Honeywell

Reference Manual

IQ System™ Database Manager Software

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P/N 13-241
Version 6
27AUG2012

Note: The initial USER ID and PASSWORD are

User ID: **setup**

Password: **iq**

Note: The User ID and Password fields are case sensitive; “setup” and “iq” must be entered in lower case as shown below.

During the installation of the IQ Administrator Program, you will be prompted for a password for the login ID “biosystems”. The password is “biosystems”.

⚠WARNING

THE IQ EXPRESS™ IS DESIGNED TO INTERFACE WITH HONEYWELL ANALYTICS GAS DETECTORS.

HONEYWELL ANALYTICS GAS DETECTORS HAVE BEEN DESIGNED FOR THE DETECTION OF DEFICIENCIES OF OXYGEN, ACCUMULATIONS OF FLAMMABLE GASES AND VAPORS AND ACCUMULATIONS OF TOXIC VAPORS.

IN ORDER TO ENSURE THAT THE USER IS PROPERLY WARNED OF POTENTIALLY DANGEROUS ATMOSPHERIC CONDITIONS, IT IS ESSENTIAL THAT THE INSTRUCTIONS IN THIS MANUAL AND THE OPERATIONS AND/OR REFERENCE MANUAL(S) FOR THE GAS DETECTOR(S) BE READ, FULLY UNDERSTOOD, AND FOLLOWED.

THIS MANUAL IS NOT INTENDED TO REPLACE THE OPERATIONS AND/OR REFERENCE MANUALS FOR THE GAS DETECTOR. THIS MANUAL IS ONLY DESIGNED TO AID IN THE INSTALLATION AND OPERATION OF THE IQ EXPRESS SYSTEM AND SHOULD BE USED IN CONJUNCTION WITH THE INSTRUMENT REFERENCE OR OPERATIONS MANUAL AT ALL TIMES.

Reference Manual
IQ Database Manager Software
Honeywell Analytics Part Number 13-241
Version 6

Table of Contents

Warnings and Cautions

A. Signal Words

The following signal words, as defined by ANSI Z535.4-1998, are used in the IQ System Reference Manual.

⚠DANGER indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

⚠WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠CAUTION indicates a potentially hazardous situation, which if not avoided, may result in moderate or minor injury.

CAUTION used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.

1. Overview

The IQ Database Manager program provides user access to the IQ Databases, which are used by Honeywell Analytics's IQ Express, MultiPro IQ Express, and IQ6 Systems to maintain instrument and calibration data for the gas detectors. This manual will discuss the functions associated with the Database Manager program.

Note: The term IQ Calibration Station will be used to refer to the IQ Express, MultiPro IQ Express, IQ6 and IQ Controller.

IQ Calibration Stations rely on user-defined templates to determine the operations to perform on instruments as they interface with the docks. To maximize flexibility, IQ Calibration Stations allow for the programming of multiple templates through the Database Manager program. Each instrument must be assigned to a specific template. New instruments are automatically assigned to the "Generic (No Change)" template unless a default template has been set up for the instrument type.

The key to the functionality of the IQ System lies in understanding how different types of information is entered into the database. All IQ Systems software utilizes a PostgreSQL database server. The database is typically housed on a local hard drive, but may also be housed on a network server or shared drive, which will allow multiple calibration stations to access and store information in the same place.

Database information, including user and template information can only be accessed through the Database Manager software.

Instrument information concerning sensors and calibrations can be downloaded from instrument to PC automatically when the instrument interfaces with the PC. For IQ Calibration Stations, this occurs when the instrument is placed in the dock.

The automatic datalogger download function must be enabled in an IQ template for the download to proceed automatically. **See section 5.5.1.6 for instructions.**

Note: Instrument readings and other session data that are downloaded from the detector may not be accessed through the Database Manager program. Session data must be accessed through the BioTrak or BioTrakII program. See the appropriate BioTrak Reference Manual for details.

1.1 PC Requirements

- Pentium Processor 1.0GHz or better or equivalent.
- 512MB RAM.
- Windows XP Pro / Server 2003 and 2008 / Vista / Windows 7
- 50MB hard drive disk space.

Note: See the Reference Manual that came with the IQ System that you purchased for details on Detector Firmware Requirements.

1.2 E-mail Requirements

Enabling the IQ System's e-mail function requires the configuration of the network e-mail server as follows:

1. The mail server's SMTP listener task must be enabled.
2. Mail relaying to the address listed under File / Options in the E-Mail tab must be allowed. Section 5.5.5.2 covers e-mail options.

Please contact your e-mail system administrator for further details.

1.3 Terminology: Records, Recordsets, Data fields

It's important to understand some basic database terminology in order to better utilize the IQ System

The data for a single gas detector is known as a **record**. Records are typically represented as horizontal rows in a matrix.

A group of records is known as a **recordset**.

A **data field** is a grouping of similar information that appears across a number of records. As an example, since each gas detector has a serial number, the listing of serial numbers would comprise a data field. Data fields are typically represented as vertical columns in a matrix.

