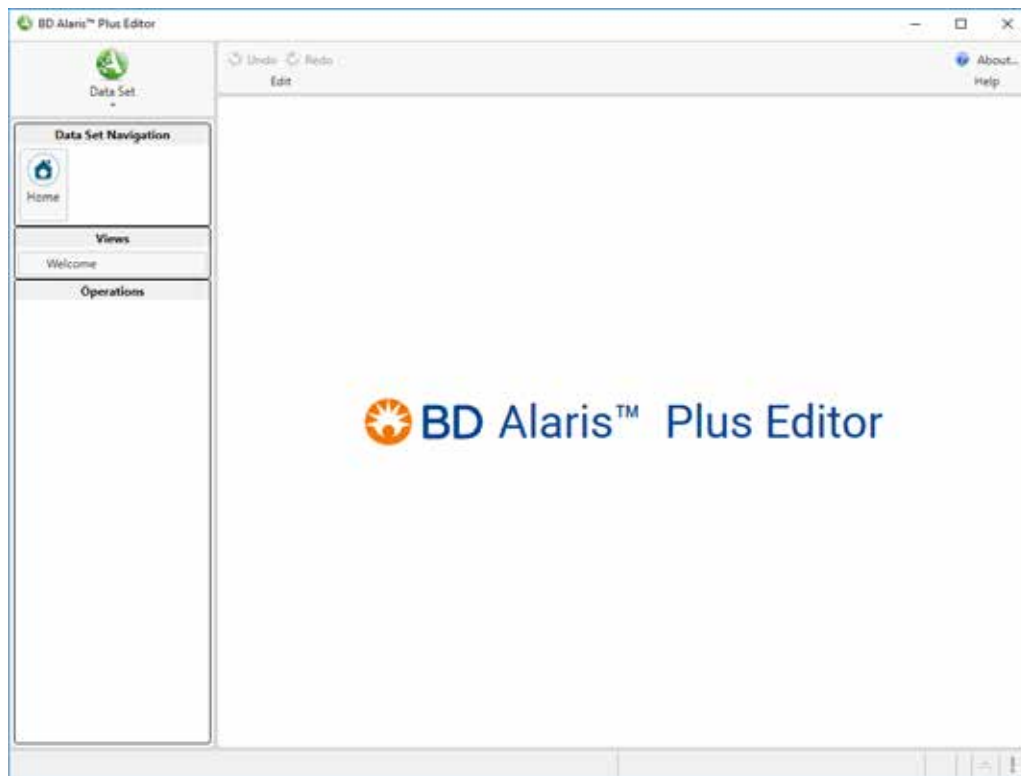
2 Getting Started

Starting the BD Alaris™ Plus Editor

To open the BD Alaris™ Plus Editor, click the shortcut icon on the desktop or select **Start > BD Alaris > BD Alaris Plus Editor**.

Note: This is the default Start Menu location. You can amend the location of the installed files during installation but not the Start Menu location.

Navigating the Editor



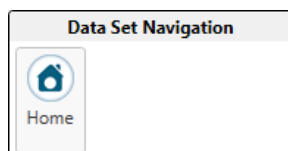
The Editor screen is divided into seven working areas:

Data Set Operations

The **Data Set Operations** allows the creation and management of data sets and is accessed by clicking **Data Set** in the top left corner of the BD Alaris™ Plus Editor. See 'Data Set File Operations' for further details.

Data Set Navigation Pane

The Data Set Navigation pane allows access to the following main data set areas. If no data set is loaded, the Data Set Navigation pane shows only **Home**. If a data set is loaded, three additional options become available: **Data Set**, **Master Lists** and **Profiles**.



Home – Returns to the Editor Welcome screen.

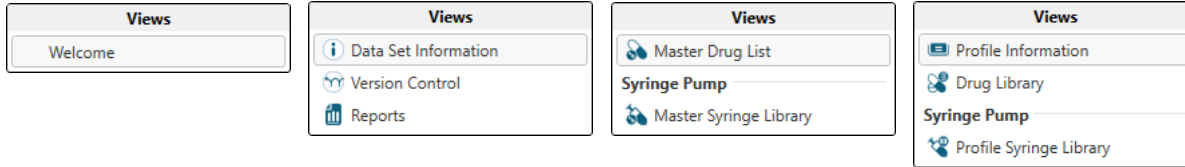
Data Set – Provides access to Data Set Information, Version Control and Reports.

Master Lists – Provides access to the Master Drug List and the Master Syringe Library.

Profiles – Provides access to Profile Information, Profile Syringe Library and the profile-specific Drug Library.

Views Panes

The **Views** listed are dependent on the selected item within the Data Set Navigation. Selecting the different options listed in the **Views** pane changes the data entry/information screen displayed in the main working area.



Operations Panes

The options available in the **Operations** pane vary depending on the data set **View** selected.

Menu Bar

Undo – All data set modifications made within the editor working area can be undone, unless otherwise specified. When the data set is saved, the Undo list is automatically cleared. The application remembers up to 50 actions.

Redo – Allows a previous Undo action to be reversed (where applicable).

Help – Accesses the application help file.

Main Screen

The right-hand pane is the working area where the editing/viewing of the **Views** menu items is performed.

Data entry areas of the application can be navigated by using the mouse or keyboard. Use the arrow keys or the Tab and Shift+Tab keys to navigate within most data entry areas. To open a choice list with the keyboard, use the Alt+Down Arrow key combination.

Status Bar

The **Status Bar** provides information on the current data set status. Information displayed in this bar includes Approval State, Date and Time, Master List version numbers, Drug Count and the ID of the user currently logged on. The **Save** icon and the **Validation Error** icon are also displayed in the bottom right of the Status Bar. If there are no changes and no validation errors, both are greyed out and inactive. If there are changes to be saved or errors to be corrected, either or both are active.



No changes,
no errors

Changes made,
errors present

Clicking the **Save** icon saves the current data set.

Clicking the **Validation Error** icon displays a list of the errors in the current data set.

3 Data Set Management

Data Set File Operations

Clicking **Data Set** in the top left corner of the BD Alaris™ Plus Editor opens the **Data Set Operations** menu, which allows the creation and management of data sets, and folders and sub-folders in which to store them.

Data sets can be deleted, duplicated (via **Save As**), loaded from or saved to file, and converted from previous versions of the BD Alaris™ Plus Editor. This is also where the Approval password can be changed.

New...

