Cubiscan® Qbit-DB

User Guide

Version 2.15 (2024.04.25)

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CUBISCAN

Cubiscan Qbit-DB User Guide

This document was created with the purpose of providing the most accurate and complete information. If you have comments or suggestions for improving this manual, contact Cubiscan at manual@Cubiscan.com.

What's new in Version 2.15?

- Interface update.
- Cross reference. See "Measuring items with cross reference lookup enabled" on page 129
- Additional camera options. See "Images" on page 64
- On hand report.
- Added protocol types for export. See "FTP download" on page 33
- Webservices update. See "Web services" on page 92

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CHAPTER 1
GETTING STARTED

This chapter provides instructions for starting and exiting Qbit-DB™ and describes the different areas and the functions performed at the main window.

Starting/exiting Qbit-DB

Do one of the following to start Qbit-DB:

- Click **[Start]**, select **Programs**, click **Cubiscan**, then click **Qbit-DB**.
- Double-click the Qbit-DB desktop icon.

The main window is displayed.

Do one of the following to exit Qbit-DB:

- Pull down the File menu, and click **[Exit]**.
- Click the Close button (**[X]**) located in the upper right corner of the main window.

Menu bar

The menus at the top of the main window contain functions used to perform tasks and set up Qbit-DB. Click a menu name and the menu drops down from the menu bar. Click a function on the menu to select it. If a function has an arrow on the right, a sub menu is displayed when you click the function.

You can also select a function by typing the first letter in the function name.

File menu

Following are the functions available on the File menu.

Import	Use this function to manually import data from an external source file. Refer to "Importing to a database table" on page 113.
Export	Use this function to export all or a portion of the Qbit-DB database to an FTP site, an ASCII text file, or a csv file. Refer to "Exporting a database table" on page 115.
Exit	Use this function to exit Qbit-DB.

Database menu

Following are the functions available on the Database menu.

New table	Select this function to create a new database table. Refer to "Creating a new database" on page 109.
Open table	Select this function to open an existing database table. Refer to "Opening a database" on page 110.
Delete table	Select this function to delete a database table. Refer to "Deleting a database" on page 111.
Empty table	Select this function to empty or clear the database table that is currently open. Refer to "Emptying a database" on page 112.
Save copy as	Select this function to make a copy of the entire MS Access database and tables by creating a backup file from the **Cubiscan.accdb** MS Access database file.
Default column order	Select this function to arrange the database columns in their default order.
Delete current record	Select this function to delete the current highlighted record. You can also tap the delete button on the keyboard to delete individual item numbers from the database table.
Log database field names	Select this function to store all the current database table field names in the log file.

View menu

Cubiscan picture	Click this function to show or hide the Cubiscan picture window. A checkmark indicates it is shown.

Stacking	Click this function to show or hide the stacking window. A checkmark indicates it is shown.
Message	Click this function to show or hide the message window. A checkmark indicates it is shown.
Camera image	Click this function to show or hide the camera image window. A checkmark indicates it is shown.
Previous measurement	Click this function to show or hide the previous measurement window. A checkmark indicates it is shown.
QR code	Click this function to show a window displaying an item's associated QR code.
Cubiscan fields read only	Click this function to make the Cubiscan fields read only. With this function selected, you will not be able to make entries or edit information in any of the Cubiscan fields.
Database fields	Click this function to show or hide the database fields. A checkmark indicates they are shown.
Load default view	If you have changed the arrangement of windows on the main window (see "Customizing the main window" on page 13), select this function to return it to the default view.
Save as default view	If you have changed the arrangement of windows on the main window (see "Customizing the main window" on page 13), select this function to save the new arrangement as the default view.

NOTE *Saving a new default view will erase the factory setting default view.*

Lock view	If you have changed the arrangement of windows on the main window (see "Customizing the main window" on page 13), select this function to "lock" the position of the windows so that it cannot be moved. Select **Unlock view** to unlock them.
Data History	Provides searchable information that can be viewed in the Data History Overview or downloaded as an on-hand report. See "Data History Viewer" on page 136.

Tools menu

Following are the functions available on the Tools menu. The **Zero**, **Status**, **Test mode**, **Values**, and **Calibrate** functions may not be available depending on whether or not the functions are available on the selected Cubiscan model.

Zero — Use this function to "zero" the Cubiscan. Refer to "Zero" on page 119. This function is not available when the Cubiscan™ 50, 200B, 200TS, 210, or 225 is selected.

Status — Use this function to verify that the Cubiscan is operating properly. Refer to "Status" on page 120. This function is not available when the Cubiscan™ 30, 50, 200B, 200TS, 210, or 225 is selected.

Test mode — Use this function to set up the Cubiscan for testing purposes. Refer to "Test mode" on page 122.

Values — Use this function to display a table of sensor values that can be useful for troubleshooting the Cubiscan. Refer to "Values" on page 123. This function is not available when the Cubiscan™ 50, 200B, 200TS, 210, or 225 is selected.

Options — Use this function to configure Qbit-DB. Configuration options include selecting your Cubiscan model, determining the measurement units, setting up import and export options, setting up user-defined fields, setting up a password, and so on. Refer to Chapter 2 "Configuration" on page 16 for details.

Actions menu

Following are the functions available on the Actions menu.

Swap length for width — Select this function to switch the length and width measurement values for the current item.

Swap width for height — Select this function to switch the width and height measurement values for the current item.

Swap height for length — Select this function to switch the height and length measurement values for the current item.

Request weight — This function is used for testing purposes.

Web service errors — This function allows you to view and access error files and refresh, transfer, or delete the files. See "Error records" on page 106.

Reports menu

Following are the functions available on the Reports menu.

Detail Select this function to generate a report that lists all information in the currently loaded database table. The report can be viewed on screen or printed. Refer to Chapter 6 "Reports" on page 132.

Label Select this function to generate a label that can be printed. For information on customizing this label, see "Label report" on page 132.

NOTE *The label function is only available if the* **Enable label report printing** *field is enabled under* **Tools > Options > Reports**.

Help menu

Following are the functions available on the Help menu.

About Select this function to display the current version and build of Qbit-DB and information about Cubiscan.

Languages menu

From this menu you can choose from the following languages.

- Chinese (PRC)
- Danish
- English
- French
- Japanese
- Korean
- Portuguese (Brazil)
- Russian
- Spanish

Main window

When Qbit-DB starts, the main window is displayed and either an empty database table with the default name “ITEM_INFO” or the last database table that was opened is loaded.

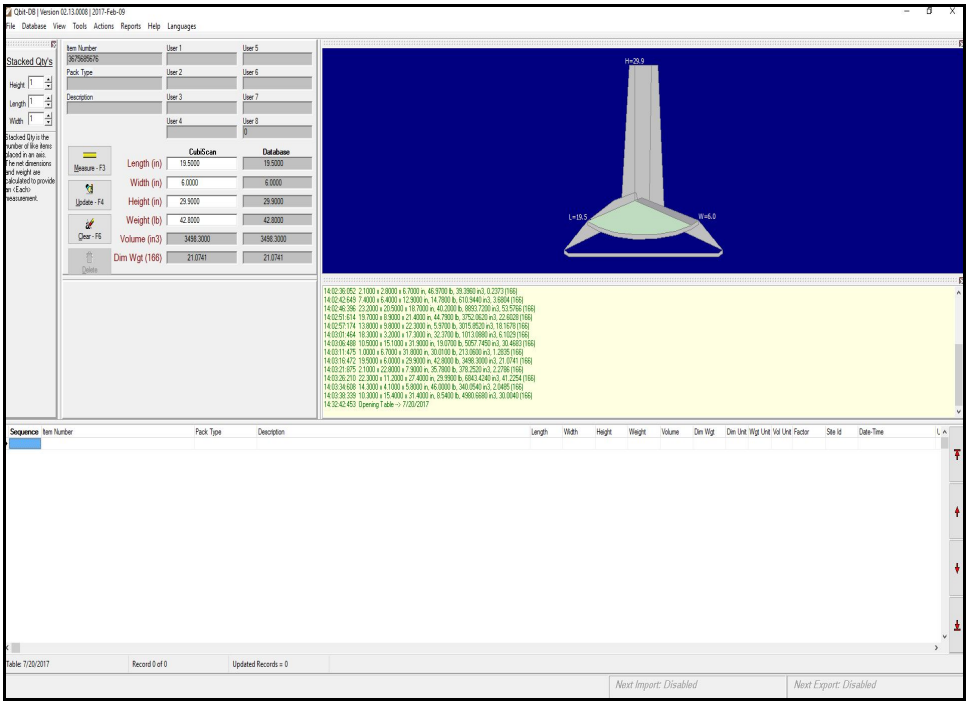


Figure 1
Main window

All recorded measurement data is saved in the open database table. You can open a different database if necessary. Refer to Chapter 3, “Database Management” for information.

The following functions are performed at the main window:

- Measure and weigh objects (see Chapter 5 “Measuring Objects” on page 125).
- Add/update database entries (see “Database window” on page 12).
- Access all other Qbit-DB functions using the menus (see “Menu bar” on page 1).

The main window is divided into several windows, as described in the following sections. You can move, resize, or hide some windows to make it easier to view only what you need (refer to “Customizing the main window” on page 13).

Stacking window

The stacking window can be used to stack similar items that fall beneath the minimum measuring requirements. Individual dimensions will be calculated and stored in the database. Refer to Chapter 5, "Measuring Objects" for information.

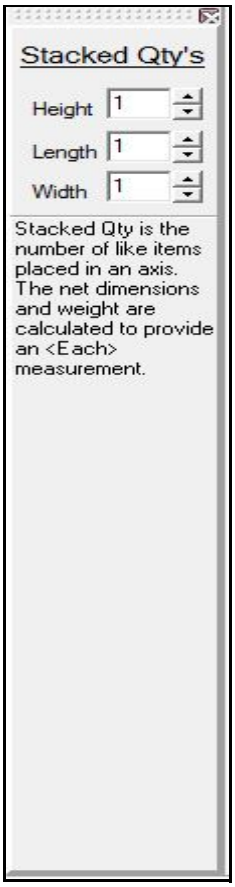


Figure 2
Stacking window

Measurement window

The measurement window contains all of the fields and buttons you use to measure the length, width, height, weight, and other appropriate data.

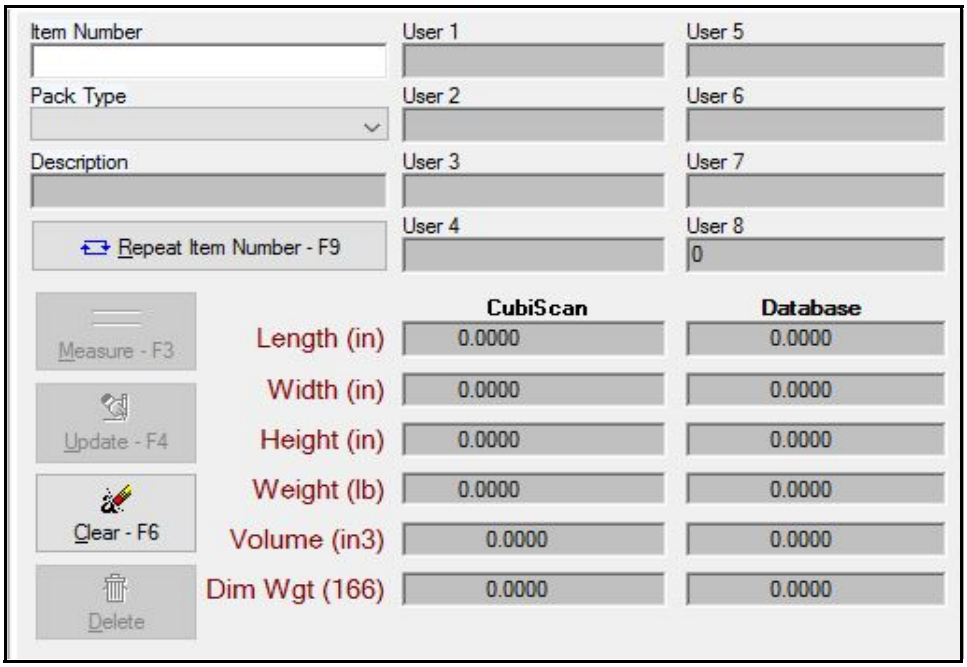


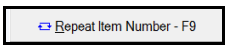
Figure 3
Measurement window

Entry fields

The fields in which you can make an entry include the primary or **Item Number** field (which can only be edited before the measurement is taken), the secondary field if it is enabled, the **Description** field if it is enabled, any user fields that have been enabled, and the object's measurement and weight entries. Some fields are enabled or disabled using the Options on the Tools menu (refer to Chapter 2 "Configuration").

The item number may be selected by scanning a label, or entered manually as you measure the object. You can select an item in the database table to edit its measurement fields. You can edit any field that is not disabled. Click in a field to edit it, and type over the existing entry. Then click **[Update]** (or press **<F4>**) to update the information in the database.

Repeat item number



If you have enabled the secondary field (see "Secondary field" on page 21), this button is enabled. You can use it to make an additional database entry with the same item number (or other primary field descriptor) so that you can add another item with the same number and a secondary descriptor to make it a unique item.

User fields

The user fields section contains user-defined fields. These are fields that can be set up to meet your specific requirements. When enabled, these fields are available for entry and can be edited in the main window. Refer to "User fields" on page 54 for information.

Cubiscan fields

The dimensions and weight of the object are entered as each item is measured with the Cubiscan. You can also enter or edit the entries in the **Length**, **Width**, **Height**, and **Weight** fields (if **Cubiscan fields read only** is not selected in the View menu).

Database fields

These fields display the information of previously measured items or item information that was imported into the database. You can compare the imported item information to the item information in the **Cubiscan** fields to make sure the measurements have been updated in the database. You can remove these boxes from the measurement window by selecting **View > Database Fields**.

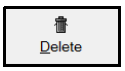
Measurement buttons

The measurement buttons include the buttons you will use to measure objects with the Cubiscan, as follows.

Click the **[Measure]** button to measure the object on the Cubiscan.

Click the **[Update]** button to update the current item record. You must update a record (or "clear" it) before you can measure a new item.

Click the **[Clear]** button to clear the data fields for the current item and start over.



Click the **[Delete]** button to delete the current record. (This button must be enabled; refer to "Enable record delete button" on page 24.)

Cubiscan picture window

After you specify the Cubiscan model to which your computer is connected (refer to "Cubiscan" on page 18), a simulation of the Cubiscan is displayed

in the picture window. After you measure objects, the object and its measurements are also shown.

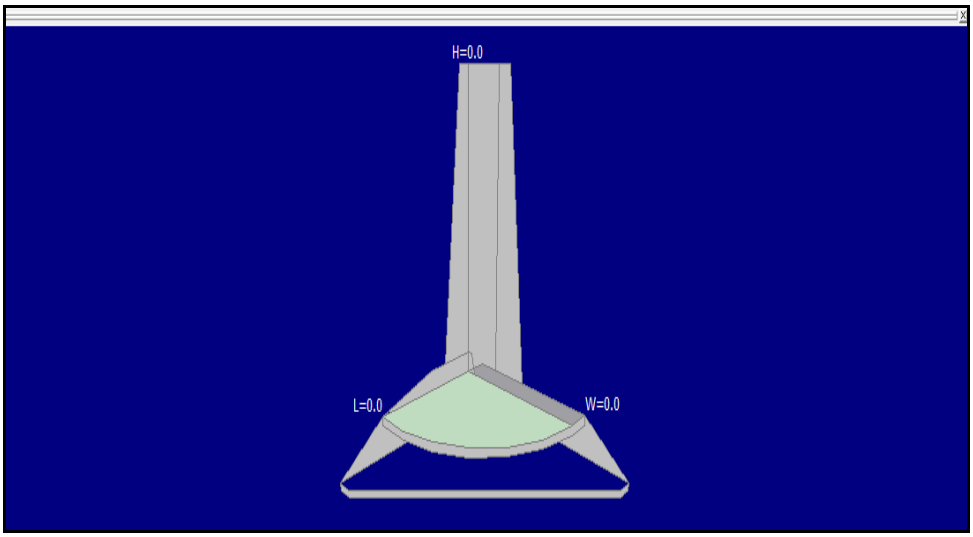


Figure 4
Cubiscan picture window

Camera image window

The camera image window displays the image that was taken of the object. For more information on this feature see "Images" on page 64.

If no image is available the window displays the message "No Image".

This window can be placed in one of the docking positions on the main window or it can be left to float. To move the window click in the top left corner.

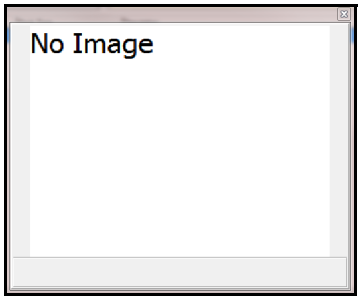


Figure 5
Camera image window

Previous measurement window

This window displays the measurement information of the previous item that was measured. This feature can be used with in-motion Cubiscan systems, such as the Cubiscan™ 200-TS, 210-SS, or the 210-DS.

This window can be placed in one of the docking positions on the main window or it can be left to float. To move the window click in the top left corner.

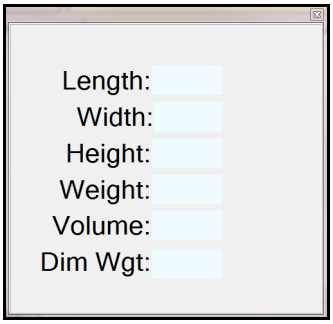


Figure 6
Previous measurement window

QR Code window

This window displays a scannable QR code for each measured item. The code contains embedded data about the item. See "QR Code" on page 89 for instructions on configuring which content is embedded and its format.

Message window

The message window lists any Cubiscan activity and gives the status of the activity. This includes any configuration changes, measurements taken, and error messages.

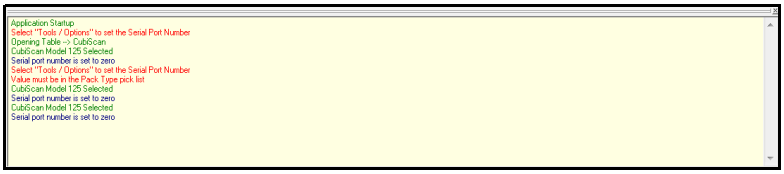


Figure 7
Message window

Database window

The database window lists the items in the open database. The columns and number of items visible may depend on how you have moved and resized the windows in the main window. You can also resize and rearrange the columns in the database view (see "Customizing the database window" on page 13).

Right clicking on a grid column will hide or unhide the column. Double clicking on the column header will sort the table on that column in ascending order. Double clicking in the same column header again will sort the table by that column in descending order.

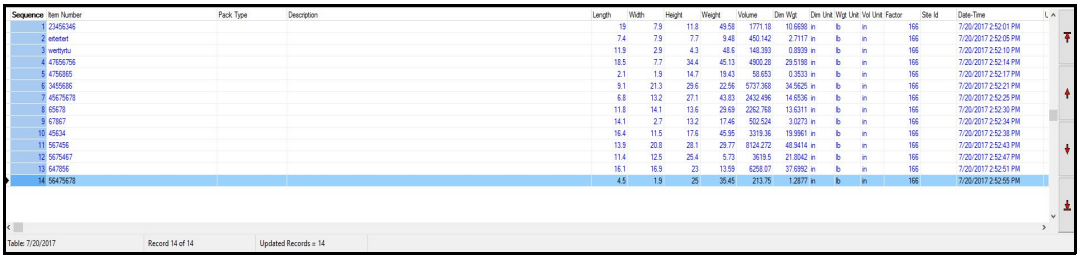
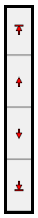


Figure 8
Database window

Moving through the database window

Use the horizontal scroll bar to move left and right through the columns and the vertical scroll bar to move up or down through the items in the database.

Use the arrow buttons to move up and down through the items, as follows.



Click to move to the first item in the database.

Click to move up one item at a time.

Click to move down one item at a time.

Click to move to the last item in the database.

Selecting an item

Click an item to select it for measurement or remeasurement or to display the object's measurements and weight in the measurement window.

You cannot edit the fields in the Database view. To edit an item, click it to select it, then edit the data in the measurement fields. To update the line in the Database view with the new information, click **[Update]** (or press **<F4>**).

Customizing the database window

You can change the position and size of the columns in the database view, and you can sort the items by any column as follows:

- To change the position of a column in the table, click on the heading and drag it to a new position.
- To change the width of a column, move the mouse pointer over the side of the column heading until the pointer changes to directional arrows. Click and hold the mouse button, and drag the side of the column until it is the size you want, then release the mouse button.
- To sort by the entries in a column, click the column heading. Click once to sort in descending order; click again to sort in ascending order.
- To return the Database view to its default set up, pull down the Database menu, and click **Default column order**.

Refer to Chapter 3, "Database Management" for information on managing databases.

Customizing the main window

You can move, resize, or hide some windows of the main window to customize the display. The measurement window cannot be moved and acts as a point of reference for all of the other Qbit-DB windows.

- The stacking window, Cubiscan picture window, message window, camera image window, previous measurement window, and database window can be resized.
- The stacking window, Cubiscan picture window, message window, camera image window, and previous measurement window can be separated from the main window and moved to a different docking position or left to float on the screen.
- The stacking window, Cubiscan picture window, message window, camera image window, previous measurement window, and Database fields can be hidden or shown.

Resizing

To resize a window, hover the mouse over any side or corner until the pointer changes to directional arrows. Click and hold the mouse button, and drag the side or corner of the window until it is the size you want, then release the mouse button.

NOTE *You can resize the entire main window using the same method.*

Moving

Each window that can be separated has a "docking bar" at the top when the window is docked, or in a fixed position, in the window.

To move the window, click the docking bar, hold down the mouse button, and drag the window to another location in the window. As you drag it, you will see an outline that indicates the position and size it will be. When it is in the position you want, release the mouse button. If you move a window to a floating, or undocked, position, the docking bar changes to a title bar. To move a floating window, click the title bar, hold down the mouse button, and drag the window. When you move it into a docked position, the docking bar appears again.

Docked positions are on either side of the measurement window.

Hiding/ Showing

To hide the stacking window, Cubiscan picture window, message window, camera image window, previous measurement window, or the Database fields (in the measurement window), pull down the View menu, and click the window you want to hide. Pull down the menu and click it again to show a hidden window.

You can also click the **[X]** on the docking bar or title bar of the stacking window, Cubiscan picture window, or message window. To show the window again, select it from the View menu.

Saving a view

After you have customized the view of the main window, you can lock the windows into place, save the new arrangement as the default view, or return to the default view. Pull down the View menu, and select a function, as follows:

- **Load default view**
  Select this function to return the main window to the default view.
- **Save as default view**
  Select this function to save the new arrangement as the default view.
- **Lock view**
  Select this function to "lock" the position of the windows so they cannot be moved. Select **Unlock view** to "unlock" the windows.

Status bar

The Status bar is located at the bottom of the main window and provides the following information.

Table: CubiScan

Name of the currently loaded database table.

Record 1 of 1

Currently selected record number and the total number of records.

Updated Records = 1

Whether or not the records have been updated. Until a record is updated, the label reads: "Updated records = 0." After one or more records are updated, it reads: "Updated records = *xx*" (where *xx* is the total number of updated records in the current database).

Enter a unique number used to identify this item

Move the mouse over a menu or function, and a description of the menu or function is displayed.

Next Import: Disabled

If you scheduled an automatic import (see "Auto export" on page 44), the number of hours/minutes/seconds to the next import is displayed. If you have not set up auto import, "Next import: Disabled" is shown.

Next Export: Disabled

If you scheduled an automatic export (see "Auto export" on page 44), the number of hours/minutes/seconds to the next export is displayed. If you have not set up auto export, "Next export: Disabled" is shown. Right clicking on the auto import or auto export will manually start the import/export process.

CHAPTER 2
CONFIGURATION

This chapter provides information and instructions to configure and set up defaults for Qbit-DB using the **Tools > Options** function. The following tabs contain the configuration options:

- "Cubiscan" on page 18
  Setup the measurement and dimensional weight units, select the Cubiscan communications port, select your Cubiscan model, and enter a site ID (optional).
- "Database" on page 20
  Setup primary, secondary, description, and database fields, as well as other database options. This tab also contains the option to convert an older Qbit-DB database to the new format.
- "Database connection" on page 26
  Define the connection name and schema name. This is also where you can format the time and date of the database information.
- "Password" on page 27
  Setup password security for selected functions.
- "Import" on page 29
  Select import options, set up the layout of the imported database fields, and set up the automatic import function.
- "Export" on page 36
  Select export options, set up the layout of the exported database fields, and set up the automatic export function.
- "Factors" on page 53
  Enter the values used for dimensional weight factors.
- "User fields" on page 54
  Setup from one to eight user-defined fields.
- "Tolerances" on page 57
  Setup tolerance values, validation options, or validation events.
- "Orientation" on page 60
  Setup the orientation settings of measurements.
- "Login" on page 62
  Setup user ID options and settings.

- "Images" on page 64
  Setup a network or digital camera with Qbit-DB. Configure captured image file names and setup automatic file transfers.
- "Reports" on page 78
  Setup label report printing and select label setup options.
- "Nesting" on page 80
  Enable nesting and select nesting settings. This tab is not available when the Cubiscan™ 200TS, 210, or 225 is selected.
- "ODBC" on page 81
  Enable open database connectivity to connect your database to Cubiscan's database.
- "Maintenance" on page 85
  Enable database maintenance to remove records older than a set number of days.
- "Scale" on page 86
  Enable a weight trigger to cause an automatic weight measurement to occur.
- "QR Code" on page 89
  Set the format and content to generate QR codes for each measured item.
- "Web services" on page 92
  Enable and configure web services

Select **Options** from the Tools menu to open the Options dialog box. Refer to the following sections for information on the options in each tab. Click **[OK]** to save changes you made to any tab and exit the dialog box. Click **[Cancel]** to exit without saving.

The User fields tab has a unique saving mechanism, for more information, see "Select user field" on page 64.

Cubiscan

Click the Cubiscan tab to set up the measurement and dimensional weight units, select the Cubiscan communications port, select your Cubiscan model, and enter a site ID (optional).

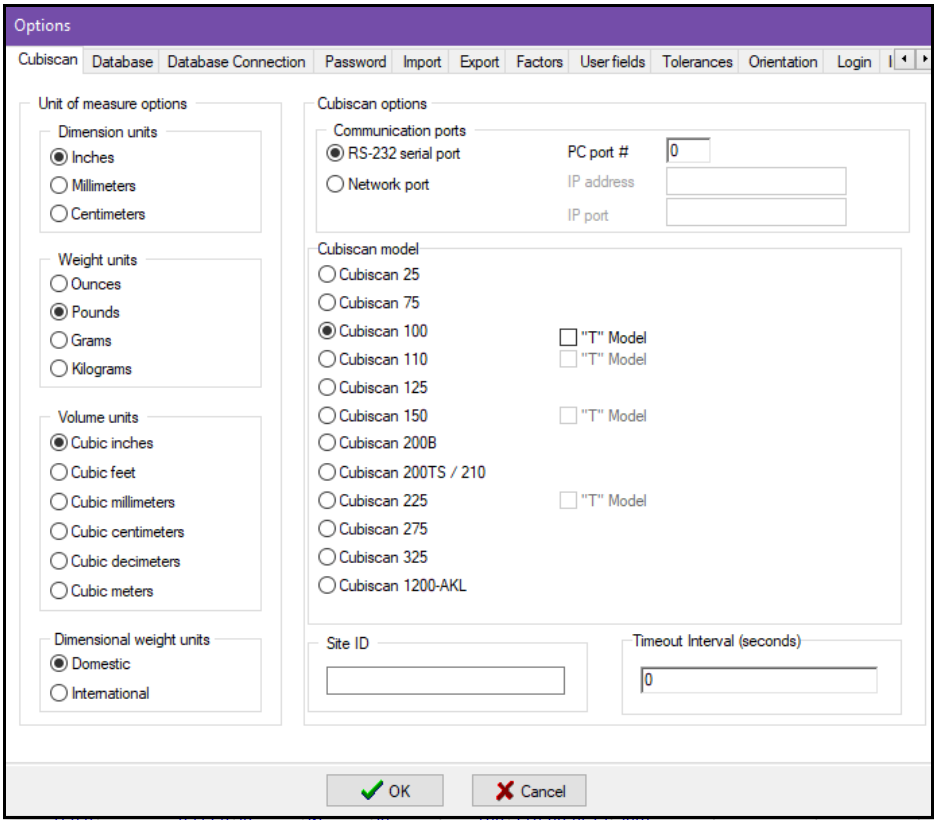


Figure 9
Cubiscan tab

Unit of measure options

Dimension units — Select the measurement units you want used to measure length, width, and height dimensions: **Inches**, **Millimeters**, or **Centimeters**.

Weight units — Select the units you want used for package weights: **Ounces**, **Pounds**, **Grams**, or **Kilograms**.

Volume units — Select the units you want used to measure volume: **Cubic inches**, **Cubic feet**, **Cubic millimeters**, **Cubic centimeters**, **Cubic decimeters**, or **Cubic meters**.

Dimensional weight units

Select whether you want to use **Domestic** or **International** dimensional weight units. Refer to "Factors" on page 53 for information on setting up dimensional weight factors.

Cubiscan options

Communication ports

Select which method you will use to connect your Cubiscan to a computer. The options are: **RS-232 serial port**, **Network port**, or **USB port** (depending on which Cubiscan model is selected). If you are using the serial port, enter the **PC port #**. If you are using the Network port, enter the **IP address** and the **IP port**.

Cubiscan model

Select the model of Cubiscan you are using. Options in some tabs may vary depending on the Cubiscan model selected. In addition, the Cubiscan measuring display and the menus and functions available in the main window will change to match the selected model.

The "T" Model is the touchscreen model for the Cubiscan™ 100, 110, and 150, 225. If you have the touchscreen model for one of these Cubiscans, enable this field when selecting your model. If you select one of these models, a new USB port option appears under the communications ports section.

Site ID

If measurement data from your site will be exported and merged with measurement data from other sites, you may want to assign a "Site ID" number to each site to identify the site that supplied the data. If used, the site ID number is shown in the "Site ID" column in the database table.

Enter an identification code for your site using any alphabetic or numeric characters but no symbols or spaces.

Database

Click the **Database** tab to set up database fields, options, and tare values.

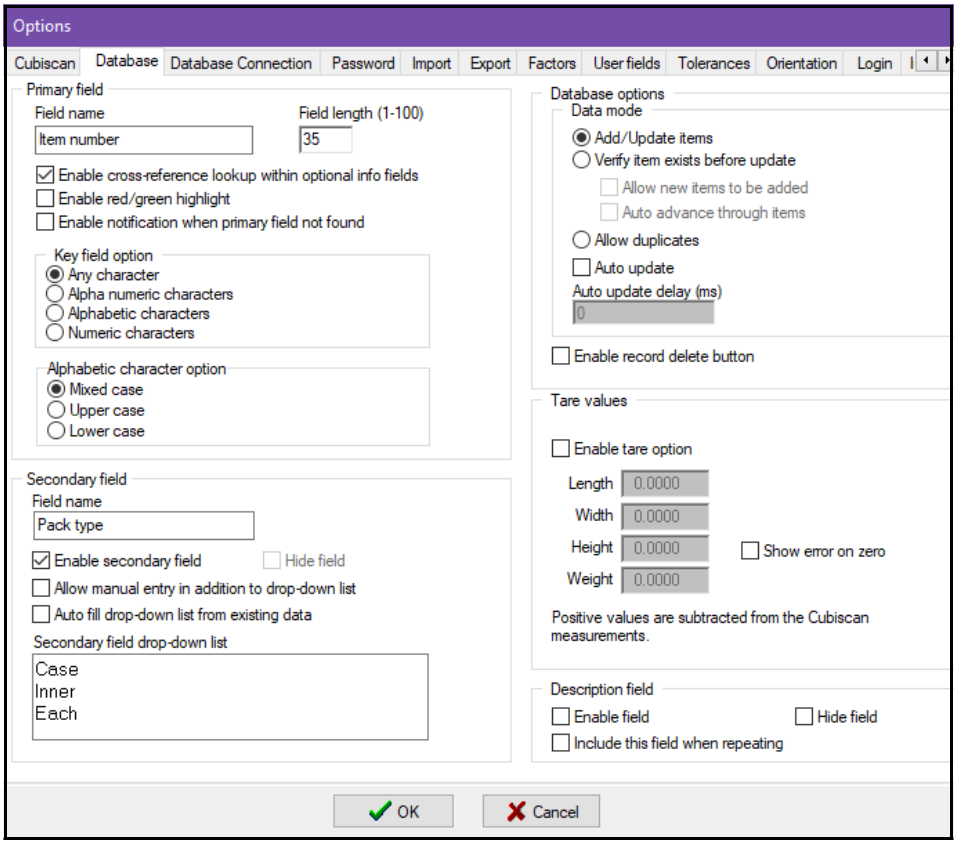


Figure 10
Database tab

Primary field

The **primary field** is the first field in the editable fields section of the main window with **Item number** as the default label.

The primary field receives an item's identification number, whether typed, scanned, or selected from an imported data file. The following options allow you to customize this field:

Field name — By default, the primary field label is **Item number**. Type a new name in the text box to change the label. The new label replaces **Item number** in the main window and in the database window.

Enable cross-reference lookup within optional info fields
: Enabling this function allows the primary field to be populated with a cross-referenced value. For more information on this function, see "Measuring items with cross reference lookup enabled" on page 129.

Enabled red/green highlight
: Enabling this function displays a green background for located records and a red background for records not found.

Enable notification when primary field not found
: Enabling this function displays a message after a user enters a primary field value that is not found in the database.

Field length
: Enter the maximum number of characters that can be entered in the key field (from 1 to 100). You will not be allowed to enter more than the specified number of characters in the field.

Key field option
: This option can be used to limit the type of characters that can be entered in the primary field to help prevent data input errors. Select the option for the type of characters to be allowed in the key field: **Any character**, **Alpha numeric characters**, **Alphabetic characters**, or **Numeric characters**. If you do not want to define any restrictions, select **Any character**.

Secondary field

In addition to the primary field, you can enable a secondary field that can be used to enter an additional descriptor under the primary field label. For example, you can enter a product number in the primary field and then enter a pack type in the secondary field.

Field name
: Type a field name in the text box to change the label. The new label appears in the main window and in the database window.

Enable secondary field
: Select this option to enable the secondary field. When this field is enabled a new **[Repeat item number]** button appears above the **[Measure]** button in the measurement window.

  If you click the **[Repeat item number]** button after measuring an item, it will automatically identify the same item number as the previous measurement. It will then automatically select the next item in the secondary field drop-down list (if applicable). It will also update the description and user field values.

Hide field
: Select this option to hide the secondary field in the main window.

Allow manual entry in addition to drop-down list

After you enable the secondary field, you can enter a drop-down list of items or descriptions from which to choose at the secondary field on the main window. Select this option if you want to be able to make a manual entry in the secondary field in addition to selecting from the drop-down list.

Auto-fill drop-down list from existing data

This option overrides the secondary drop-down list and imports a drop-down list from a specified import file. For more information on importing a file, see "Export" on page 36.

This will also provide a "result set" to choose from within the secondary drop-down list values when you enter an item number into the primary field.

Secondary field drop-down list

Click in the text box and enter a list of items. Press **<Enter>** after each item. The items entered become available for selection from a drop-down list in the secondary field on the main window.

Database options

The database options determine how items are entered in the database and whether or not you can delete item records.

Data mode

The following options determine how information is entered into the database.

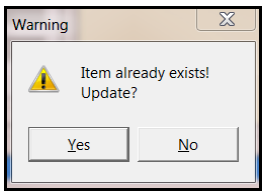
Add/Update items

Select this option if you want to add items to the database more often than you update existing items. This makes adding items the default, and a warning message appears when you update an existing item.

Item records are identified by the descriptors in the primary field (generally item number) and the secondary field if it is enabled. You cannot add an identical item to a database, but you can change and update an item.

If the secondary field is *not* enabled, an identical item is any item with the same item number. If the secondary field is enabled, an identical item is any item with the same item number and the same secondary field entry.

If you attempt to add an identical item, the following warning message is displayed.



Select **[Yes]** to overwrite the existing item or **[No]** if you did not intend to change the existing item.

Verify item exists before update

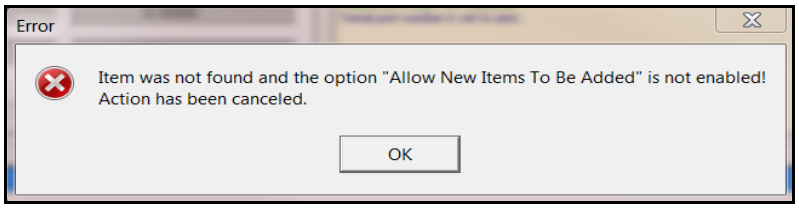
Select this option if you update existing items or import data in a database more often then you add new items. This option is used with its sub-options to give you multiple variations, as follows.

Allow new items to be added (enabled)

If this option is enabled, updating existing items is the default, but items can also be added to the database.

Allow new items to be added (disabled)

If this option is *not* enabled, you can only update existing items; you cannot add new items. If you attempt to add a new item, the following warning is displayed.



Auto advance through items

Select this option if you generally measure items in the order they are listed in the existing database. If enabled, after you select the first item, Qbit-DB automatically moves down the list in sequential order as each item is measured and updated. However, you can also manually click an item to select it if necessary.

The database window can be sorted by the entries in a column by clicking on the column heading. For more information, see "Customizing the database window" on page 13.