1.4 Installation overview

Each IQ System is delivered with a disk that contains the software needed for the specific IQ hardware that was purchased.

To complete an initial software installation for any of the IQ Systems, the following items must be accomplished:

1. Install the PostgreSQL Database (see the IQ Administrator / PostgreSQL installation guide that was shipped with the software).
2. Install Database Manager as described below in section 2.
3. Install the specific IQ Program that you desire (see the IQ Reference Manual that came with your purchase).
4. Launch IQ Administrator and create the PostgreSQL database.

To upgrade an existing installation of Database Manager, only the Database Manager may need to be installed. This may not be correct if the upgrade is system wide. An additional upgrade to calibration system desktop software may be needed.

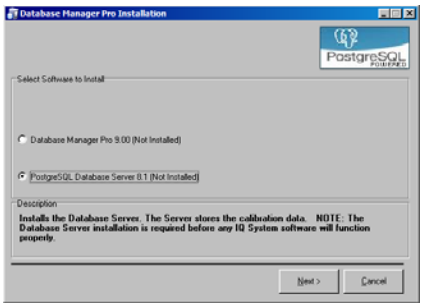
Warning: The Postgre installation should only be performed once. Removing PostgreSQL without proper data backup could result in data loss.

To upgrade an existing MS Access database **(IQ system software less than version 5.00)** to PostgreSQL, perform the steps above and then proceed to section 6.2 of the IQ Administrator / PostgreSQL Installation Guide.

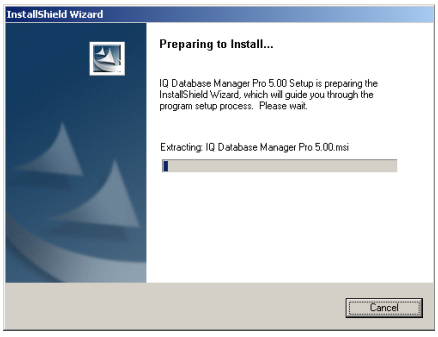
2. Installation of Database Manager

Note: At this point, the PostgreSQL database should have been installed. See the IQ Administrator Reference Manual.

1. Place the IQ Installation CD into your computer's CD tray and close the tray. The following screen should come up automatically.



2. Select Database Manager and click "Install". The PC will show a few screens indicating that it is preparing to install the software before moving on to the InstallShield Wizard screen.



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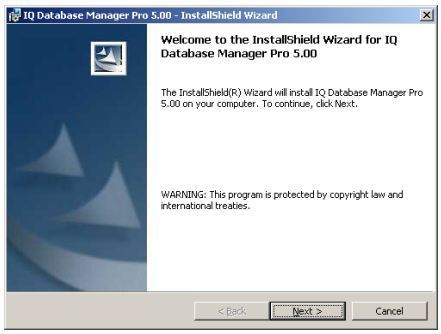
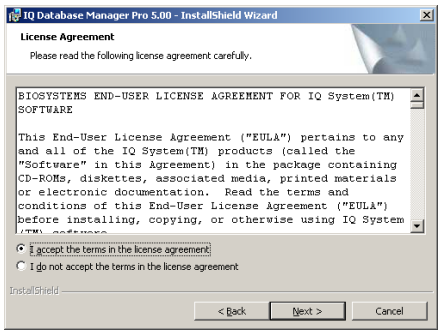
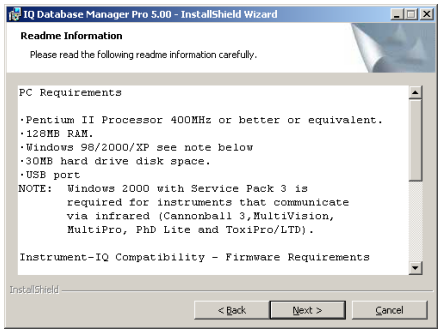


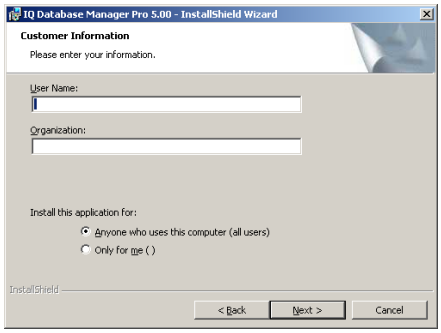
3. Click “Next”. The License Agreement screen will be shown.



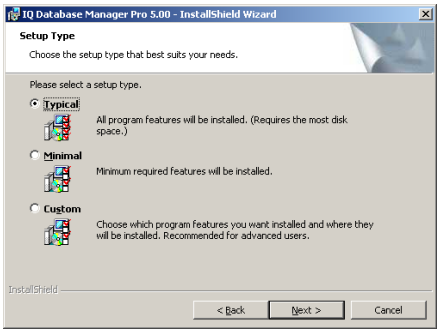
4. Read the Licensing Agreement. If the terms are acceptable, select “I accept the terms…..” If the terms are not acceptable click “Cancel” to terminate the installation. The PC requirements will be shown once the Licensing Agreement is accepted.