1. Select **New...** from the **Data Set Operations** menu. The **New Data Set Types** options are displayed:
 - **Plus Data Set...** Creates a Plus data set for editing in the application (Ctrl+Shift+N).
 - **Plus Guardrails™ Data Set...** Creates a new Plus Guardrails™ data set for editing in the application (Ctrl+N).
2. Select the required data set option. The **Data Set Information** panel is displayed.
3. Enter a valid **Data Set Name**. Choose a data set name that is easy to identify. The data set version combined with the data set ID allows that data set to be identified on the Pump.
4. Enter a **Hospital Name** if required.
5. Enter a **Data Set Description** if required.
6. Select the **Infusion Platform** and **Model** of the Pump to which the data set applies.
7. Click **View/Edit** if the **Data Set Origin** must be changed (see Chapter 4, 'Data Set Information' for more information on the Data Set Origin).
8. Select the **Profile Filter** option required (Plus Guardrails™ data sets only):
 - **Filtering Available** allows specific profiles to be selected on the Pump and filtered from view so they are unavailable for use.
 - **All Profiles – No Filtering** allows all profiles to be available on the Pump.
9. Select the display format for **Microgram** (mcg or µg).
10. Select the display format for **Unit** (unit or U).

Open...

To upgrade Data Sets from Editor and Transfer Tool version 4.4 to 4.5, the data sets must be manually exported and saved in version 4.4. They can then be imported to the BD Alaris™ Plus Editor v4.5 by selecting **Open From File** as described below. For further details, see 'Upgrade to Plus Guardrails™' in Chapter 4.

Note: When upgraded to version 4.5, it is not possible to reload the files into the version 4.4 Editor.

1. Select **Open...** from the **Data Set Operations** menu. The New Data Set Types options are displayed:
 - **Open From Data Store...** Open a data set from the data set repository (Ctrl+O).
 - **Open From File...** Open a data set from an exported file (Ctrl+Shift+O). Select the required **Files of Type** to open:
 - .mnr files (*.mnr) – Displays all Plus data set files in the current directory.
 - .mgr files (*.mgr) – Displays all Plus Guardrails™ data set files in the current directory.
 - All files (*.*) – Displays all files in the current directory.
2. Select the required data set and click **OK**.

Close...

1. Select **Close** from the **Data Set Operations** menu.
2. The current data set is closed. If changes have been made to the data set, the user is prompted to save their changes.

Save...

The **Save...** facility saves a data set in the repository.

1. Select **Save** (Ctrl+S) from the **Data Set Operations** menu.
2. Enter a valid **Data Set Name** and click **Save**. If the data set has been saved previously, a file name is not requested and the data set automatically overwrites the previous version.

If the data set is closed without saving, all changes made since the last save are lost.

Note: If a data set has not been approved, it may still be saved using the **Save...** or **Save As** menus, but it may not be exported. If a data set has been *approved*, it may also be *exported*, meaning it can be used for loading on to a Pump via the Transfer Tool. See Chapter 4, 'Data Set Approval' for details on approving and exporting data sets.

Save As

The **Save As** procedure can be used to create a data set file in a location on the PC or external drive to back up a data set or to move the data set to another PC running the Editor.

1. Select **Save As** from the **Data Set Operations** menu.
2. Select the **Destination** of the save file:
 - **Save to Data Store** – Saves the data set to the repository under a new name (F12).
 - **Save to File** – Saves the data set to a .mnr (Plus data set) or .mgr (Plus Guardrails™ data set) file format (Shift+F12).
3. Enter a valid **Data Set Name** and click **Save**.

If the data set is closed without saving, all changes made since the last save are lost.

Note: While the **Save As** facility allows a data set to be saved as a file, these files cannot be uploaded to a Pump unless they have been exported, and a data set cannot be exported unless it has been *approved*.

Note: Data sets saved to file do not include their change history. Historical approval information is included but the previous change history is not. This means when a data set is reloaded from file, the **View Differences** tool can only show changes made from that point forwards.

Data Store Management

Data Store Management (Ctrl+M) allows data sets to be deleted from the repository.

The repository is an SQL database which contains all data sets that have been defined, and their change history.

Any of the data sets in the repository can be saved separately as files, which will have .mnr or .mgr file extensions, but do not include previous change history.



While any of the data sets in the repository can be saved at any time, if the Editor is uninstalled the entire data set repository is also removed. To avoid unintended data loss, ensure all needed data sets are saved as files.

Deleting a Data Set

1. Select **Data Store Management** from the **Data Set Operations** menu.
2. Select the data set to be deleted and click **Delete** or right-click and select **Delete** from the menu.
3. A confirmation screen is displayed. Click **Yes** to delete the selected data set.
4. Click **Close** to close the **Data Store Management** window.

Note: This operation cannot be undone.

Creating a New Storage Location

1. Select the location for the new folder using the directory tree.
2. Click **Create a new folder**. The **New Data Set Folder** dialog box is displayed.
3. Enter a **New Folder Name** and click **OK**. The new folder is displayed in the directory tree and the path information is updated.

Options...

The **Options...** button allows the approval password to be changed.

Changing the Approval Password

1. From the **Data Set Operations** menu, select **Options...**
2. Input the **Old Password**, enter the **New Password** and **Confirm New Password**.
 - The password must be between 8 and 30 characters long
 - The password should also contain three of the following four elements:
 - At least one upper-case letter
 - At least one lower-case letter
 - At least one digit
 - At least one special character ! @ # \$ % * () _ + ^ & < ?
3. Click **Apply** to confirm. An information dialog box confirms that the password has been updated.

4 Data Set Approval

Data Set Review Operations

The Data Set pane provides an overview of past and current versions of the data set. It allows comparisons to be made between any data set versions that were edited in the current repository, and provides the means for data sets to be approved and exported for upload onto an appropriate Alaris™ Pump.

Data Set Information

Data Set Information is accessed by clicking **Data Set** on the **Data Set Navigation** pane and then selecting **Data Set Information** from the **Views** pane.

Enter the **Data Set Name** and the **Hospital Name** (both fields are limited to 20 characters). A free-text description can be entered in the **Data Set Description** section.

The following data set properties may be changed:

- **Data Set Name** – the name of the data set as it appears on the Pump.
- Note:** If a **Data Set Name** matches one already present in the repository, it becomes possible to overwrite an existing data set. The user must provide confirmation before an existing data set is over-written, and is warned that this operation cannot be undone.
- **Hospital Name** – The name of the hospital as it appears on the Pump (optional).
- **Data Set Description** – A description of purpose for the data set (optional). This text is not uploaded to the Pump.
- **Infusion Platforms** – Select the infusion pump models for which the data set is being created.
- **Data Set Origin** – A field that represents the origin of the data set, which is used by the hospital server environment. This field should only be modified if there is a specific reason to do so. The **Data Set Origin** is defined when the new data set is created. The user may change the **Data Set Origin**, but it must be unique within the Data Set Repository. When a data set is loaded from file and saved into the repository, the origin does not change. If an imported file has a Data Set Origin that matches a data set already in the repository, the user is prompted to generate a new Data Set Origin for the imported file. If no new Data Set Origin is generated, the file is not saved in the repository.
- **Profile Filtering** – Controls whether the user is able to filter which profiles are available at the Pump.
- **Unit Display for Units** – unit or U.
- **Unit Display for Microgram** – mcg or µg.