Allow duplicates

Select this option if you want to allow duplicate item numbers to exist in the same database.

When you select this option, item numbers can no longer be updated or

edited.

Selecting this option also causes the **Replicate last scan** function to appear under the Actions menu. Selecting this function will allow you to make duplicates of an item number in your database.

When you select **Replicate last scan** the following window appears.

This window shows the item number and all of its associated information. To replicate the item number, enter the desired value into the field and click **[Replicate]**.

A warning window will appear, asking if you are sure that you want to replicate. If you do want to replicate, click **[Yes]**. If you do not want to replicate, click **[No]**.

NOTE *Selecting this option also removes the Import tab found in the* **Tools > Options** *window.*

Auto update — Select this option if you want Qbit-DB to automatically store item information in the database. You only need to enter the item number and click **[Measure]**. You do not need to click the **[Update]** button.

Auto update delay (ms) — Select this option if you want the auto update feature to be delayed by the amount of time you enter into the field (in milliseconds).

Enable record delete button — Select this option if you want to be able to delete an item record from the database. The **[Delete]** button in the main window becomes available; otherwise, it is grayed.

Tare values

Tare values are preset dimensions to be subtracted from a measurement. If a tare value is included and the resulting measurement or weight is less than zero, the reading will be zero.

Tare values are not used in most applications but may be used in some circumstances.

Enable tare option

If you use tare values all or part of the time, click this option to enable tare. If enabled, two new options appear on the Actions menu.

The **Apply tare values** (or **<Ctrl><T>**) applies the tare values to the current measurement.

The **Enable automatic tare** (or **<Ctrl><Alt><T>**) automatically applies the tare values to each measurement until it is disabled.

Length
Width
Height
Weight

Enter tare values for measurements and weight as applicable. Each specified value is subtracted from the dimension measurement or weight.

Show error on zero

Select this function if you want Qbit-DB to alert you if an item number's measurement information is zero (or less than zero) once the tare values have been applied.

Description field

Enable field

Select this option to enable the **Description** field in the main window (under the primary and secondary fields). You can then enter a description for each item, which will appear in the database table.

Include this field when repeating

Select this option if you want the item description included when you repeat an item number. (Repeat is only available if the secondary field is enabled; refer to "Secondary field" on page 21.)

Hide field

Select this option if you do not want the **Description** field displayed in the main window.

Database connection

On this tab, you can define the connection name and schema name. This is also where you can format the time and date of the database information.

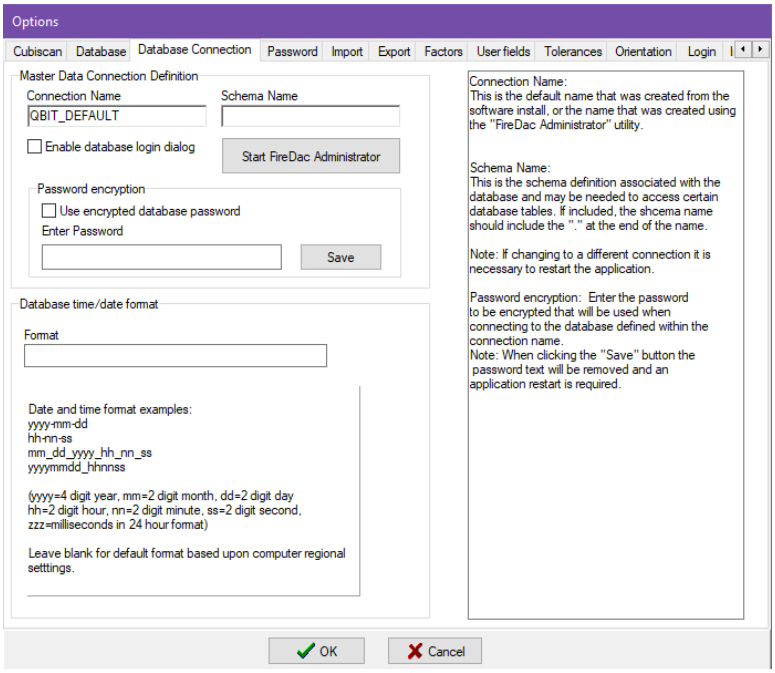


Figure 11
Database Connection

Master data connection definition

Connection name: This is the default name that was created from the software install, or the name that was created using the *FireDac Administrator* utility. (see Appendix C "Firedac administrator" on page 167).

Schema name: This is the schema definition associated with the database and may be needed to access certain database tables. If included, the schema name should include the "." at the end of the name.

Enable database login dialog: Check box to enable the login dialog whenever accessing the database.

Start FireDac Administrator: Click [Start FireDac Administrator] to launch the FireDac Administrator utility.

Use encrypted database password: Check box to enable the use of an encrypted password when accessing the database.

Password encryption: Enter the password to be used when encrypted database password is enabled.

NOTE *When clicking [Save], the password text will be removed and an application restart will be required.*

Consult your database administrator for details on requirements for connecting to your database.

Database time/date format

Here you can set your preferred time and date format using the examples shown. You can also leave the field blank for default formatting based upon your computer's regional settings.

Password

To provide security for specified functions in Qbit-DB, you can set up a password. Once a password is set up, the selected functions are dimmed in the menus and only become available when the password is entered. The

Options function is always included when password protection is enabled for any function.

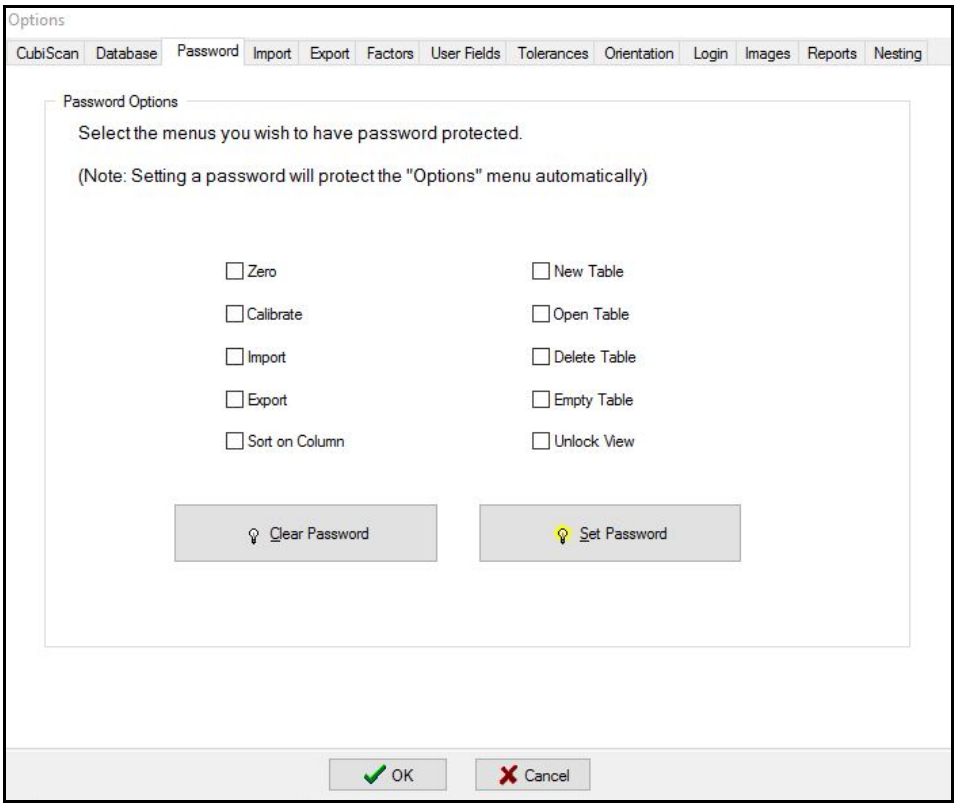


Figure 12
Password tab

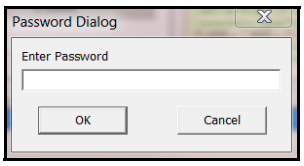
Password options — Select the functions for which a password will be required. Options include: **zero**, **calibrate**, **import**, **export**, **sort on column**, **new table**, **open table**, **delete table**, **empty table**, and **unlock view**.

Set password — Click this button to set up or change the password. The following dialog box is displayed.

In the **Enter password** box, type the password. In the **Re-enter password** box, type it again for verification. The password is case sensitive; if you

enter upper or lower case characters, they must be entered in the same case when entering the password. Click **[OK]** to accept the password.

When you attempt to access a function that has been password protected, the following prompt appears.



Enter the password exactly as it was entered when set up (case sensitive), and click **[OK]** to open the function.

Clear password

Click **[Clear password]** to remove an existing password. This allows access to all functions by all users. The message: "Password cleared" is displayed. This means that a password is no longer required to use any functions in Qbit-DB. Click **[OK]**.

Import

Import type

Import file type

Select the type of file you want to import. The options are **delimited**, and **fixed length**.

Import file includes header information

Select whether or not the file you want to import has header information.

Import merge options

This option allows you to select how to handle existing and new items when doing an import.

Append only: Selecting **Append only** will allow new items to be added, but existing items will not be updated.

Update only: Selecting **Update only** will allow existing items to be updated without adding new items.

Append/Update: Selecting **Append/Update** will allow existing items to be updated while adding new items.

Import delimited file

Use this option to select the delimiter type for your file. You can select **comma**, **tab**, or **other**. When selecting **other**, be sure to identify the import file delimiter in its field.

Import fields contain double quotation marks around character strings

Check box to toggle option for importing character strings with or without double quotations.

Import file delimiter

Enter in the text box below the header the character used for delimiting values in the imported data. The default is a comma.

Date format

Enter an alternative date formate that to override the imported date format. Use "/" or "-" to separate day, month, and year. Use the following to set format:

year = YYYY

month = MM

day = DD

Import layout

The data being imported must be mapped to the fields in the database table.

First, load a sample file of the data to be imported. Alternatively, preloaded default fields. Refine table field choices by selecting options from the dropdown list for each field.

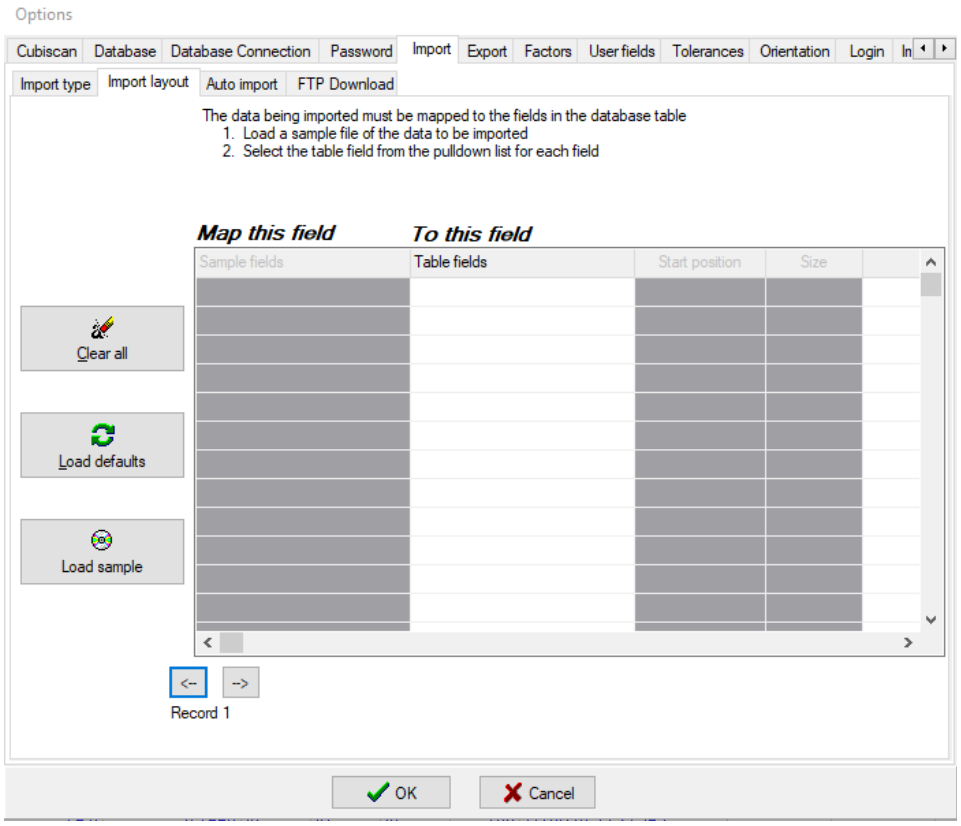


Figure 13
Import Layout

Use the left and right arrows to navigate between records. Click **[Clear all]** to clear all the table fields. After values are entered, click **[OK]** to save settings.

Auto Import

On this tab, you can set up automatic importing. To do this, enter the file location and name, select the frequency options, the times, or intervals for importing. You can also select the options to import at program startup, prompt for confirmation when importing, and deleting the file after auto import.

Import file location and name

Enter the location path of the file to be imported or click **[Browse...]** to select the file from the **Browse** window.

Import frequency options

Import mode

Select the mode for automatic importing, as follows.

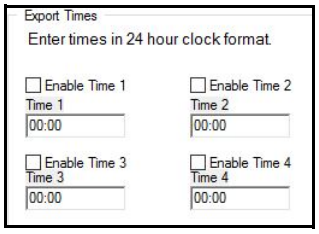
Off
Select this option to disable automatic import.

Import at specified time of day
Select this option to set up a time of day to import the file. The **Import times** options become available to set up the time(s) of day for import.

Import at specified time interval
Select this option to set up a time interval to import the file. The **Import interval timer** options become available to set up the time interval for import.

Import times

If you selected **Import at specified time of day**, this section is available to set up the time of day you want the file exported.

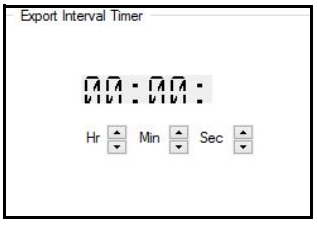


You can set up four different times to export a file. Select **Enable Time 1** to enter the first export time. Then type the time of day in the **Time 1** text box in a 12-hour clock format (i.e., 1:00 AM, 2:00 PM, and so on). Do the same to set up times 2 through 4 as required.

The database file will be exported automatically every day at the specified time or times until you disable the time.

Import interval timer

If you selected **Import at specified time interval**, this section is available to set up the interval timer.



Click the arrow buttons to scroll up or down from 00 to 23 hours, 00 to 59 minutes, and 00 to 59 seconds. Click once to scroll one at a time, or click and hold to scroll quickly through the numbers in sequence.

The database file will be imported automatically at the specified time intervals. For example, if you select 2 hours, the file will be imported every 2 hours.

Import at program startup
If you enable this function, the file will be imported automatically each time Qbit-DB starts up.

Prompt for confirmation when importing
If you enable this function, Qbit-DB will prompt you for confirmation when a file is about to be imported.

Delete file after auto import
If you enable this function, Qbit-DB will delete file after it is auto imported.

FTP download

The FTP download tab is used by Cubiscan when importing files downloading via FTP (File Transfer Protocol).

FTP download options

Select whether you want to download the import file from a host using FTP or an ASCII text file. You can select one or the other or both options.

Activate FTP download
Select **Activate FTP download** to activate the FTP download option. Enabling this option allows you to edit and select options in the FTP section.

Set up the options to download the file from a host via FTP. You can obtain this information from your network administrator.

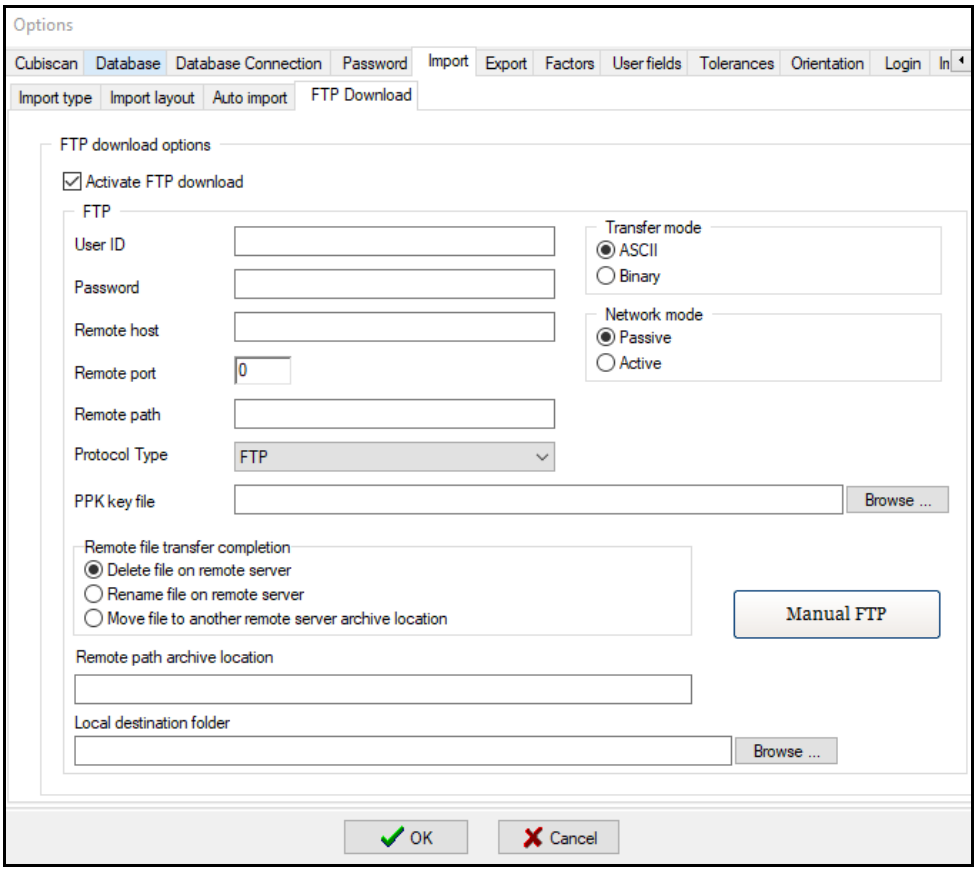


Figure 14
FTP Download

FTP Enter the login information required by your network for file transfer.

User ID
Enter a valid user ID (required for upload access to the host site).

Password
Enter a valid password (required for upload access to the host site).

Remote host
Enter the name of the FTP host (e.g., ftp.host.com)

Remote port
Enter the port used for the transfer, normally “21”.

Remote path
Enter the directory path on the host. Be sure to use the correct syntax for the server type (e.g., \...\ or /.../).

Protocol Type
Select protocol type form the drop down menu. Options include: **FTP**, **sFTP**, **FTPs (implicit SSL)**, **FTP-ES (SSL 3.0 or TLS 1.0)**.

If you are unsure which protocol you will need, consult your network administrator.

Transfer mode — Select the file transfer method.

ASCII
Select this option if you want the file to be imported in ASCII (plain text) mode.

Binary
Select this option if the file contains formatted text, non-text characters, or other data not interpreted as text.

Network mode — Select your network mode.

Passive
Select this option if your network uses passive FTP.

Active
Select this option if your network uses active FTP.

PPK key file — Enter the location path for the private key or browse for it by clicking the **[Browse]** button. The private key file must be in **.ppk** format.

Remote file transfer completion — Choose what you would like Qbit-DB to do with the imported file after it is downloaded via FTP.

Delete file on remote server
Once the file is successfully downloaded from the remote host the file will be deleted.

Rename file on remote server
Once the file is successfully downloaded from the remote host the file will be renamed with prefix “Done-”.

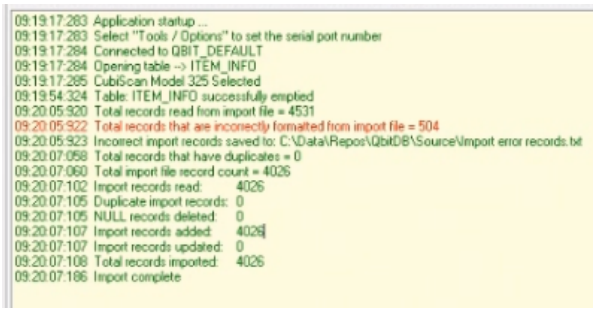
Move file to another remote server archive location
Once the file is successfully downloaded from the remote host the file will be moved to an archive folder on the remote server.

Remote path archive location — Enter the directory path where you would like files to be archived. Be sure to use the correct syntax for the server type (e.g., \...\ or /.../).

Local destination folder — Select the local folder for downloading. You may enter the local address or click **[Browse]** to bring up the browsing window and select the folder you wish to download to.

Importing bad records

When importing data some files may not transfer correctly (e.g., Qbit-DB does not recognize the data, files are corrupted, data was not mapped properly, etc.). When this happens Qubit-DB will give an error message totaling the number of files that did not import correctly.



These files are saved in a text file called **Import error records.txt** found in the **Cubiscan** folder. By default, the **Cubiscan** folder will be in the root directory. You can also search for the folder in File Explorer.

Export

The Export option on the File menu is used to export data to an external ASCII text file or upload it via FTP (File Transfer Protocol). (Refer to "Exporting a database table" on page 115 for information.) Click the **Export** tab to set up the export options, the layout of the exported database fields, and the automatic export function.

Export type

Select the **Export type** tab to set up the options that define the type of files that can be exported.

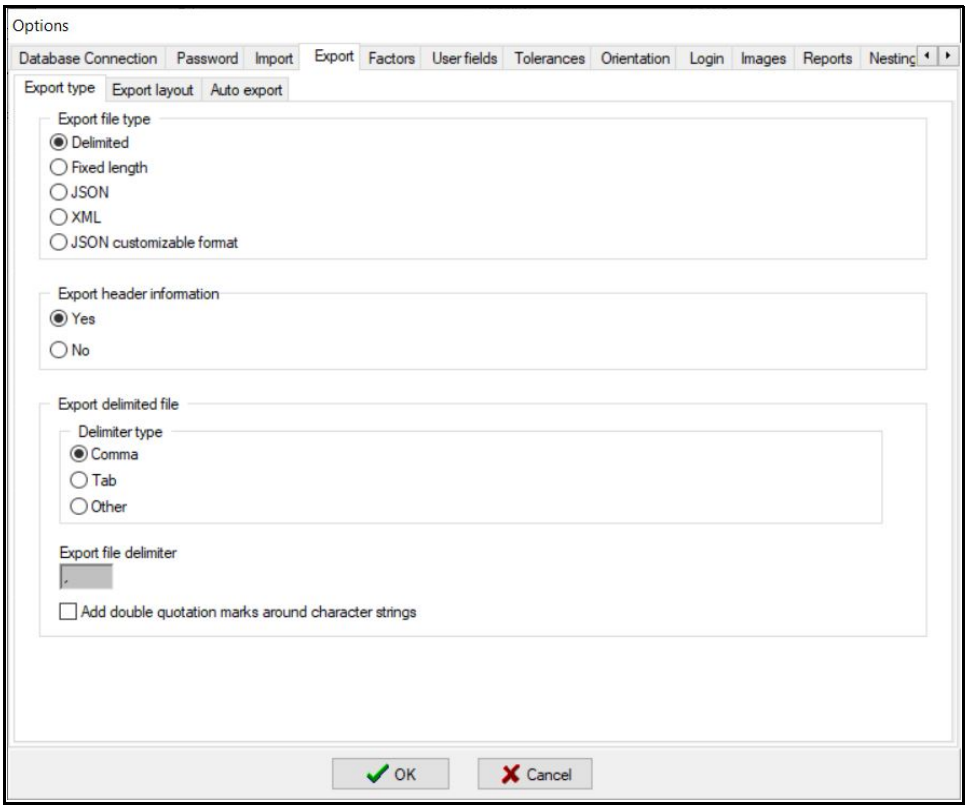


Figure 15
Export type

Export file type

Select the file type to be used when exporting database files. The default is delimited.

Delimited — Variable length, delimited files (*.csv* or *.txt* file extension) contain variable length records, each separated by a carriage return/line feed pair. Fields may vary in length and are separated by field separators. Leading and trailing spaces for numeric and character fields are truncated. The format of date fields depends on your Windows regional settings. If you select this option, additional options to define the delimiter type become available at the bottom of the tab.

Fixed length — Fixed length files (*.txt* file extension) contain fixed length records, each separated by a carriage return/line feed pair. Fields are fixed in length with no field separators. Character fields are padded with trailing blanks, and

numeric fields are padded with leading blanks. The format of date fields depends on your Windows regional settings.

JSON and XML

The JSON and XML exports will follow the same process as the text file export with the following exceptions.

1. All data will be stored in memory before it is written to disk. Because of this, it is not recommended to export large amounts of data.

There is a built-in internal check every 1000 records to see how much internal memory has been used and will terminate the export process if it reaches 1.5GB.

2. The element and tag names will always be stored using the physical database table field names and are always upper case. (See example below.)

3. The root element and entry point will be called “DATA”. For XML, the array parent tag will be “ITEM”.

4. Whether there is one record or multiple records being exported, they will always be stored in an array or nested format. (See example below.)

5. All duplicate fields from the export layout will be ignored.

6. All “SPACE FILLER” from the export layout will be ignored.

JSON format using an example of an export layout as defined in the **Export layout** tab.


```
{
    "DATA": [
        {
            "ITEM_ID": "123",
            "TIME_STAMP": "20210525 07:43:07",
            "ITEM_TYPE": "Each",
            "FACTOR": "166",
            "DESCRIPTION": "",
            "NET_LENGTH": "5.0000",
            "NET_WIDTH": "6.0000",
            "NET_HEIGHT": "78.0000",
            "NET_WEIGHT": "9.0000",
            "NET_VOLUME": "2340.0000",
            "NET_DIM_WGT": "14.0964",
            "DIM_UNIT": "in",
            "WGT_UNIT": "lb",
            "VOL_UNIT": "in",
            "SITE_ID": "",
            "OPT_INFO_1": "123",
            "OPT_INFO_2": "",
            "OPT_INFO_3": "",
            "OPT_INFO_4": "",
            "OPT_INFO_5": "",
            "OPT_INFO_6": "",
            "OPT_INFO_7": "",
            "OPT_INFO_8": "0",
            "IMAGE_FILE_NAME": ""
        },
        {
            "ITEM_ID": "555",
            "TIME_STAMP": "20210525 07:43:10",
            "ITEM_TYPE": "",
            "FACTOR": "166",
            "DESCRIPTION": "",
            "NET_LENGTH": "12.0000",
            "NET_WIDTH": "5.0000",
            "NET_HEIGHT": "3.5000",
            "NET_WEIGHT": "1.4500",
            "NET_VOLUME": "210.0000",
            "NET_DIM_WGT": "1.2651",
            "DIM_UNIT": "in",
            "WGT_UNIT": "lb",
            "VOL_UNIT": "in",
            "SITE_ID": "",
            "OPT_INFO_1": "",
            "OPT_INFO_2": "",
            "OPT_INFO_3": "",
            "OPT_INFO_4": "",
            "OPT_INFO_5": "",
            "OPT_INFO_6": "",
            "OPT_INFO_7": "",
            "OPT_INFO_8": "0",
            "IMAGE_FILE_NAME": "555SLC20210519_092915.jpg"
        }
    ]
}
```

XML format using an example of an export layout as defined in the **Export layout** tab.

```
<?xml version="1.0"?>
<DATA>
  <ITEM>
    <ITEM_ID>123</ITEM_ID>
    <TIME_STAMP>20210525 07:50:07</TIME_STAMP>
    <ITEM_TYPE>Each</ITEM_TYPE>
    <FACTOR>166</FACTOR>
    <DESCRIPTION></DESCRIPTION>
    <NET_LENGTH>5.0000</NET_LENGTH>
    <NET_WIDTH>6.0000</NET_WIDTH>
    <NET_HEIGHT>78.0000</NET_HEIGHT>
    <NET_WEIGHT>9.0000</NET_WEIGHT>
    <NET_VOLUME>2340.0000</NET_VOLUME>
    <NET_DIM_WGT>14.0964</NET_DIM_WGT>
    <DIM_UNIT>in</DIM_UNIT>
    <WGT_UNIT>lb</WGT_UNIT>
    <VOL_UNIT>in</VOL_UNIT>
    <SITE_ID></SITE_ID>
    <OPT_INFO_1>123</OPT_INFO_1>
    <OPT_INFO_2></OPT_INFO_2>
    <OPT_INFO_3></OPT_INFO_3>
    <OPT_INFO_4></OPT_INFO_4>
    <OPT_INFO_5></OPT_INFO_5>
    <OPT_INFO_6></OPT_INFO_6>
    <OPT_INFO_7></OPT_INFO_7>
    <OPT_INFO_8>0</OPT_INFO_8>
    <IMAGE_FILE_NAME></IMAGE_FILE_NAME>
  </ITEM>
  <ITEM>
    <ITEM_ID>555</ITEM_ID>
    <TIME_STAMP>20210525 07:50:11</TIME_STAMP>
    <ITEM_TYPE></ITEM_TYPE>
    <FACTOR>166</FACTOR>
    <DESCRIPTION></DESCRIPTION>
    <NET_LENGTH>12.0000</NET_LENGTH>
    <NET_WIDTH>5.0000</NET_WIDTH>
    <NET_HEIGHT>3.5000</NET_HEIGHT>
    <NET_WEIGHT>1.4500</NET_WEIGHT>
    <NET_VOLUME>210.0000</NET_VOLUME>
    <NET_DIM_WGT>1.2651</NET_DIM_WGT>
    <DIM_UNIT>in</DIM_UNIT>
    <WGT_UNIT>lb</WGT_UNIT>
    <VOL_UNIT>in</VOL_UNIT>
    <SITE_ID></SITE_ID>
    <OPT_INFO_1></OPT_INFO_1>
    <OPT_INFO_2></OPT_INFO_2>
    <OPT_INFO_3></OPT_INFO_3>
    <OPT_INFO_4></OPT_INFO_4>
    <OPT_INFO_5></OPT_INFO_5>
    <OPT_INFO_6></OPT_INFO_6>
    <OPT_INFO_7></OPT_INFO_7>
    <OPT_INFO_8>0</OPT_INFO_8>
    <IMAGE_FILE_NAME>555SLC20210519_092915.jpg</IMAGE_FILE_NAME>
  </ITEM>
</DATA>
```

JSON customizable format

As with the JSON and XML outputs, all data will be stored in memory before it is written to disk. Because of this, it is not recommended to export large amounts of data.

The customizable JSON is manually defined in the "JSON custom format.txt" file using control tags to create the desired JSON output format. "Customizable JSON format" on page 99.

Export header information

Select **Yes** if you want to include header information in the file when it is exported. Select **No** if you do not want to include it.

Export delimited file

Select export options for delimited file types.

Delimiter type

This option is only available if you selected "Delimited" as the export file type. Select the delimiter type used in the text file: **Comma**, **Tab**, or **Other**. If you select **Other**, enter the delimiter in the **Export file delimiter** box.

Add double quotation marks around character strings

Select this option if you want quotation marks placed around character strings in the exported file. The double quotation marks will keep the characters within the quotation marks together in the export file.

Export layout

You can change the layout of the database table for the export file. You can select which fields you want included, change the length of the field, change the decimal point location, or even rearrange the fields. You must set up the Export type options before you change the layout (see "Export type" on page 37). Do the following to set up the fields in the database table for export.

Select the **Export layout** tab.

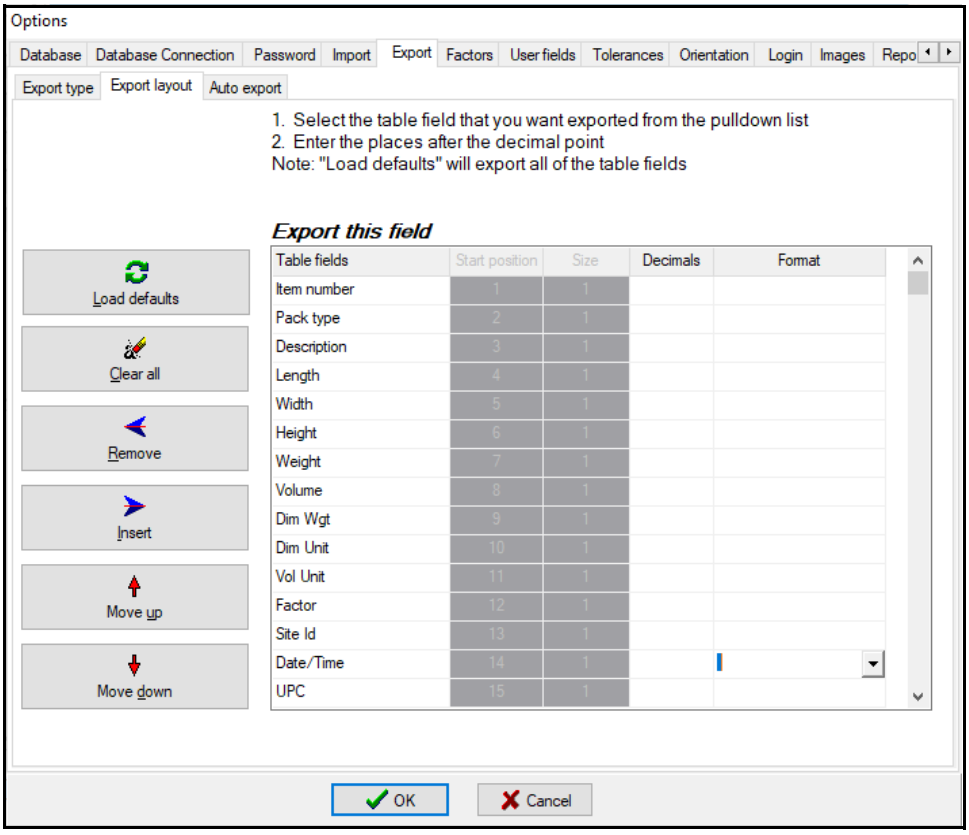
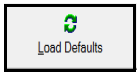


Figure 16
Export layout



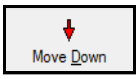
Click **[Load defaults]** if you want to export the database as it appears in Qbit-DB, or to display all of the fields in the database table so that you can edit the layout.

Click **[Clear all]** to clear all of the fields from the layout list.

Click a table field and then click **[Remove]** to remove the field from the exported database.

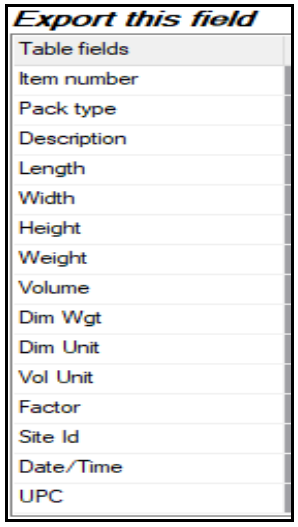
Click a table field and then click **[Insert]** to insert a field above the selected field.

Click a table field and then click **[Move up]** to move the selected field up one position in the table.



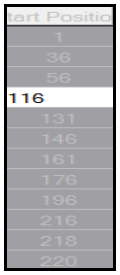
Click a table field and then click **[Move down]** to move the selected field down one position in the table.

Click the drop-down arrow at a table field to display a list of available fields and select a field name to add or change a field. Options may differ from those shown to reflect user defined fields.

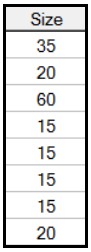


NOTE *The "SPACE FILLER" option in the drop-down list can be used to specify an empty or blank field.*

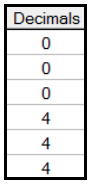
If you specified fixed length as the file type in the **Export type** tab, click in the second column next to a field to change the starting position (in number of characters) of the field.



If you specified fixed length as the file type in the **Export type** tab, click in the **Size** column next to a field to change the number of characters in the field.



Click in the **Decimals** column for a field to add or change the number of characters after the decimal point for entries in the field. This applies to decimal fields only (e.g., dimensions, weight, and volume).



Decimals
0
0
0
4
4
4

Auto export

To set up Qbit-DB to automatically export a file at a time of day, at specified time intervals, or after every update, click the **Auto export** tab.

NOTE *You must set up the* **Export type** *options and the* **Export layout** *before you set up auto export (see* "Export type" on page 37 *and* "Export layout" on page 41*).*

After you set up an auto export, the number of hours/minutes/seconds to the next scheduled export is displayed in the status bar of the main window (see "Main window" on page 6).

Click the **Frequency** tab to set up the time(s) to export the file, then click the **Destination** tab to select the type of output.

NOTE *The options in the Destination tab are not available until you select a frequency option in the Frequency tab.*

Frequency

Click the **Frequency** tab to set up the mode and times to export.