5. Click “Next”. The Customer Information screen will then be shown.



6. Enter the User Name and Organization in the input boxes. Then choose whether the application should be available to “Anyone who uses this computer” or “Only for me”. The software will then prompt for the setup type.

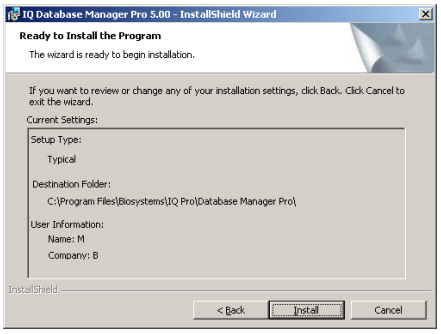


7. Honeywell Analytics recommends selecting “Typical” as the setup type, but advanced users may consider selecting minimal or custom.

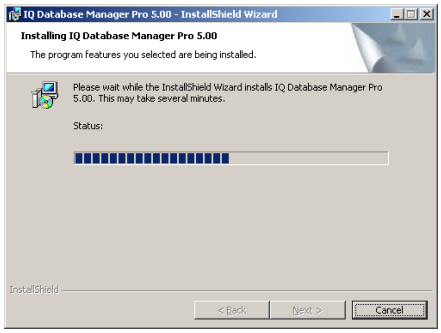
   In Typical and Minimal, the Database Manager will be installed to the “C:\ Program Files \ Biosystems \ IQ Pro \ Database Manager Pro” folder. To install the program to a different location, select Custom and the click “Change” to relocate the program.

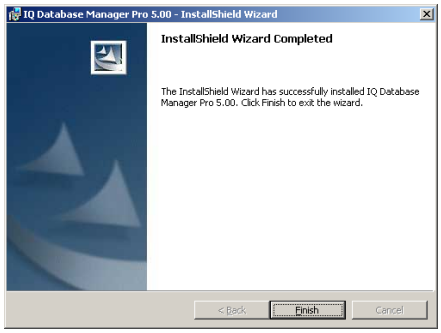
   Once the type has been selected, click “Next”.

8. At the “Ready To Install” screen, verify the settings for the setup, destination folder and user information and click “Install”. Click “Back” to modify the setup parameters if needed.



Once “Install” is selected, the program will start the installation process. A few screens will be shown before the PC informs you that the installation is complete.





9. Click “Finish” to close out the installation.

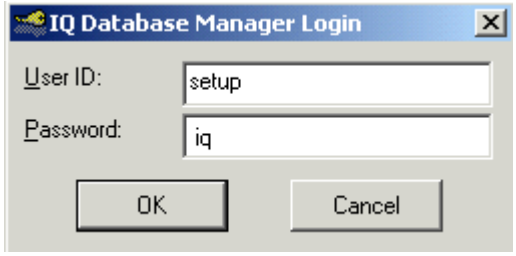
Note: At this point in the installation process, you should load the remaining IQ Software from the Installation CD (if this is first time installation), and then create an IQ database. See the IQ Administrator Reference Manual for details on creating the PostgreSQL database.

3. First Launch of the Database Manager

1. Launch the software by clicking on the Database Manager icon on your desktop screen.

The Database Manager can also be accessed by clicking on the Start button followed by All Programs / Biosystems / IQ Pro / Database Manager Pro / Database Manager Pro.

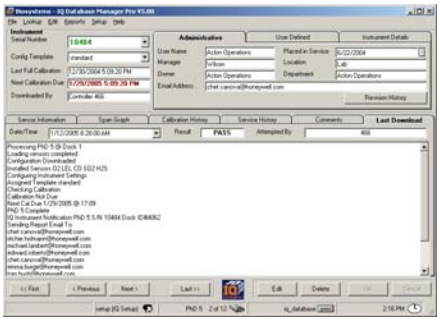
Database Manager always opens to the login screen.



2. Enter your User ID and password.

If this is the first time that the software has been run, enter “setup” as the User ID and “iq” as the Password. This is an administrative level user id and it recommended to be deleted after a new administrative level user is created for security reasons.

The Database Manager’s main interface will be shown.



3.1 New Database Users

To maintain data security, the IQ System requires the user to log in with a name and a password. Each user is also given a specific level of clearance ranging from General Use to Administrator.

The IQ System uses templates to determine the specific functions to perform when an instrument interfaces with the system. When a user modifies a template, the user’s name is saved to the “Last Modified By” file, which can be accessed through the Setup / Template / General Tab.

Section 5.5.2.2 of this manual provides a full explanation of how to enter a new user into the system.

3.2 New Instrument Users

A list of instrument users can be created to allow an instrument to be assigned to a specific user. This assignment will allow the IQ system to track instrument usage and exposures levels by a user or an instrument.

Section 5.5.3.1 of this manual provides a full explanation of how to create a new instrument user.

3.3 New Instrument Location

A list of instrument location can be created to allow an instrument to be assigned to a location. This assignment will allow the IQ system to track instrument usage and exposures levels in a particular location.