Note: Changing the unit display format affects both the data set and the Pump.

Approve for Export

A data set needs to be approved before it can be exported for upload to the Pump. Data sets are approved via the **Operations** options on the **Data Set Information** screen.

Note: A hard copy print of the entire data set should be reviewed and signed by the hospital's authorised reviewers before a data set is approved and exported for use. The Data Set Name, Data Set Version and Data Set ID in the Data Set Review report should be used to identify that data set.

1. From the **Operations** menu, select **Approve For Export**. The **Approve Data Set** dialog box is displayed.
2. Enter password (case sensitive).

Note: The default password is 'password'. To change the password, see 'Changing the Approval Password' in Chapter 3. If the approval password is forgotten, it cannot be recovered. Consult the Installation Guide for a workaround if this issue occurs.

3. Enter the **Data Set ID**. The data set ID is the four character hexadecimal code printed on the front page and footer of the approved data set report. If the data set is to be exported at the same time as approval, ensure that the **Export after Approval** box is selected.

Note: The hexadecimal code has digits 0000–9999 and letters AAAA–FFFF in any order e.g. 1B2A, 7754 and so on.

4. Click **OK**. The data set status is set to Approved and the version control data is updated accordingly.
5. If the data set is being exported, the **Save As** dialog box is displayed. It is strongly recommended to save copies of approved data sets. Enter the data set name and set the location to store the data set file. Click **Save**.

Export for Pump

If the data set has been approved but not yet exported for upload.

1. From the **Operations** menu, select **Export For Pump**. The Export Verification dialog box is displayed.
2. Enter the **Data Set ID** and click **OK**.
3. Enter the data set name and set the location to store the data set file. Click **Save**.

Upgrade to Plus Guardrails™

A Plus data set can be upgraded to a Plus Guardrails™ data set via the **Operations** options on the **Data Set Information** screen.

1. With the required Plus data set open, click **Upgrade to Plus Guardrails™**. This option is only available when a Plus data set is open.
2. Click **Yes** to confirm upgrade.

The Plus data set is upgraded to a Plus Guardrails™ data set. Default values are applied to Guardrails™-specific fields where possible, and validation errors are displayed for fields that require attention.

Version Control

Version Control is accessed by clicking **Data Set** in the **Data Set Navigation** pane and then selecting **Version Control** from the **Views** pane.

Baseline Current Version

Creates a new version based on the current version of the data set. If the previous version did not have any change history, then creating a new baseline version reinstates version control.

1. Click **Baseline Current Version**.
2. A confirmation box is displayed. Click **Yes** to continue.
3. A new numbered version of the data set is created.

Note: The new version's initial status is unapproved.

Revert to Selected

Reverts the data set to a previous version.

1. Select a data set to which you want to revert and click **Revert to Selected**.
2. A confirmation box is displayed. Click **Yes** to continue.
3. The data set is reverted to the previous version and all subsequent data set versions are deleted.

Note: This operation cannot be undone.

Create New From

Creates a new, unapproved data set from the selected data set.

1. Select a data set to copy and click **Create New From**.
2. A confirmation box is displayed. Click **Yes** to continue.
3. A new unapproved copy of the selected data set is created at version 1. The **Data Set Information** screen is displayed.
4. Amend the **Data Set Information** as required and save the data set.

View Differences

Creates a report which highlights the differences between two data sets.

1. Select two data sets to compare. (A second data set may be selected by Ctrl+ click.)
2. Click **View Differences**. The Differences window is displayed showing a difference report. The following options are available:
 - **Print to File** – Prints a copy of the displayed report.
 - **Close** – Closes the displayed report.

Note: Data sets saved to file do not include their change history. Historical approval information is included but the previous change history is not. This means when a data set is reloaded from file, the **View Differences** tool can only show changes made from that point forwards.

Difference Options

Displays the options to ignore certain types of differences when generating the difference report.

- **Ignore Date/Times** – Specifies that the report should ignore differences in date and time.
- **Ignore case differences** – Specifies that the report should ignore differences in case.
- **Ignore whitespace** – Specifies that the report should ignore lines that differ only in the space, tab, or other white space characters.

Reports

All reports are accessed by clicking **Data Set** in the **Data Set Navigation** pane and then selecting **Reports** from the **Views** pane.

The Data Set Review and Data Set Entry Reports have a report for GP/VP/GH/CC Pumps.

The time required to generate a report depends on the size of the data set, and the specification of the PC.

A minimum of Microsoft Office 2010 Word or later is required to allow Data Set Review and Data Set Entry reports to be output correctly.

Note If Microsoft Office 2010 Word or later is not present, users are given the option to save the report instead. Thus it can be transferred to another computer with Microsoft Office Word 2010 or later installed.

Data Set Entry Report

The Data Set Entry Report is an empty report template containing all the configurable options. The information fields are blank to allow the required values to be manually entered. This allows users who do not have direct access to the Editor to make a data set entry request prior to the approval process.

1. Select **Data Set Entry Report** from the **Operations** pane. The Data Set Entry Report is displayed.
2. Select **Print** (Ctrl+P) to print the data entry report.
3. The report may be filled in manually or electronically.
4. When the Data Set Entry Report has been filled in, it can be used to create a suitable data set from which a data set review report can be created for approval.

Note: The Data Set Entry Report uses whichever unit display format has been previously configured by the user as the default values to be used for new data sets – µg/mcg and U/Unit (see Chapter 4, 'Data Set Information').

Data Set Review Report

A hard copy print of the entire data set should be signed by the hospital's authorised reviewers before a data set is approved and exported for use. When the report is created, a unique four character hexadecimal data set ID is generated on the front page and in the footer of each page of the report. The data set ID is required to export an approved data set. Each page of the report should be signed by a hospital representative.

1. Select **Data Set Review Report** from the **Operations** pane. The Data Set Review Report of the current data set is displayed.
2. Select **Print** (Ctrl+P) to print the report.
3. Submit for approval.

5 Master Lists

Master Drug and Syringe Lists

There are two types of master list available – a master drugs list and a master syringe library. Master drugs can optionally be set up with alternate names and concentrations, which can then be used within a profile, while the syringe library simply provides a current list of all syringe types usable with CC and GH model Pumps.

Master Drug List

The Master Drug List is accessed by clicking **Master Lists** in the **Data Set Navigation** pane and then selecting **Master Drug List** from the **Master Lists Views** pane.

The Master Drug List contains a predefined list of drug names and concentrations suitable for infusion using the Alaris™ Plus Infusion Pumps. Alternate Names and Concentrations can be defined in the Master Drug List and are accessible when creating a Profile Drug Library.

Alternate Names

Each drug in the **Master Drug List** may be defined with alternate names. Each alternate name is automatically mapped to the master drug name.