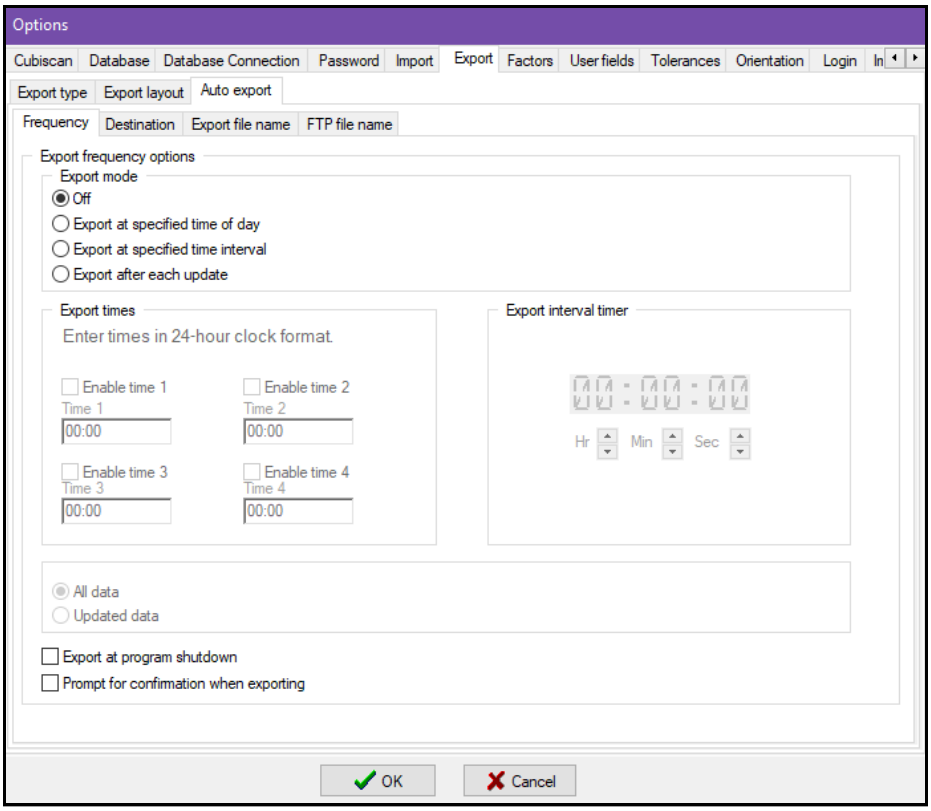


Figure 17
Auto export, frequency

Export frequency options

Select how often a file will be exported.

Export mode

Select the mode for automatic exporting, as follows.

Off — Select this option to disable automatic export.

Export at specified time of day — Select this option to set up a time of day to export the database file. The **Export times** options become available to set up the time(s) of day for export.

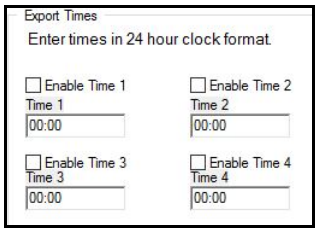
Export at specified time interval — Select this option to set up a time interval to export the database file. The **Export interval timer** options become available to set up the time interval for export.

Export after each update

Select this option to automatically export the current database file each time it is updated. No other options are necessary in this tab if you select this option.

Export times

If you selected **Export at specified time of day**, this section is available to set up the time of day you want the file exported.

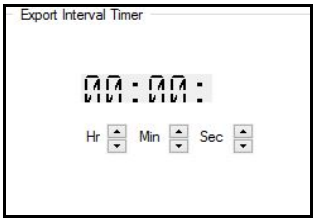


You can set up four different times to export a file. Select **Enable Time 1** to enter the first export time. Then type the time of day in the **Time 1** text box in a 12-hour clock format (i.e., 1:00 AM, 2:00 PM, and so on). Do the same to set up times 2 through 4 as required.

The database file will be exported automatically every day at the specified time or times until you disable the time.

Export interval timer

If you selected **Export at specified time interval**, this section is available to set up the interval timer.



Click the arrow buttons to scroll up or down from 00 to 23 hours, 00 to 59 minutes, and 00 to 59 seconds. Click once to scroll one at a time, or click and hold to scroll quickly through the numbers in sequence.

The database file will be exported automatically at the specified time intervals. For example, if you select 2 hours, the file will be exported every 2 hours.

All data or updated data

If you selected a time of day or time interval for the export, select whether you want to export **All data** in the database or only the **Updated data**.

Export at program shutdown

If you enable this function, the database file will be exported automatically each time Qbit-DB is shutdown.

Prompt for confirmation when exporting

If you enable this function, Qbit-DB will prompt you for confirmation when a database file is about to be exported.

Destination

Click the **Destination** tab to set up the type of output for the export file.

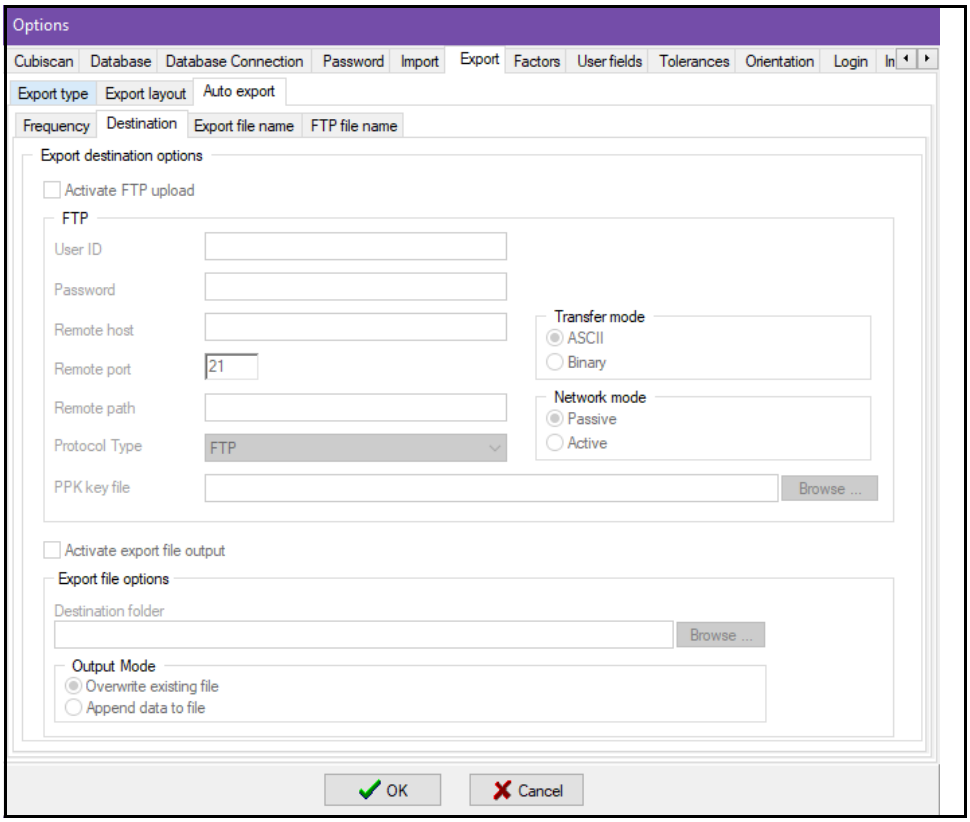


Figure 18
Auto Export, Destination

Export destination options

Select whether you want to upload the export file to a host using FTP or output the file to an ASCII text file. You can select one or the other or both options.

Activate FTP Upload

Select **Activate FTP Upload** to activate the FTP upload option. This option is only available when you have selected an Export Mode from the Frequency tab. Enabling this option allows you to edit and select options in the FTP section.

Set up the options to upload the database file to a host via FTP when it is exported automatically. You can obtain this information from your network administrator.

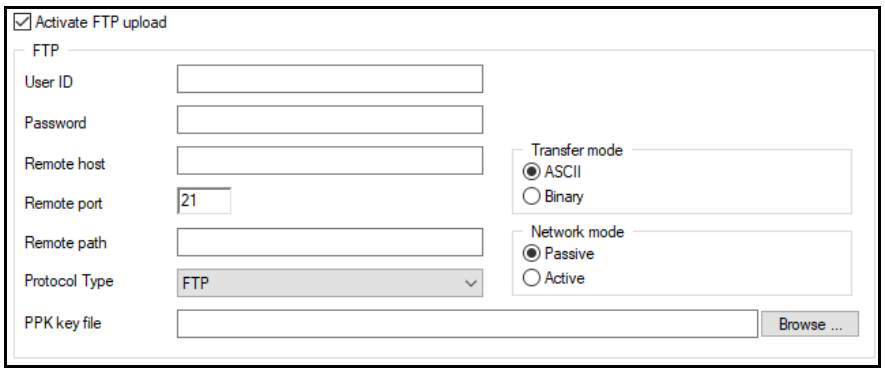


Figure 19
Auto Export, Destination, FTP

FTP

Enter the login information required by your network for file transfer.

User ID

Enter a valid user ID (required for upload access to the host site).

Password

Enter a valid password (required for upload access to the host site).

Remote host

Enter the name of the FTP host (e.g., ftp.host.com)

Remote port

Enter the port used for the transfer, normally “21”.

Remote path

Enter the directory path on the host. Be sure to use the correct syntax for the server type (e.g., \...\ or /.../).

Protocol Type
Select protocol type form the drop down menu. Options include: **FTP**, **sFTP**, **FTPs (implicit SSL)**, **FTP-ES (SSL 3.0 or TLS 1.0)**.

If you are unsure which protocol you will need, consult your network administrator.

Transfer mode — Select the file transfer method.

ASCII
Select this option if you want the file to be exported in ASCII (plain text) mode.

Binary
Select this option if the file contains formatted text, non-text characters, or other data not interpreted as text.

Network mode — Select your network mode.

Passive
Select this option if your network uses passive FTP.

Active
Select this option if your network uses active FTP.

Private key file — Enter the location path for the private key or browse for it by clicking the **[Browse]** button. The private key file must be in **.ppk** format.

Activate export file output

Select this option to output the exported data to an ASCII text file.

Export file options

Enter a directory path and complete file name for the exported file in the **File Location and Name** text box, or click **[Browse]**.

Browse to the folder in which you want to save the file. If you want to write over or append to an existing file, select the file name; if you want to create a unique file, enter a file name in the **File Name** field (including the extension, which can be any ASCII text file extension, e.g., *.txt*, *.csv*). Click **[Save]**. The path and file name are inserted in the **Destination Folder** field.

Output mode
Select the option you want to use to create the exported file.

Overwrite existing file
Select this option to overwrite a previously uploaded file.

Append data to file
Select this option to append (add) the uploaded file to an existing file.

Export file name

Click the **Export file name** tab to select the auto export file name convention settings.

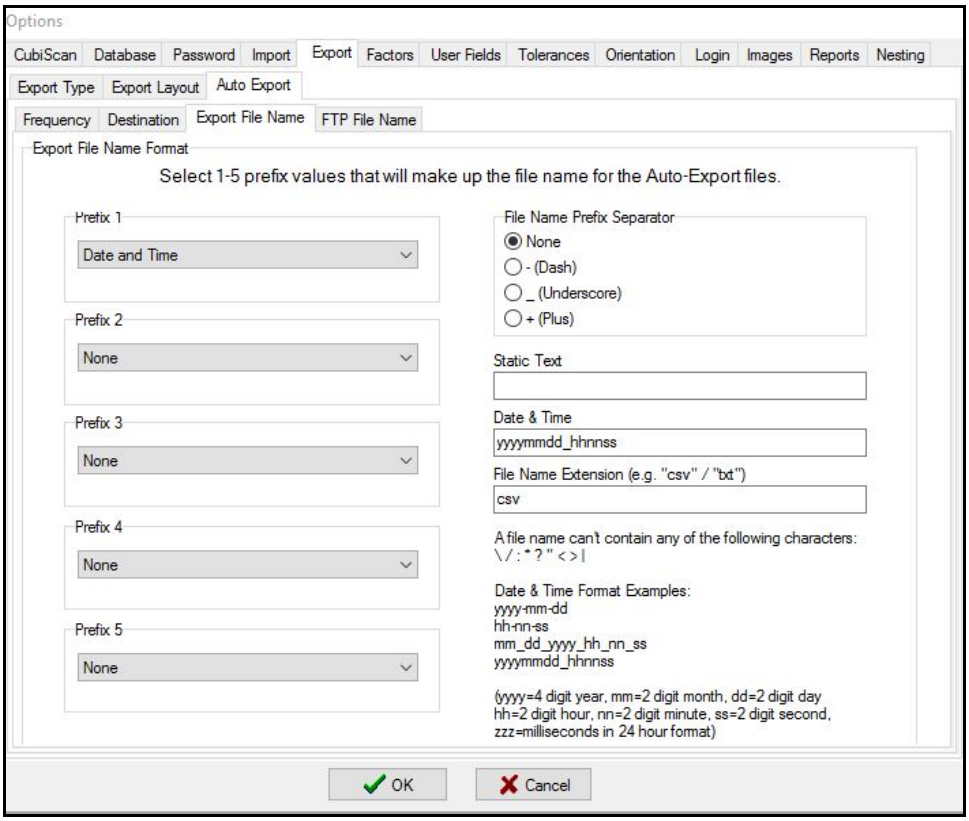


Figure 20
Auto Export, Export File Name

Export file name format

Select the auto export file name conventions from the following options.

Prefix 1-5 You can select five prefixes that make up the auto export file name. **Prefix 1** is a mandatory field and must have an option selected. From these

drop-down fields you can select various fields from Qbit-DB that will be used to make up file names. The options available are: **(None)**, **Pack type**, **Optional info 1**, **Optional info 2**, **Optional info 3**, **Optional info 4**, **Optional info 5**, **Optional info 6**, **Optional info 7**, **Optional info 8**, **Site ID**, **Static text**, and **Date and Time**.

NOTE *Prefix options may differ from the default to reflect user defined fields.*

File name prefix separator

You can select the symbol that will separate the file name prefixes from the following options: **None**, **-(Dash)**, **_(Underscore)**, or **+(Plus)**.

Static text
You can enter any desired text here that you want included in auto export file names. To add the static text to the file name, select **Static Text** in one of the **Prefix 1-5** drop-down lists.

NOTE *File names can't contain the following characters: \ / : * ? " < > |*

Date & Time
You can enter the date and time here. To add the date and time to the file name, select **Date & Time** in one of the **Prefix 1-5** drop-down lists. The acceptable date & time formats are found below the **Date & Time** field.

File name extension
You can enter the file name extension here.

FTP file name

Click the **FTP file name** tab to select the FTP file name convention settings.

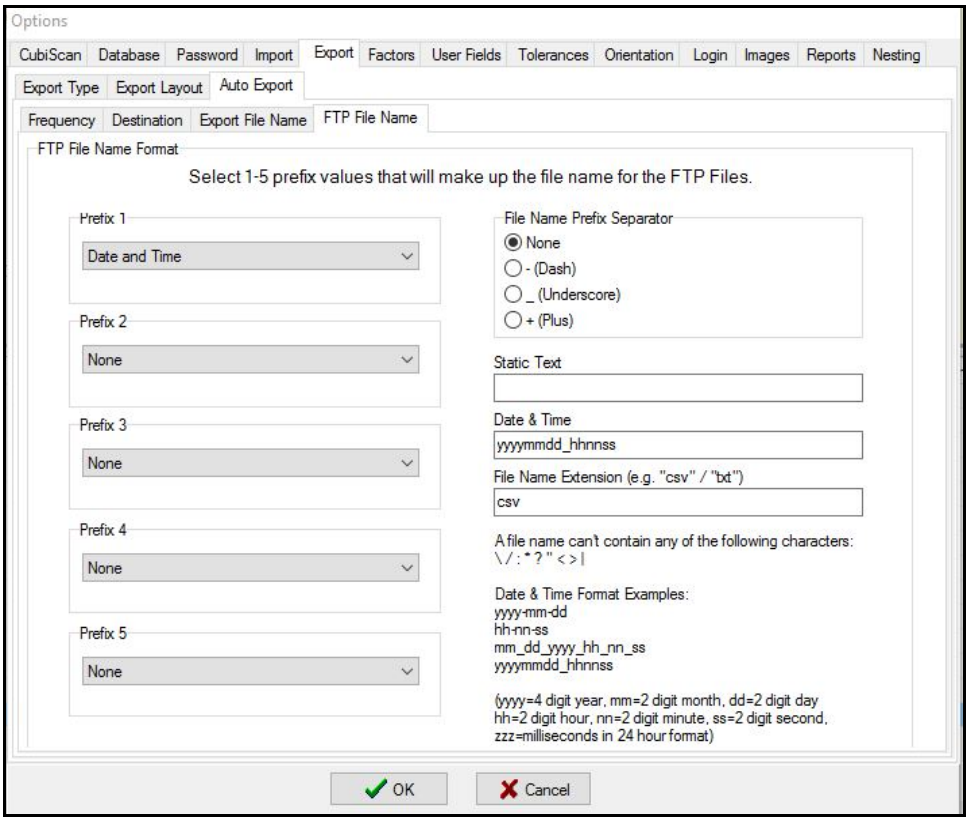


Figure 21
Auto Export, FTP File Name

FTP file name format

Select the FTP file name conventions from the following options.

Prefix 1-5 — You can select up to five prefixes that make up the FTP file name. **Prefix 1** is a mandatory field and must have an option selected. From these drop-down fields you can select various fields from Qbit-DB that will be used to make up file names. The default options available are: **(None)**, **Pack type**, **Optional info 1**, **Optional info 2**, **Optional info 3**, **Optional info 4**, **Optional info 5**, **Optional info 6**, **Optional info 7**, **Optional info 8**, **Site ID**, **Static text**, and **Date and Time**.

NOTE *Prefix options may differ from the default to reflect user defined fields.*

File name prefix separator — You can select the symbol that will separate the file name prefixes from the following options: **None**, **-(Dash)**, **_(Underscore)**, or **+(Plus)**.

Static Text

You can enter any desired text here that you want included in FTP file names. To add the static text to the file name, select **Static text** in one of the **Prefix 1-5** drop-down lists.

NOTE

*File names can't contain the following characters: \ / : * ? " < >*

Date & Time

You can enter the date and time here. To add the date and time to the file name, select **Date & Time** in one of the **Prefix 1-5** drop-down lists. The acceptable date & time formats are found below the **Date & Time** field.

File Name Extension

You can enter the file name extension here.

Factors

Click the **Factors** tab to enter or edit the domestic and international dimensional weight factors. A dimensional weight is calculated for each measurement (both domestic and international).

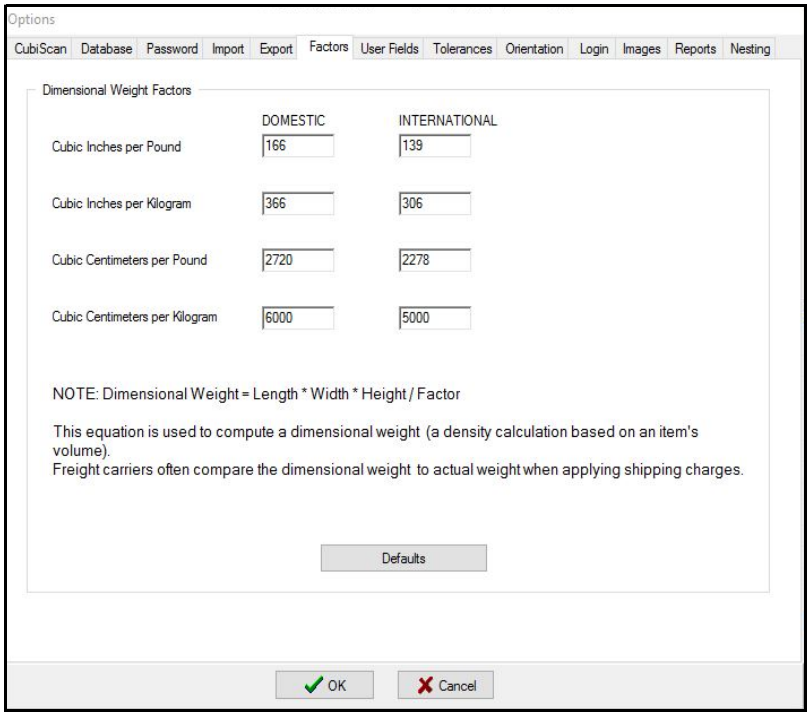


Figure 22
Factor tab

Dimensional weight factors

An item's dimensional weight is its density based on volume and is calculated using the following equation:

Dimensional Weight = Length * Width * Height / Factor

Defaults Click **[Defaults]** to use the default values provided by Cubiscan. Or, click in each text box and enter your own values for each factor.

User fields

User fields are labeled **User field 1** through **User field 8** by default, however, you can customize the labels. These fields can be used to enter any additional information about an item into the database.

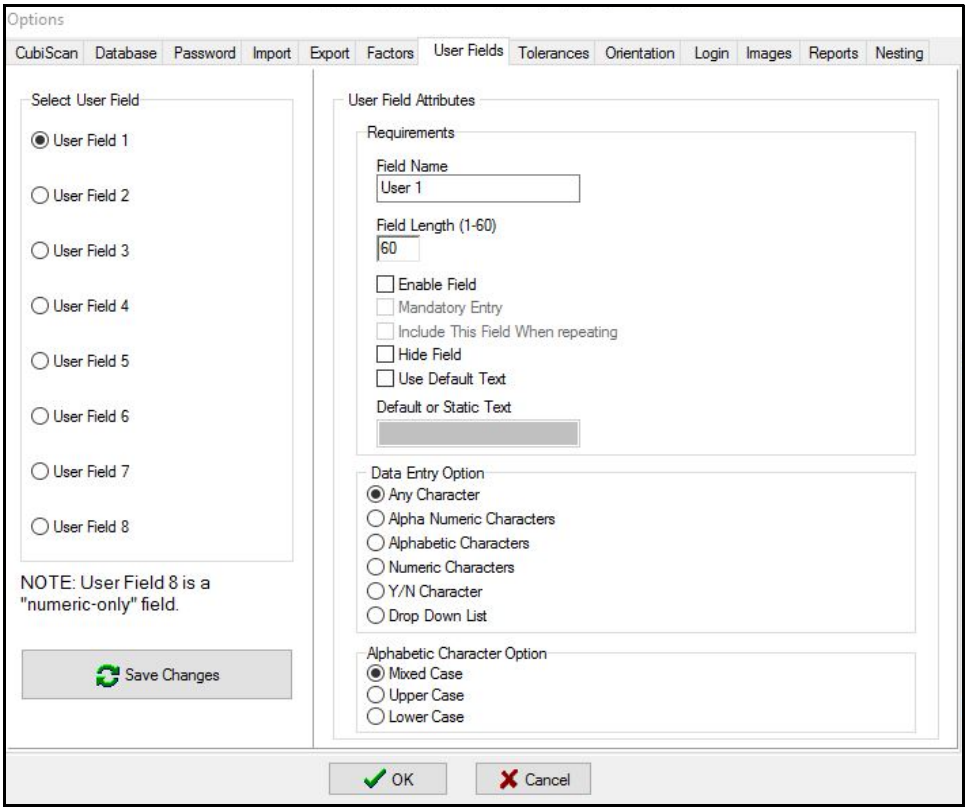


Figure 23
User Fields tab

Use the following options to customize one or more user fields.

Select user field

Select the user field that you would like to edit. You must save the changes made at each field using the **[Save Changes]** button before moving on to the next field. If you make a change to a user field and forget to save, you will be prompted to save your changes.

If you are only editing one user field, you can simply click **[OK]** after you have made your changes and the changes will automatically be saved.

NOTE *User field 8 is numeric only.*

User field attributes

Select the attributes of user fields 1-8.

Requirements

Setup the requirements for the selected user field.

Field name — Type a label for the field. The label is displayed in the place of the **User field** default label in the main window and as the column heading in the database table.

Field length — Enter the maximum number of characters that can be entered in the field (from 1 to 60). You will not be allowed to enter more than the specified number of characters in the field. Default values will be shortened to fit the specified field length.

Enable field — Select this option to enable the user field. Once enabled, the field becomes available after the item number is entered and remains available until the record is updated. You cannot make this field mandatory or include it when repeating unless it is enabled. You cannot hide this field if it is enabled.

Mandatory entry — Select this option if you want an entry to the field to be mandatory. A valid entry will be required in the field before the item record can be updated.

Include this field when repeating — Select this option if you want the user field included when you repeat an item number. (Repeat is only available if the secondary field is enabled; refer to "Secondary field" on page 21.)

Hide field — Select this option to hide a disabled user field in the main window.

Use default text
: Select this option if you want a default or static value to appear in the selected user field.

Default or static text
: Type a default value for the field. This value will appear by default in the selected user field. If both the **Enable field** and **Use default text** fields are enabled, the default will appear in the user field but can be overridden by manual entry.

  You can also disable the **Enable field** option while using a default value. Doing this will enable you to use the default value and not allow it to be edited during the cubing and weighing process.

  If you are using a default value with a drop-down list, your default value must also be listed among the drop-down values. The **Enable field** option must also be enabled.

Data entry option

This option can be used to limit the type of characters that can be entered in the field to help prevent data input errors. Click the option for the type of characters to be allowed: **Any character**, **Alpha numeric characters**, **Alphabetic characters**, **Numeric characters**, **Y/N character** (yes/no), or **Drop-down list**. If you do not want to define any restrictions, select **Any character**.

If you select **Drop-down list** you will be required to enter the desired values into the box that appears to the right of the Data entry options.

Alphabetic character option

This option can be used to restrict the type of alphabetic characters that are entered in the field to help prevent data input errors. Click the option for the type of alphabetic characters to be allowed: **Mixed case**, **Upper case**, or **Lower case**.

Ensure that your alphabetic character option does not interfere with your Data entry option. For example, if you select alpha numeric characters for your data entry option and upper case as your alphabetic character option you will be unable to enter any lower case options into the selected user field.

This section may be grayed out depending on the data entry option that was selected.

Tolerances

Click this tab to enable tolerance checking. This is the tab where you can set your exclusion criteria. You can set a **Max** or **Min** value for the length, width, height, weight, or volume of an item's measurements. You can also set an **Allowed difference** tolerance, which is the difference allowed between an item's current dimension versus the new dimension that has been manually inputed or received from the Cubiscan.

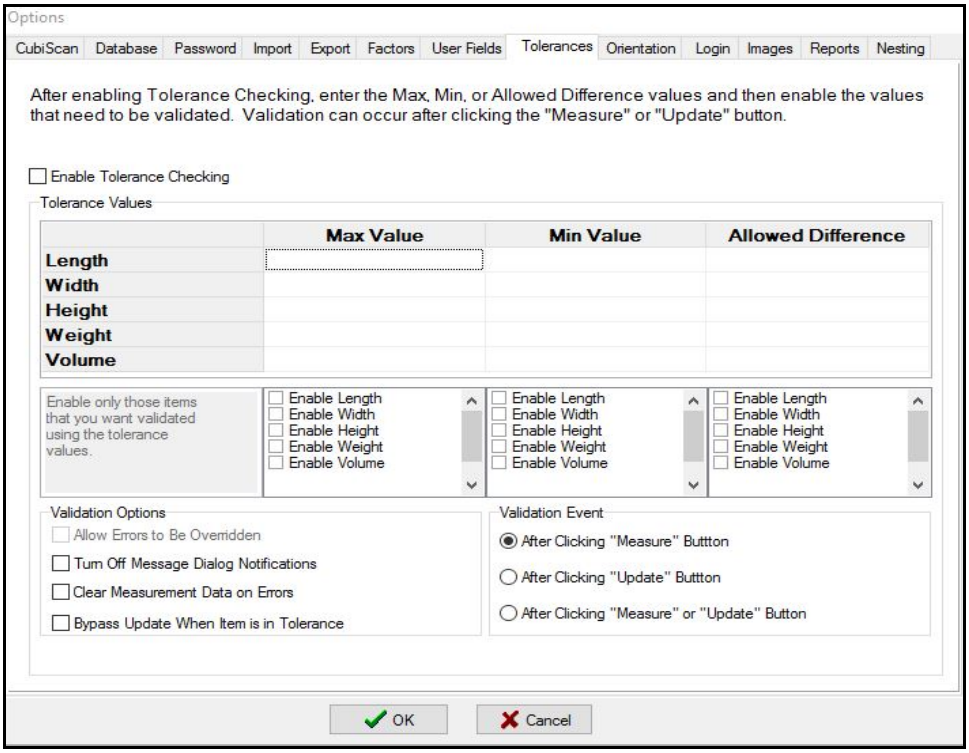


Figure 24
Tolerances tab

Enable tolerance checking — Enabling this function allows Qbit-DB to validate new item numbers and item numbers that are updated against the tolerance values.

Tolerance values

The tolerance values for **Length**, **Width**, **Height**, **Weight**, and **Volume** can be entered into the columns of the table.

To enable a tolerance value, complete the following steps.

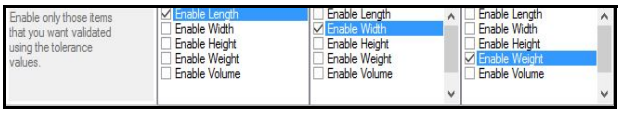
1. Enable the **Enable tolerance checking** field.

2. Enter the desired tolerance values into the appropriate field in the Tolerance values table.

   You can enter a **Max**, **Min**, or **Allowed difference** value for the length, width, height, weight, or volume of an object.

3. Enable the corresponding fields located below the Tolerance values table. These fields must be enabled for the tolerance values that were entered into the Tolerance Values table to be checked.

   If one of these fields is enabled without a corresponding tolerance value being entered into the Tolerance values table an error will display after attempting to **Measure** or **Update** an item.



Validation options

The Validation options field is where you can enable and disable various validation options.

Allow errors to be overridden Enabling this field allows you to override tolerance exceptions that are found.

Turn off message dialog notifications Enabling this field turns off the tolerance exception notifications.

Clear measurement data on errors Enabling this field will clear all the measurement data when tolerance exceptions are found.

Bypass update when item is in tolerance Enabling this field will allow the system to bypass updating the database when items are in tolerance. This means that if you attempt to update and change an item's measurements the system will *not* retain the changes if the measurements are within the tolerance values. When this option is enabled, the **Validation event** field is grayed out.

Validation event

The Validation Event field allows you to select when you would like the system to check for tolerance exceptions.

After clicking "Measure" button	Selecting this field will prompt the Qbit-DB system to check for tolerance exceptions when the **[Measure]** button is clicked.
After clicking "Update" button	Selecting this field will prompt the Qbit-DB system to check for tolerance exceptions when the **[Update]** button is clicked.
After clicking "Measure" or "Update" button	Selecting this field will prompt the Qbit-DB system to check for tolerance exceptions when the **[Measure]** or **[Update]** button is clicked.

Orientation

From this tab you can select the orientation settings of the Cubiscan's measurements.

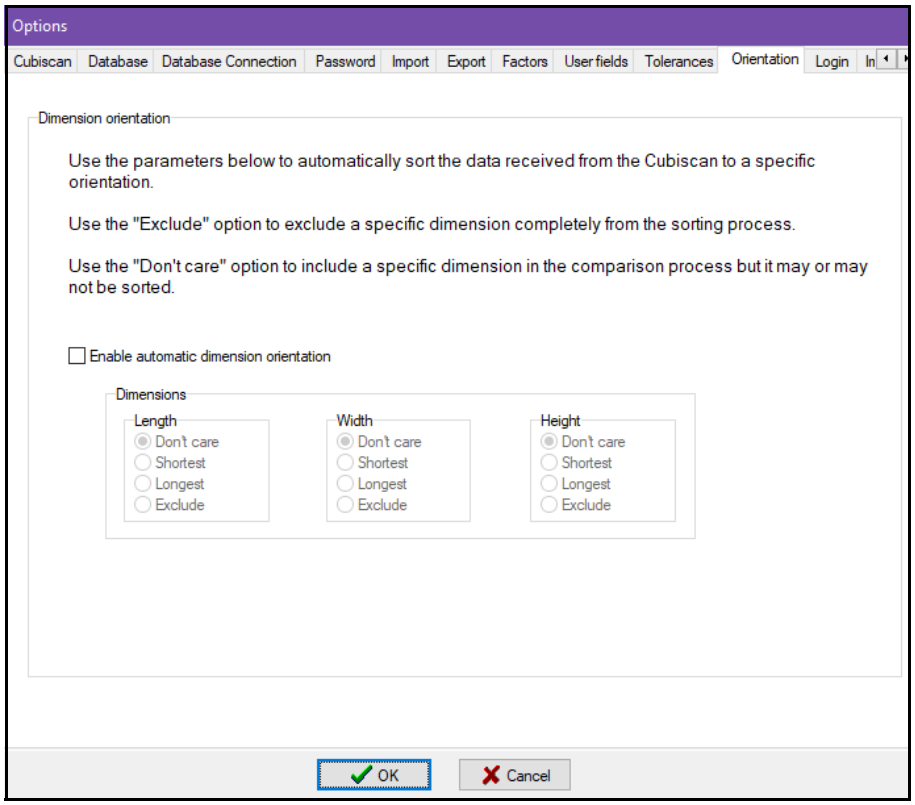


Figure 25
Orientation tab

Dimension orientation

In this field you can enable automatic dimension orientation, select dimensions that should be excluded from the automatic option, and select dimension settings. The orientation tab settings occur when you click the **[Measure]** button.

Enable automatic dimension orientation — Enabling this field automatically sorts the item's measurements according to the selections made in the drop-down length, width, and height

dimension boxes. The message window will notify you of the automatic dimension orientation that took place. An example is shown below.

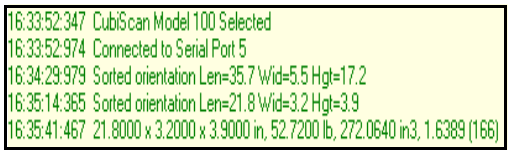


Figure 26
Automatic dimension orientation

Dimensions

Choose the parameters you would like to sort the data received from the Cubiscan to a specific orientation. For each dimension (length, width, and height), you can select from the values **Don't care**, **Shortest**, **Longest**, or **Exclude**.

Use the **Don't care** option if you want to include a specific dimension in the comparison process, but do not need it sorted.

Use the **Exclude** option to exclude a specific dimension from the sorting process.

Login

From this tab you can select a user ID and the field in which it will appear.

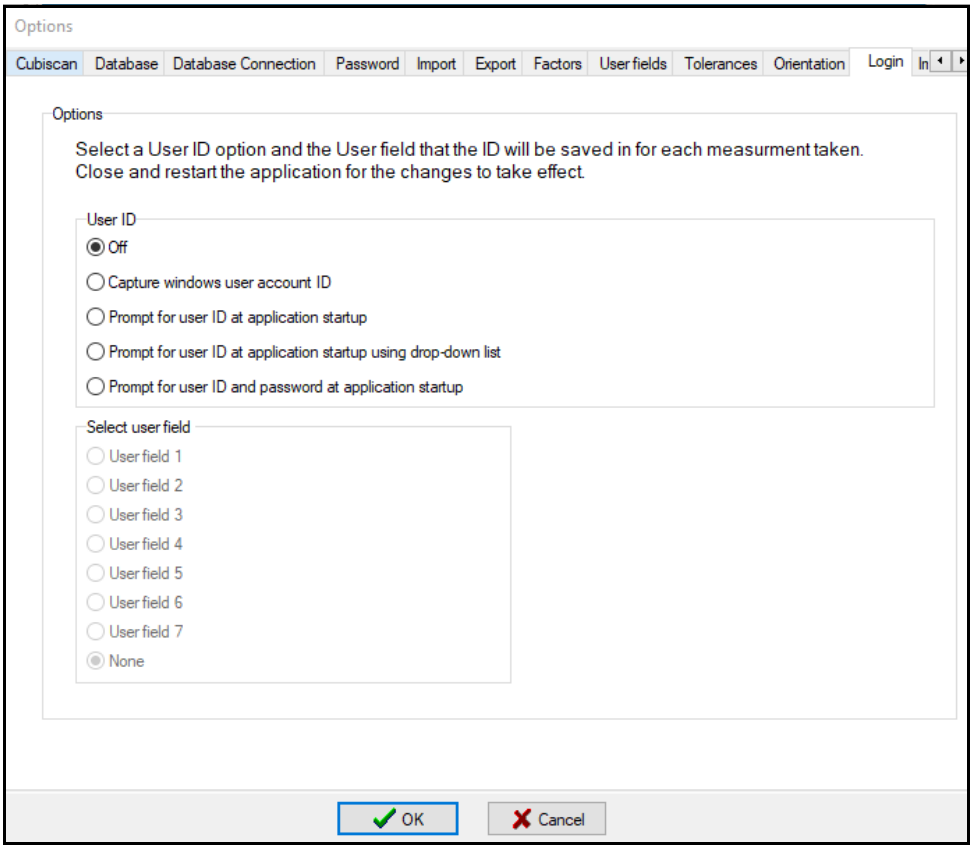


Figure 27
Login tab

Options

Select User ID options. After making these changes Qbit-DB must be closed and restarted for the changes to take effect.

User ID

Select your preferred User ID option from the following options.

Off Select this option if you do not want Qbit-DB to prompt the user for an ID or password.

Capture Windows user account ID

Select this option if you want Qbit-DB to capture your Windows user account ID and store it in the selected user field each time the **[Update]** button is clicked.

Prompt for user ID at application startup

Select this option if you want Qbit-DB to prompt the user to enter an ID each time Qbit-DB starts up.

Prompt for user ID at application startup using drop-down list

Select this option if you want Qbit-DB to prompt the user to select an ID from the drop-down list each time Qbit-DB starts up. When you select this option a new field appears, called the **User ID** drop-down list. Enter the desired values into this field.

When this option is selected a new option appears under the Actions menu that allows you to change users. To change a user select **Actions > Change** user (**<Ctrl><U>**) and select the new user from the drop-down list.

Prompt for user ID and password at application startup

Select this option if you want Qbit-DB to prompt the user for an ID and password each time Qbit-DB starts up. When you select this option a new button called **[Manage users/passwords]** appears.

When this option is selected a new option appears under the Actions menu that allows you to change users. To change a user select **Actions > Change** user (**<Ctrl><U>**) and login using the desired user ID and password.

Click on this button to bring up the **User/Password management** window that is shown below.