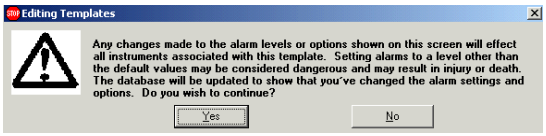
Section 5.5.4.1 of this manual provides a full explanation of how to create a new instrument location.

3.4 Templates

IQ Systems rely on user-defined templates to determine the specific functions to perform when an instrument interfaces with the system. To maximize flexibility, the IQ System allows for the programming of multiple templates. Each instrument will be automatically assigned to the "Generic (No Change)" template until it is reassigned to another template by the user or new Default template is created. See section 4.2.4 for further instructions on assigning an instrument to a template.

Default templates may also be set up by instrument type so that as new instruments are introduced to the system the instrument will be automatically assigned to a template specified in advance by the user. See section 5.5.1.1 for further instructions.

Whenever changes of any type are made to a template, the database logs the name of the user that is currently logged in. The user must acknowledge the change by clicking "Yes" on the Editing Templates warning screen.



At the first opening of the Database Manager, the default template will be the only template available.

Templates are discussed in detail in section 5.5.1.

3.5 Using IQ Systems

Once the IQ software and hardware have been installed and the system has been properly configured, the gas detector can interface with the PC. For IQ Calibration Stations, the interface is made by placing the instrument in the Docking Station.

Once the software recognizes the instrument, the system will upload the information contained in the assigned IQ template. IQ Calibration Stations will always bump test and sometimes automatically initiate instrument calibration upon recognition that the instrument is due for calibration or fails the bump test.

Note: IQ Calibration systems are only capable of downloading instrument readings and alarm events. IQ System's add on applications - BioTrak or BioTrak II program must be installed on the PC to read the data.

4. Using Database Manager

The Database Manager program can be accessed in several ways depending on the choices made during installation. The Database Manager icon will appear on the PC's desktop. Simply click on the icon to launch the software.

The Database Manager can also be accessed by clicking on the Start button followed by All Programs / Biosystems / IQ Pro / Database Manager Pro / Database Manager Pro.

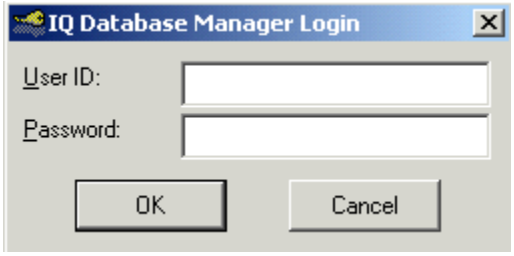
The Database Manager always opens to the log in screen.

4.1 Log in and log out features

The Database Manager maintains security by requiring users to log in before using the system. Whenever changes are made to any of the system templates, the name of the user that is currently logged in is stored in the database in the "Last Modified By" file.

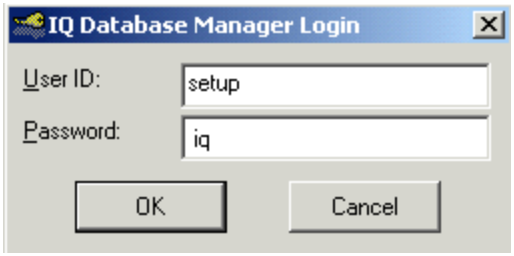
4.1.1 Log in

The IQ Database Manager Login screen is shown whenever the Database Manager program is accessed.

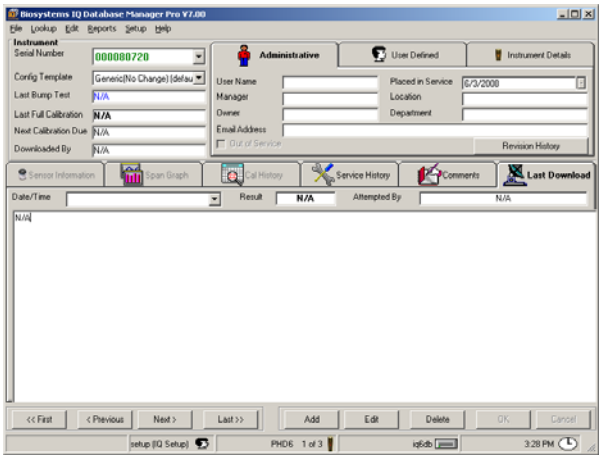


To log in enter your User ID and password.

If this is the first time that the software has been run, enter "setup" as the User ID and "IQ" as the Password.



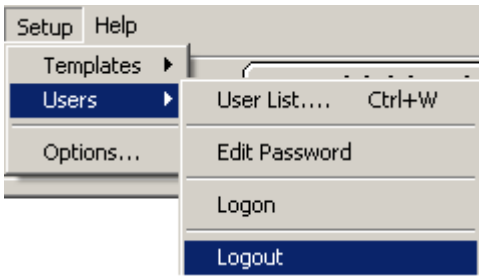
Once a user has successfully logged in Database Manager's main interface will be shown in a separate window.