Add Alternate Name

1. Select the drug that requires an alternate name from the **Drug Names** list.
2. Click **Add Alternate Name**. The **New Alternate Name** dialog box is displayed.
3. Enter the **Alternate Name:** and click **OK**. The new alternate name is displayed in the **Alternate Names** field in the **Drug Details** pane.

Edit Alternate Name

1. Select the drug that requires editing from the **Drug Names** list and select the **Alternate Name**.
2. Click **Edit Alternate Name**. The Edit Alternate Name dialog box is displayed.
3. Edit the **Alternate Name:** and click **OK**. The new alternate name is displayed in the **Drug Details**.

Delete Alternate Name

1. Select the drug that requires editing from the **Drug Names** list and select the **Alternate Name**.
2. Click **Delete Alternate Name**. A confirmation box is displayed.
3. Click **Yes** to delete the alternate name.

Concentrations

Add Concentration

1. Select the drug that requires a concentration from the **Drug Names** list.
2. Click **Add Concentration**. The **New Concentration** dialog box is displayed.
3. Select **Standard** or **Units Only**.
4. Specify the required concentration and click **OK**. The new concentration is added to the **Concentrations** field.

Edit Concentration

1. Select the drug that requires editing from the **Drug Names** list and select the required **Concentration**.
2. Click **Edit Concentration**. The **Edit Concentration** dialog box is displayed.
3. Edit the concentration as required and click **OK**. The concentration is updated.

Delete Concentration

1. Select the drug that requires editing from the **Drug Names** list and select the required **Concentration**.
2. Click **Delete Concentration**. A confirmation box is displayed.
3. Click **Yes** to delete the concentration.

Update to Latest Version

Click **Update to Latest Version** to ensure that the information in the Master Drug List is the most current version. The option is greyed out if no updates are available.

Master Syringe Library

The Master Syringe Library is a predefined list of the currently supported syringes and is accessed by clicking **Master Lists** in the **Data Set Navigation** pane and then selecting **Master Syringe Library** from the **Master Lists Views** pane.

Update to Latest Version

Click **Update to Latest Version** to ensure that the information in the Syringe Library is the most current version. The option is greyed out if no updates are available. The Master Syringe Library screen is for reference only.

6 Profiles

Profile Management

Clicking **Profiles** in the **Data Set Navigation** pane enables the creation and management of up to 30 profiles for each data set. The drop-down menu in the status bar allows different profiles to be selected, and the current number of profiles used is shown.

Each profile comprises:

- **Profile Information** – The Profile Information is a set of user-defined configuration settings for the Pump.
- **Profile Syringe Library** – The Profile Syringe Library contains the enabled syringes selected from the Master Syringe Library. A syringe pump profile must have at least one syringe enabled before it can be approved.
- **Drug Library** – The Drug Library is a collection of infusion drug protocols, including predefined infusion parameters.

The Profile Management tool bar is accessible on all profile setup screens.

Add Profile

1. Click **Add Profile**. The **New Profile** dialog box is displayed.
2. Enter a valid profile name and click **OK**. The new profile becomes the current profile and is displayed in the **Current Profile** field.

Copy Profile

1. Click **Copy Profile**. The **Copy Profile** dialog box is displayed showing all profiles in the current data set. To show the profiles from all data sets in the repository, select the **Include profiles from all data sets in repository** check box.
2. Select the source profile required.
3. Enter a valid profile name and click **OK**. A new profile based on the selected profile is created.
Note: If the syringe library version of the data set containing the selected profile and the current data set do not match a dialog box is displayed. The syringe list for the profile being copied can be cleared and the syringes for this profile must be re-selected (see 'Profile Syringe Library').

Delete Profile

1. Select the profile to delete from the **Current Profile** drop-down menu, or from the Operations pane, and click **Delete Profile**. A confirmation box is displayed.
2. Click **Yes** to delete the selected profile.

Profile Information


The **Profile Information** allows the creation and management of pump configuration settings for each profile within the current data set.


1. Select the required profile from the Current Profile list.
2. Select the **Profile Information** option.
3. Make the required changes to the pump configuration. Positioning the mouse pointer over a configuration option displays a tooltip with a setting definition, factory default and range of permissible values (if applicable).
4. Most configuration controls are common to all pump types, but Syringe Pumps and Large Volume Pumps also have sections for their own custom configuration settings:

	CC, GH	GP, VP
General Profile Properties	✓	✓
General Pump Configuration Settings	✓	✓
Syringe Pump Configuration Settings	✓	
Large Volume Pump Configuration Settings		✓
Dosing Only Units	✓	✓

Note: Any changes to the configuration settings reset the status of an approved data set to unapproved. This includes altering a value, then putting the old value back again.

Note: Reset To Factory Defaults returns the configurations for the selected profile to the original settings.

Note: The Validation Error symbol  appears next to any field where an invalid value has been entered or where a required value is missing.

Note: Tool tips are displayed whenever the pointer is placed over the  symbol.

General Profile Properties

The General Properties comprises the following:

- **Profile Name** – The Profile Name can be changed at any time.
- **Profile Description** – An optional field allowing a description of the profile's intended use to be entered.
- **Infusion Platforms** – The pump platform and models available. The options available are dependent on the platforms and models selected when creating the data set.

General Pump Configuration Settings

The following general pump settings can be configured in the BD Alaris™ Plus Editor and apply to all Pumps configured with the selected profile.

Setting	Default Value	Options	Increments
AC Fail Warning	Enabled	Enabled/Disabled	N/A
Audio Volume	<i>Medium</i>	<i>Low,</i> <i>Medium,</i> <i>High</i> Note: The <i>Low</i> audible alarm setting may not be suitable for all operating environments.	N/A
Audio Volume Adjustable	Disabled	Enabled/Disabled	N/A
Auto Night Mode	Enabled	Enabled/Disabled	N/A
Auto Save	Enabled	Enabled/Disabled	N/A
Battery Icon	Enabled	Enabled/Disabled	N/A
Callback Time	2.0 minutes	0.1 to 15.0 minutes	0.1 minutes
Drug Override Mode	Always	Always/Smart	N/A
Event Log	Enabled	Enabled/Disabled	N/A
Pressure Display*	Enabled	Enabled/Disabled	N/A
Quiet Mode	Disabled	Enabled/Disabled	N/A
Rate Lock	Disabled	Enabled/Disabled	N/A
Rate Titration	Enabled	Enabled/Disabled	N/A
Standby Mode	Disabled	Enabled/Disabled	N/A
VTBI Clear Rate	Disabled	Enabled/Disabled	N/A
Weight Default	1.00kg	0.01 to 250kg	0.01 to 9.99kg in steps of 0.01kg 10.0 to 99.9kg in steps of 0.1kg 100 to 250kg in steps of 1kg
Weight Soft Min (Plus Guardrails™ data sets only)	1.00kg	0.01kg to <i>Weight Default</i>	0.01 to 9.99kg in steps of 0.01kg 10.0 to 99.9kg in steps of 0.1kg 100 to 250kg in steps of 1kg
Weight Soft Max (Plus Guardrails™ data sets only)	150kg	<i>Weight Default</i> to 250kg	0.01 to 9.99kg in steps of 0.01kg 10.0 to 99.9kg in steps of 0.1kg 100 to 250kg in steps of 1kg

* **Note:** Pressure Display is not an option for the Alaris™ VP Volumetric Pump, as the pressure display is always Enabled.