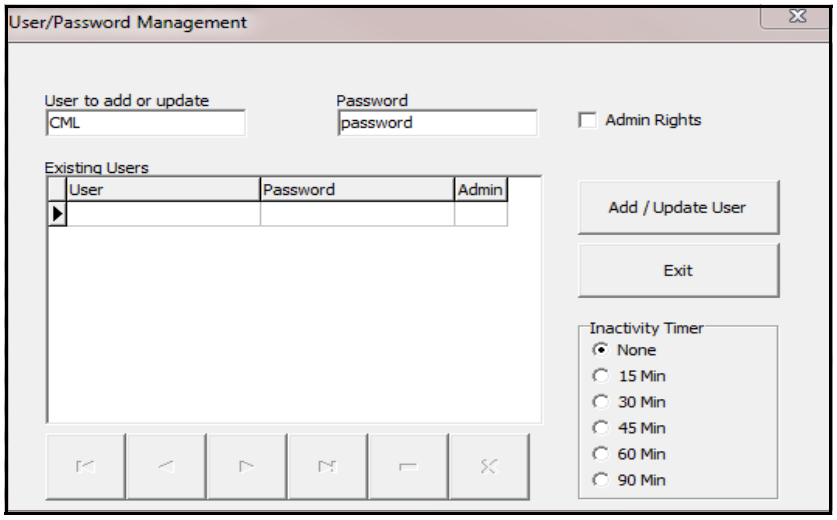


Figure 28
User/Password Management Window

Enter the user ID and password into the appropriate fields. You can select if the user will have administration rights, which allows the user to manage the user accounts. There must be at least one administration account.

The Existing users box shows all the current records of user IDs, passwords, and administration rights status. Passwords that are shown in this box are encrypted. You can arrow through or delete these records using the arrows found at the bottom of the Existing users box.

To give a user administrative rights, toggle the **Admin rights** option next to the **Password** field.

NOTE *Make sure that all records have an associated user ID and password, delete all incomplete records.*

The Inactivity timer box is where you can select how often a user will be prompted to enter their ID and password. The options are **None**, **15 Min**, **30 Min**, **45 Min**, **60 Min**, and **90 Min**. Depending on which option was selected, the user will need to enter their information again if Qbit-DB is left inactive for the selected amount of time.

Use the **[Add/Update user]** button to add a user ID and password or to update an existing record. When you are finished, click **[Exit]**.

Select user field

In this box you can select which user field you would like to correspond with a user ID. This user ID will be stored in the selected user field each time the **[Update]** button is clicked. The options available are **User fields 1-7**, or **None**. When you select the user field that you wish to use, you will automatically be directed to the corresponding user field under the **User Fields** tab. For further information on the user field options, see "User fields" on page 54.

NOTE *When selecting which user field you want associated with an ID, be sure that the user field you select is not already in use.*

Images

From this tab you can enable a network or digital camera to work with Qbit-DB or select your image file options. Camera kits are available from Cubiscan to purchase.

The images tab requires a camera to be connected to Qbit-DB.

For information on installing a network camera, see "Parts list for the Axis network camera kit" on page 148.

For information on installing a digital camera, see "Digital camera options" on page 68.

For information on the Cubiscan 75 and 75 Pro cameras, see "Cubiscan 75 camera options" on page 70.

Overhead Camera options

From this screen you can configure and select the settings for overhead camera.

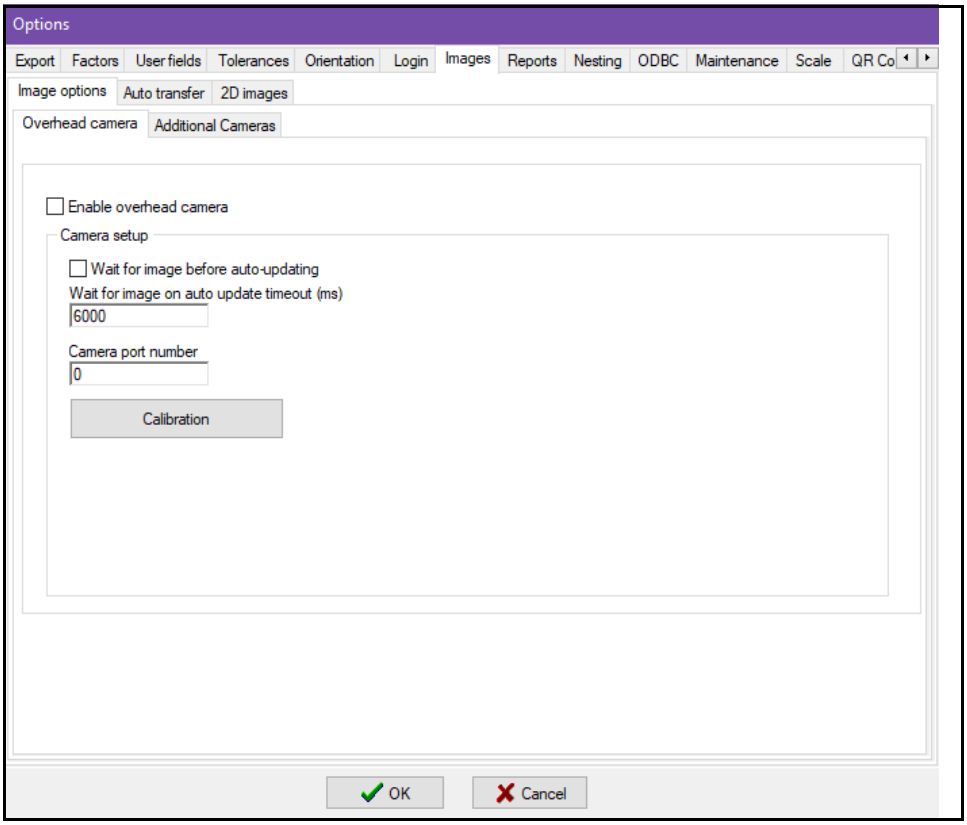


Figure 29
Camera options

Additional Cameras

The additional cameras tab allows for the configuration of additional network and custom Cubiscan cameras other than the overhead camera These include the Axis, the digital camera, and options specific to the Cubiscan 75 and 75 Pro. Note that the availability of certain cameras is dependent on the Cubiscan used.

Axis Camera Options

This field contains all the settings for the Axis camera.

Enable network camera snapshots

Enable this field to allow a network camera to connect to Qbit-DB.

A new **[Snapshot]** button will also appear in the measurement window. Click this button to take a snapshot.

Once a snapshot has been taken Qbit-DB automatically names and saves the file as a **.jpg**. To see the file name, use the arrows to scroll to the far right of the database window until you reach the **Image file** section. This section displays the file names of each snapshot taken. To select the image file name settings, see "Click the Destination tab to set up the type of output for the image file." on page 74.

If there are multiple snapshots associated with an item number, then Qbit-DB displays **??** in the file name, as shown below.

SnapShotFile
453_Master.jpg
2345345_Inner.jpg
245345_Each_??.jpg

Camera setup

Select your network camera setup options.

IP address

Enter the IP address in this field. The IP address that you should enter is printed on the Axis camera box. The default IP address setting is usually 10.1.100.40, but check your Axis camera box to be sure.

IP port number	The IP port number should automatically be filled in.
Auto-snapshot after measure	Enable this field if you want a snapshot to be taken automatically after you measure an item.
Enable multiple snapshots	Enable this field if you want to be able to take multiple snapshots of an item.
Seconds to show snapshot	In this field you can edit the number of seconds for which the snapshot is displayed in the camera image window after a snapshot has been taken.

Barcode scan event

Auto-snapshot after barcode scan	Check box to enable snapshots to be taken automatically after a barcode has scanned.
Seconds to delay before taking snapshot	Set a delay timer in seconds for snapshot to be taken. This is especially helpful to allow time for an operator to remove hand and barcode scanner from measurement area to ensure they do not end up in the snapshot.

NOTE *For the multiple snapshots function to work properly Qbit-DB needs to be closed and restarted when this field is enabled or disabled.*

When you enable this option a new slide show view button appears at the bottom of the camera image window.

Figure 30
Slide show view

To view all the snapshots associated with an item number, click on **Slide show view**.

Use the **[Prev]** and **[Next]** arrows to scroll back and forth through the snapshots.

Click **Live view** to display the live feed from the camera.

When both **Auto-snapshot after measure** and **Enable multiple snapshots** are enabled at the same time only the first snapshot will be automatic. To obtain additional snapshots, click **[Snapshot]**.

Digital camera options

This field contains all the settings for a digital camera.

Enable digital camera snapshots — Enable this field to allow a digital camera to connect to Qbit-DB.

Auto-accept image

Enable this field if you want the image you took to be automatically accepted.

The default setting is that each image must be accepted or discarded before it will be saved to the item number that has been entered into the Item number field, as shown below.

If multiple images are taken, each image will appear as the previous image is accepted or discarded by clicking the **[Accept]** or **[Discard]** buttons found at the bottom of the camera image window.

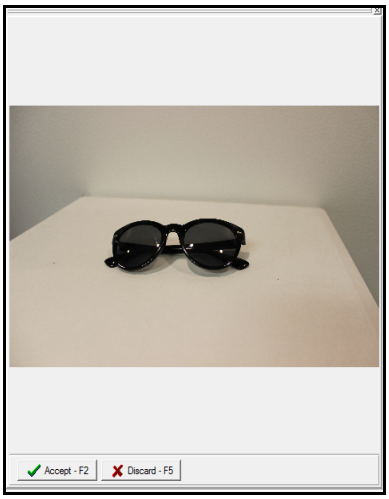


Figure 31
Auto-accept image disabled

If you enable Auto-accept Image then you will not need to accept or

discard each image as it is taken. The **[Accept]** and **[Discard]** buttons are no longer available.

Figure 32
Auto-accept Image Enabled

Enable multiple snapshots

Enable this field if you want the system to allow multiple snapshots per item number.

When this function is enabled, two new buttons appear at the bottom of the camera image window. These buttons, **[Prev]** and **[Next]**, allow you to scroll through all images that are associated with an item number.

If Auto-accept Image is not enabled, each image will need to be accepted or discarded before you can scroll through the images.

Repair multiple snapshots broken links

Repair any broken links for multiple snapshots by clicking **[Start]**. A dialogue box will appear informing you of the number of broken links repaired.

Cubiscan 75 camera options

This field contains all the settings for a Cubiscan 75 camera.

Enable Cubiscan 75 camera snapshots

Enable this field to allow a Cubiscan 75 camera to connect to Qbit-DB. If you are using the Cubiscan 75 Pro, you must check the box next **Cubiscan model 75Pro**.

This is to ensure that the Qbit DB software know which version of the Cubiscan 75 you are using. If this box is not checked errors will occur.

Auto transfer

To set up Qbit-DB to automatically transfer an image file at a certain time of day, at specified time intervals, or after every update, click the **Auto transfer** tab.

Select the **Frequency** tab to set up the time(s) to export the image files, select the **Destination** tab to determine where the image file will be transferred to, or select the **Image file name** tab to choose how your image file should be named.

Frequency

Select the **Frequency** tab to set up the mode and times to export.

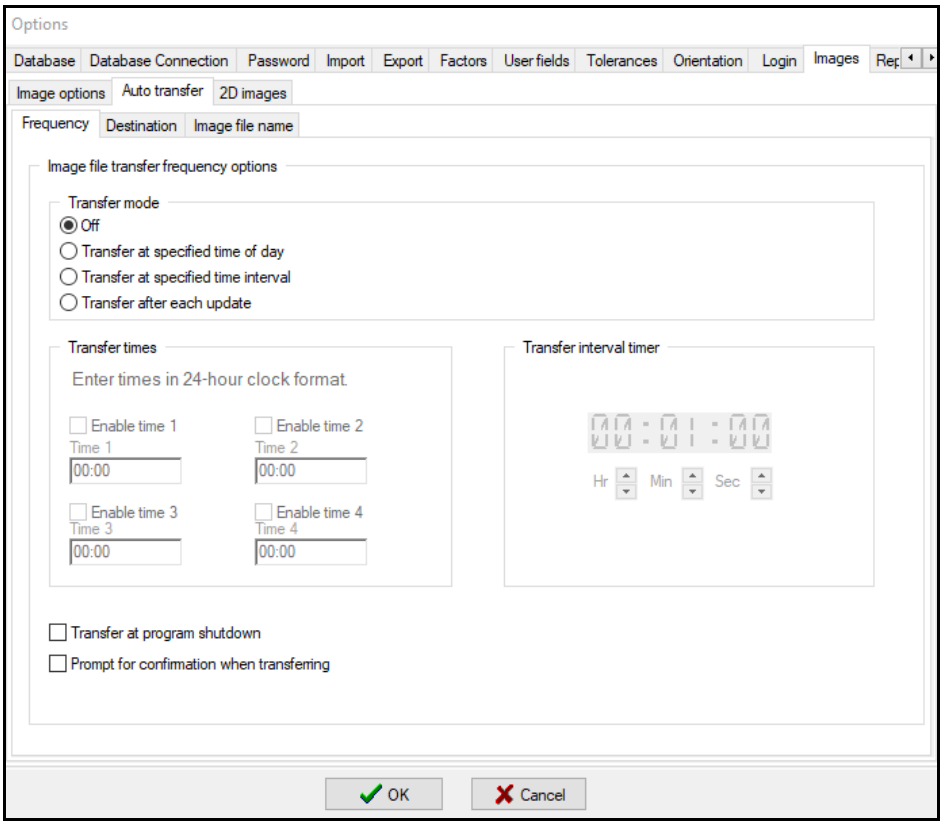


Figure 33
Images, Auto Transfer, Frequency

Image file transfer frequency options	Select how often an image file will be transferred.

Transfer mode

Select the mode for automatic transfers, as follows.

Off
Select this option to disable automatic transfers.

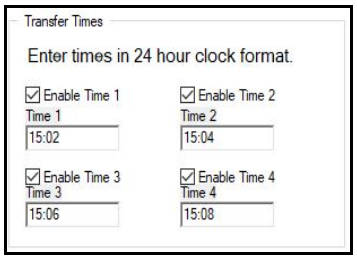
Transfer at specified time of day
Select this option to set up a time of day to transfer the image file. The **Transfer times** options become available to set up the time(s) of day for transfer.

Transfer at specified time interval
Select this option to set up a time interval to transfer the image file. The **Transfer interval timer** options become available to set up the time interval for transfer.

Transfer after each update
Select this option to automatically transfer an image file every time the **[Update]** button is clicked.

Transfer times

If you selected **Transfer at specified time of day**, this section is available to set up the time of day you want the file transferred.

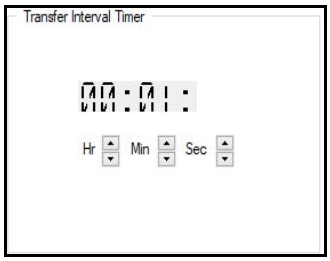


You can set up four different times to export a file. Select **Enable time 1** to enter the first transfer time. Then type the time of day in the **Time 1** field in a 12-hour clock format (i.e., 1:00 AM, 2:00 PM, and so on). Do the same to set up times 2 through 4 as desired.

The image file will be transferred automatically every day at the specified time or times until you disable the **Transfer at specified time of day** feature.

Transfer interval timer

If you selected **Transfer at specified time interval**, this section is available to set up the interval timer.



Click the arrow buttons to scroll up or down from 00 to 23 hours, 00 to 59 minutes, and 00 to 59 seconds. Click once to scroll one at a time, or click and hold to scroll quickly through the numbers in sequence.

The image file will be transferred automatically at the specified time intervals. For example, if you select 2 hours, the file will be transferred every 2 hours.

Transfer at program shutdown

If you enable this function, the image file will be transferred automatically each time Qbit-DB is shutdown.

Prompt for confirmation when transferring

If you enable this function, Qbit-DB will prompt you for confirmation when a database file is about to be exported.

Destination

Click the Destination tab to set up the type of output for the image file.

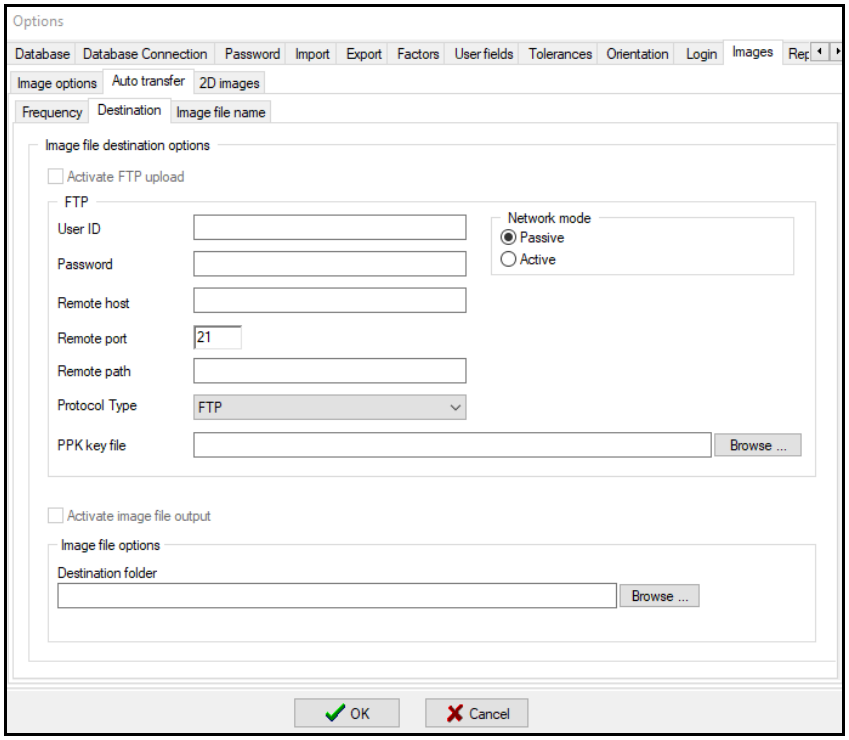


Figure 34
Images, Auto Transfer, Destination

Image file destination options

Configure your image file destination options.

Activate FTP upload

Select **Activate FTP upload** to activate the FTP upload option. This option is only available when you have selected a **Transfer mode** from the **Frequency** tab. Enabling this option allows you to edit and select options in the FTP section.

Set up the options to transfer the image file to a host via FTP when it is transferred automatically. You can obtain this information from your network administrator.

FTP

Enter the login information required by your network for file transfer.

User ID
Enter a valid user ID (required for upload access to the host site).

Password
Enter a valid password (required for upload access to the host site).

Remote host
Enter the name of the FTP host (e.g., ftp.host.com)

Remote port
Enter the port used for the transfer, normally "21".

Remote path
Enter the directory path on the host. Be sure to use the correct syntax for the server type (e.g., \...\ or /.../).

Protocol Type
Select protocol type form the drop down menu. Options include: **FTP**, **sFTP**, **FTPs (implicit SSL)**, **FTP-ES (SSL 3.0 or TLS 1.0)**.

If you are unsure which protocol you will need, consult your network administrator.

Network mode — Select your network mode.

Passive
Select this option if your network uses passive FTP.

Active
Select this option if your network uses active FTP.

Private key file — Enter the location path for the private key or browse for it by clicking the **[Browse]** button. The private key file must be in **.ppk** format.

Activate image file output — Select this option to output the image file to a destination folder.

Image file options — Enter a directory path to the folder you with to send the image file in the **Destination Folder** field, or click **[Browse]**.

Browse to the folder in which you want to save the file. Click **[Save]**. The path and file name are inserted in the **Destination Folder** field.

Image file name

From this tab you can select the image file name convention settings.

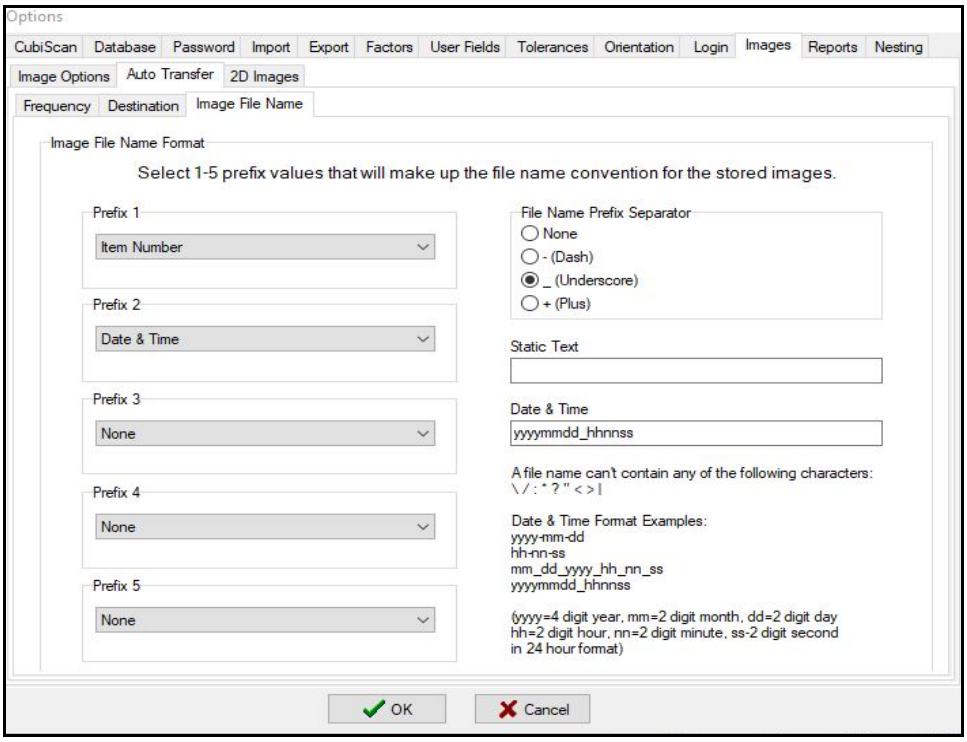


Figure 35
Images, Auto Transfer, Image File Name

Image file name format

Select the image file name conventions from the following options.

Prefix 1-5 You can select 5 prefixes that make up the image file name. **Prefix 1** is a mandatory field and must have an option selected. The options available are **Item number**, **pack Type**, **Option info 1-8, Site ID, Static text,** and **Date & Time**.

NOTE *Prefix options may differ from the default to reflect user defined fields.*

File name prefix separator You can select the symbol that will separate the file name prefixes from the following options: **None**, **-(Dash)**, **_(Underscore)**, or **+(Plus)**.

Static text You can enter any desired text here that you want included in image file names. To add the static text to the file name, select **Static text** in one of the **Prefix 1-5** drop-down lists.

Date & time — You can enter the date and time here. To add the date and time to the file name, select **Date and time** in one of the **Prefix 1-5** drop-down lists. The acceptable date & time formats are found below the **Date and time** field. Using these formats will ensure that the file is saved with the correct information.

NOTE *The following characters are not allowed in the Prefix 1-5, Static Text, or Date and time fields: \ / : * ? < >*

2D images

From this screen you can enable 2D images.

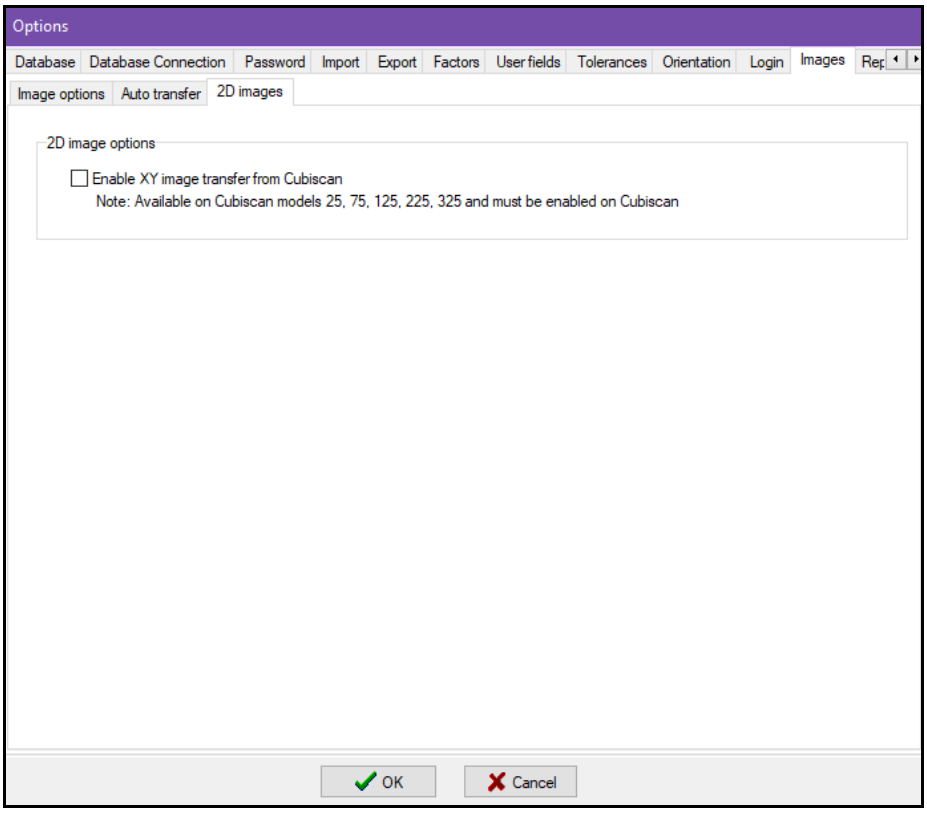
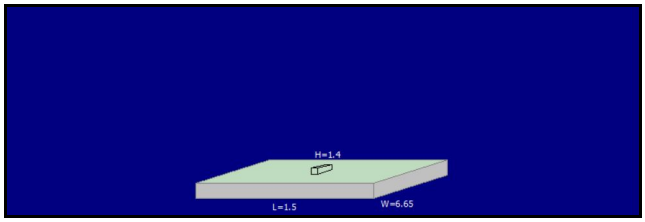


Figure 36
Images, 2D images

2D image options

Enable the 2D image option if you would like to view the 2D image from the Cubiscan in Qbit-DB. The 2D image will be displayed in the Cubiscan picture window. Available on Cubiscan™ models 25, 75, 125, 225, and 325.

NOTE *2D image capture must be enabled on Cubiscan to use this function.*



Reports

Access this tab to enable label report printing and select label setup options.

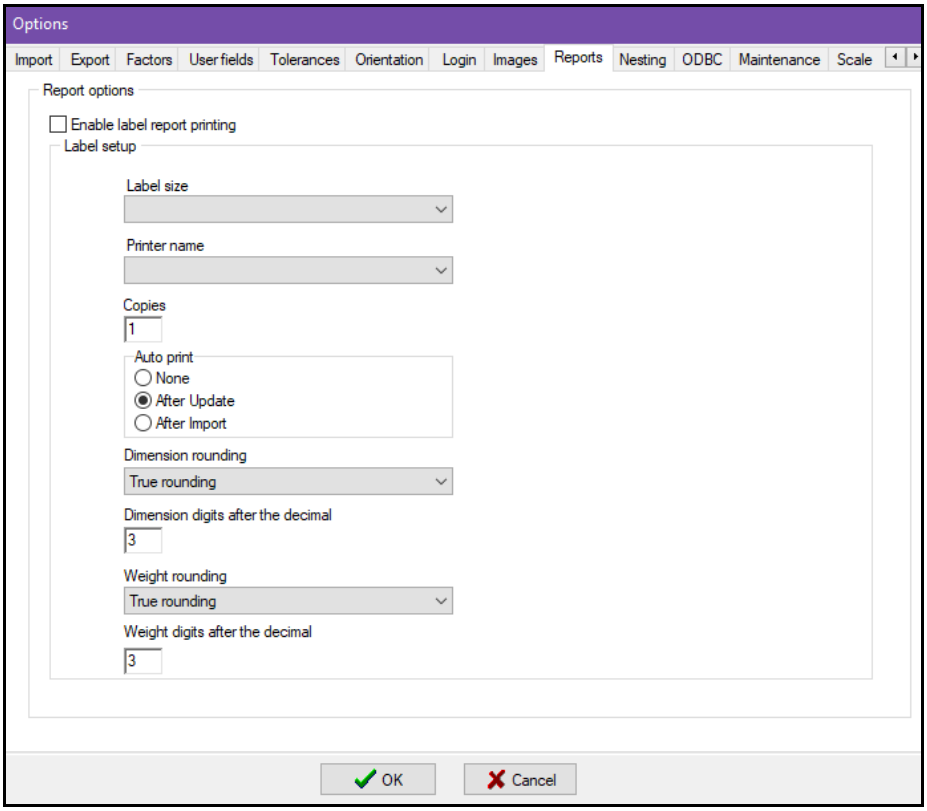


Figure 37
Reports tab

Report options

This field contains label report settings.

Enable label report printing — Enable this field to allow label reports to be printed.

Label setup

This field contains label setup options.

Label size — Select the size of the label from the drop-down box. The sizes available are a 2x2, 3x3, 4x4, and a 4x6 inch label.

Printer name — Select the printer that the label will print to.

Copies — Type in the number of labels that you want to print.

Auto print

None — Select if you want to force manual printing.

After Update — Select if you want a label to print each time you click **[Update]**.

After Import — Select if you want a label to print each time you import.

Dimension rounding — Select the dimension rounding option that you prefer. This option will round the length, width, and height measurements to the option that you select. The options available are True rounding, Round up, and Round down.

Dimension digits after the decimal — Type in the number of digits that you want to appear after the decimal on length, width, and height measurement dimensions.

Weight rounding — Select the weight rounding option that you prefer. This option will round the weight measurement to the option that you select. The options available are True rounding, Round up, and Round down.

Weight digits after the decimal — Type in the number of digits that you want to appear after the decimal on weight measurement dimensions.

Nesting

From this tab you can view and change nesting settings. Enabling nesting will allow you to calculate and save the nesting factor of an item. The nesting feature should be used when you are measuring multiples of an item that can be stacked inside one another, like cups or Russian nesting dolls.

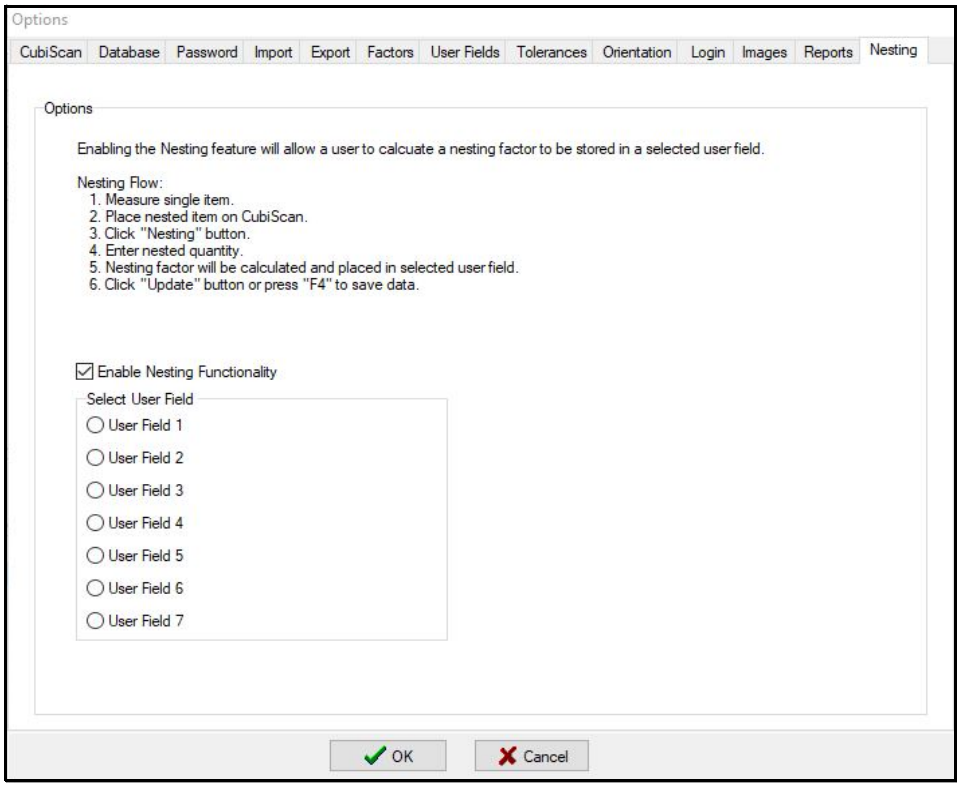


Figure 38
Nesting tab

Enable nesting functionality

Enable this field to allow for a nesting factor to be calculated and saved. When you enable this feature a new button appears on the home screen, called **[Nesting]** (the shortcut is **<F11>**). You may need to rearrange your main window to display the new nesting button. The **[Nesting]** button will appear below the **[Delete]** button.

Select user field

Select which user field will contain the nesting factor. The options available are **user fields 1-7**. Make sure you select a user field that is not already in use. When you select a user field you will be automatically directed to the **User fields** tab so that you can select the settings for the selected user field. See "User fields" on page 54 for more information on the options available for the user fields.

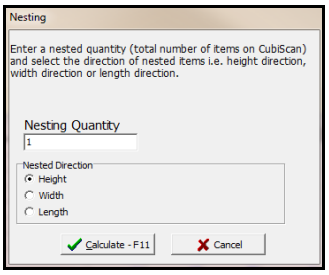
Calculating and saving a nesting factor

To calculate and save a nesting factor, complete the following steps:

1. Measure a single item. When the measurement process is complete, remove the item from the Cubiscan platform.

2. Place the nested item on the Cubiscan.

3. Click the **[Nesting]** button. The following window appears.



4. Enter the nested quantity into the field and select the nesting direction. The nesting direction refers to the direction that the items are stacked. When you are finished click **[Calculate]**, press **<F11>**, or use the measuring gate to take a measurement. If you wish to quit without calculating the nesting factor, click **[Cancel]**.

5. The nesting factor is calculated and placed in the selected user field.

6. Click **[Update]** or press **<F4>** to save.

ODBC

This tab allows you to manage an ODBC (third-party database).

Connection

Enable ODBC	Check the box to enable an ODBC connection.
ODBC data connection definition	In these fields, you can enter the connection name, schema name, and ODBC table name. The connection name is the name that was created using the *FireDac administrator* utility to connect to the ODBC data-source name. The schema name is the schema definition associated with the database and may be needed to access certain database tables. If included, the schema name should include the "." at the end of the name.
Password encryption	Check box to enable the use of encrypted ODBC database definition. Enter password in the text box below for encrypting database, then click **[Save]**.
Start FireDac Administrator	Click to launch the FireDac Administrator. For more information on FireDac Utility, see Appendix C "Firedac administrator" on page 167.
Test/Open ODBC connection	Click to open and test the ODBC connection.
ODBC database table merge options	The available options are append only, update only, or append/update. When **Append only** is selected, existing items will not be updated and only new items will be added. If **Update only** is selected, then the existing items will be updated, and new items will not be added. If **Append/Update** is

selected, then the existing items will be updated and new items will be added.

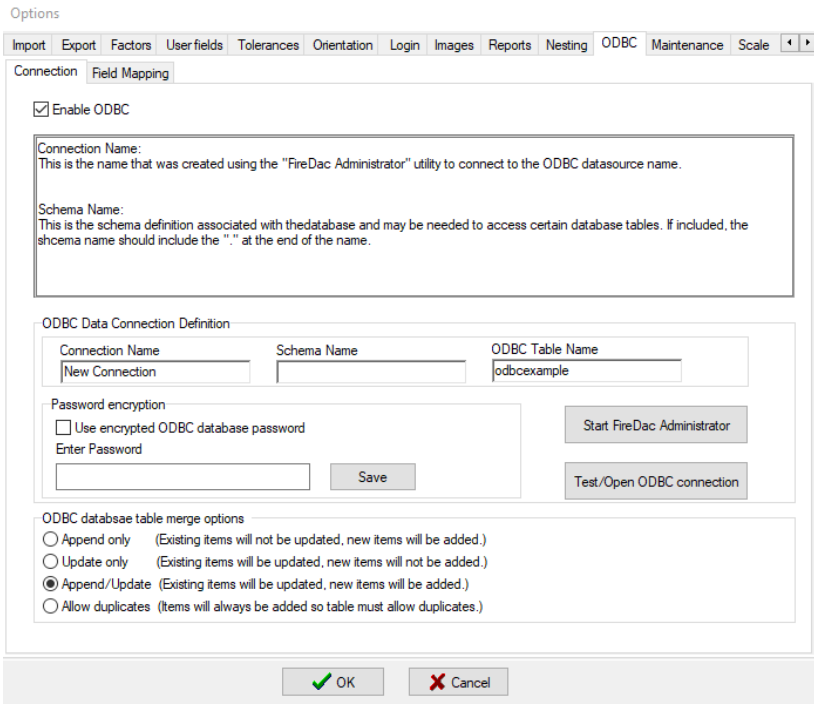


Figure 39
ODBC Connection tab

Field Mapping

This tab allows you to map the field of the ODBC database to the Qbit-DB fields.