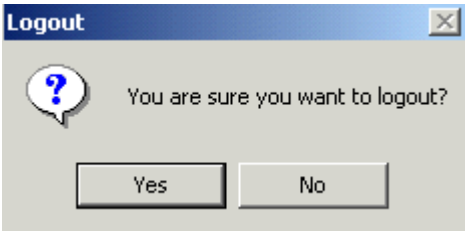
4.1.2 Log out

To maintain security within the database, users should log out of the system when they are finished with it.

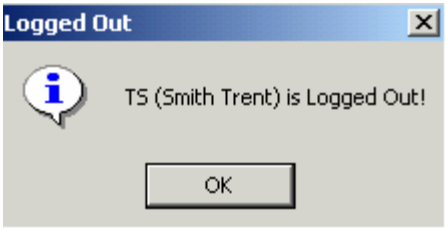
To log out of the system click on the Setup menu followed by Users / Logout.



The Logout screen will be shown. Click "Yes" to verify that you want to log out. Click "No" to return to the program.



Click "Yes". A window will be shown advising that the user has been logged out.



A new user must log in before the system can be used again.

4.2 The current record

Database Manager opens to the main screen, which will display a single record representing the data from an individual gas detector. It also automatically opens to a recordset consisting of all of the records for a certain detector type.

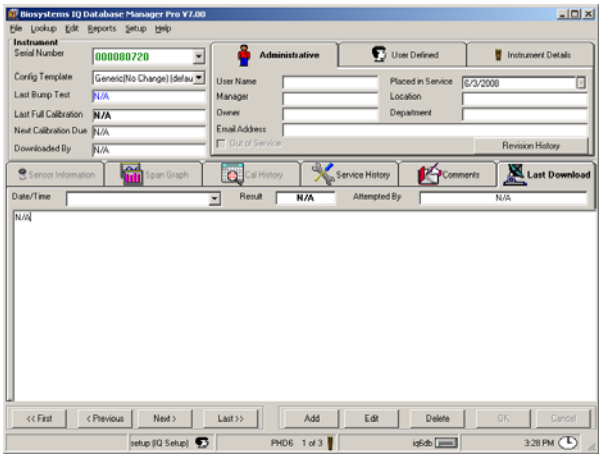
The data controls at the bottom of the screen can be used to quickly move through the current recordset one record at a time or to move directly to the first or last record in the recordset (see section 4.2.3).

To change the recordset to a different set of detectors use the Lookup menu as described below in section 5.2.

Note: If instrument data is currently being added to the database over a network, it will not appear on other PCs that are also on the network while the Database Manager Program is running on those PCs. To update the screen, either close the program and re-open it, or press the F5 key to refresh.

The main screen contains information about the detector whose serial number is shown in green at the upper left corner of the window.

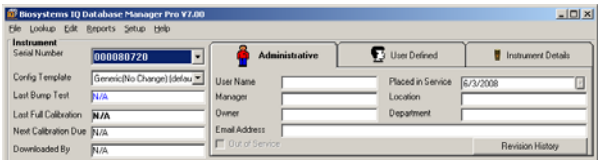
On first launch these fields will be empty.



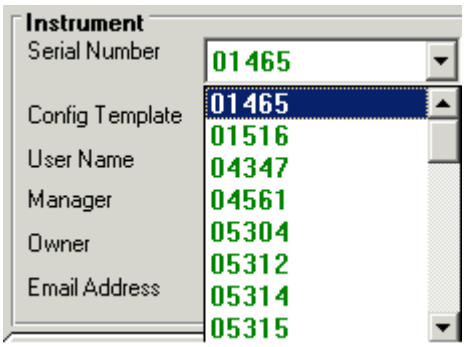
The screen is divided into three sections. The upper section contains specific information about the detector. The middle section contains detailed data about sensors, calibrations, service and downloading. The control bar at the bottom contains data controls.

4.2.1 Instrument section

The upper section serves as an overview of the information about the detector whose serial number is shown at the upper left in green.

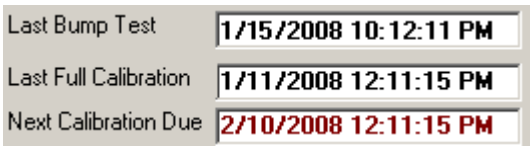


To access a different record, either use the control bar at the bottom to scroll through the current recordset, or if you know the serial number of the instrument that you need to find, click on the arrow next to the current serial number and select the new serial number from the list.

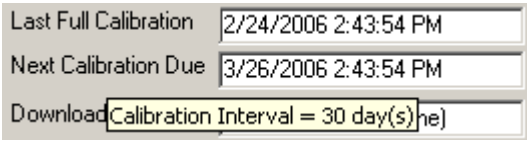


Note: The instrument must be in the current recordset for the serial number to appear in the list.

In the left column of the upper section are the dates of the last bump test and full calibration along with the date when the next calibration is due.