Syringe Pump Configuration Settings

Setting	Default Value	Options	Increments
Back Off	Enabled	Enabled/Disabled	N/A
Bolus Mode	<i>Hands-On Only</i>	<i>Disabled</i> <i>Hands-On Only</i> <i>Hands-Free and Hands-On</i>	N/A
Bolus Rate Default	500ml/h	10ml/h to <i>Bolus Rate Max</i>	10ml/h
Bolus Rate Max	1200ml/h	<i>Bolus Rate Default</i> to 1200ml/h	10ml/h
Bolus Volume Max	5.0ml	0.1 to 25.0ml	0.1ml
Display Syringe Brand	Enabled	Enabled/Disabled	N/A
End of Infusion Point	1.0%	0.1 to 5.0%	0.1%
Infusion Rate Max	1200ml/h	1.0 to 1200ml/h	1.0 to 99.9ml/h in steps of 0.1ml/h 100 to 999ml/h in steps of 1ml/h 1000 to 1200ml/h in steps of 10ml/h
KVO at EOI	Enabled	Enabled/Disabled	N/A
KVO Rate	1.0ml/h	0.1 to 2.5ml/h	0.1ml/h
Manual Bolus	Disabled	Enabled/Disabled	N/A
Near End of Infusion Point	5 minutes	1 to 15 minutes	1 minute
Purge Rate	200ml/h	100 to 500ml/h	100ml/h
Purge Volume Max	2.0ml	0.5 to 5.0ml	0.1ml
Purge Syringe	Disabled	Enabled/Disabled	N/A
VTBI Max	1000ml	0.10 to 1000ml	0.10 to 9.99ml in steps of 0.01ml 10.0 to 99.9ml in steps of 0.1ml 100 to 1000ml in steps of 1ml
Pressure Maximum (CC)	1000mmHg	1 to 1000mmHg	1mmHg
Occlusion Alarm Pressure (CC)	300mmHg	1 to 1000mmHg	1mmHg
Auto Pressure (CC)	Enabled	Enabled/Disabled	N/A
Auto Set Pressure (CC)	Disabled	Enabled/Disabled	N/A
Auto Offset (CC)	30mmHg	15 to 100mmHg	1mmHg
Pressure Maximum (GH)	L10	L0 to L10	L0, L1, ... L10
Occlusion Alarm Pressure (GH)	L3	L0 to L10	L0, L1, ... L10

Large Volume Pump Configuration Settings

The following pump settings can be configured in the BD Alaris™ Plus Editor.

Setting	Default Value	Options	Increments
AIL Limit	100µl	50µl, 100µl, 250µl, 500µl	N/A
Bolus Mode	<i>Hands-On Only</i>	<i>Disabled</i> <i>Hands-On Only</i> <i>Hands-Free and Hands-On</i>	N/A
Bolus Rate Default	500ml/h	10ml/h to <i>Bolus Rate Max</i>	10ml/h
Bolus Rate Max	1200ml/h	<i>Bolus Rate Default</i> to 1200ml/h	10ml/h
Bolus Volume Max	5ml	1 to 100ml	1ml
Downstream Occlusion Alarm Pressure (GP)	L5	L0 to L8	L0, L1, ... L8
Downstream Pressure Maximum (GP)	L8	L0 to L8	L0, L1, ... L8
Infusion Rate Max	1200ml/h	1.0 to 1200ml/h	1.0 to 99.9ml/h in steps of 0.1ml/h 100 to 999ml/h in steps of 1ml/h 1000 to 1200ml/h in steps of 10ml/h
KVO Rate	5.0ml/h	0.1 to 20.0ml/h	0.1ml/h
Near End of Infusion Point	5 minutes	1 to 15 minutes	1 minute
Primary VTBI Max	9999ml	1 to 9999ml	1ml
Prime Rate	200ml/h	100 to 1200ml/h	100ml/h
Prime Volume Max	20ml	5 to 50ml	1ml
Secondary Infusion	Disabled	Enabled/Disabled	N/A
Secondary Infusion Rate Max	200ml/h (When Secondary Infusion Enabled)	1 to 1200ml/h	1 to 999ml/h in steps of 1ml/h 1000 to 1200ml/h in steps of 10ml/h
Secondary VTBI Max	9999ml (When Secondary Infusion Enabled)	1 to 9999ml	1ml
Downstream Occlusion Alarm Pressure (VP)	500mmHg	1 to 800mmHg	1mmHg
Downstream Pressure Maximum (VP)	800mmHg	1 to 800mmHg	1mmHg
Auto Pressure (VP)	Enabled	Enabled/Disabled	N/A
Auto Set Pressure (VP)	Disabled	Enabled/Disabled	N/A
Auto Offset (VP)	30mmHg	15 to 100mmHg	1mmHg
Alarm Volume Ramping (VP)	Enabled	Enabled/Disabled	N/A
Disable Near End Of Infusion (VP)	Disabled	Enabled/Disabled	N/A

Note: When the Secondary Infusion Rate Max exceeds 200ml/h, a  warning is displayed. High secondary rates may cause sympathetic flow from the primary container.

Dosing Only Units

The following dose rate units can be configured for use in Dosing Only mode. Selecting the **All** check box selects all of the listed units.

Type	Unit	Default Value	Unit	Default Value
Gram Based	ng/min	Disabled	ng/kg/min	Enabled
	ng/h	Disabled	ng/kg/h	Disabled
	ng/24h	Disabled	ng/kg/24h	Disabled
	µg/min	Enabled	µg/kg/min	Enabled
	µg/h	Enabled	µg/kg/h	Enabled
	µg/24h	Disabled	µg/kg/24h	Disabled
	mg/min	Disabled	mg/kg/min	Enabled
	mg/h	Enabled	mg/kg/h	Enabled
	mg/24h	Disabled	mg/kg/24h	Disabled
	g/min	Disabled	g/kg/min	Disabled
	g/h	Enabled	g/kg/h	Disabled
	g/24h	Disabled	g/kg/24h	Disabled
Unit Based	mU/min	Disabled	mU/kg/min	Disabled
	mU/h	Disabled	mU/kg/h	Disabled
	mU/24h	Disabled	mU/kg/24h	Disabled
	U/min	Disabled	U/kg/min	Disabled
	U/h	Enabled	U/kg/h	Enabled
	U/24h	Disabled	U/kg/24h	Disabled
	kU/min	Disabled	kU/kg/min	Disabled
	kU/h	Disabled	kU/kg/h	Disabled
	kU/24h	Disabled	kU/kg/24h	Disabled
mmol Based	mmol/min	Disabled	mmol/kg/min	Enabled
	mmol/h	Enabled	mmol/kg/h	Enabled
	mmol/24h	Disabled	mmol/kg/24h	Disabled
Volume Based	ml/min	Disabled	ml/kg/min	Disabled
	ml/h	Always Enabled	ml/kg/h	Disabled
	ml/24h	Disabled	ml/kg/24h	Disabled

Profile Syringe Library

The Profile Syringe Library is created from the predefined Master Syringe Library (Alaris™ Syringe Pumps only).