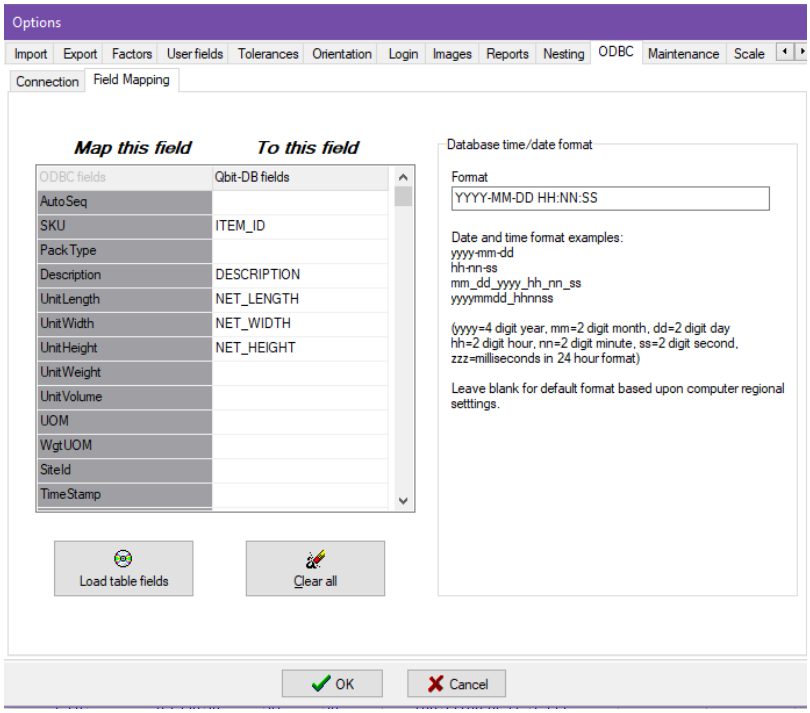


Figure 40
ODBC Field Mapping tab

Load table fields — Click the **[Load table fields]** button to view the ODBC fields. In the second column, you can use the dropdown arrow on each line to select an available Qbit-DB field to which it should map.

Clear all — This button clears all fields.

Database time/date format — This field allows you to format the way in which you'd like the database time/date format displayed. Leave this field blank to use the default based upon your computer regional settings.

Maintenance

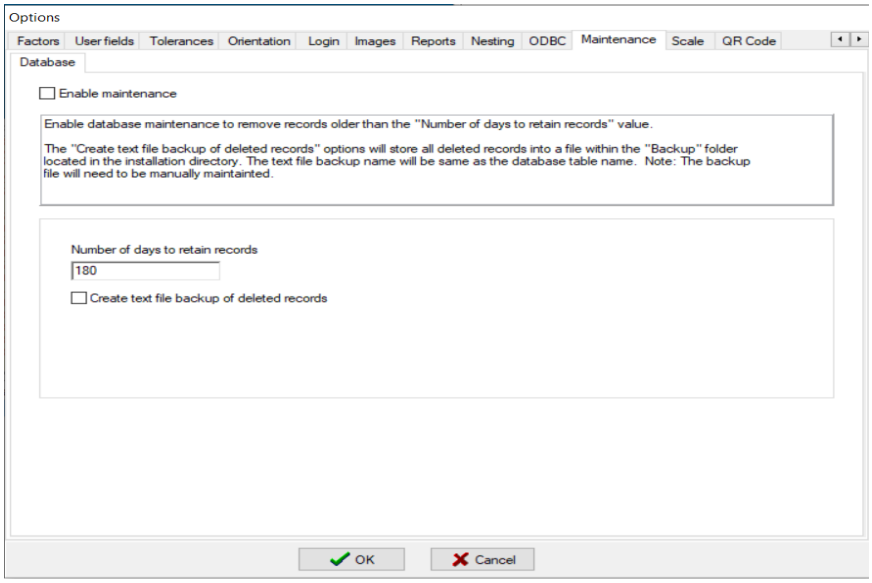


Figure 41
Maintenance tab

Database

Enable maintenance — Enabling maintenance allows the database to automatically remove records older than a certain number of days indicated by the user. This function only removes records from the Qbit database. It does not remove records from a connected database.

Number of days to retain records — Enter a number of days to keep the records before they are deleted.

Create text file backup of deleted records — Selecting this option will store all deleted records into a file within the "Backup" folder located in the installation directory. The text file backup name will be the same as the database table name.

NOTE *The backup file will need to be manually maintained.*

Scale

This is where you can configure weighing options.

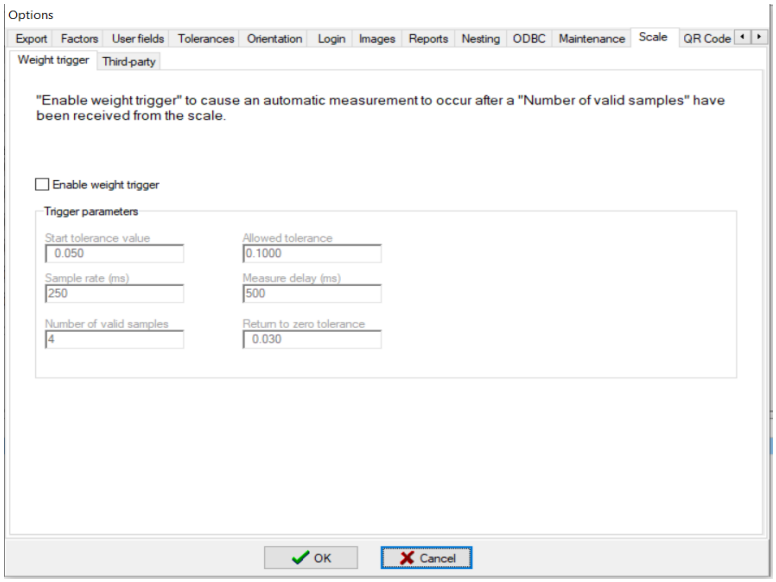


Figure 42
Scale weight trigger tab

Weight trigger

Enable weight trigger

When this box is checked, an automatic measurement occurs after a "number of valid samples" have been received from the scale. You can set the parameters for valid samples in the fields under **Trigger parameters**.

Trigger parameters

Valid samples are consistent weights for a certain amount of time. In these fields you can set the weights, amount of time, and consistency.

Start tolerance value — This value indicates at which weight the software will start sensing an automatic measurement.

Allowed tolerance	This value indicates the highest value of weight at which the software will start sensing an automatic measurement.
Sample rate (ms)	This is value, in milliseconds, is the frequency at which the software will check for a weight measurement.
Measure delay (ms)	This value, in milliseconds, is the amount of time between checking for a valid weight measurement sample.
Number of valid samples	This value is the number of samples needed to provide an automatic weight measurement.
Return to zero tolerance	This value is the weight at which the software will recognize the absence of weight after a measurement.

Third-party

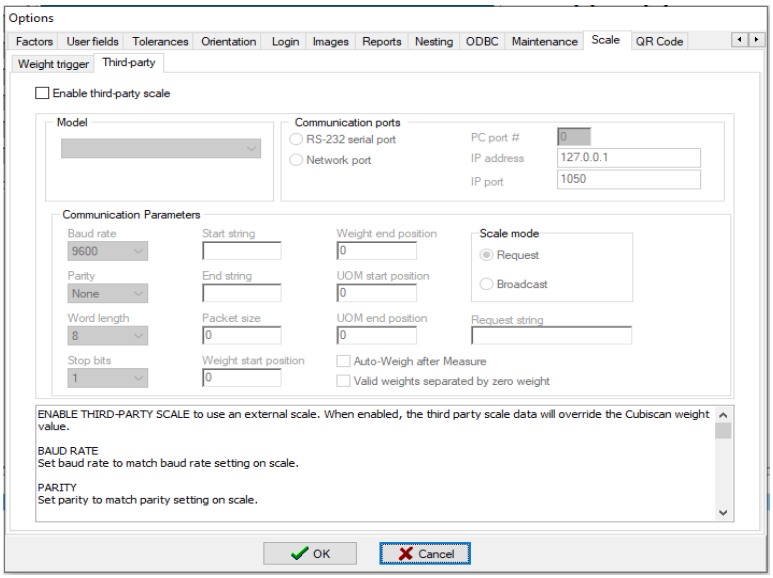


Figure 43
Scale third-party tab

Enable third-party scale	Check this box to enable the connection of a third-party scale, as some Cubiscans do not have an integrated scale.
Model	Select the appropriate model from the dropdown menu.
Communication ports	Select the appropriate connection method and enter identifying information in the fields. When selecting a third-party/serial TCP scale, all parameters will need to be entered. When selecting a Fairbanks Ultegra™

USB scale, the parameters are already defined. When selecting a network port, the first column of parameters does not need to be adjusted.

Communication Parameters

Baud rate: Set baud rate to match baud rate setting on scale.

Parity: Set parity to match parity setting on scale.

Word length: Set word length to match word length setting on scale.

Stop bits: Set stop bits to match stop bits settings on scale.

Start string: The packet will start when the start string has been received. If start string is left blank then any character will start the packet. Use the # character with a decimal value to set the start string as a control character. For example #2 = STX, #13#10 = CRLF

End String/Packet Size: The complete packet has been received when end string has been received -or- packet size characters are received. One of these parameters must be set. Setting the **Packet size** to zero will cause only the end string to be used. Use the # character with a decimal value to set the **End string** as a control character. For example #3 = ETX, #13#10 = CRLF

Weight start position: Set the start position of the weight value.

Weight end position: Set the end position of the weight value.

UOM start position: Set the start position of the unit of measure string. A value of zero will ignore any unit of measure.

UOM end position: Set the end position of the unit of measure string.

Include Start/End Strings: Include start and end string in the returned packet.

Valid weights separated by zero weight: This will ignore the status/return to zero data packet that is sent automatically from the scale.

Request string: Enter the character(s) to make a request for weight from the scale indicator. Use the # character with a decimal value to set the request string as a control character. For example #2 = STX, #13#10 = CRLF

Example for a Weightronix™ 1310 indicator use W#13.

Scale mode

Select either **request mode** or **broadcast mode**. In request mode, the scale data is transmitted by request. In broadcast mode, the scale data is transmitted automatically.

QR Code

The QR Code feature enables you to create a QR code for each measured item. The QR code contains embedded data associated with the measured item.

QR code format

This tab is where you can format the data which is contained in the QR code.

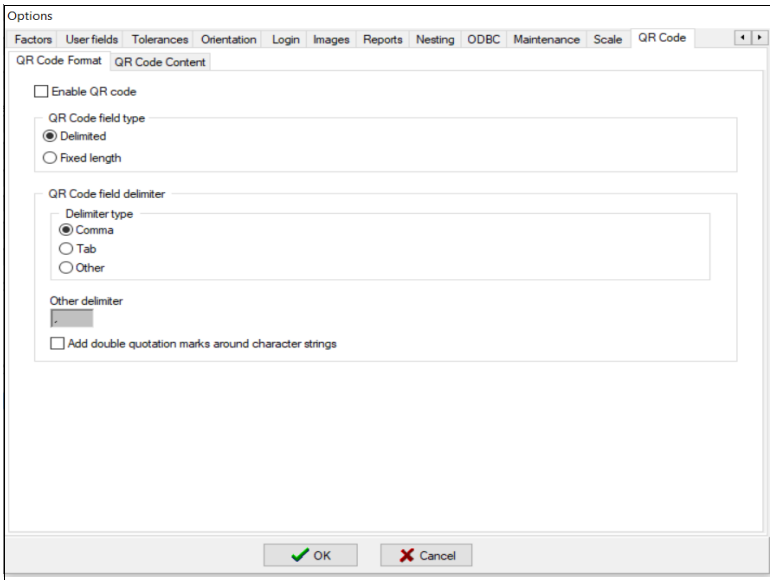


Figure 44
QR code format tab

Enable QR code — Checking this box will display a QR code window on the main Qbit-DB window.

QR code field type — Select either **delimited** or **fixed length**.

QR code field delimiter — If you have selected the delimited option under QR code field type, select which type of delimiter should separate the fields. The options are **comma**, **tab**, or **other**.

Other delimiter — In this field you can enter a delimiter to separate your data which is displayed upon scanning the QR code. For example, you can enter a period or a semicolon.

Add double quotation marks around character strings — Checking this box will format the data with double quotation marks around character strings.

QR code content

This tab is where you can select the content which is contained in the QR code. Table field names will reflect the localized values instead of the actual table field name. This is true as well for the import and export mappings.

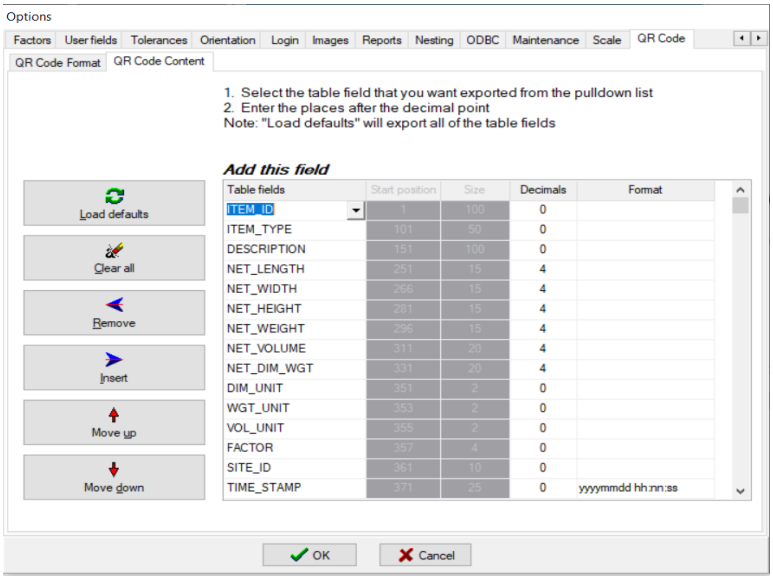
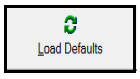


Figure 45
QR code content tab



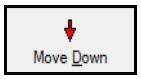
Click **[Load Defaults]** if you want to include all table fields in the database as it appears in Qbit-DB, or to display all of the fields in the database table so that you can edit the layout.

Click **[Clear All]** to clear all of the fields from the layout list.

Select a table field and then click **[Remove]** to remove the field from the QR code content.

Select a table field and then click **[Insert]** to insert a field above the selected field.

Select a table field and then click **[Move Up]** to move the selected field up one position in the table.

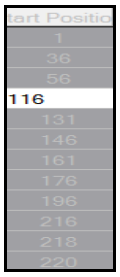


Select a table field and then click **[Move Down]** to move the selected field down one position in the table.

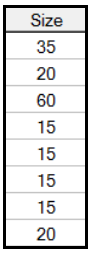
Click the drop-down arrow at a table field to display a list of available fields and select a field name to add or change a field.

NOTE *The "SPACE FILLER" option in the drop-down list can be used to specify an empty or blank field.*

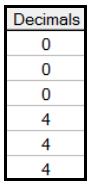
If you specified fixed length as the file type in the QR code format tab, click in the second column next to a field to change the starting position (in number of characters) of the field.



If you specified fixed length as the file type in the QR code format tab, click in the **Size** column next to a field to change the number of characters in the field.



Click in the **Decimals** column for a field to add or change the number of characters after the decimal point for entries in the field. This applies to decimal fields only (e.g., dimensions, weight, and volume).



Web services

Qbit-DB web services only supports JSON representations.

JSON requests support two formats: **standard** and **customized**.

The **standard** format is fixed elements, and all elements are sent with every request.

The **customized** format allows the JSON elements to be configured using control tags within a text file that is loaded into Qbit-DB.

Endpoint

Check box to enable options for host server.

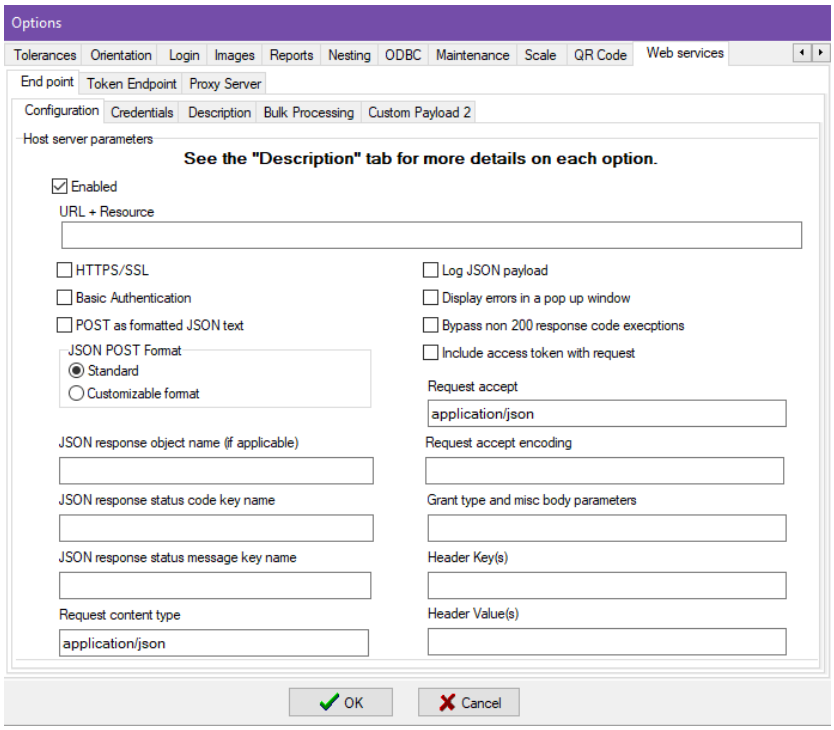


Figure 46
Endpoint configuration tab

Configuration

Host server parameters

URL + Resource	Enter the server endpoint here. The server endpoint should include non default port numbers as well as proper URL parameters (e.g., **http://127.0.0.1/SomeResource?ContentType=json).**
HTTPS/SSL	Click this box to use an HTTPS encrypted connection.
Basic authentication	Click this box to enable the server to expect a username and password validation. Username and password are set within the **Credentials** tab.
POST as formatted JSON text	When enabled, it will send formatted JSON to the server. When unchecked, it will send RAW JSON text.
Log JSON payload	Enable **Log JSON payload** to store the JSON payload to the log file. Warning: Storing the JSON payload to the log file will expose any sensitive information that is part of the payload such as usernames or passwords. Consult with database administrator before enabling this options.
Display errors in a pop up window	Enabling this will display a pop-up message window if errors occur during web service process.
Bypass non 200 response code exceptions	Enabling this option will override "non 200 response code exception" errors to allow response body to be sent as a response.
Include access token with request	When selected, this option will include the acquired token as part of the JSON request.
Request content type	Used to indicate the original media type of the resource.
Request accept	The Accept request HTTP header indicates which content types, expressed as MIME types, the client is able to understand.
Request accept encoding	The Accept-Encoding request HTTP header indicates the content encoding (usually a compression) algorithm) that the client can understand.

Body parameters

Misc body parameters "key=value" can be added as needed as separated by "&" character.

Note: When using x-www-form-urlencoded to send the payload use key=#Payload to replace #Payload with the actual payload data when posting to the endpoint.

Header Key(s) and Name(s)

Pipe "|" delimited values can be entered to add additional header parameters.

Use #key to replace that header value phrase with the encrypted key stored from the "Token Endpoint Credentials" tab.

Use #apikey to replace that header value phrase with the encrypted key stored from the "Endpoint Credentials" tab "Authorization API Key" text box.

For more information and examples see "JSON web serivce.pdf" found in the root folder directory.

Credentials

Username and Password

These fields are used to set the service account credentials for the web service interface. Once those credentials have been saved, they will no longer be accessible. To add/change the credentials they must be entered and saved again.

Authorization API key

For authorizaiton type “API Key”, enter the key value in the text box. To use encrypted api key value in the web service request enter the key name “apikey” for header values and enter “#apikey” for the key value on the Configuration tab.

Once those credentials have been saved, they will no long be accessible. To add or changed the credentials, they must be entered again and saved.

Description

This tab has short explanations for the features on the **Endpoint > Configuration** tab.

Token Endpoint

Check box to enable token endpoint options for host server. Note that this is only supported for OAuth 2.0 Bearer tokens.

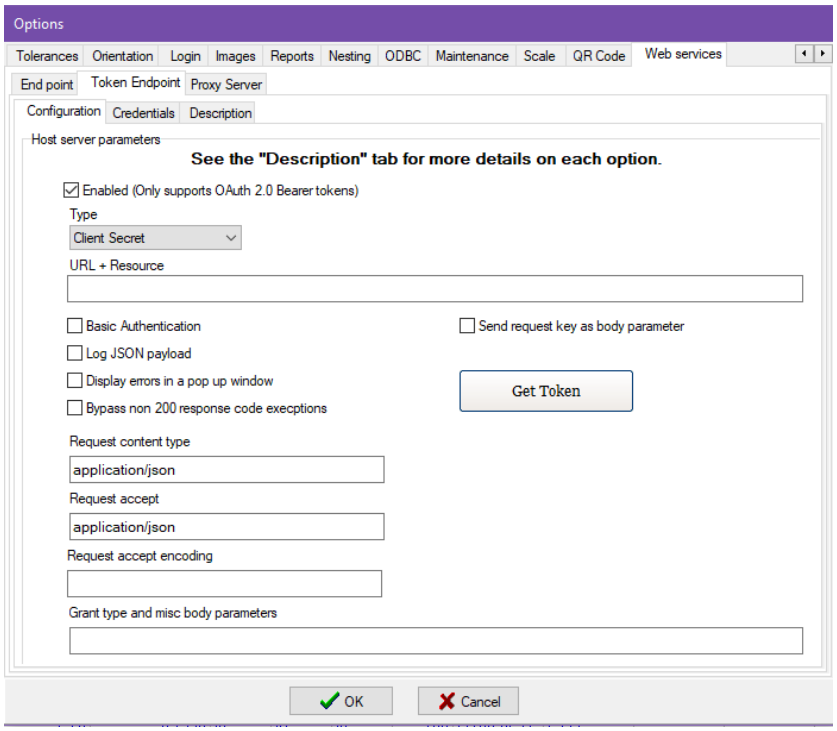


Figure 47
Token Endpoint configuration tab

Configuration

Type — Select either **basic** or **client secret**.

Client Secret: With this option the needed parameter(s) must be entered into the "Body Parameters" text box located on the token credentials tab.

"Body Parameters" name = value must be separated by "&" character.

Basic: With this option the private key must be entered into the "Private key" text box located on the token credentials tab.

"Private key" private key value must be prefixed with "Basic" if required by the server.

URL+ Resource — The server endpoint could include non-default port numbers as well as proper url params. e.g. http://127.0.0.1/SomeResource?ContentType=json

Basic Authentication	Enabled for the server expecting a username and password validation. Username and password are set within the token "Credentials" tab.
Log JSON payload	When enabled it will save the JSON request information to the log file. Be away that enabling this option will expose any sensitive information that is part of the payload such as usernames or passwords.
Display errors in a pop-up window	Will display a pop-up message window if errors occur during web service process.
Bypass non 200 response code exceptions	Override non 200 response code exceptions errors to allow response body to be sent as a response.
Request content type	Used to indicate the original media type of the resource.
Request accept	The Accept request HTTP header indicates which content types, expressed as MIME types, the client is able to understand.
Request accept encoding	The Accept-Encoding request HTTP header indicates the content encoding (usually a compression) algorithm that the client can understand.
Grant type and misc body parameters	Misc body parameters "key=value" can be added as needed and separated by "&" character. The following #TAGS (#username, #password,#key) can be used as a place holder when defining parameters such as: **username=#username&password=#password** TAG values will be replaced with the encrypted values saved from the token credentials tab text boxes.
Send request key as body parameter	This will include the private key as a request body parameter. When not enabled, the private key is sent as a header key name parameter "Authorization".

Credentials

Username and Password	These fields are used to set the service account credentials for the web service interface token retrieval. Once those credentials have been saved, they will no longer be accessible. To add/change the credentials they must be entered and saved again.

Key or body parameters must be prefixed with required token types such as “Basic” followed by the value or client_id=clientid and seperated by “&” character.

Body value parameters can be defined using #username. #password, #key, using the encrypted values from the token credentials tab.

Once those credentials have been saved, they will no long be accessible. To add or changed the credentials, they must be entered again and saved.

Description

This tab has short explanations for the features on the **Token Endpoint > Configuration** tab.

Bulk Processing

For users who are unable to set up posting due to network concerns, bulk processing is provided to allow for a one time transmitting of data. Complete the following steps to set up bulk processing:

1. Select bulk mode. Options include **Array** or **Record by record**. The first option allows for all data to be transmitted as a single JSON array. The second transmits data in several packets for each records.

   When selecting **Array**, a text box will appear to enter the name of the array.

2. Select which records to transmit. Options include **All database records** or **Records by date range**. All database records may be transmitted or a selection of records according to data range.

3. Click **[OK]** to keep selections.

To start the bulk processing, select **Start bulk web service process** from the Actions menu. If **All database records** is selected, bulk processing will immediately begin. If **Records by date range** is selected, a prompt will be appear asking for a date range.

JSON POST Format

Standard JSON Format

Fixed elements and all elements are sent with each request. Each element matches a database table field name as shown below.

JSON Element Name	Database Table Field Name
identifier	ITEM_ID
packType	ITEM_TYPE
description	DESCRIPTION
netLength	NET_LENGTH
netWidth	NET_WIDTH
netHeight	NET_HEIGHT
netWeight	NET_WEIGHT
netVolume	NET_VOLUME
netDimWeight	NET_DIM_WGT
dimUnit	DIM_UNIT
wgtUnit	WGT_UNIT
volUnit	VOL_UNIT
factor	FACTOR
siteId	SITE_ID
timestamp	TIME_STAMP
optionalInfo1	OPT_INFO_1
optionalInfo2	OPT_INFO_2
optionalInfo3	OPT_INFO_3
optionalInfo4	OPT_INFO_4
optionalInfo5	OPT_INFO_5
optionalInfo6	OPT_INFO_6
optionalInfo7	OPT_INFO_7
optionalInfo8	OPT_INFO_8
imageFile	IMAGE_FILE_NAME
updated	UPDATED

Example of JSON Standard format request:


```
{
  "DATA": {
    "indentifier": "123",
    "packType": "each",
    "description": "test description for item 123",
    "netLength": "5.5000",
    "netWidth": "6.6000",
    "netHeight": "7.7000",
    "netWeight": "11.2000",
    "netVolume": "279.5100",
    "netDimWeight": "1.6838",
    "dimUnit": "in",
    "wgtUnit": "lb",
    "volUnit": "in",
    "factor": "166",
    "siteId": "SLC",
    "timeStamp": "8/18/2021 11:35:14 AM",
    "optionalInfo1": "",
    "optionalInfo2": "",
    "optionalInfo3": "",
    "optionalInfo4": "",
    "optionalInfo5": "",
    "optionalInfo6": "",
    "optionalInfo7": "",
    "optionalInfo8": "0",
    "imageFile": "",
    "updated": "Y"
  }
}
```


Customizable JSON format

This allows the JSON elements to be configured using a text file that is loaded into Qbit-DB. The customizable JSON is manually defined in the "JSON custom format.txt" file using control tags to create the desired JSON output format.

Control tag meanings

#TEXT# - Literal text used for brackets, braces, commas, colons, and static object names and values.

#OBJECTNAME# - Defines an object that needs a value from the database table using the control tag #TABLEFIELDNAME# or credentials using control tags #USERNAME# and #PASSWORD#.

~NUMERIC Defines an object identified by the **#OBJECTNAME#** as a numeric type so the element value will not be encapsulated within double quotes. Note: **#OBJECTNAME#** must precede the **~NUMERIC** definition.

^SEPARATOR"x" Overrides the object value identified by the **#OBJECTNAME#** to replace the default numeric separator, with the new characters as defined by "x". ("," or ".")_ Note: **#OBJECTNAME#** must precede the **^SEPARATOR** definition.

e.g., #OBJECTNAME# "weightNet": #TABLEFIELDNAME# $NET_WEIGHT ~SEPARATOR","

(changes 3.7 to 3,7)

Note: "@", "~" and "^" is the required order of the formatting when using any combination of these special characters.

Example 1: #OBJECTNAME# "Width": #TABLEFIELDNAME# $NET_WIDTH ~NUMERIC ^SEPARATOR","

Example 2: #OBJECTNAME# "Length": #TABLEFIELDNAME# $NET_LENGTH @0000.0## ~NUMERIC ^SEPARATOR","

<ESC> Defines a format of JSON within JSON using the escape character and must be used in conjunction with the **#OBJECTNAME#** control tag. e.g. #OBJECTNAME# <ESC>"ItemNumber": #TABLEFIELDNAME# $ITEM_ID

#TABLEFIELDNAME# - Used in conjunction with the #OBJECTNAME# tag to do a lookup for the object name value stored in the database table as defined from the #TABLEFIELDNAME# text following the $ character.

$ - Text following this character is the database table field name.

@ - Text following this character is the database table field numeric format or date/time stamp format.

#USERNAME# - Control tag used in conjunction with the #OBJECTNAME# tag that will be replaced with a username value.

#PASSWORD# - Control tag used in conjunction with the #OBJECTNAME# tag that will be replaced with a password value.

NOTE *Username and password values are encrypted when stored within the Qbit application, and are never exposed as readable text.*

JSON Export formatting resource

Specifier	Displays
c	Displays the date using the format given by localized settings in Windows.
d	Displays the day as a number without a leading zero (1-31).
dd	Displays the day as a number with a leading zero (01-31).
ddd	Displays the day as an abbreviation (Sun-Sat) using the strings given by the short Windows localized global variable.
dddd	Displays the day as a full name (Sunday-Saturday) using the strings given by the Windows localized global variable.
ddddd	Displays the date using the format given by the Windows short localized global variable.
dddddd	Displays the date using the format given by the Windows long localized global variable.
m	Displays the month as a number without a leading zero (1-12). If the m specifier immediately follows an h or hh specifier, the minute rather than the month is displayed.
mm	Displays the month as a number with a leading zero (01-12). If the mm specifier immediately follows an h or hh specifier, the minute rather than the month is displayed.
mmm	Displays the month as an abbreviation (Jan-Dec) using the strings given by the Windows short localized global variable.
mmmm	Displays the month as a full name (January-December) using the strings given by the Windows long localized global variable.
yy	Displays the year as a two-digit number (00-99).
yyyy	Displays the year as a four-digit number (0000-9999).
h	Displays the hour without a leading zero (0-23).
hh	Displays the hour with a leading zero (00-23).
n	Displays the minute without a leading zero (0-59).
nn	Displays the minute with a leading zero (00-59).
s	Displays the second without a leading zero (0-59).
ss	Displays the second with a leading zero (00-59).
t	Displays the time using the format given by localized settings in Windows.
tt	Displays the time using the format given by the Windows long localized global variable.
am/pm	Uses the 12-hour clock for the preceding h or hh specifier, and displays 'am' for any hour before noon, and 'pm' for any hour after noon. The am/pm specifier can use lower, upper, or mixed case, and the result is displayed accordingly.
a/p	Uses the 12-hour clock for the preceding h or hh specifier, and displays 'a' for any hour before noon, and 'p' for any hour after noon. The a/p specifier can use lower, upper, or mixed case, and the result is displayed accordingly.
ampm	Uses the 12-hour clock for the preceding h or hh specifier, and displays the contents of the “am” for any hour before noon, and the contents of the “pm” for any hour after noon.
/	Displays the date separator character given by localized settings in Windows.
:	Displays the time separator character given by localized settings in Windows.

Custom JSON format examples:

Example 1:

```
#TEXT# {
#TEXT# "Payload":[
#TEXT# {
#OBJECTNAME# "itemNumber": #TABLEFIELDNAME# $ITEM_ID
#TEXT# ,
#OBJECTNAME# "weightNet": #TABLEFIELDNAME# $NET_WEIGHT
#TEXT# ,
#TEXT# "unitSize":
#TEXT# {
#OBJECTNAME# "sizeLength": #TABLEFIELDNAME# $NET_LENGTH
#TEXT# ,
#OBJECTNAME# "sizeWidth": #TABLEFIELDNAME# $NET_WIDTH
#TEXT# ,
#OBJECTNAME# "sizeHeight": #TABLEFIELDNAME# $NET_HEIGHT
#TEXT# },
#TEXT# "company":
#TEXT# {
#TEXT# "code":"ABC"
#TEXT# }
#TEXT# }
#TEXT# ]

#TEXT# }
```

Example 1 formatted JSON output:

```
{
 "Payload": [
  {
   "itemNumber": "1234",
   "weightNet": "12.3",
   "unitSize": {
    "sizeLength": "5.1",
    "sizeWidth": "6.2",
    "sizeHeight": "7.3"
   },
   "company": {
    "code": "ABC"
   }
  }
 ]
```

```
}
```

Example 1 actual JSON exported output:

```
{"Payload":[{"itemNumber":"1234","weightNet":"12.3","unitSize":{"sizeLength":"5.1","si
zeWidth":"6.2","sizeHeight":"7.3"},"company":{"code":"ABC"}}]}
```

Example 2:

```
#TEXT# {
#TEXT# "DATA":
#TEXT# {
#OBJECTNAME# "itemNumber": #TABLEFIELDNAME# $ITEM_ID
#TEXT# ,
#OBJECTNAME# "Description": #TABLEFIELDNAME# $DESCRIPTION
#TEXT# ,
#OBJECTNAME# "netLength": #TABLEFIELDNAME# $NET_LENGTH @0000.0##
#TEXT# ,
#OBJECTNAME# "netWidth": #TABLEFIELDNAME# $NET_WIDTH @###0.00#
#TEXT# ,
#OBJECTNAME# "netHeight": #TABLEFIELDNAME# $NET_HEIGHT @###0.000
#TEXT# ,
#OBJECTNAME# "netWeight": #TABLEFIELDNAME# $NET_WEIGHT @###0.0000
#TEXT# ,
#OBJECTNAME# "dimUnit": #TABLEFIELDNAME# $DIM_UNIT
#TEXT# ,
#OBJECTNAME# "wgtUnit": #TABLEFIELDNAME# $WGT_UNIT
#TEXT# ,
#OBJECTNAME# "timeStamp": #TABLEFIELDNAME# $TIME_STAMP @YYYY-MM-DD
HH:NN:SS
#TEXT# ,
#OBJECTNAME# "userId": #TABLEFIELDNAME# $OPT_INFO_1
#TEXT# ,
#OBJECTNAME# "siteId": #TABLEFIELDNAME# $SITE_ID
#TEXT# ,
#TEXT# "countryCode":"USA"
#TEXT# }
#TEXT# }
```

Example 2 formatted JSON output:

```
{
 "DATA": {
  "itemNumber": "123",
  "Description": "test item 123",
  "netLength": "0005.5",
```

```
  "netWidth": "6.60",
  "netHeight": "7.700",
  "netWeight": "11.2000",
  "dimUnit": "in",
  "wgtUnit": "lb",
  "timeStamp": "2021-07-20 09:34:44",
  "userId": "JT",
  "siteId": "PHX",
  "countryCode": "USA"
 }
}
```

Example 2 actual JSON exported output for text file:

```
{"DATA":{"itemNumber":"123","Description":"test item
123","netLength":"0005.5","netWidth":"6.60","netHeight":"7.700","netWeight":"11.200
0","dimUnit":"in","wgtUnit":"lb","timeStamp":"2021-07-20
09:34:44","userId":"JT","siteId":"PHX","countryCode":"USA"}}
```

Example 3:

```
#TEXT# {
#TEXT# "settings":
#TEXT# {
#OBJECTNAME# "jsonUser": #USERNAME#
#TEXT# ,
#OBJECTNAME# "jsonPassword": #PASSWORD#
#TEXT# ,
#TEXT# "programName":"Qbit-DB"
#TEXT# },
#TEXT# "cubiscan":
#TEXT# {
#OBJECTNAME# "itemNumber": #TABLEFIELDNAME# $ITEM_ID
#TEXT# ,
#OBJECTNAME# "Description": #TABLEFIELDNAME# $DESCRIPTION
#TEXT# ,
#OBJECTNAME# "netLength": #TABLEFIELDNAME# $NET_LENGTH @0000.0##
#TEXT# ,
#OBJECTNAME# "netWidth": #TABLEFIELDNAME# $NET_WIDTH @###0.00#
#TEXT# ,
#OBJECTNAME# "netHeight": #TABLEFIELDNAME# $NET_HEIGHT @###0.000
#TEXT# ,
#OBJECTNAME# "netWeight": #TABLEFIELDNAME# $NET_WEIGHT @###0.0000
#TEXT# ,
#OBJECTNAME# "dimUnit": #TABLEFIELDNAME# $DIM_UNIT
```

```
#TEXT# ,
#OBJECTNAME# "wgtUnit": #TABLEFIELDNAME# $WGT_UNIT
#TEXT# ,
#OBJECTNAME# "timeStamp": #TABLEFIELDNAME# $TIME_STAMP @YYYY-MM-DD
HH:NN:SS
#TEXT# ,
#OBJECTNAME# "qty": #TABLEFIELDNAME# $OPT_INFO_1
#TEXT# ,
#OBJECTNAME# "siteId": #TABLEFIELDNAME# $SITE_ID
#TEXT# }

#TEXT# }
```

Example 3 formatted JSON output:

```
{
 "settings": {
  "jsonUser": "xyz123",
  "jsonPassword": "abc123",
  "programName": "Qbit-DB"
 },
 "cubiscan": {
  "itemNumber": "123",
  "Description": "test item 123",
  "netLength": "0005.5",
  "netWidth": "6.60",
  "netHeight": "7.700",
  "netWeight": "11.2000",
  "dimUnit": "in",
  "wgtUnit": "lb",
  "timeStamp": "2021-07-20 09:34:44",
  "qty": "1",
  "siteId": "PHX"
 }
}
```

Example 3 actual JSON exported output for text file:

```
{"settings":{"jsonUser":"xyz123","jsonPassword":"abc123","programName":"Qbit-DB"},"
cubiscan":{"itemNumber":"123","Description":"test item
123","netLength":"0005.5","netWidth":"6.60","netHeight":"7.700","netWeight":"11.200
0","dimUnit":"in","wgtUnit":"lb","timeStamp":"2021-07-20
09:34:44","qty":"1","siteId":"PHX"}}
```

Error records

When posting and transmitting data, failed attempts are stored as text files in the **Webservice repository** folder. To view and access these error files, select the menu **Actions > Web service errors** which will open the dialog below.