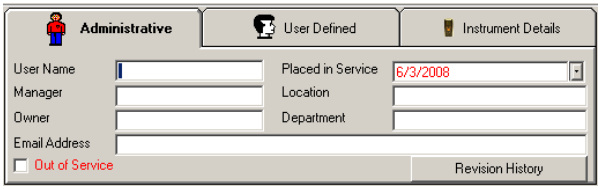


When an instrument is due for calibration, the next calibration due date is shown in dark red. To view the calibration due reminder interval, roll the mouse over the Next Calibration Due date and the date will appear in a pop up.



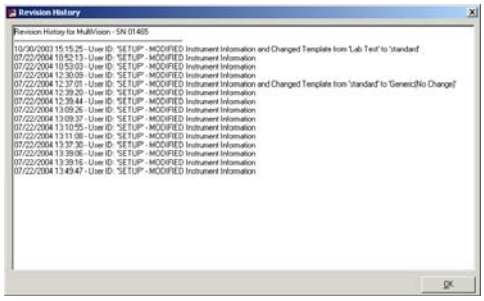
At the right center of the screen are three tabbed sections named “Administrative”, “User-Defined” and “Instrument Details”.

The “Administrative” tab shows specific information about the instrument such as user name, manager and in-service date.

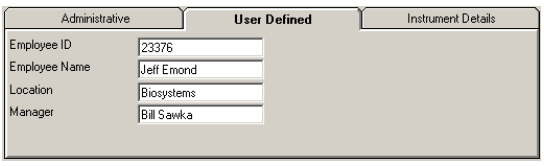


To mark the instrument out of service, first select Edit then select the Out of Service option at the lower left. Marking an instrument out of service removes it from the Bump and Calibration Status reports, and adds it to the Out of Service report.

To view the instrument’s revision history, click on the “Revision History” button at the far right inside the Administrative tab.

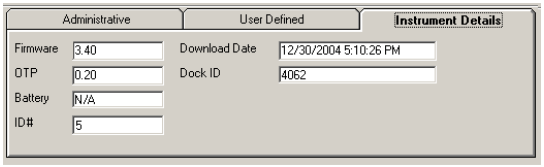


The “User-Defined” tab contains up to ten fields of specific information that have been added by the user. The tab will be blank until the user creates and enables the fields.



For instructions on adding fields to the User Defined tab, see section 5.5.5.5.

The “Instrument Details” tab contains basic instrument information such as Firmware and the last recorded download date.

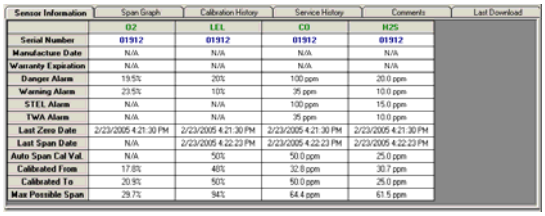


4.2.2 Sensors and Service

The center section on the screen comprises 6 tabbed pages and opens to the sensor information tab. The tabs at the top of the section can be clicked to access Span Graphs, Calibration and Service Histories, Comments and information on the Last Download.

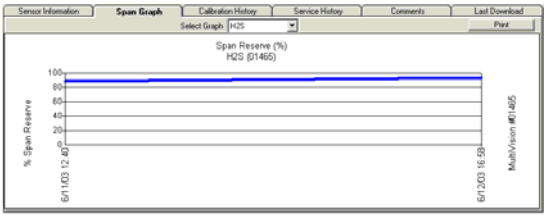
Sensor Information Tab

The sensor information tab contains all available information on the sensors in the instrument whose record is shown.



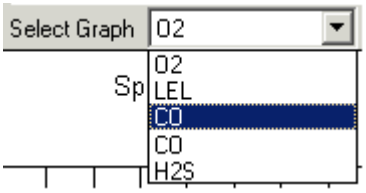
Span Graph Tab

Click on the Span Graph tab to access the span graphs for each of the sensors.

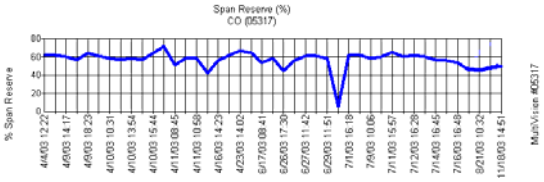


For instruments with more than one sensor, click on Select Graph and choose the sensor to view the graph for a different sensor.

The PhD Ultra, PhD Lite, PhD5, PHD6 and Cannonball3 are equipped with “smart sensors” that are able to identify themselves to the instrument. Database Manager will create a new sensor file whenever it recognizes a new sensor in these instruments, even if the new sensor is the same type as the sensor it is replacing. Each individual sensor will have unique data and will be shown in the pull down list.

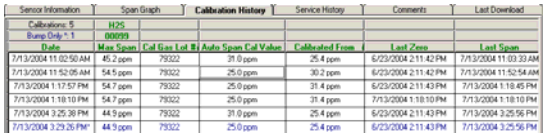


The MultiPro, MultiVision, Toxi Pro and Toxi Ltd are unable to recognize when a sensor is replaced with another of the same type. As a result, there is only one span graph per sensor type. A sensor change will often result in drastic shifts in the graph.