1. Select **Profile Syringe Library** from the **Profiles Views** pane.
2. Select the check boxes of the syringes to be included in the profile. Selecting the **All Syringes** check box under **Operations** selects all the syringes.

Note: It is recommended that only syringe types and sizes used in the care area are selected.

Drug Library

For each profile a **Drug Library** is defined. Ensure that the required profile is shown in **Current Profile** drop-down list. The profile drug library is accessed via **Drug Library** under **Views**.

Each profile may have up to 100 drug definitions.

Add Drug...

Drug Definition

1. Select **Add Drug...** from the **Operations** pane.
2. Select a **Drug Name** from the drop-down list. The list reflects the drugs defined in the **Master Drug List**.
 - If a drug is required that does not appear in the **Master Drug List**:
 - a) Enter the required name into the **Drug Name** field as it is to appear on the Pump.
 - b) Select the **Mapping** for the drug. This allows the drug to be linked to a predefined drug from the **Master Drug List** (i.e. creates a new alternate name) or creates it as a new definition using **<No Mapping Selected>**.

Note: It is recommended that drugs are mapped to a known master drug. If **<No Mapping Selected>** is selected, a warning icon is displayed next to the Mapping field on the main Drug Library screen.

Note: Any new Drug Name or Alternate Name defined in the Profile Drug Library only appears in the Profile Drug Library and is not added to the Master Drug List.
3. Select the relevant **Platform** check box.
4. Select the **Primary/Secondary** option for the drug (Large Volume Pump platform only).
5. Select **Allow Secondary** if the drug name is able to be selected for labelling secondary infusions (Large Volume Pump platform only).
6. Click **Next** to continue.

Concentrations

Note: If **Secondary** or **Allow Secondary** are selected in the **Drug Definition**, the **Concentration Units** are set to **No Concentrations (ml)**.

1. If a drug concentration is to be defined; select **Concentration Units** from the drop-down menu.
2. For **Concentration Units** other than **No Concentration (ml)**, click the **Add Concentration** icon to display the **New Concentration** window.

Note: Any previously defined concentrations are displayed only when the corresponding unit is selected.
3. Select **Standard** or **Units Only**.
4. Specify the required concentration and click **OK**. The new concentration is added to the **Concentrations** field.
5. Select the check boxes to specify the applicable platform.
6. Confirm or modify the **Concentration Min** and **Concentration Max**.
7. Click **Next** to continue.

Dose Rate Settings

Note: If **Secondary** or **Allow Secondary** are selected in the Drug Definition, the Dose Rate Units are set to ml/h.

1. Select the **Weight Based** box to enable weight based dose rate units.
2. Select the required **Dose Rate Units** from the drop-down menu.
3. Enter the required values for **Dose Rate Default**, **Dose Rate Soft Min** (Plus Guardrails™ data sets only), **Dose Rate Soft Max** (Plus Guardrails™ data sets only) and **Dose Rate Hard Max**.
4. Click **Next** to continue.

Bolus Settings

1. Select the required bolus function from the **Bolus Mode** drop-down menu (**Disabled**, **Hands-On Only** or **Hands-Free and Hands-On**).
2. Check the **Weight Based** box to enable weight based dose rate units if required.
3. Select the **Bolus Dose Units** from the drop-down menu.
4. Enter the **Bolus Dose Default**, **Bolus Dose Soft Min** (Plus Guardrails™ data sets only), **Bolus Dose Soft Max** (Plus Guardrails™ data sets only) and the **Bolus Dose Hard Max**.
5. Enter the **Bolus Rate Default**.
6. Click **Next** to continue.

Pressure Settings

1. Select the required **Occlusion Alarm Pressure** or **Downstream Occlusion Alarm Pressure** for the relevant platform.
2. Click **Finish** to confirm the new drug details.

CC Settings

Setting	Default Value	Options	Increments
Occlusion Alarm Pressure	Profile Occlusion Alarm Pressure	1 to 1000mmHg	1mmHg

GH Settings

Setting	Default Value	Options	Increments
Occlusion Alarm Pressure	Profile Occlusion Alarm Pressure	L0 to L10	L0, L1, ... L10

GP Settings

Setting	Default Value	Options	Increments
Occlusion Alarm Pressure	Profile Occlusion Alarm Pressure	L0 to L8	L0, L1, ... L8

VP Settings

Setting	Default Value	Options	Increments
Occlusion Alarm Pressure	Profile Occlusion Alarm Pressure	1 to 800mmHg	1mmHg

Copy Drug...

Drug parameters may be copied from any drug previously described in any of the Data Sets stored in the data set repository.

1. Select **Copy Drug...** from the **Operations** pane. The **Copy Drug** dialog box is displayed.
2. The drugs available to copy from the current data set are displayed showing the **Drug Name**, **Source Profile** and **Source Data Set**. Selecting the **Include drugs from all data sets in repository** check box lists all the drugs defined within the repository.
3. Select the drug to be copied. Click **OK**.
4. The copied drug is listed under **Drug Names** and the details are displayed.

Delete Selected Drug

1. Select the drug to be deleted from the **Drug Names** list.
2. Click **Delete Selected Drug**, a confirmation box is displayed.
3. Click **Yes** to delete the selected drug.

Editing a Selected Drug

When a drug has been created, the parameters can be edited directly on the Drug Library screen.

Note: Clearing the **Pertains to Platform** check box results in the loss of all drug parameters for that platform only. This action cannot be undone.

7 BD Alaris™ Plus Transfer Tool

Introduction

The BD Alaris™ Plus Transfer Tool allows an approved data set which has been exported from the BD Alaris™ Plus Editor to be uploaded to an appropriate Pump. The Transfer Tool can also be used to download CQI events from a Pump.