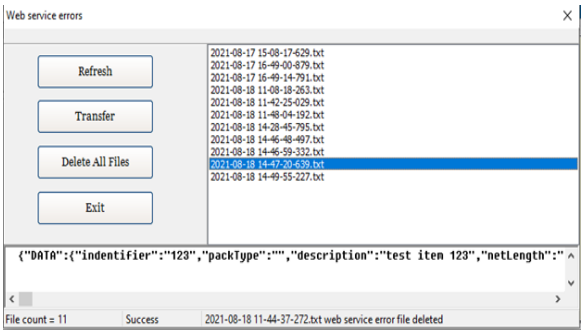


Figure 48
Web service errors dialog

Refresh — Clicking this button will show all existing error files.

Transfer — Clicking this button will attempt to re-transmit the select error file to the web server and if successful will delete the error file from the list.

Delete all files — Clicking this button will delete all error files.

Exit — Clicking this button will close the dialog.

Custom Payload 2

A second custom payload format different from the first may be created and assigned to be sent dependent on the value in a select option field.

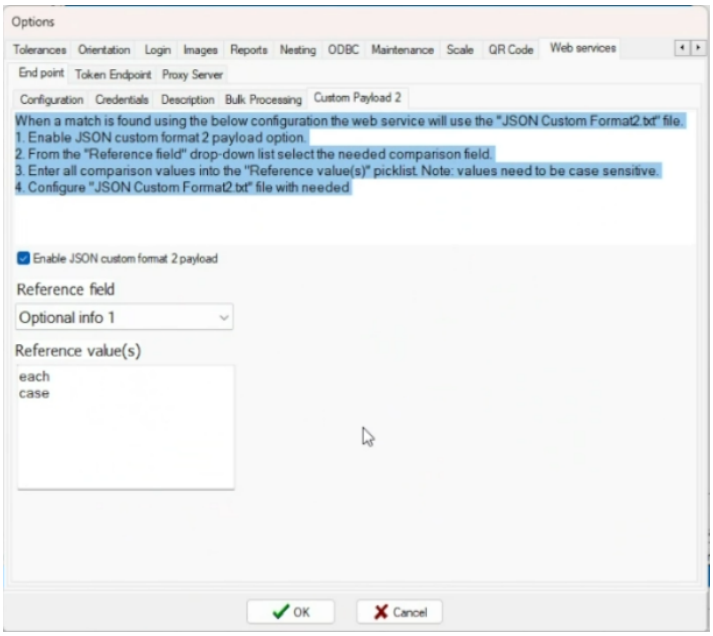


Figure 49
Custom Payload2

To set up a second custom payload complete the following steps:

1. Click in the box for **Enable JSON custom format 2 payload** to enable the option.

2. Select the **Reference field** form the drop down options.

3. Enter the reference values to which the secondary format will be assigned in the text box below **Reference value(s)**.

4. Click **[OK]** to save settings.

5. A second JSON custom format file will appear in the root folder named **JSON custom format2.txt**. Edit this file according to your desired formatting needs. For formatting instructions, see "Customizable JSON format" on page 99.

Proxy Server

To setup a proxy server for posting and other transmissions select the proxy tab under Webservices. Click in the check box to enable the proxy server option.

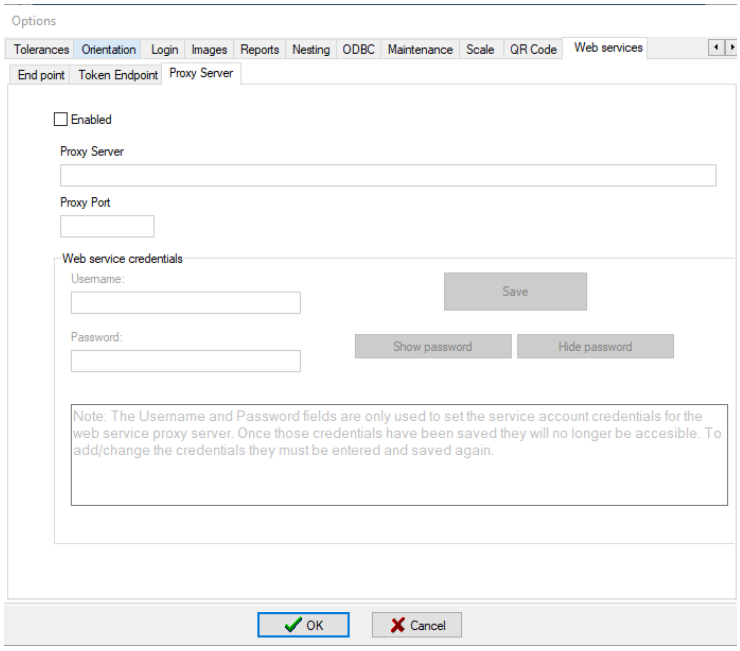


Figure 50
Proxy server

Proxy server — Enter the address of the proxy server.

Proxy port — Enter the port of the proxy server.

Web credentials — The Username and Password fields are only used to set the service account credentials for the web service proxy server. Once the credentials are saved, they are no longer accessible. To add or change the credentials, they must be entered and saved again.

CHAPTER 3
DATABASE MANAGEMENT

Item measurements and weights are stored in item records (by item number) in a Qbit-DB database table (Access database). This chapter provides information and instructions on managing your Qbit-DB databases. Most of the database functions are found on the Database menu. The Import and Export functions are on the File menu.

NOTE

Depending on your database, some functions may not be available. If you have questions about making certain functions available, consult with your database administrator to ensure that your database will allow your desired functionality. Custom scripts can be created to provide greater functionality for customer defined databases (see Appendix C "Firedac administrator" on page 167*).*

When you start Qbit-DB for the first time, an empty database is opened with the default name "Cubiscan". All of the measurements and weights of the objects you measure are recorded and saved in the open database. You can do either of the following:

- Record the information in the "Cubiscan" database table.
- Create a new database table using the **New table** function (see "Creating a new database" on page 109).

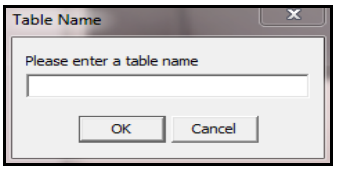
If you already have a Qbit-DB database or databases, the last database loaded is opened when you start Qbit-DB. You can do any of the following:

- Save new measurements and weights in the open database table.
- Open a different database table using the **Open table** function (see "Opening a database" on page 110).
- Create a new database table using the **New table** function (see "Creating a new database" on page 109).

Creating a new database

Do the following to create a new database.

1. Pull down the Database menu and select **New table**, and the following prompt is displayed.



2. Type the name that you want to give the new database table.

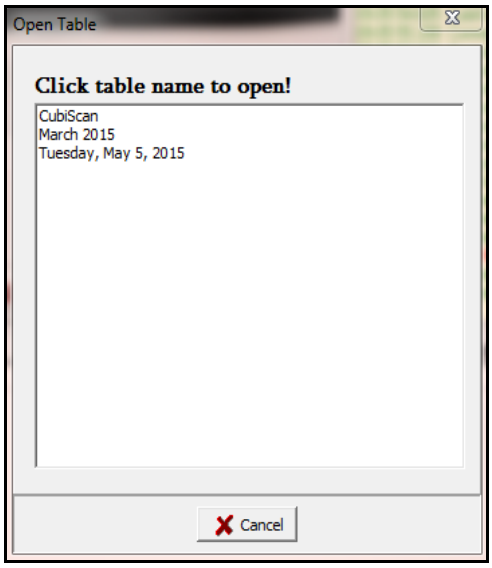
NOTE *If you enter the name of an existing database table, an error message appears warning you that the database already exists.*

3. Click **[OK]** and the new, empty database table is opened so you can begin entering data into it.

Opening a database

Do the following to open an existing database.

1. Select **Open table** from the Database menu, and the following dialog box is displayed.



All of the database tables in Qbit-DB are listed.

2. Click the name of the database table that you want to open, and the table is loaded into Qbit-DB.

   Click **[Cancel]** if you do not want to open a new table.

Deleting a database

Do the following to delete a database table.

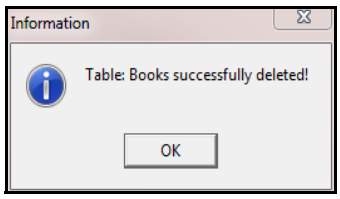
1. Select **Delete table** from the Database menu, and the following dialog box is displayed.

   All of the database tables in Qbit-DB are listed.

2. Click the name of the database table that you want to delete, and the following warning is displayed.

3. All records in the selected database table will be deleted and cannot be recovered. Click **[Yes]** if you want to delete the specified database table.

The following message is displayed.



4. Click **[OK]** to close the message.

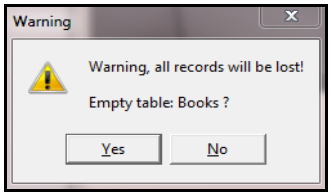
NOTE *You cannot delete a database that is currently open. Either create a new database or open another existing database so that you will be allowed to delete the correct database.*

Emptying a database

Do the following to delete all of the records from a database table.

1. Make sure the table from which you want to delete all records is the open table.

2. Select **Empty table** from the Database menu, and the following prompt is displayed.



3. All records in the open database table will be deleted and cannot be recovered. Click **[Yes]** if you want to empty the database table.

   The following message is displayed.

4. Click **[OK]** to close the message.

Copying a database

You can save a copy of a database table to use as a backup in case of problems with the database or a hard disk or other computer failure.

Making a backup of your database table is highly recommended. Ask your IT administrator how often a backup should be created.

NOTE *Backing up your database only works when using the default database MS Access.*

Do the following to save a copy of the database (the original database remains unchanged).

1. Select **Save copy as** from the Database menu, and a **Save As** dialog box is displayed.

2. To save the copy to a drive or folder, select the drive letter and/or folder at the **Save in** box.

3. Type a name for the duplicate database in the **File name** field. The "**.mdb**" file extension is added automatically.

4. Click **[Save]** to save the duplicate database. The original database remains available in Qbit-DB. The database that was open when you performed the copy function remains open.

   You should save backups on removable media (e.g., thumb drive, tape, Zip disk, etc.) and store them in a secure place so that they are available in the event of a hard disk or other computer failure.

Importing to a database table

Use the Import function on the File menu to import data from an external ASCII text file source or cvs file. You must set up the import file options before importing a file. Also, the layout of the information in the text file must match the Qbit-DB database layout to be imported correctly.

Do the following to configure import data options.

1. Open the database table to which you want to add or update the new data (see "Opening a database" on page 110).

   If you want to create a new database table with the imported data, create a new, empty database table with a unique name in which you will insert the imported data (see "Creating a new database" on page 109).

2. Pull down the Tools menu, and select **Options**.

3. Click the **Import** tab and then the **Import type** tab.

4. Select the method you want to use to import the data into the existing database.

   Append only
   Only new items are added to the existing database. Duplicate items (items with the same item numbers) are *not* added or updated.

   Update only
   Duplicate items are updated, but new items are *not* added to the database.

   Append/Update
   New items are added to the existing database, and any duplicate items are updated.

NOTE *If you are importing data into a new, empty database, select either* **Append only** *or* **Append/Update**. *(Because you are adding the data to an empty database table, there can be no duplicate records.)*

5. If you have not already done so, select the other import options, and map the import file fields to the database fields in the **Import layout** tab.

6. Click **[OK]** to save and close the **Options** dialog box.

NOTE *You may want to back up the existing database table before importing a file into it. Refer to* "Copying a database" on page 113 *for information.*

Click **Import** on the File menu, and a submenu is displayed with the following functions:

Run auto import
Select this function to start the automatic import that you have already set up.

Run manual import

Complete the following steps to run a manual import.

1. Select **Import > Run manual import** from the File menu.
2. If necessary, navigate to the file location and select the file you want to import.
3. If necessary, select the format of the imported file (*e.g., .xls*).
4. Click the name of the text file to import, and it is inserted in the **File name** field.
5. Click **[Open]** to import the file into the open database table.

The status of the import process and any errors encountered are displayed in the message box.

Exporting a database table

Use the Export option to export an entire Qbit-DB database table or a portion of a database table to a variable or fixed length format ASCII text file. You can also use "auto export" to upload the database via FTP. You must set up the export file options before exporting data (see "Export type" on page 37). You can also change the layout of the Qbit-DB database table to be exported. Refer to "Export layout" on page 41 for instructions.

To export to an ODBC data source, see "This tab allows you to manage an ODBC (third-party database)." on page 81.

Select **Export** on the File menu, and a submenu is displayed with the following functions:

Run auto export

Select this function to start the automatic export that you have already set up. (See "Auto export" on page 44.)

Run manual export

When you click this function, a submenu is displayed with the following options:

All data: Select this option to create a text file that contains all records in the current database.

Updated data: Select this option to create a text file that contains only records updated or added since the last export.

Date range: Select this option to create a text file containing all records updated or added within a specified period of time.

Run auto export

You can use the **Run auto export** function to start the automatic export that you have set up. The export will take place immediately using the options that you set up in the **Auto export** tab in Options (refer to "Auto export" on page 44).

This function is useful if you want to manually upload the database to a network using FTP. Set up auto export by selecting the **Activate FTP upload** option and entering the required login and mode information. Then select **Run auto export** to upload the data immediately.

Run manual export

Select this function if you want to manually export all or part of the database to a text file. Select one of the following options.

All data/ updated data

Select the **All data** option to create an export text file containing all records in the current database, or select the **Updated data** option to create an export file containing only records updated or added since the last export. An updated record is indicated by a "Y" (Yes) in the **Updated** (last) column in the database table. After a record has been exported, an "N" (No) is shown in the **Updated** column.

Take the following steps to export data using either the **All data** or **Updated data** option.

1. Pull down the Tools menu, and select **Options**.
2. Select the **Export** tab and then the **Export type** tab.
3. Select the export file type and other applicable options (see "Export type" on page 37).
4. If you want to change the layout of the data, select the **Export layout** tab and make the desired changes (see "Export layout" on page 41).
5. Click **[OK]** to save and close the **Options** dialog box.
6. Select **All data** or **Updated data** from the **Run manual export** submenu.

7. Navigate to your preferred file location.

8. Enter a name for the export file in the **File name** field, including the extension, which can be any ASCII text file extension (e.g., *.txt*, *.csv*).

   If you want to copy over an existing export file, select the drive/folder containing the file you want to copy over, and click the file name to insert it in the **File name** field.

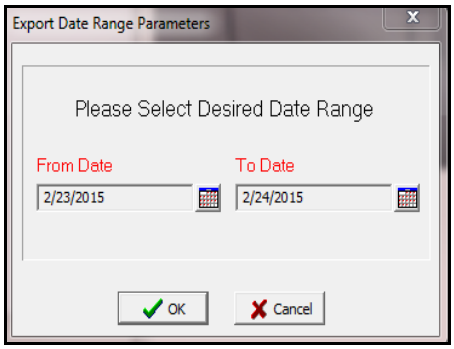
9. Click **[Save]** to export the database table to the file.

The status of the export and any errors are displayed in the message box.

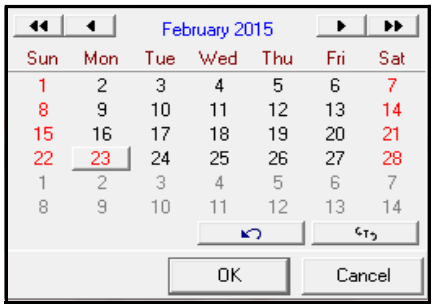
Date range

Use the **Date range** option to save an export text file containing all records that were updated or added within a specified period of time.

1. Select **Date range** from the **Run manual export** submenu, and the following dialog box is displayed.



2. By default, the "From" date is yesterday's date, and the "To" date is today's date. To change a date, click  and a calendar is displayed from which to choose the date, as follows.



3. Select the date, and click **[OK]**. The date is inserted in the **From date** or **To date** field.

The export file will contain all records added or updated on and between the dates you selected.

4. Click **[OK]** to export the data to the file.

The status of the export and any errors are displayed in the message box.

CHAPTER 4
CUBISCAN FUNCTIONS

This chapter provides information on the Qbit-DB functions used to verify, reset, and test the Cubiscan. These functions are selected from the Tools menu and include the following:

- **Zero**
  Use this function to zero the Cubiscan weight and dims values.
- **Status**
  Use this function to verify that the Cubiscan is operating properly.
- **Test mode**
  Use this function to set up the Cubiscan for testing.
- **Values**
  Use this function to display a table of sensor values that can be useful for troubleshooting problems.

NOTE *The* **Zero**, **Status**, **Test mode**, **Values**, *and* **Calibrate** *functions may not be available (if not available, they are dimmed or grayed) depending on whether or not the functions are available on the selected Cubiscan model.*

Refer to the following sections for more information on each function.

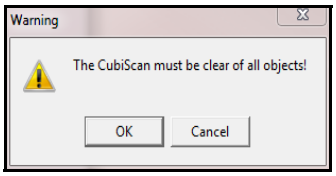
Zero

Use the **Zero** function to "zero" the Cubiscan. Zeroing sets all dims and weight to zero. The weight of the platform and the measurement from each sensor to the platform sides when the platform is empty must be set to zero for the Cubiscan to operate properly. A Cubiscan zeros itself automatically every five seconds when it is not in **Measure mode**. However, you may need to manually zero the Cubiscan in the following circumstances:

- If during a long measuring session environmental conditions (temperature and humidity) have changed noticeably.
- If you suspect that the last zeroing was in error (e.g., something was on the platform).

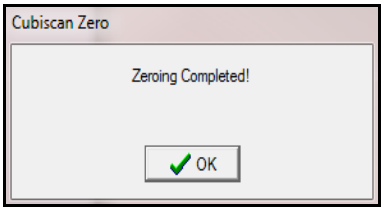
NOTE *Make certain that the Cubiscan platform is free of all objects before zeroing. If not, the zero reading will not be accurate.*

1. Pull down the Tools menu and select **Zero**. The following prompt is displayed.



2. Verify that the Cubiscan platform is free of ALL objects, then click **[OK]** to proceed.

3. After the scale and sensors are zeroed, the following message is displayed.

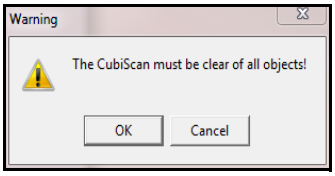


4. Click **[OK]** to return to the main window.

Status

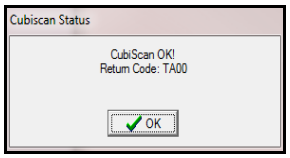
Use the **Status** function to verify that the Cubiscan is operating properly.

1. Select **Status** from the Tools menu, and the following prompt is displayed.



2. Verify that the Cubiscan platform is free of ALL objects, then click **[OK]** to proceed.

3. The current status is checked and an appropriate message returned. If there are no problems, the following message is displayed.



4. Click **[OK]** to return to the main window.

   If any problems are found, an error message appears. For example:

   TA*XX* – [error message]

   (where *XX* is the error number)

   If you get an error message, first verify that the Cubiscan is turned on, then refer to the Troubleshooting chapter in your Cubiscan manual for further help.

Test mode

Use the **Test mode** function to set up the Cubiscan for testing purposes. When you select this function, the Cubiscan measures, weighs, and displays the results continuously, as shown below.

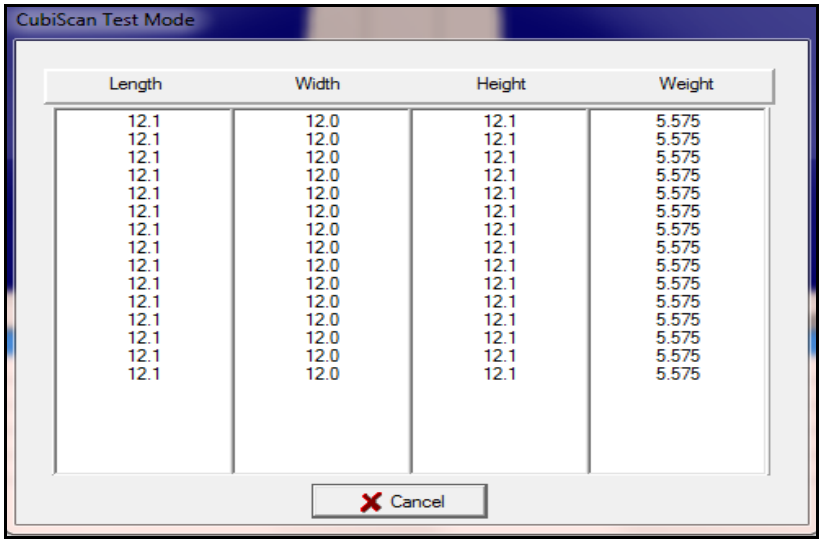
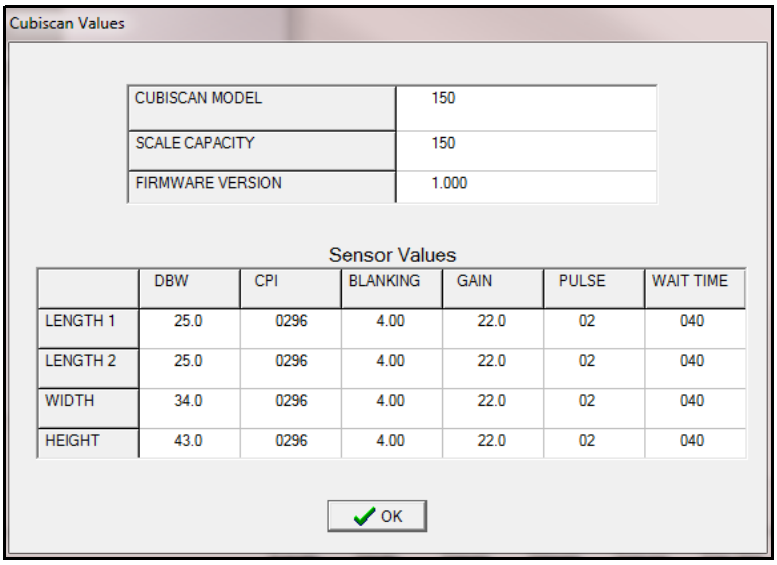


Figure 51
Test mode

The collected data continues to scroll on the screen until you exit test mode. The data collected is not recorded or saved. To exit from **Test mode**, click **[Cancel]**.

Values

Use the Values function to display a table of sensor values that can be useful for troubleshooting problems with the Cubiscan.



	DBW	CPI	BLANKING	GAIN	PULSE	WAIT TIME
LENGTH 1	25.0	0296	4.00	22.0	02	040
LENGTH 2	25.0	0296	4.00	22.0	02	040
WIDTH	34.0	0296	4.00	22.0	02	040
HEIGHT	43.0	0296	4.00	22.0	02	040

Figure 52
Cubiscan values

Click **[OK]** to return to the main window.

Barcode.ini

For those Cubiscan models that use the serial barcode, some additional paring options are available. To take advantage of these options, the barcode.ini file will need be accessed from the root folder.

Parsing will be based on three different default criteria: **start position**, **length**, and **unique identifier**. Use these criteria to assign special parsing operation to get information when scanning a barcode.

1. Complete the following steps to setup parsing with the barcode scanner:

2. Locate the barcode.ini file in the root folder.

3. Open the .ini file with a basic text editor like notepad.

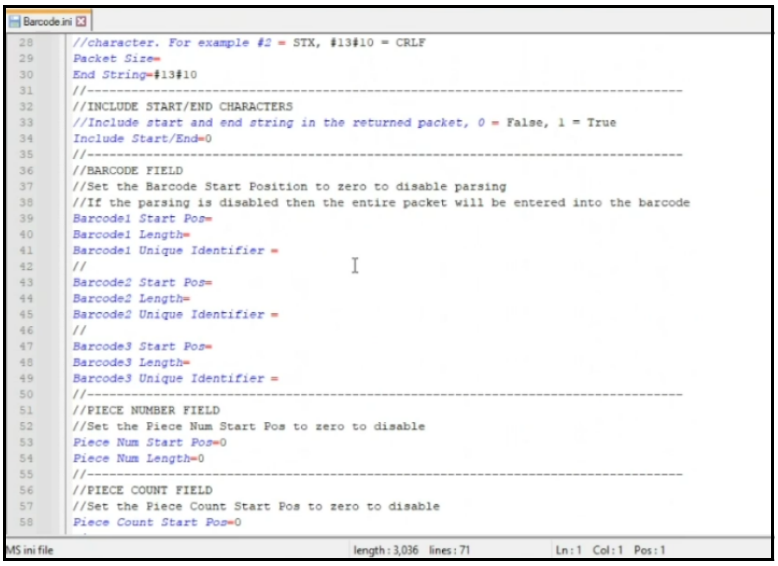


Figure 53
Barcode.ini

4. Scroll down to //BARCODE FIELD and enter the parsing constructions next to the respective criteria.

For example, when a unique identifier such as a hash tag is scanned by the barcode, the instructions will let tell Qbit-DB what to do with the information. It may grab the next five letters in the string or add a prefix to the data received.

5. Be sure to save file and reload Qbit DB before taking any further measurements.

For more information on how to set up the parsing, contact Cubiscan support.

CHAPTER 5
MEASURING OBJECTS

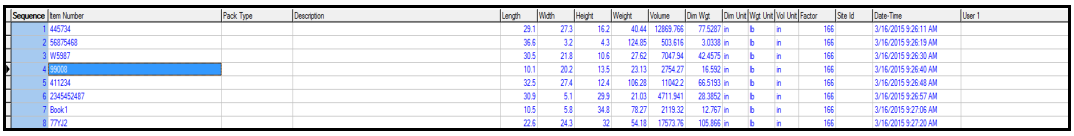
This chapter describes how to measure objects. If your Cubiscan has a scale, weight is automatically recorded at the same time as the measurements.

There are two methods you can use to measure objects in Qbit-DB depending on how you enter items in your database, as follows.

1. Measure items that are already listed in an imported database (refer to "Importing to a database table" on page 113 for information on importing a database). Depending on your setup, there are two ways to select the item to be measured from the database.

   Auto advance:
   If you will be measuring items in the same order they are listed in the database, you can set up the **Auto advance through items** function in Options (see "Database" on page 20 for information). If **Auto advance** is set up, you select the first item, and Qbit-DB automatically moves down the database list in sequential order as you measure and update each item. However, you can also manually click an item to select it.

   Select items manually:
   Click the item in the database table to select the item, as shown below.



Sequence	Item Number	Pack Type	Description	Length	Width	Height	Weight	Volume	Dim Wgt	Dim Unit	Wgt Unit	Vol Unit	Factor	Site Id	Date-Time	User 1
1	445734			29.1	27.3	16.2	40.44	12869.766	77.5287	in	lb	in	166		3/16/2015 9:26:11 AM	
2	56875468			36.6	3.2	4.3	124.85	503.616	3.0338	in	lb	in	166		3/16/2015 9:26:19 AM	
3	W5987			30.5	21.8	10.6	27.62	7047.94	42.4575	in	lb	in	166		3/16/2015 9:26:30 AM	
4	59000			10.1	20.2	13.5	23.13	2754.27	16.592	in	lb	in	166		3/16/2015 9:26:40 AM	
5	411234			32.5	27.4	12.4	106.28	11042.2	66.5193	in	lb	in	166		3/16/2015 9:26:48 AM	
6	2345452487			30.9	5.1	29.9	21.03	4711.941	28.3852	in	lb	in	166		3/16/2015 9:26:57 AM	
7	Book1			10.5	5.8	34.8	78.27	2119.32	12.767	in	lb	in	166		3/16/2015 9:27:06 AM	
8	77Vu2			22.6	24.3	32	54.18	17573.76	105.866	in	lb	in	166		3/16/2015 9:27:20 AM	

2. Enter items manually or by scanning as you measure each item.

   With the cursor at the **Item number** field, you can do one of the following:

   - If your system has a scanner, scan the item and the number is inserted in the **Item number** field. Then press **<Enter>**.
   - Type the item number in the **Item number** field, and press **<Enter>**.

NOTE *An* **<Enter>** *key can be programmed into a barcode scanner; see your system or hardware administrator for assistance.*

Measuring existing items

Do the following to measure items listed in an existing database.

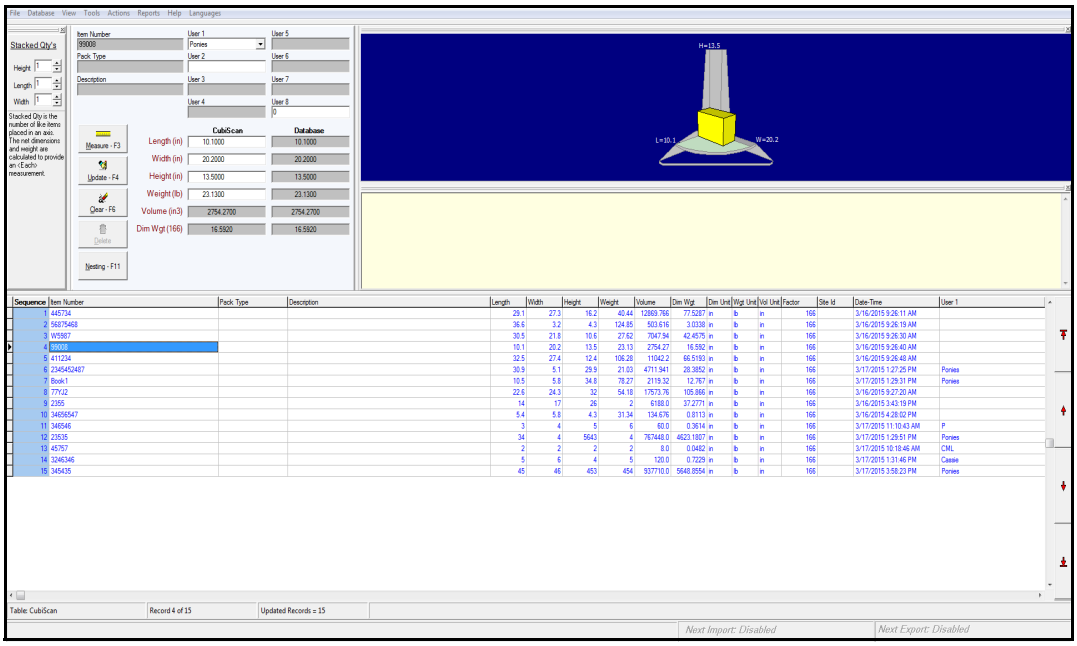
1. If necessary, open the database that contains the items you are going to measure.

2. Verify that all of the Cubiscan options have been set up correctly (see "Cubiscan" on page 18).

3. Place the item to be measured on the Cubiscan (refer to your *Cubiscan Operations Manual* for details on correct object placement).

4. In Qbit-DB, select the item to be measured using one of the methods described at the beginning of this section.

5. Click Measure - F3 to measure the item. The measurement process is shown on the screen, the measurements are inserted into the dimension fields, and a simulation of the measured object is shown in the Cubiscan picture box.



6. (This step is only necessary if "tare" is enabled and the object being measured requires a tare adjustment.) To apply tare values to an item, pull down the Actions menu and select **Apply tare values** or press **<Ctrl><T>** after you measure the item. Tare values are subtracted from

the measurements or weight. (Set up tare values in Options on the Tools menu. Refer to "Tare values" on page 24 for information.)

7. Edit the data as required (see "Editing data" on page 131).

8. When you are finished, click 

to update the item record.

   To clear an item's measurement data and start over (or to measure a different item), click 

. A record must either be updated or cleared before you can measure another item.

9. Remove the item from the Cubiscan, and repeat the steps above for the next item.

Measuring new items

Do the following to enter new items into the database as you measure them.

1. If necessary, open the database in which you want to enter the items you are measuring.

2. Verify that all of the Cubiscan options have been set up correctly (see "Cubiscan" on page 18).

3. Place the item to be measured on the Cubiscan (refer to your *Cubiscan Operations Manual* for details on correct object placement).

4. Verify that the cursor is in the **Item number** field.

   If not, click 

to save the last measurement or click 

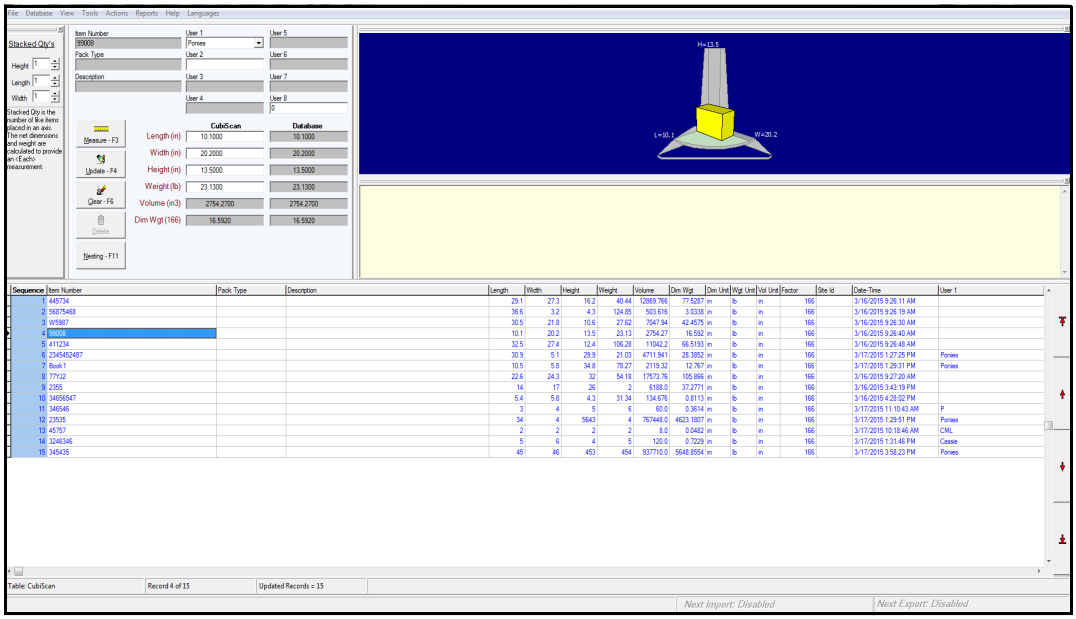
if it is not valid or is already saved.

5. Scan the item or type in the item number, and press **<Enter>**. An **<Enter>** key can be programmed into a barcode scanner; see your system or hardware administrator for help.

6. Click 

to measure the item. The measurement process is shown on the screen, the measurements are inserted into the dimension

fields, and a simulation of the measured object is shown in the Cubiscan picture box.



7. (This step is only necessary if "tare" is enabled and the object being measured requires a tare adjustment.) To apply tare values to an item, pull down the Actions menu and select **Apply tare values**, or press **<Ctrl><T>** after you measure the item. Tare values are subtracted from the measurements or weight. (Set up tare values in Options on the Tools menu. Refer to "Tare values" on page 24 for information.)

8. Edit the data as required (see "Editing data" on page 131).

9. When you are finished, click Update - F4 to update the item record.

   To clear an item's measurement data and start over (or to measure a different item), click Clear - F6. A record must either be updated or cleared before you can measure another item.

10. Remove the item from the Cubiscan, and repeat the steps above for the next item.

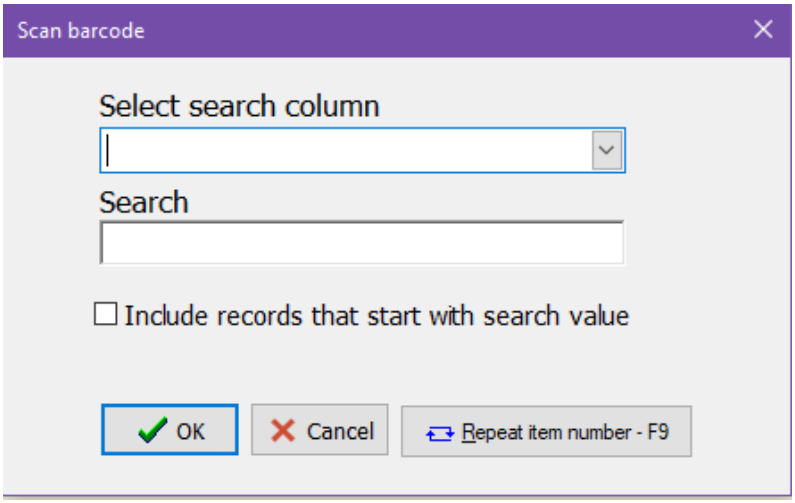
Measuring items with cross reference lookup enabled

Do the following to measure items using the **Cross reference lookup** functionality. This function may be used with a barcode scanner. (If using a barcode scanner, it may be helpful to program your scanner with an automatic carriage return feed.)

NOTE *When using a barcode scanner, you must have Windows focus on Qbit-DB for the barcode information to be fed into the program.*

1. Open Qbit-DB and enable the **Enable cross-reference lookup withing optional info fields** located under **Tools > Options > Database**. Click **[OK]** when you are finished.

2. When you exit the **Tools > Options** window, the following window appears.



3. Select from the **Select search column** drop-down list. Alternatively, you may also click **[Repeat item number]** or press F9 on the keyboard to load the last scanned item.

4. Scan or enter the search value in the **Search** field. You may also search using only a few starting characters in the value by checking the box next to **Include records that start with search value**.

   Qbit-DB will find the information that is associated with the selected search field (e.g., Item number, UPC, etc.) according to the information that you entered in the **Search** field.