Calibration History Tab

The Calibration History tab contains the calibration history of the instrument represented by the current recordset.



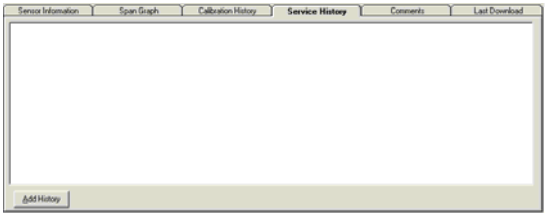
The Columns displayed in the Calibration History tab represent individual data fields from the database (see section 1.3 if needed). The data fields shown in the Calibration History may be selected by the user. To add or delete columns from the Calibration History, right click anywhere in the columns shown to access the complete list of data fields and click on a field to select or deselect it as needed. Selected data fields will be shown with a check mark.

Once the appropriate options are checked, press “OK” to return to the Calibration History.

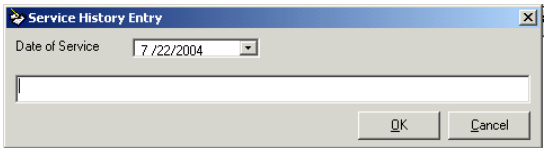
Note: If the instrument appears in more than one database, the calibration history may not be complete in any one database.

Service History Tab

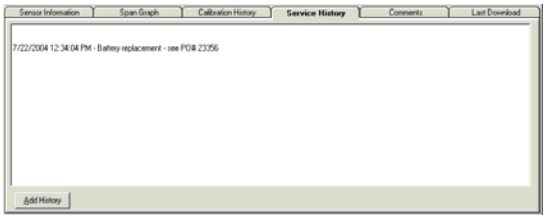
Click on the Service History tab to access the service history input box, which will appear blank until the user enters information.



To make an entry, first click edit on the control bar (near the bottom of the window). The “Add History” button will then be enabled. Click on “Add History” to make an entry. The “Service History Entry” window will then be shown. Type the entry into the input box at the center of the window. The date will be automatically entered into the file along with the entry.



Once the entry has been made, click “OK”. The entry will then appear in the Service History section.



Once an entry is made in the Service History section, it may not be retracted.

Comments Tab

Click on the Comments tab to enter comments about the detector.

To enter a comment, press the Edit button on the control bar. Unlike the Service History section, entries made in the Comments section do not automatically include a date and may be retracted in the future.

Once the comment has been typed in, press “OK” to enter it into the record.

Last Download

The final tab is “Last Download”, and contains the details of the last file download. It does not contain the actual results of the download.

Note: IQ System's add on applications - BioTrak or BioTrakII Software is required to view instrument readings and other data that have been downloaded from a detector.

4.2.3 Control bar

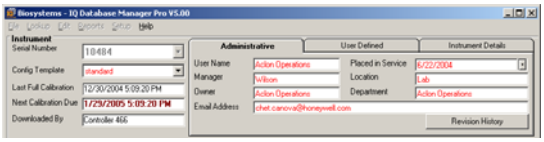
The database control bar is contained at the bottom of the main screen.

To scroll through individual files that make up the database, use the “<<First”, “<Previous”, “Next>” and “Last>>” controls on the left side of the upper section. The Edit and Delete options appear on the right side of the upper section. The "Session/Events" button will appear when the selected instrument has session or event data stored in the database. Selecting this button will open the BioTrak II application to display the session and event data.

The control bar’s lower section contains the name of the current user, the name of the file recordset, the number of the file within the recordset, and the database name.

4.2.4 Edit the Current Record

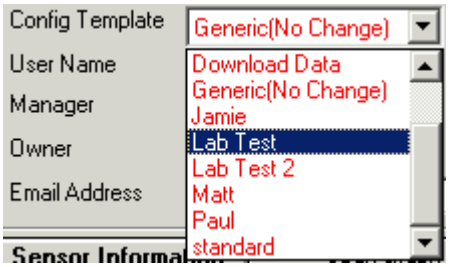
To edit any of the information on the screen, press the Edit button in the control bar. Once “Edit” is pressed, the modifiable fields will be shown in red.



Note: Calibration data can not be modified.

IQ Calibration Stations rely on user-defined templates to determine the operations to perform on instruments as they interface with the docks. Each detector is assigned to a specific template.

The detector's current template is shown in the field immediately below Serial Number next to "Config Template". To change the template that will be applied to the detector, click on the arrow next to the template name. The current template choices will then be shown.



Once the appropriate template has been selected, press the "OK" button in the control bar to continue.

Instrument User Assignment

The instrument's current user assignment is shown in the field next to "Instrument User" and "User ID". To change the user assignment, click on the arrow next to the current assignment. A list of instrument user names will then be shown. **Section 5.5.3.1 of this manual provides a full explanation of how to create or edit instrument users.**

Note: Instrument user names are created using the user and location manager functions.

Once the appropriate user has been selected, press the "OK" button in the control bar to save the changes.