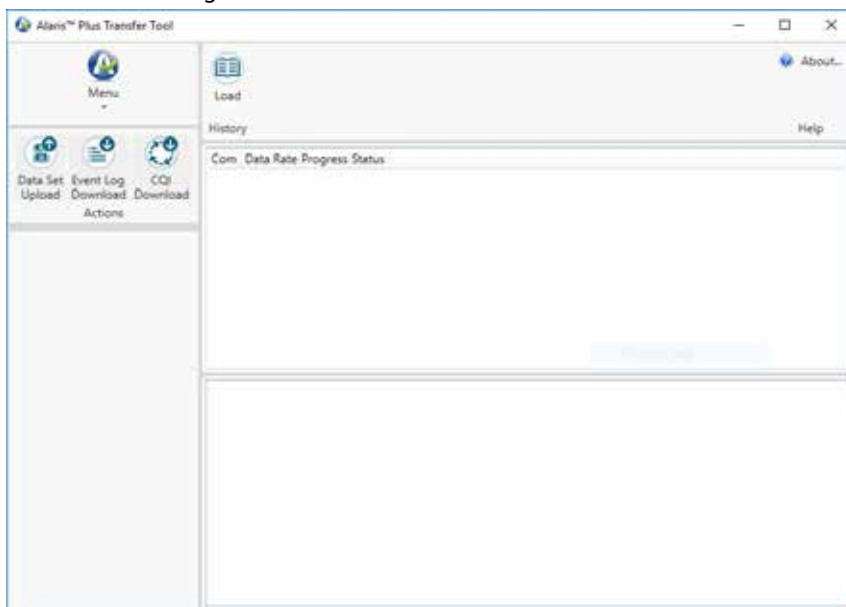
Getting Started

Starting the BD Alaris™ Plus Transfer Tool

To open the BD Alaris™ Plus Transfer Tool select the shortcut icon on the desktop or select **Start > BD Alaris > BD Alaris Plus Transfer Tool**.

Navigating the Transfer Tool

Most activities begin from the Transfer Tool main screen.



The Transfer Tool is divided into six areas:

Menu

The Menu function provides an alternate access to the **Actions** icons and allows the user to Exit the Transfer Tool.

Actions

Data Set Upload – Allows an approved data set to be uploaded to a compatible Pump (Ctrl+U).

Event Log Download – Allows event log data to be downloaded from the selected Pump(s) either to a new file or added to an existing one (Ctrl+L).

CQI Download – Allows CQI data to be downloaded from the selected Pump(s) either to a new file or added to an existing one (Ctrl+Q).

Note: Event log download functionality is also available via the Alaris™ Technical Utility (ATU), available separately.

Information

When a data set is selected, the relevant data set information is displayed in the Information pane.

Menu Bar

The functions available from the menu bar are:

History – Toggles the History pane on and off (see 'History').

About... – Displays information about the current version of the BD Alaris™ Plus Transfer Tool.

Help – Accesses the application help file.

Transfer Status Pane

Displays the status of each channel being used to upload the data set.

History Pane

An event log containing all events associated with every transfer that has been performed on the selected channel.

Connecting the Pump to the PC

Note: Only an approved and exported data set can be uploaded.



At no time should the Transfer Tool be used to upload a data set to an Alaris™ Plus Infusion Pump while the Pump is connected to the patient.

1. Ensure that the Alaris™ Plus Infusion Pump is turned off.
2. Connect a straight-through RS232 communications cable or USB to RS232 communications cable to the RS232 connector on the back of the Pump.
3. Connect the other end of the cable to the serial port (usually COM1) or the USB port of the PC as appropriate.




Note: Software drivers need to be installed to use the USB to RS232 communications cable.

Note: An RS232 to IrDA adapter (e.g. Actisys) can be used with a cable or by itself. The IrDA adapter must be aligned with the IR Comms Port on the back of the Pump.

Note: A USB to multi-port RS232 hub (e.g. Roline USB to 4 × RS232 Converter) can be used to connect to many Pumps simultaneously. A USB to USB cable needs to be connected from the hub to the PC and the Pumps connected to the hub via RS232 communications cables or IrDA adapters. Software drivers need to be installed to use the hub.

Data Set Upload

The Data Set Upload allows an approved data set to be uploaded to a compatible Pump. A data set on a Pump cannot normally be deleted, but it can be overwritten by uploading a new data set.

1. Connect the Pump(s) to the PC (see 'Connecting the Pump to the PC').
2. Click **Data Set Upload** (Ctrl+U). The **Data Set Upload Wizard** is displayed. Click **Next** to continue.
3. Select the serial port(s) required to upload the data set to the Pump(s). Click **Next** to continue.
4. Click **Select Dataset** and **Open** the required data set. Plus Pumps use .mnr data set files, and Plus Guardrails™ Pumps use .mgr data set files. The selected data set and path are displayed. Click **Next** to continue.
5. Enter the data set ID and click **Validate**. If the data set ID entered matches the ID of the selected data set, the **Next** button becomes available. Click **Next** to continue.
6. Select the profile to be uploaded (Plus data sets only). Click **Next** to continue.
7. The data set selection is now complete. Click **Finish**. The file information is updated to show the **File** used, **Data Set** and **Supported Pump Types**.
8. On the Pump, while holding the  button, press and release the  button to enter Tech Mode. Release the  button after the beep has sounded.
9. The access code screen is displayed on the Pump. For Alaris™ Syringe Pumps, enter access code **401** and proceed to step 10. For Alaris™ Volumetric Pumps enter access code **212**, select **Data Set Transfer**, press the **OK** softkey and proceed to step 10.
10. Select either **RS232** or **IrDA** on the Pump. (Alaris™ Volumetric Pumps offer RS232 only; Alaris™ Syringe Pumps offer RS232 or IrDA.)
11. Press the **Start** softkey to start a data set upload.
12. When the upload is complete, the Pump validates the data then displays **Transfer Complete**. The transfer status is shown as **Data Set Deployed to the Pump**.



Ensure the Data Set Name, Data Set Version and Data Set ID shown on the Pump are identical to the one uploaded.

13. Accept the data set upload on the Pump. The transfer status is shown as **Deployed**.
14. Switch off the Pump by holding the power button for three seconds and disconnect from the PC.
15. If multiple uploads are required, connect the next Pump and repeat from step 8.
16. When all uploads are complete, click **Menu > Exit** to close the Transfer Tool.



Transfer activities – i.e. uploading a data set to a Pump, or downloading CQI events from it – are considered non-clinical service activities.

Interconnecting the Pump with a PC may cause the safety or electromagnetic environment to change while the connection exists. The threat of higher leakage currents or EMI disturbances may be present. Disconnect the IrDA or RS232 cable connection at both ends following transfer activities.

Event Log Download

The **Event Log Download** allows event log data to be downloaded from the selected Pump(s) either to a new file or added to an existing one. This feature is currently only available for the Alaris™ GP Volumetric Pump and the Alaris™ GP Guardrails™ Volumetric Pump.