5. A **Select record** window will appear with all items that match the search criteria. Choose which item to lookup.

6. The information for the chosen item will populate in the main window.

Measuring stacked quantities

If you want to stack like items for measurement but want the dimensions for each item included separately in the database, use the **Stacked quantities** box.

1. If the **Stacked quantities** box is not visible, pull down the View menu, and select **Stacking**.

2. Place the stack of objects on the Cubiscan platform. Make sure all the edges of the objects are aligned.

3. Identify and measure the stacked objects, and enter the quantity in the **Stacked quantities** box in the **Height**, **Length**, and **Width** fields as applicable.

4. Measure the item by clicking the **Measure** button, **<F3>**, or using the measuring gate.

   The Cubiscan values will be calculated using the stack quantity values and the division result will be stored to the database.

Editing data

At any time after measuring an item, you can edit any of its measurements using one of the following methods. Click the item in the database table to select it.

Edit Fields

You can edit any field that is not grayed (has a white background).

Click in a field to edit it, and type over the existing entry. Then click 

to update the information in the database.

Swap Measurements

You can change the orientation of an item using one of the "swap" functions. Pull down the Actions menu and select a function (or use the specified keyboard shortcut), as follows:

- Select **Swap length for width** (or press **<Ctrl><L>**) to switch the length and width measurement values for the selected item.
- Select **Swap width for height** (or press **<Ctrl><W>**) to switch the width and height measurement values for the selected item.
- Select **Swap height for length** (or press **<Ctrl><H>**) to switch the height and length measurement values for the selected item.

When you have finished, click 

to update the information in the database.

CHAPTER 6
REPORTS

The Reports menu contains one standard report. This menu also contains the option to generate and design labels that can be viewed or printed by the user.

- The standard report option is a Detail report, explained below.
- For information on creating a label report, see "Label report" on page 132.
- For information on designing a label, see "" on page 136.

Detail report

The Detail report lists all recorded data for the open database. Pull down the Report menu and select **Detail** to generate the Detail report. An example of the report is shown in Figure 54 on page 133.

The Detail report contains all of the database detail (as shown in the database table). If you use user-defined fields, they are included on additional lines.

NOTE *You can also generate reports on your measurement data by exporting it from Qbit-DB in a text file and importing it into another application, such as a word processing or spreadsheet program. Refer to* "Exporting a database table" on page 115 *and* "Importing to a database table" on page 113 *for information.*

Label report

The Label report lists the information for the item number that was selected when the **Reports > Label** option was selected.

The default label displays the item number, barcode, measurement dimensions, date, and time. An example is shown in Figure 55 on page 134.

To create a label report, the option **Enable label report printing** must be enabled under the **Tools** > **Options** > **Reports** tab.

Report preview

When you select **Detail** or **Label** from the Report menu, it is displayed in the Preview window, as shown below.

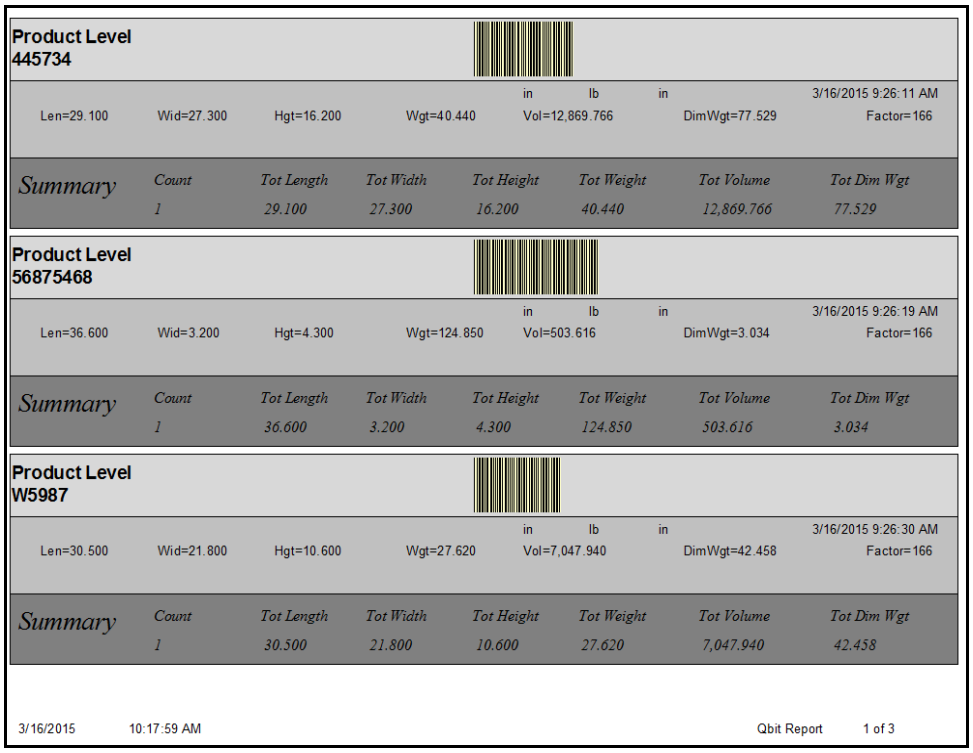


Figure 54
Detail report preview

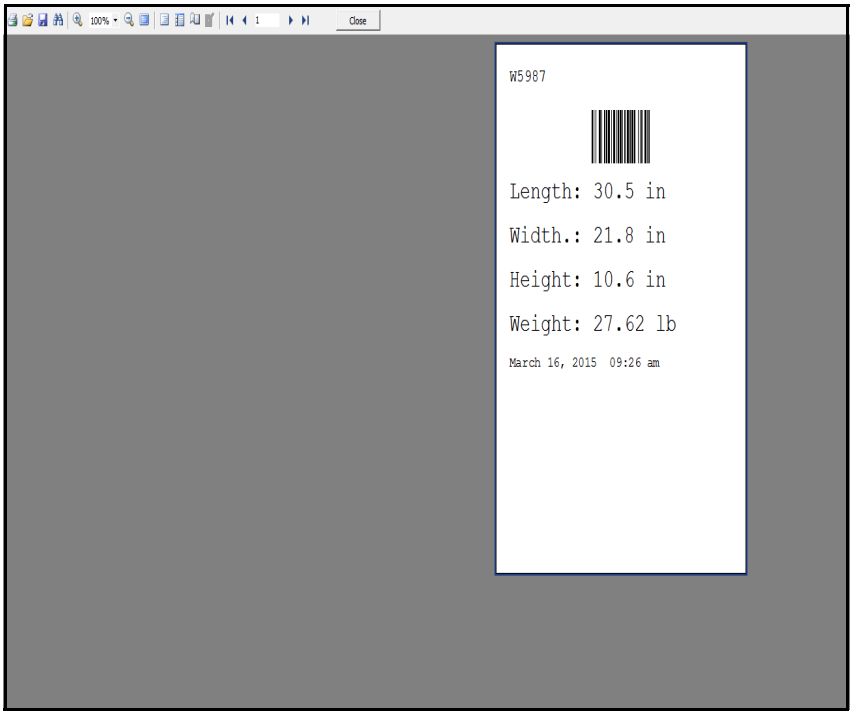
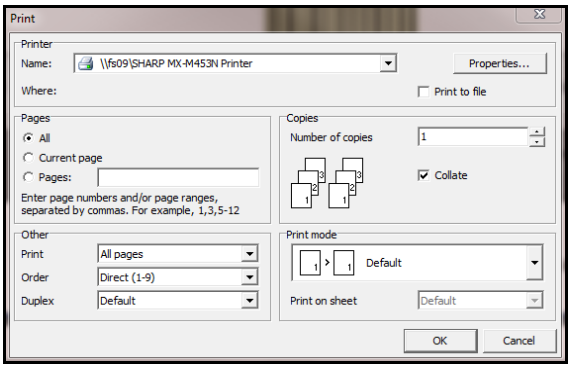


Figure 55
Label report preview

In this report view the cursor becomes a hand when it hovers over the report. You can use this hand to navigate throughout the report. You can also scroll through pages using your mouse or the scroll bars located on the right side of the screen.

Use the buttons on the toolbar to view or print the report, as follows:

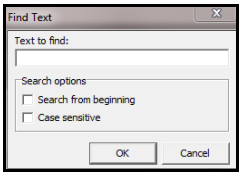
Click to print the report. A standard Windows print dialog box is displayed. Select a printer, the number of copies you want to print, the pages you want to print, and click **[OK]** to print the report.



Click to open a different report. A **Load report** dialog box is displayed. Reports are saved in the **... > Cubiscan > Reports** folder with an **.fp3** extension by default. If you saved your reports in a different folder, select the folder. Select the report you want, and click **[Open]** to display it.

Click to save the displayed report. A Save Report dialog box is displayed. Reports are saved in the **... > Cubiscan > Reports** folder with an **.fp3** extension by default. If you want to save your reports in a different folder, select the folder. Save report files can be opened in the Qbit-DB report viewer (see above).

Click to display the **Find text** dialog window. This window will allow you to search the report for specific word(s) by typing the desired word(s) into the **Text to find:** field. You can also enable the options **Search from beginning** or **Case sensitive**. Search from the beginning option searches the document from the beginning and the case sensitive option makes your search case sensitive.



Click to zoom in on the report. Each time you click the report is magnified by 25%.

Click the drop-down arrow and select a size to display the report, or click in the text box and enter a percentage.

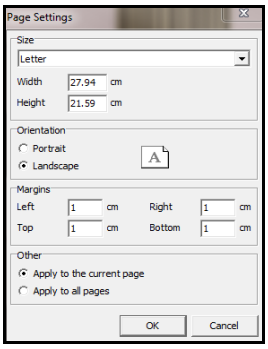
Click to zoom out. Each time you click the report is minimized by 25%.

Click to display the report in the full window view. Right-click anywhere on the screen and select **Full window** to return to the default view.

This report outline button is not applicable in the report or label preview.

Click to display a sidebar that contains thumbnails of all the report pages. Click this button again to return to the normal display.

Click to set up the report pages for printing. A **Page settings** dialog box is displayed. Select the size, orientation, margins and other options for each page of the report, and click **[OK]**.



The edit page option is grayed out and not applicable in the report or label previewer.

Click to go to the first page of the report.

Click to go to the previous page of the report.

The number of the report page that is shown in the window is displayed in this text box. You can type a page number and press **<Enter>** to display that page.

Click to go to the next page of the report.

Click to go to the last page of the report.

Click to close the report and return to the Qbit-DB main window.

Data History Viewer

The Data History Viewer allows users to search for information by primary field value, typically item number. This information may then be downloaded as an on-hand report.

Complete the following steps to open the Data History Viewer and download an on-hand report:

1. Select **Data History** form the View menu.

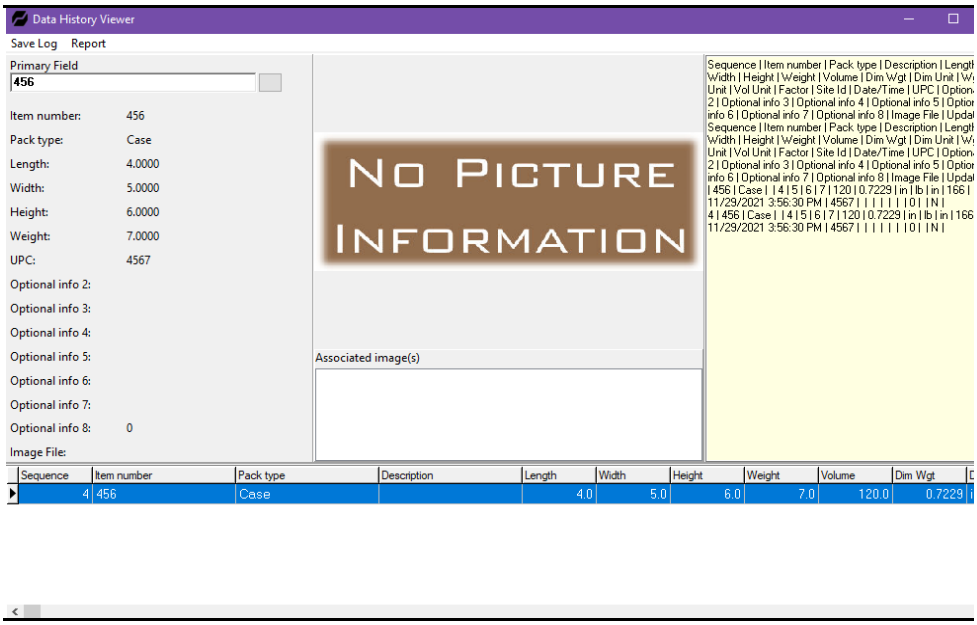


Figure 56
Data history

2. To search for an item, enter a distinguishing value such as item number in the text box under Primary Field.

   All entries with that value will appear in the table below. Information about the item will be displayed along the left panel of the viewer. If there are any images associated with the item, they will appear in the middle panel.

   Toggle between different items by highlighting the item in the table below. The information and images for that item will appear in the panels above.

3. To print out an on-hand report of the item, select **On-Hand** from the Report menu. This will produce a preview of the on-hand report.

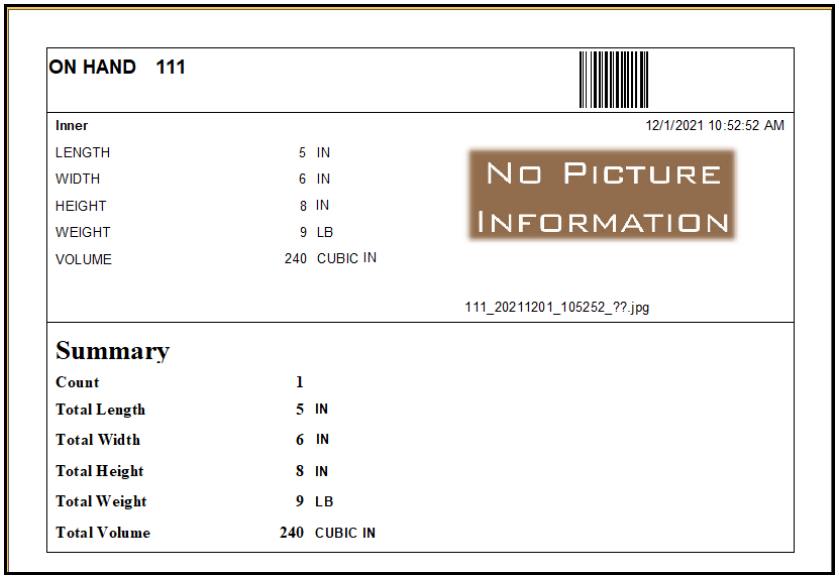


Figure 57
On-hand report

4. From the preview menu, you may print or save the report. By clicking the respective icons from the menu bar at the top.

APPENDIX A
INSTALLATION

This appendix provides instructions for installing Qbit-DB, as well as instructions for installing a network or digital camera to work with Qbit-DB.

System requirements

Qbit-DB is designed to operate with the following minimum computer requirements:

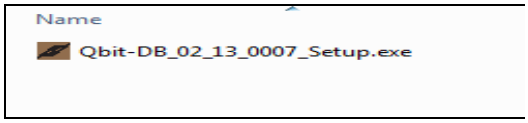
Processor:	PC Pentium III processor or better
Memory:	1 GB RAM
Hard Disk:	40 MB disk space available
Display:	VGA 1024 x 768 or higher resolution color display (*will not operate at a lower resolution*; e.g., 800 x 600)
Operating System:	Microsoft® Windows 2000®, Windows XP, 7, 8, 8.1, 10, or 11.
Other:	Quantronix Inc. Cubiscan™ unit attached to computer

Installing Qbit-DB

Do the following to install Qbit-DB on your computer.

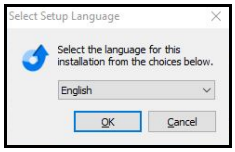
1. Close any open Windows applications.
2. Insert the flash drive into an open USB port. The following prompt is displayed.

3. Click **Open folder** to view files.



4. Double-click the Qbit-DB setup file.

5. If you want the installation in a language other than English, select the language from the drop-down list. Click **[OK]** to proceed.



The welcome window is displayed.

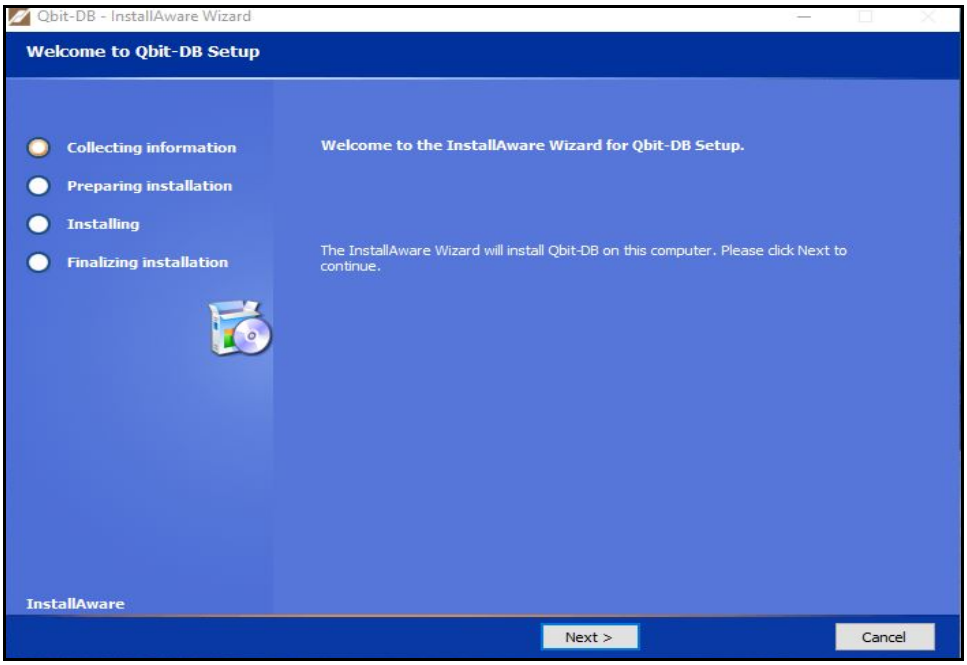


Figure 58
Qbit-DB installation, welcome window

6. Click **[Next]** to continue, and the license agreement window is displayed.

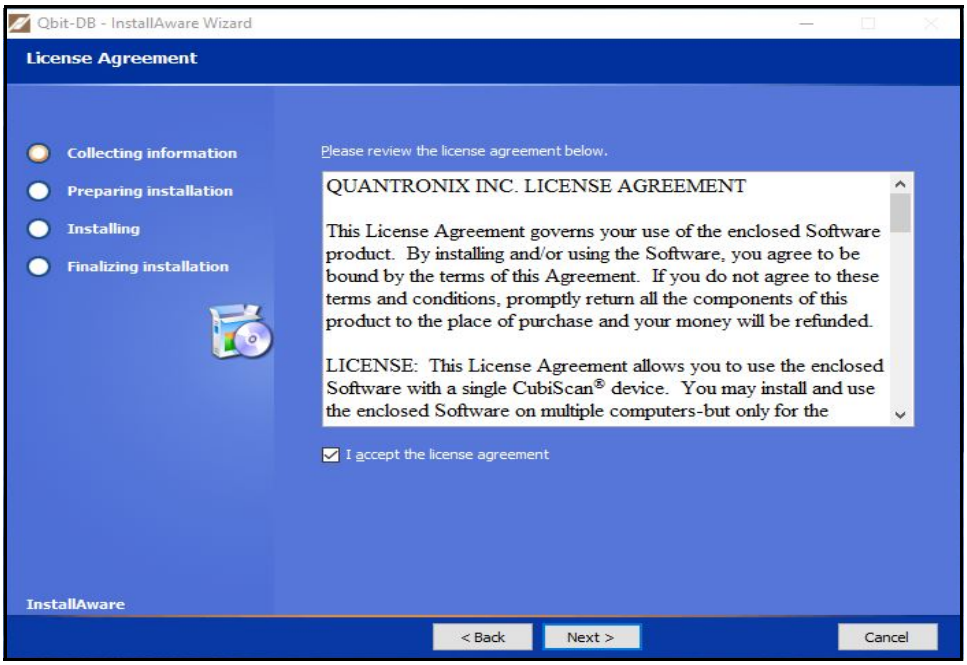


Figure 59
Qbit-DB installation, license agreement

7. Read the license agreement, and click the radio button next to **I accept the license agreement** if you agree. Click **[Next]** to continue, and the following window appears.

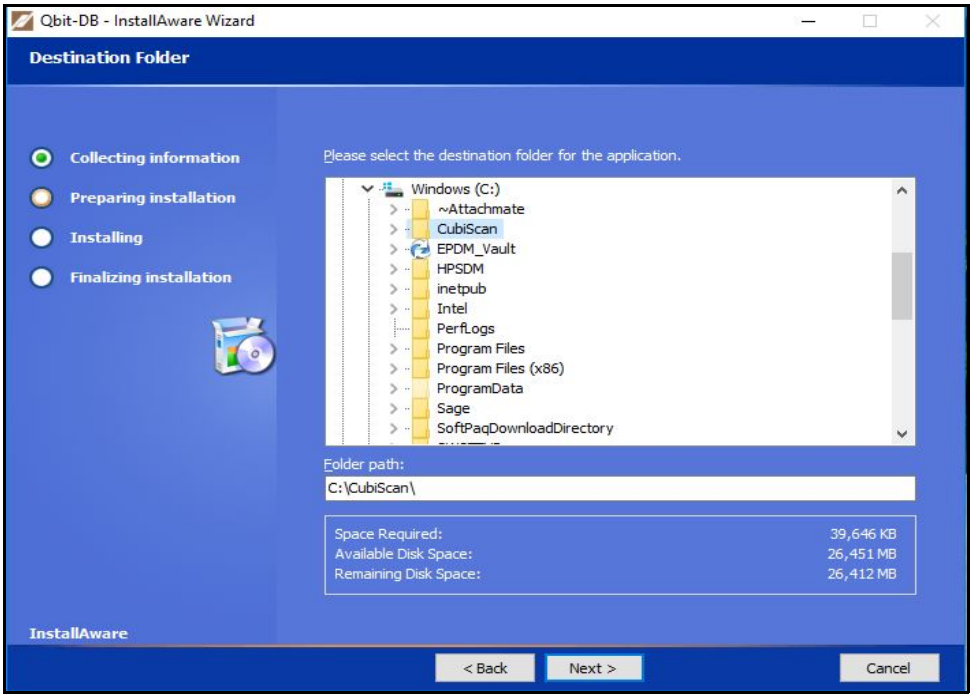


Figure 60
Qbit-DB Installation, Destination Folder

8. Accept the default path for the installation of Qbit-DB, or select a different drive and/or folder. Click **[Next]** to continue. The following window is displayed.

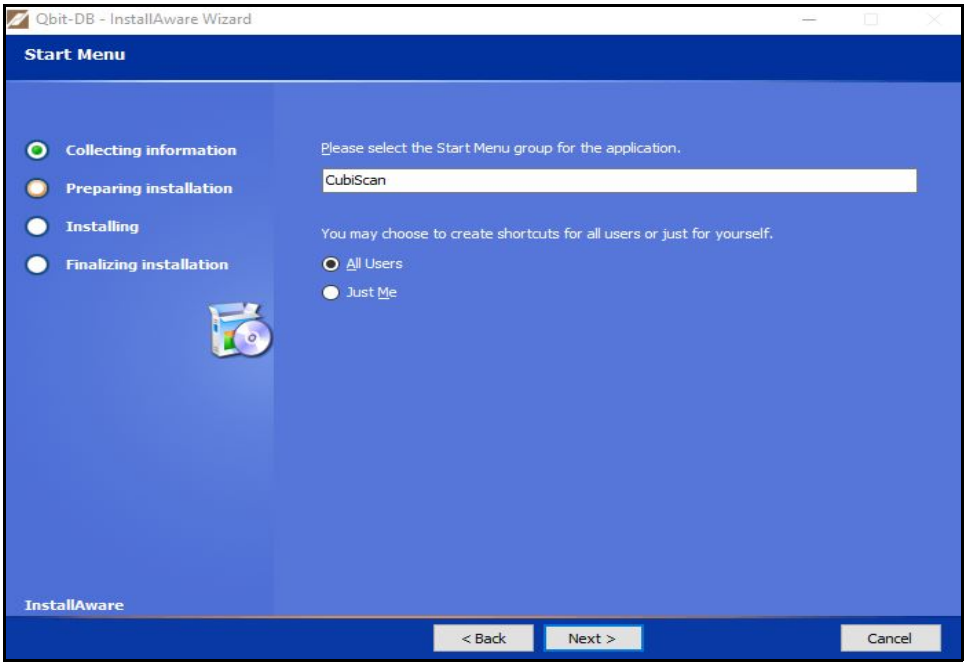


Figure 61
Qbit-DB installation, start menu

9. Accept the default **Start menu** group, or enter a different name. Select **All users** if you want all users to have access to Qbit-DB on this computer or **Just me** if you want only yourself to have access. If you select **Just me** a password is required to open Qbit-DB.

10. Click **[Next]** to continue, and the following window appears.

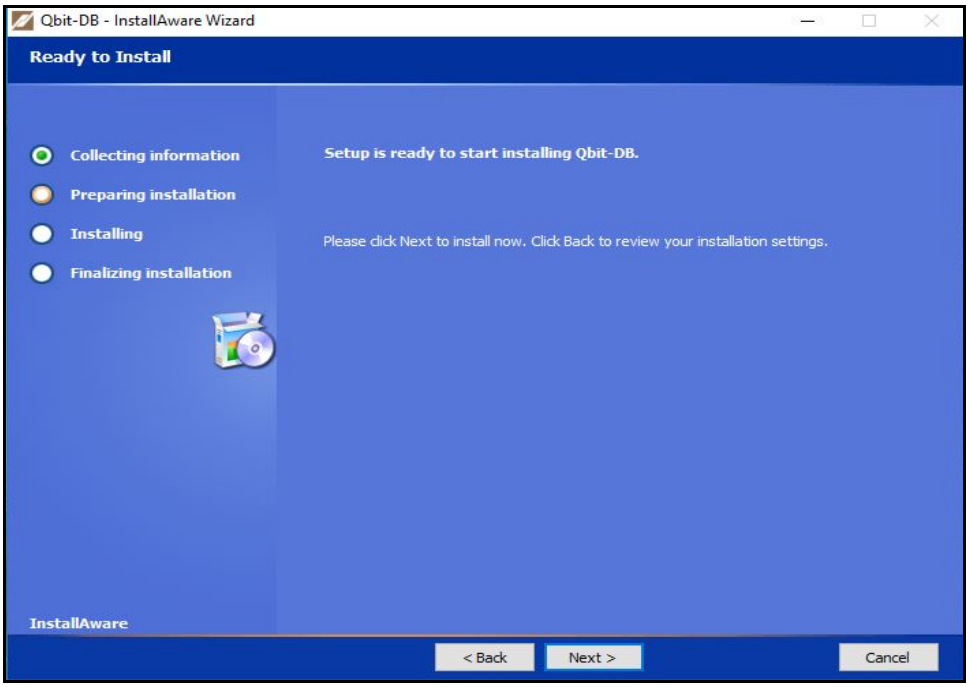


Figure 62
Qbit-DB installation, ready to install

11. If you want to review or change any of the settings, click **[Back]**. If not, click **[Next]** to continue.

12. When the installation is complete, the following window appears:

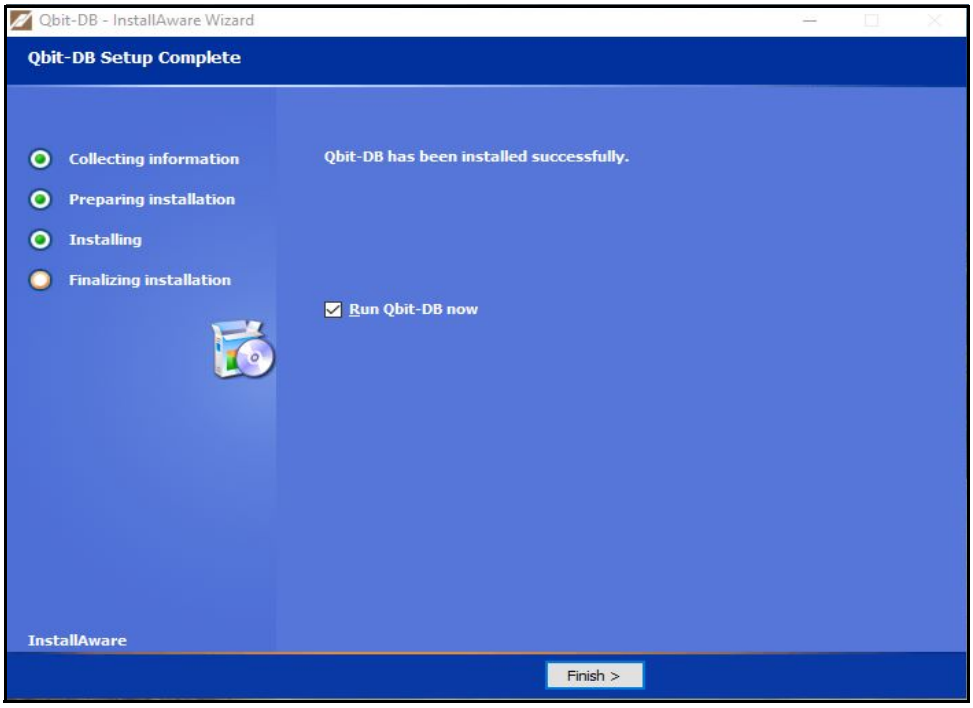


Figure 63
Qbit-DB installation, setup complete

13. If you do not want to start Qbit-DB now, click the already checked box next to **Run Qbit-DB now** to remove the checkmark. Click **[Finish]** to exit and close the installation window.

Installing a new version or update of Qbit-DB

If you are installing a new version or update of Qbit-DB (that is older than version 02.13.0008 or installed prior to February 2017) complete the installation steps listed above. You will then need to complete the following steps listed in this section.

1. Open Qbit-DB.

   The following window appears.

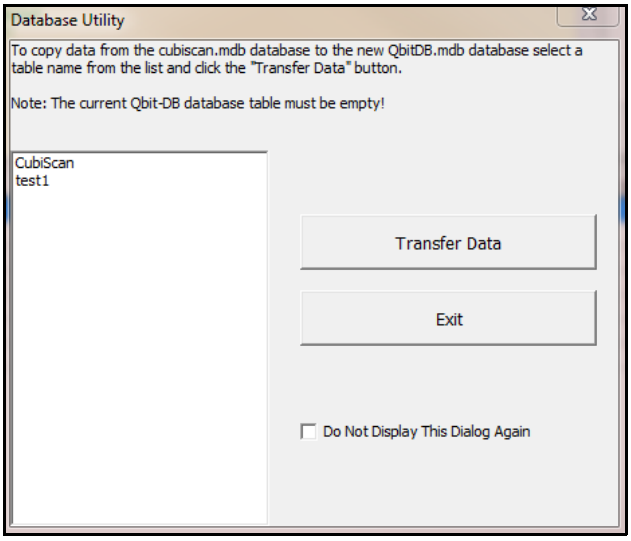


Figure 64
Database Utility window

2. Select the database that you would like to copy.

3. Click **[Transfer data]**. (If your current database is not empty you will receive an error message. Empty your current database and restart Qbit-DB.)

   The following message appears.

4. If you have copied all the database information that you want, select the **Do not display this dialog again** option. If you do not select this option, the Database Utility window will appear each time you open Qbit-DB.

   Your old version of Qbit-DB will be automatically deleted when the new version is installed.

NOTE *The name of the database that is being imported cannot contain any spaces. If the database that you are tying to import does have spaces in the name, contact* **Cubiscan Technical Support at 801.451.0500**.

Installing a network (Axis) camera

Ensure that you have received all of the correct parts and quantities for the Axis network camera kit by referring to the figure below or the parts list on page 148.

Figure 65
Axis camera kit components

A USB to Ethernet adapter
B Axis camera
C Tripod
D PoE switch
E Ethernet cables (2)

To install your network camera, complete the following steps.

1. Locate your white TRENDnet USB to Ethernet adapter cable and plug it into an available USB port on your computer. Wait for the appropriate drivers to load. If there are any problems with this process refer to the *TRENDnet User's Guide* that came in the box with the adapter.

2. Locate your TRENDnet PoE switch and connect it to a power source.

3. Locate one (of two) of the Ethernet cables and plug one end of the cable into the USB to Ethernet adapter cable and the other end into the TRENDnet PoE switch. You can plug the Ethernet cable into any of

the PoE switch ports (1-8), but slots 5-8 are recommended because power will not be required.

4. Set up your camera using the tripod (included) or the cart mount system (not included) as desired.

5. Locate the remaining Ethernet cable and plug one end of the cable into the PoE Switch. You must plug it into one of the PoE switch ports labeled 1-4, or PoE, so that the camera will receive power. Plug the other end of the Ethernet cable into the back of the Axis camera.

   A green light should appear at the back of the Axis camera if it has been connected correctly. The light will be orange if it has been connected incorrectly.

6. To connect the camera with Qbit-DB, see "Images" on page 64.

Parts list for the Axis network camera kit

Following is the parts list for the network camera kit:

Part No.	Description	Quantity/Unit
13410	PoE switch	1
13411	USB to Ethernet adapter	1
13412	Tripod	1
13413	Ethernet cable, 10 ft	2
13414	Integration camera software (Included with Qbit-DB)	1
13416	Axis camera	1

Installing a digital camera

Ensure that you have received all of the correct parts and quantities for the digital camera kit by referring to the figure below or the parts list on page 160.

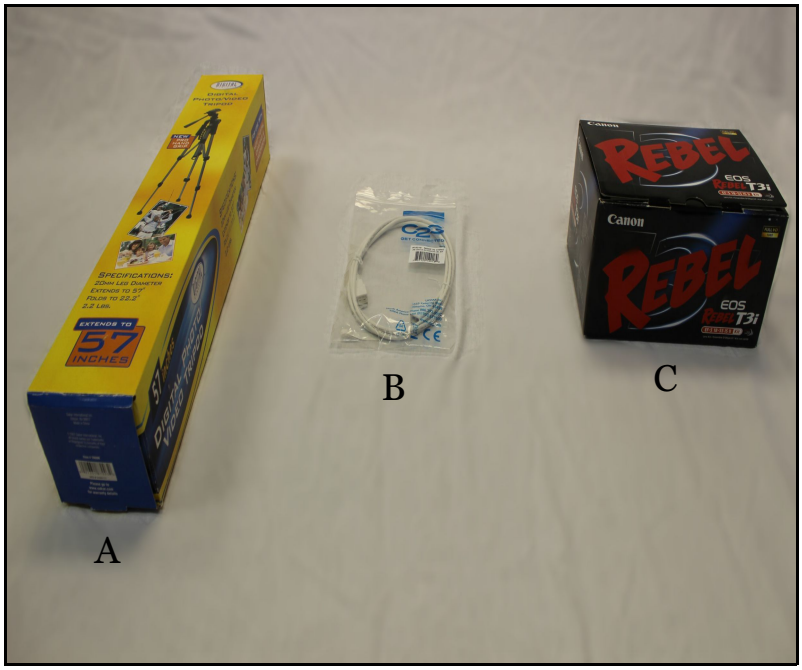


Figure 66
Digital camera kit components

A Tripod
B USB extension cable
C Digital camera

Your camera may appear different depending on the brand of digital camera that you received.

To install your digital camera, you will need to complete the following steps.

1. Install the digital camera software onto your computer. For instructions on how to do this, see "Installing the digital camera software" on page 150.

2. Load the digital camera driver onto your computer. For instructions on how to do this, see "Loading the digital camera driver" on page 154.

3. Connect your camera to Qbit-DB. For instructions on how to do this, see "Connecting your camera to Qbit-DB" on page 155.