1. Connect the pump(s) to the PC (see 'Connecting the Pump to the PC').
2. Click **Event Log Download** (Ctrl+L). The **Event Log Download Wizard** is displayed. Click **Next** to continue.
3. Select the serial port(s) required to transfer the event log data from the pump(s). Click **Next** to continue.
4. Select the file option that the event logs are to be saved to. Select the existing .zip file or enter a filename and location to create a new file. Click **Next** to continue.
5. Ensure that the selected Pumps are switched on and switched to Tech Mode (access code **212** for Alaris™ Volumetric Pumps) and click **Finish**. The Transfer Tool status is shown as **Event log downloading**.
6. The event logs are downloaded to the selected file and the BD Alaris™ Plus Transfer Tool status is shown as **Event log download complete**. The file information is updated to show the **File Name** and **File Size**.

CQI Download

The **CQI Download** allows event log data to be downloaded from the selected Pump(s) either to a new file or added to an existing one. (Only available on infusion pumps running plus Guardrails™ software.)

1. Connect the Pump(s) to the PC (see 'Connecting the Pump to the PC').
2. Click **CQI Download** (Ctrl+Q). The **CQI Event Log Download Wizard** is displayed. Click **Next** to continue.
3. Select the serial port(s) required to download the event log data from the Pump(s). Click **Next** to continue.
4. Select the file option that the CQI event logs are to be saved to. Select the existing .zip file or enter a filename and location to create a new file. Click **Next** to continue.
5. Ensure that the selected Pumps are switched on and switched to Tech Mode (access code **212** for Alaris™ Volumetric Pumps, code **402** for Alaris™ Syringe Pumps). On GP/VP Pumps select **CQI Event Download**. For all Pump models then click **Finish**. The Transfer Tool status is shown as **Requesting Device info**.
6. Press the **Start** softkey on the Pump(s) to initiate download. The Transfer Tool status is shown as **CQI log downloading**.
7. The event logs are downloaded to the selected file and the BD Alaris™ Plus Transfer Tool status is shown as **CQI log download complete**. The file information is updated to show the **File Name** and **File Size**.

History

Clicking **History** toggles the information displayed in the History pane on and off.

The History information is a text file containing the Transfer Tool events in chronological order.

Status Messages

Message	Description
Requesting device info	Communication has been established with the Pump, but no data has yet been transferred.
Sending Data Set	The data set is being uploaded to the Pump.
Data Set deployed to the pump	The data set has been accepted on the Pump.
Device Disconnected	The BD Alaris™ Plus Transfer Tool cannot detect a connection to a Pump. The connection between the BD Alaris™ Plus Transfer Tool and the Pump has been lost.
Event log downloading	The event log is being downloaded from the pump.
Event log being archived	The event log data is being written to a .zip file.
Event log download complete	The event log has been successfully downloaded from the pump.
CQI log downloading	The CQI event log is being downloaded from the Pump.
CQI log download complete	The CQI event log has been successfully downloaded from the Pump.
Session aborted by user	The transfer has been cancelled in the BD Alaris™ Plus Transfer Tool.
Session terminated by pump	The transfer has been cancelled on the Pump.
Forbidden	The action is not supported by the Pump. e.g. Event Log Download is not currently supported on the Alaris™ Syringe Pumps.

8 Warnings, Cautions and Precautions

Warnings



At no time should the BD Alaris™ Plus Transfer Tool be used for transfer activities – i.e. uploading a data set to a Pump, or downloading CQI events from it – while the Pump is connected to a patient.



The BD Alaris™ Plus Editor incorporates dosing limits and pump configuration parameters based on hospital protocol. The software adds a test of reasonableness to drug programming based on the limits defined by the hospital. Qualified users must ensure the suitability of the drug dosing limits. Potential hazards include drug interactions, inaccurate delivery rates, inaccurate pressure alarms and nuisance alarms.



Pumps returned to the BD service centre may be set to factory defaults and will not have a hospital-approved data set loaded. Biomedical users in the facility are responsible for checking the Pump and ensuring the current, hospital-approved data set is loaded.

Cautions



Transfer activities – i.e. uploading a data set to a Pump, or downloading CQI events and the Pump Event Log from it – are considered non-clinical service activities.

Interconnecting the Pump with a PC may cause the safety or electromagnetic environment to change while the connection exists. The threat of higher leakage currents or EMI disturbances may be present.

Disconnect the IrDA or RS232 cable connection at both ends following transfer activities.

General Use Precautions

A data set is designed to incorporate the hospital's best-practice guidelines. As such, it should be developed and approved by the appropriate clinical decision makers in the hospital.

Only qualified users, or persons acting under the direct supervision of qualified users, should have access to the BD Alaris™ Plus Editor and BD Alaris™ Plus Transfer Tool.

Users of the BD Alaris™ Plus Editor and BD Alaris™ Plus Transfer Tool should read all instructions before installing and using the software product.

All users should ensure that they are thoroughly familiar with the relevant Pump *Directions For Use* prior to use.

Hospital data sets should accurately reflect the hospital's best-practice guidelines. Care should be taken when specifying the limits for the data set.

The default Guardrails™ data set does not have drug-related Guardrails™ limits.

The Pump serial number and the hospital name are stored in the event log.

When processing large data sets it is recommended that other PC applications are closed.

The BD Alaris™ Plus Editor and BD Alaris™ Plus Transfer Tool should not be used on computers running safety critical applications.

Troubleshooting

Problem	Possible Cause	Solution
Unable to set up application; Unable to set up database.	An installation error or an MS SQL database error outside the scope of this manual has occurred.	Re-run the installation after rebooting the computer. If the problem persists contact your local technical support services.
Data set cannot be loaded.	Exported data set is corrupt.	Re-export the data set from the Editor.
	Data set was exported from an incompatible Editor version.	Re-export the data set using the current version of the Editor.
	Data set was exported from an Editor that supports a different type of Pump (e.g. syringe pump).	Use the Transfer Tool provided with the relevant Editor.
Data transfer failed.	Incorrectly fitted/faulty transfer cables.	Check/replace cables and restart transfer.
	Unexpected Transfer Tool error.	Restart the BD Alaris™ Plus Transfer Tool.
Data set cannot be loaded – it is an unapproved data set.	The data set is not approved.	Approve the data set and re-export.
The application could not create a temporary file. Please contact your system administrator.	The user does not have access to the Windows TEMP (or TMP) directory.	Contact your system administrator.
There are no serial ports available for use.	The PC has no serial ports fitted or (more likely) all the ports are in use by other programs.	Close any applications that may be using the port. Restart the BD Alaris™ Plus Transfer Tool.
A serial port has stopped functioning and can no longer be used.	Serial port has failed or is being used by another application.	Close any applications that may be using the port. Restart the Alaris™ Plus Transfer Tool. Any other ports in use can continue to be used.

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Document History

Issue	Date	Software Version	Update Description
1	May 2019	v4.5	Initial release

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