Installing the digital camera software

NOTE *The following screenshots were taken from a Windows 7 operating system. Your screenshots may appear different if you are using a different operating system.*

To install your digital camera software, complete the following steps:

1. Locate your **EOS DIGITAL solution disk** that came in the camera box and load it into your computer's CD drive.

   The following window will pop up:

2. Select **Run SETUP.EXE**.

3. Select the area you live in.

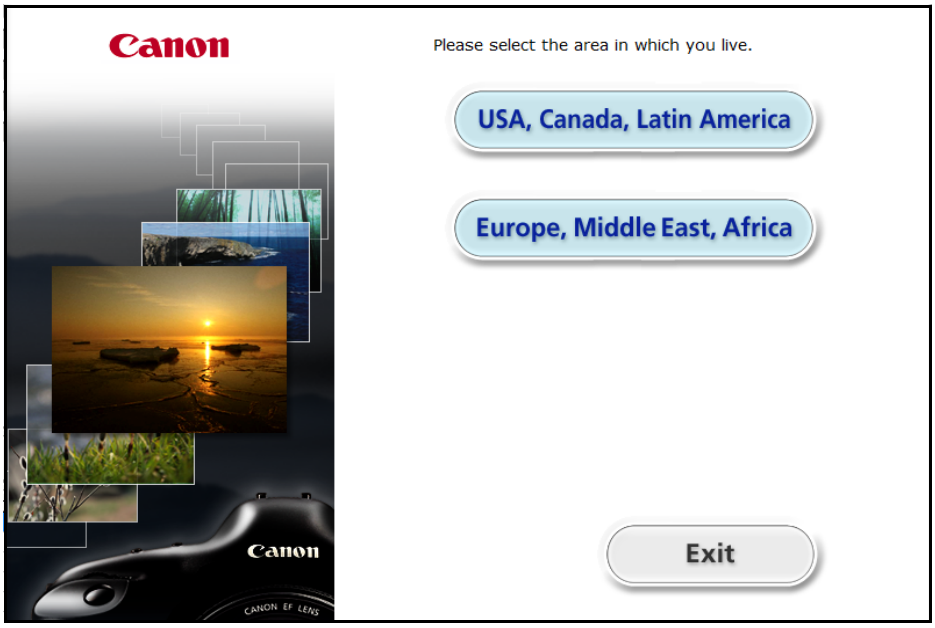


Figure 67
Digital camera setup, first screen

4. Select the country you live in.

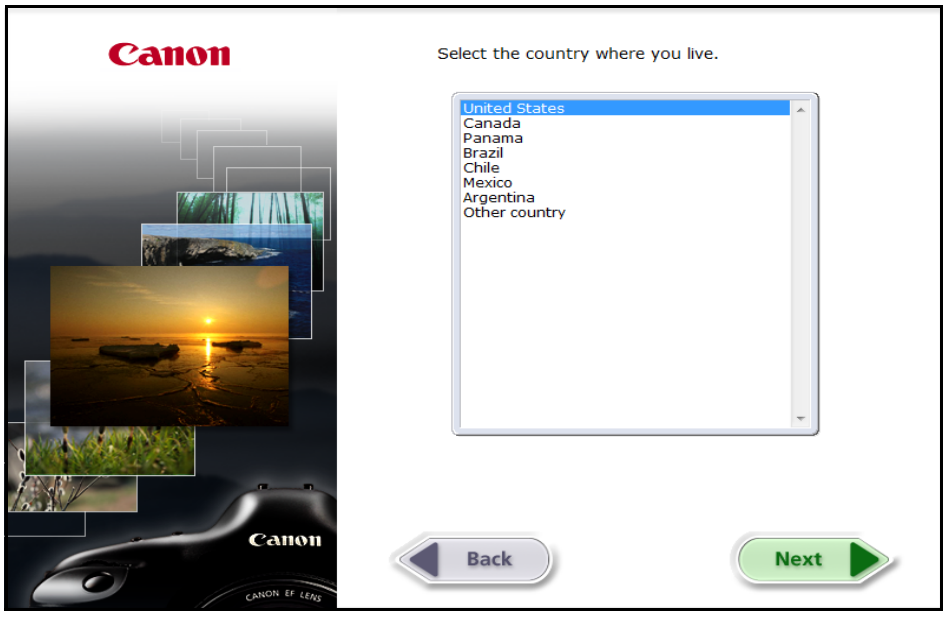


Figure 68
Digital camera setup, second screen

5. Select your language.

Figure 69
Digital camera setup, third screen

6. Select the **Custom installation** option.

Figure 70
Digital camera installation, fourth screen

7. Uncheck everything except **EOS utility**. Click **[Next]**.

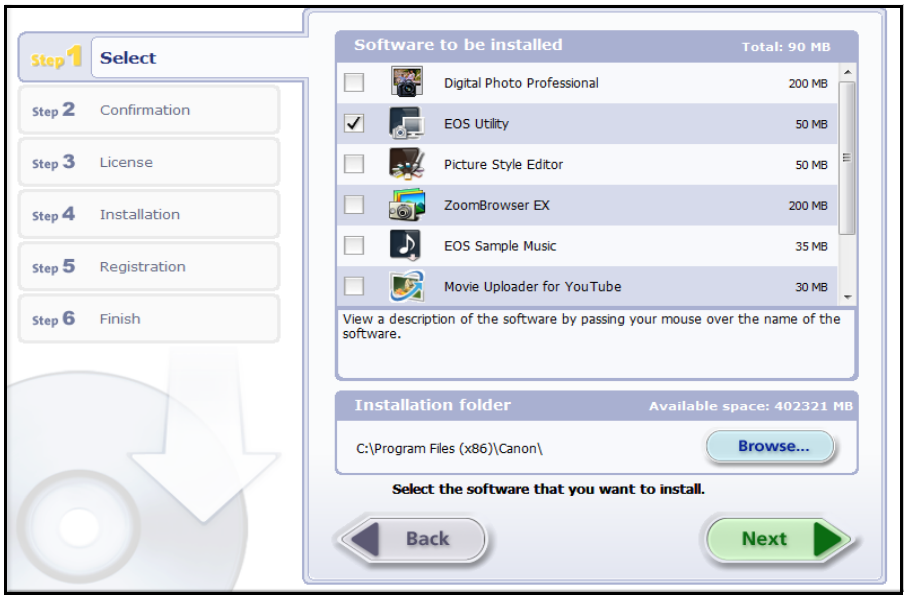


Figure 71
Digital camera installation, fifth screen

8. On the Confirmation screen, make sure that EOS Utility is the only software that is going to be installed, then click **[Install]**.

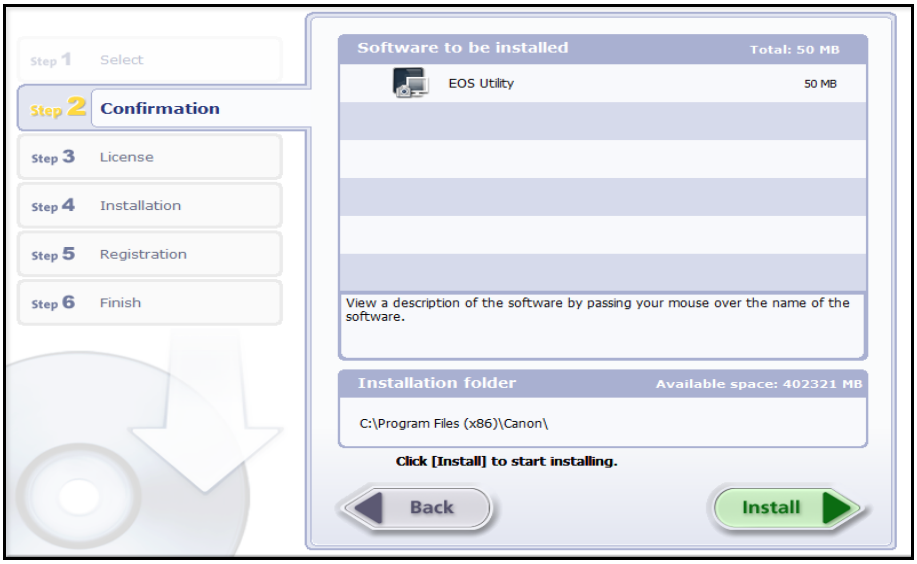


Figure 72
Digital camera installation, sixth screen

9. Select **Yes** on the License screen if you agree with the License Agreement.

10. On the Installation screen, **EOS utility** will be installed. The results of the installation will be displayed. Click **[Next]**.

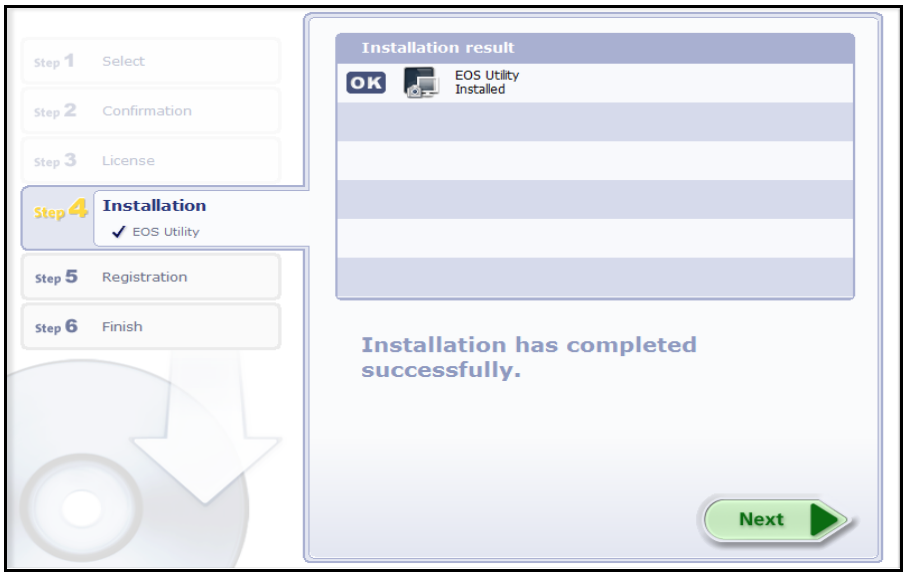


Figure 73
Digital camera installation, seventh screen

11. On the Registration screen, you can register your camera if you wish. Registration is not required to connect your camera to Qbit-DB. Make your selection and click **[Next]**.

12. When you are finished with the installation process, click **[Finish]**.

Loading the digital camera driver

Before loading the digital camera driver ensure that your camera's battery is charged.

To load the digital camera driver onto your computer, complete the following steps:

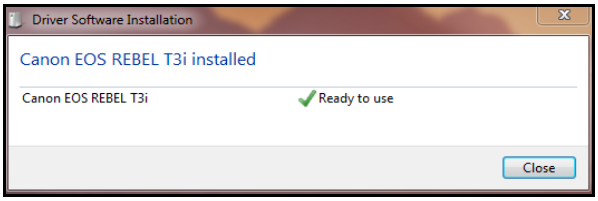
1. Locate the camera to USB cable that came in the camera box.

2. Plug one end of the cable into the camera, and the other end into an available USB port on your computer. Use the USB extension cable if needed.

3. Make sure that the camera is set to **Auto mode**.

4. Turn the camera on.

5. The driver should automatically be installed onto your computer. The following message will appear, telling you that the driver has been successfully installed.



Connecting your camera to Qbit-DB

To connect your camera to Qbit-DB you will need to configure the EOS utility software. To configure this software, complete the following steps.

1. Open up the EOS Utility software. This software will need to be started each time you operate the digital camera with Qbit-DB.

   This software may open automatically when you plug the camera into your computer and turn it on.

NOTE *Your digital camera must be connected to the computer and turned on before you can access the EOS utility software.*

2. Click **[Preferences...]**

Figure 74
EOS utility

3. Under the Basic Settings tab, select **Show main window** under Startup Action.

   Deselect all other options except **Start EOS utility automatically when the camera is connected**.

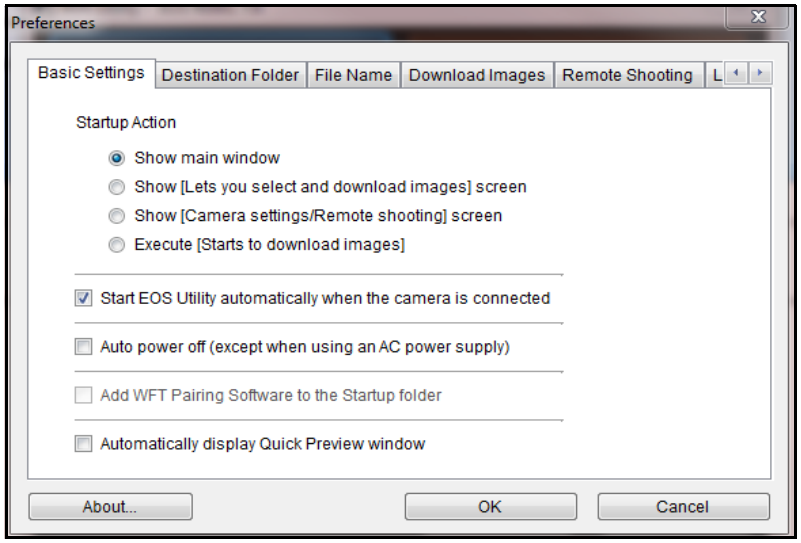


Figure 75
EOS utility, basic settings screen

4. Click on the Destination Folder tab. Under Destination folder, browse to **Cubiscan > TempImages**.

   Deselect all option boxes.

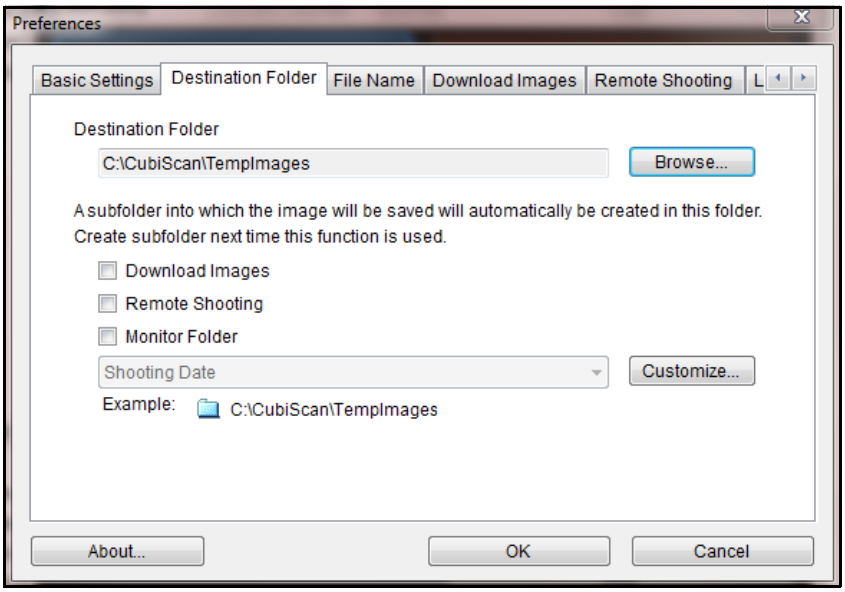


Figure 76
EOS utility, destination folder

5. When you are finished, click **[OK]** to exit the Preferences window.

6. From the EOS utility software home screen, click **[Camera settings/ Remote shooting]**. This will bring up a window that allows you to capture images remotely using the computer. Minimize this window for the next few steps.

7. Open Qbit-DB and navigate to the Camera tab located under **Tools** > **Options**.

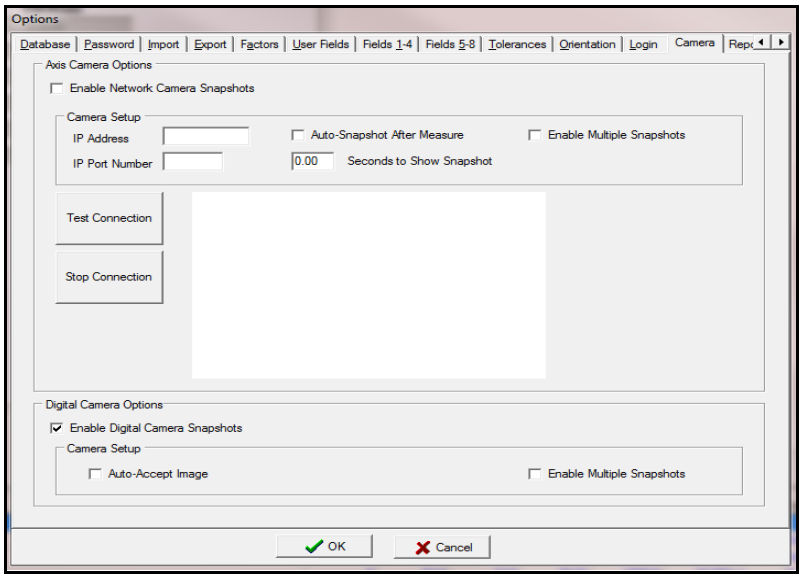


Figure 77
Camera tab

8. Under **Digital camera options**, enable the field **Enable digital camera snapshots**. Click **[OK]** when you are finished to close the Options window.

9. Enter the item number for the item that you want associated with the picture into the **Item number** field (primary field).

10. Maximize the remote image capturing window (shown below).

11. Click the black, round button located in the top right corner of the window. This should cause the digital camera to take a picture. Make

sure that the camera lens cover has been removed.

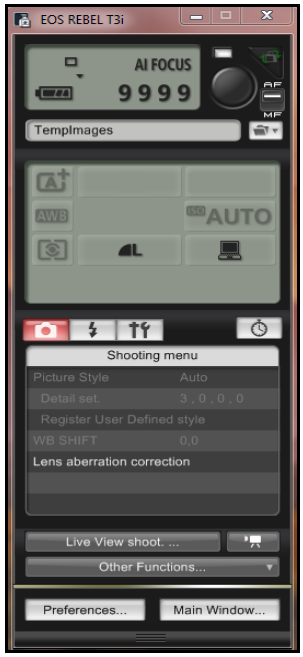


Figure 78
Remote image capturing window

If the camera was connected to Qbit-DB successfully the picture should be displayed in the camera image window on the main Qbit-DB screen (shown below).

This remote picture taking method only needs to be used the first time to help the camera connect to the Qbit-DB software accurately. After using the remote method once, you should be able to take pictures

using any method you prefer.

Figure 79
Camera image window

For further information on the settings available with the digital camera, see "Images" on page 64.

Parts list for the digital camera kit

Following is the parts list for the digital camera kit:

Part No.	Description	Quantity/Unit
12461	USB Cable	1
13412	Tripod	1
13414	Integration Software (Included with Qbit-DB)	1
14267	Digital Camera	1

APPENDIX B
FREQUENTLY ASKED QUESTIONS

This appendix contains some common questions about Qbit-DB. If, after reading this manual and reviewing this appendix, you still have questions, please contact Cubiscan.

Question: Do "updated records" that are exported contain data records from previous sessions?

Answer: Each record in the database is marked when it is updated and remains marked until exported. When exporting "updated records", all records that are marked are included.

Question I am not able to edit the Length, Width, Height, and Weight fields. What should I do?

Answer: Select View from the menu and disable the **Cubiscan fields read only** option. This enables these fields to be edited.

Question: I am unable to communicate with the Cubiscan unit. What should I do?

Answer The troubleshooting steps for connecting via Ethernet, serial, and USB are listed below. For Cubiscans that do not have touchscreens, please contact **Service and Support for assistance at 801.451.0500**.

Ethernet

Without Ethernet to USB adapter (straight connection from the Cubiscan's Ethernet port to the computer's Ethernet port):

1. Make sure the Ethernet cable is securely plugged in to the Cubiscan and the computer and both systems are powered on.

2. On your Cubiscan, make sure the Ethernet checkbox is enabled. You can find this checkbox under the **Configure > Operation** tab.

3. Verify the IP, Subnet, and port settings of the Cubiscan under the **Configure > Ethernet** tab. Make sure the IP address is 10.1.100.100, the Subnet address is 255.255.255.0, and the port number is 01050.

4. If you are using Qbit software, make sure you have entered the correct IP address of 10.1.100.100 and port number of 1050. Make sure the port is allowed by firewall and antivirus software.

5. On your computer, verify your IP and Subnet address in **Control panel's network and sharing center**. The IP address should be 10.1.100.10 and the Subnet address should be 255.255.255.0.

6. If you still cannot communicate with the Cubiscan, you may have a bad Ethernet cable. Try using a different Ethernet cable if available. If this does not correct the problem, call **Service and Support for assistance at 801.451.0500**.

With Ethernet to USB adapter:

1. Make sure the Ethernet cable is securely plugged in to the Cubiscan and the Ethernet to USB adapter. Make sure the USB adapter is plugged into the computer.

2. On your Cubiscan, make sure the Ethernet checkbox is enabled. You can find this checkbox under the **Configure > Operation** tab.

3. Verify the IP, Subnet, and port settings of the Cubiscan under the **Configure > Ethernet** tab. Make sure the IP address is 10.1.100.100, the Subnet address is 255.255.255.0, and the port number is 01050.

4. If you are using Qbit software, make sure you have entered the correct IP address of 10.1.100.100 and port number of 1050. Make sure the port is allowed by firewall and antivirus software.

5. On your computer, verify the IP and Subnet address of the Ethernet to USB adapter in **Control panel's network and sharing center**. The IP address should be 10.1.100.10 and the Subnet address should be 255.255.255.0.

6. If you still cannot communicate with the Cubiscan, you may have a bad Ethernet cable or Ethernet to USB adapter. Try using a different Ethernet cable if available. If this does not correct the problem, call **Service and Support for assistance at 801.451.0500**.

DHCP Ethernet connection:

1. Make sure the Ethernet cable is securely plugged in to the Cubiscan and the network outlet.

2. Make sure your computer is connected to your network.

3. On your Cubiscan, make sure the Ethernet checkbox is enabled. You can find this checkbox under the **Configure > Operation** tab.

4. Under the **Configure > Ethernet** tab, make sure the **In use Ethernet and DHCP** checkboxes are enabled.

5. Check with your network administrator and make sure Qbit (if applicable) and port 01050 are allowed by the firewall and antivirus software.

6. Verify the IP, Subnet, and port settings of the Cubiscan under the **Configure > Ethernet** tab. Make sure the IP and Subnet addresses match the ones you are entering into the Qbit software (if applicable).

7. If you still cannot communicate with the Cubiscan, you may have a bad Ethernet cable. Try using a different Ethernet cable if available. If this does not correct the problem, call **Service and Support for assistance at 801.451.0500**.

Serial

1. Make sure the serial communications cable is properly connected with a NULL MODEM cable.

2. Verify that the NULL MODEM cable is plugged into the correct controller box port.

3. If your Cubiscan model is the Cubiscan 100, make sure that the port closest to the Cubiscan display is the port being used. Then try measuring an item using the Cubiscan display. Place an item on the Cubiscan platform and press **MSR**. If you see a -01- or ----- in the **Length**, **Width**, **Height**, or **Weight** fields, one of the sensors or scale may be causing a communication error. If this occurs, contact **Service and Support for assistance at 801.451.0500**.

4. Verify that the proper COM port is selected in the setup options in Qbit-DB. If there is still no communication, verify that the serial port on your computer is operational (refer to your computer's documentation).

5. If you are using a USB to serial adapter, check which COM port your computer is using. This information can be found under your computer's Device Manager (see below).

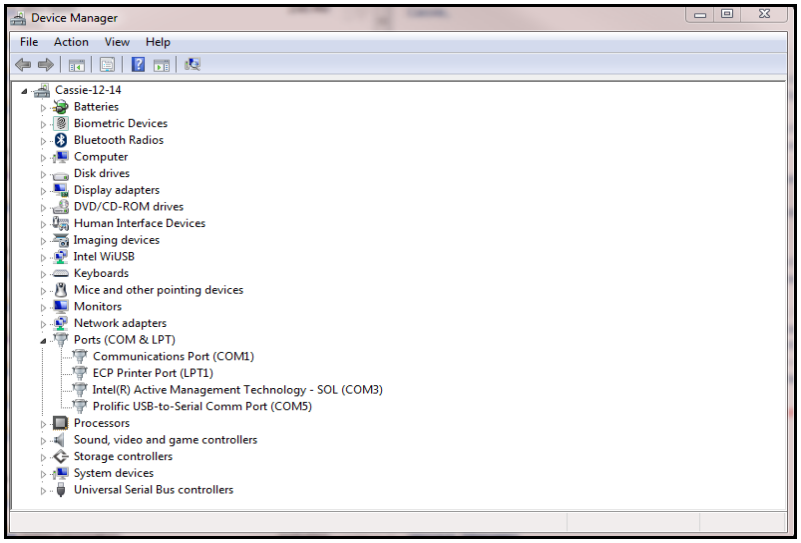


Figure 80
Device Manager

In the example shown in the figure above, the prolific port was assigned to COM5. Make sure that you are using the same port number in Qbit-DB, located in the **PC port #** field under the **Tools > Options > Cubiscan** tab.

USB

1. Make sure the USB cable is securely plugged in to the Cubiscan and the computer and both systems are powered on.

2. If you can't communicate with the Cubiscan, try using a different USB port on your computer.

3. If you still can't communicate with the Cubiscan, you may have a bad USB cable. Try using a different USB cable if available. If this does not correct the problem, call **Service and Support for assistance at 801.451.0500**.

Question: All of the records at the bottom of the Qbit-DB page have disappeared, how do I get them to show up again?

Answer Go to the Database menu found on the main window and select **Default column order**.

Question When I export a **.txt** file and open it in Excel, each number has zeros preceding the actual number. How can I eliminate these zeros?

Answer Complete the following steps.

1. Export the file to a **.txt** file. For information on how to do this, see "Exporting a database table" on page 115.

2. Open Excel and then open the desired **.txt** file using Excel (make sure that **All Files** is selected under the drop-down list located next to the **File name** field).

3. The **Text setup wizard** will open and allow you to format the various columns (shown below).

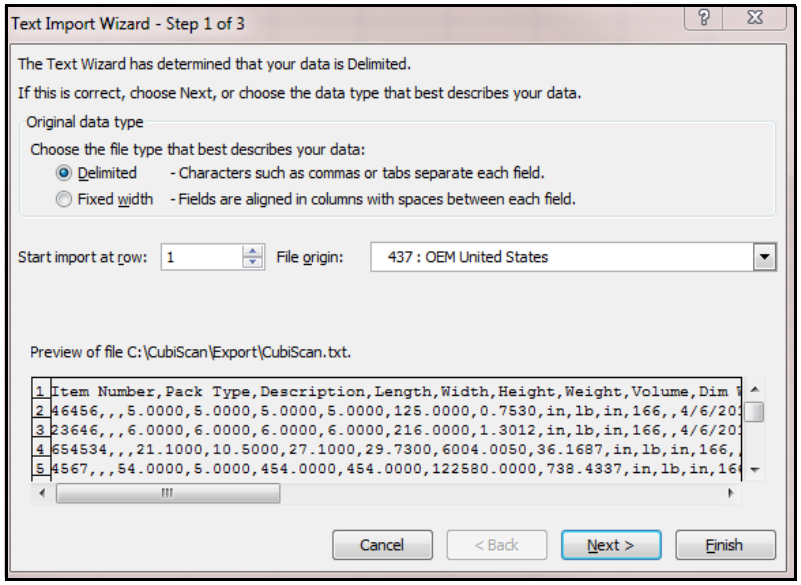


Figure 81
Text Import Wizard

NOTE **.csv** *files can be opened in Excel but will not open up the* **Text import wizard** *because* **.csv** *files are associated with Excel.*

Question How can I move the camera image window?

Answer Click on the top left corner of the window and drag it to where you would like it.

Question When I am using an ODBC connection and the following error is received: **ODBC transfer queue item not found, sequence number.** How do I fix this error condition?

Answer Open the Cubiscan folder. Locate the file called **ODBC Seq Num Errors.txt** and rename it to **ODBC Seq Num Errors.txt.old**. Restart Qbit-DB.

If you have additional questions or require further help, please contact **Cubiscan Service and Support for assistance at 801.451.0500 or at** support@Cubiscan.com.

APPENDIX C
FIREDAC ADMINISTRATOR

FireDac administrator utility

In order to better serve those customers with specific server requirements, Qbit-DB offers the FireDac administrator utility. This utility allows you to create server connections that lay outside of the default conditions established by Qbit-DB. For example, you may want to set up these connections to import or export data from Qbit-DB to a tables that reside on an outside server.

If you are not familiar with your particular server needs, consult with a systems administrator. For best performance, it is advised to use default settings whenever possible.

The *FireDac administrator* utility can be accessed by finding the **Cubiscan** folder in *File Explorer*. By default the **Cubiscan** folder will be in the root directory. You can also search for the folder in *File Explorer*.

Double-click the **FDAdministrator** application within the **Cubiscan** folder. This will launch the *FireDac administrator* utility.

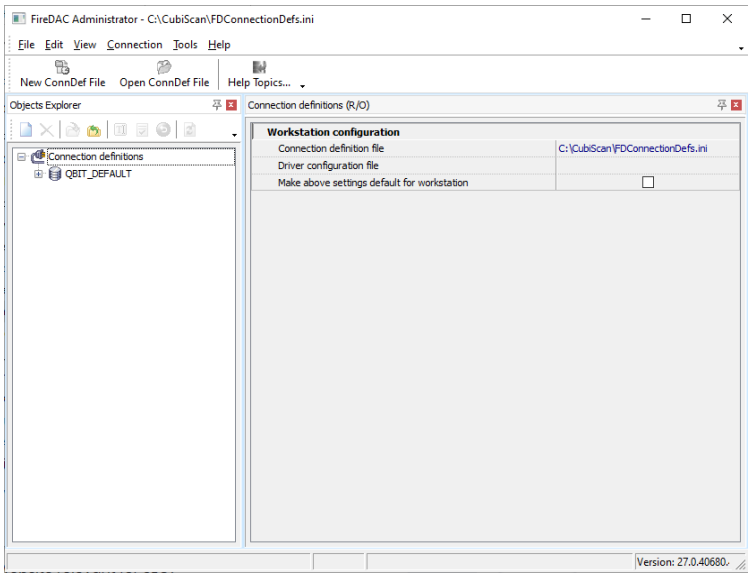
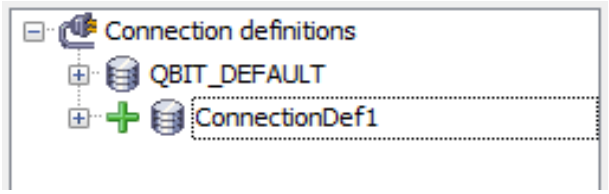


Figure 82
FireDac main window

Create a new connection

Right Click on **QBIT_DEFAULT** and select **Connection definition**. This will generate a new database connection with the default name **ConnectionDef1**. This name can be changed either by right-clicking on the new connection in the left side panel and selecting **Rename**.



Choose your **Driver ID** by selecting from the drop-down menu to the right. **The Driver ID** designates the database management system (DBMS) used. The correct DBMS must be selected for *Qbit-DB* to access your database.

The available options are **MSAcc** (Microsoft Access), **MSSQL** (SQL Server), **MySQL**, **ODBC** (Micro Soft Open Database Connectivity), **Ora** (Oracle), **PG** (PostgreSQL), **SQLite**, or **TData** (Teradata). Choose the Driver ID that matches the database you use. The connections parameter will differ depending on the DBMS used.

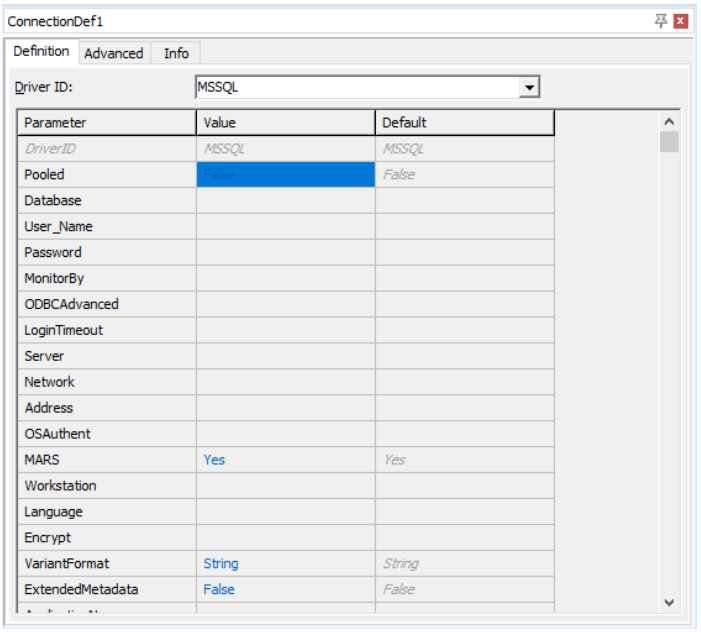
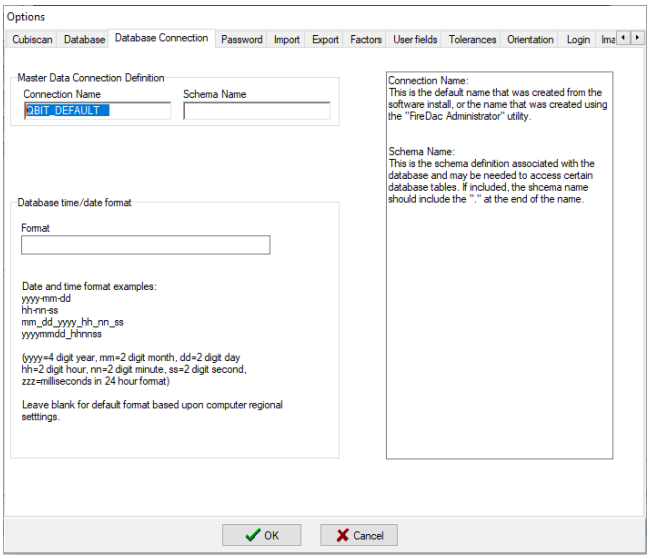


Figure 83
Connection parameters (MS SQL Server)

The value in the **Database** field shows the location of the database on the server. Your database administrator should have information on the parameters need to connect to your database.

Once the connection parameters are entered, replace the connection name in Master Data Connection Definition found in **Tool** > **Options** > **Database connection**. The default will be **QBIT_DEFAULT**.

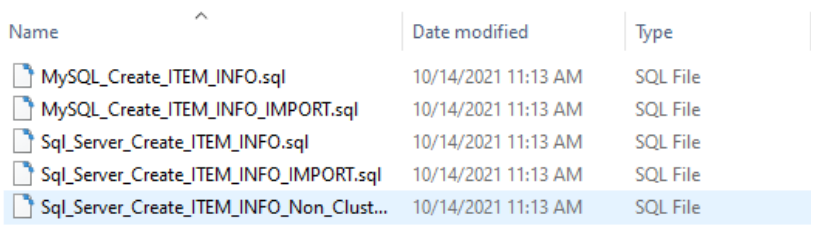


In some cases, the development location will need to be entered into the **Schema name** field to access certain database tables. The **Schema name** is the schema definition associated with the database. When entering the schema name be sure to include the "." at the end of the name (e.g., *dev.*). If you are not sure if the schema name is needed, consult your database administrator.

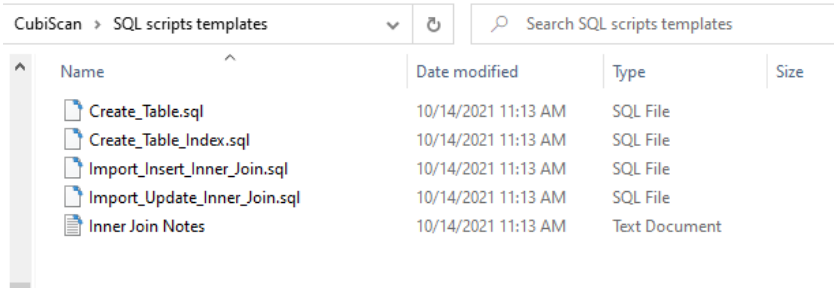
SQL scripts

In order to export and import data from tables from an outside source such as an ASCII file, scripts may need to be written in order to ensure that the data is mapped properly to and from the source. Examples of these scripts can be found in the folder called **Script examples** within the **Cubiscan** folder.

The **Script examples** folder can be accessed by finding the **Cubiscan** folder in File Explorer. By default, the **Cubiscan** folder will be in the root directory. You can also search for the folder in File Explorer.



Along with these example scripts, Cubiscan has included templates found in the **SQL scripts templates** folder that can be accessed by finding the **Cubiscan** folder in File Explorer.



MS SQL Server script templates are provided by Cubiscan for the use of database administrators. If you have questions about using the templates or do not see the template you need, please call **Service and Support for assistance at 801.451.0500.**

While other database management systems can be used with Qbit-DB such as MySQL, examples and templates are not provided. It is up to the database administrator to set up these scripts.

Open Database Connectivity (ODBC)

The **Open Database Connectivity (ODBC)** allows for the transfer of data from your database to another. The **ODBC** tab is found in the *Options* window from the *Tools* menu. To activate this capability, check the box next to **Enable ODBC**.

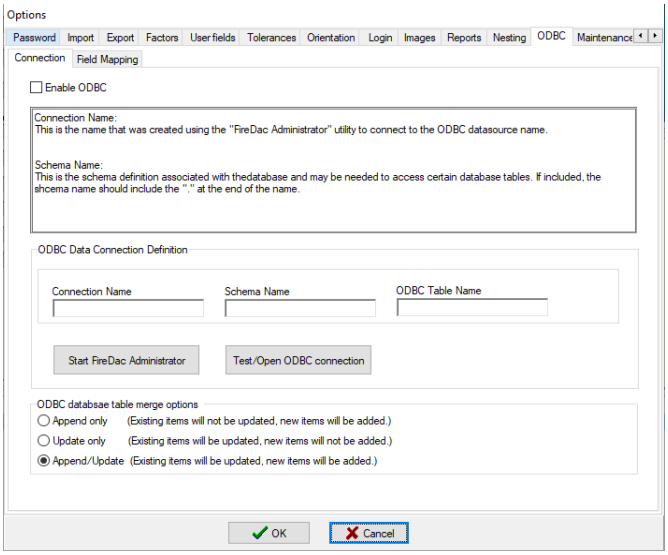


Figure 84
Open database connectivity (ODBC)

ODBC Data Connection Definition

Under the ODBC Data Connection Definition section there are fields to enter the location of the database they you wish to connect to.

Connection name: This is the name that was created using the *FireDac Administrator* utility to connect to the ODBC data source name.

Schema name: This is the schema definition associated with the database and may be needed to access certain database tables. If included, the schema name should include "." at the end of the name.

ODBC table name: Enter the name of the table you wish to connect to in this field.

Start FireDac administrator: Click this button to open *the FireDac administrator* utility.

Test/Open ODBC connection: Click this button to ensure that the ODBC connection is working properly.

ODBC database table merge options

Once you have connected to a table, you may choose how you would like to merge data with the connected table.

Append Only: Existing items will not be updated when data is merged to the table. Only new items will be added.

Update only: Existing items will be updated when the data is merged, but new items will not be added to the table.

Append/Update: Existing items will be updated during the merge, and new items will be added to the table.