Instrument Location Assignment

The instrument's current location assignment is shown in the field immediately below "Location". To change the location assignment, click on the arrow next to the current assignment. A list of locations will then be shown.

Once the appropriate location has been selected, press the "OK" button in the control bar to save the changes. **Section 5.5.4.1 of this manual provides a full explanation of how to create or edit instrument locations.**

Note: Locations are created using the user and location manager functions.

⚠WARNING Template changes may affect the functionality of the detector.

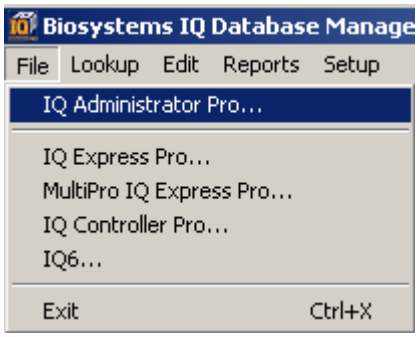
For detailed instructions concerning template settings see section 5.5.1.

5. Menu Options

5.1 File Menu

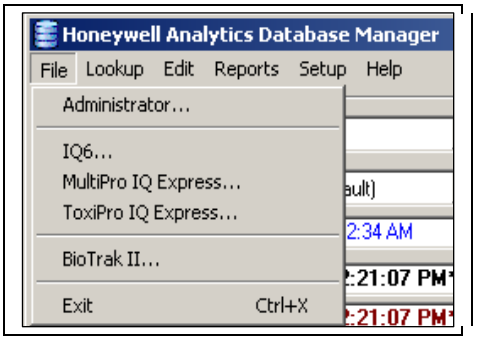
The Database Manager file menu controls access to the other IQ applications that are installed on this computer. IQ Administrator is required to be installed in order to run any IQ application. It can be used to set as default the database in which the information is to be stored.

Other IQ applications such as IQ6, IQ Express, MultiPro IQ Express may or may not be installed on your computer. Whichever ones are installed will be displayed in the File menu, and you can launch them from here.



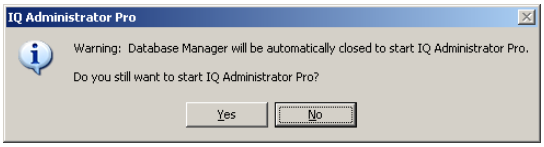
5.1.1 Open IQ Administrator

To open IQ Administrator, click on File / IQ Administrator.



The software will inform you that the Database Manager program will be automatically closed

out and prompt you to open the IQ Administrator program.

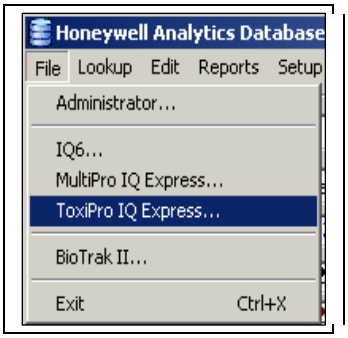


Click “Yes” to proceed.

For further instructions concerning the IQ Administrator program, see the IQ Administrator / PostgreSQL Installation Guide that was shipped with the software.

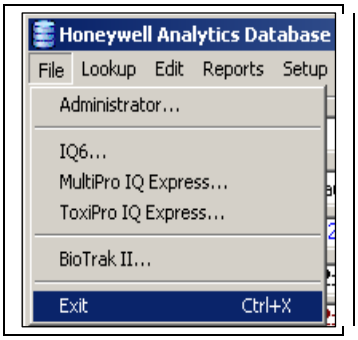
5.1.2 Launch IQ Software

To launch IQ Software from Database Manager, click on the appropriate program in the File Menu.



5.1.3 Exit

To close out the Database Manager program, select Exit from the File Menu. The database that is currently open will be automatically closed.



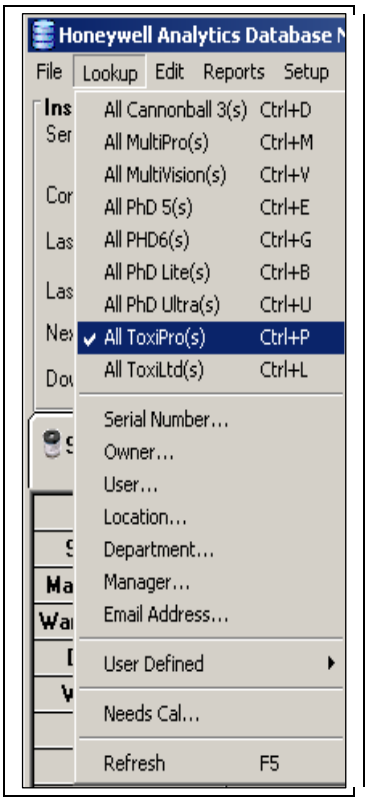
5.2 Lookup Menu

As the IQ system is used, instrument and calibration data are stored and the IQ database grows. The Lookup menu is designed to create and implement a search query to locate specific instruments.

To simplify the task of finding data in the database, the Database Manager’s active recordset is limited to one type of gas detector.

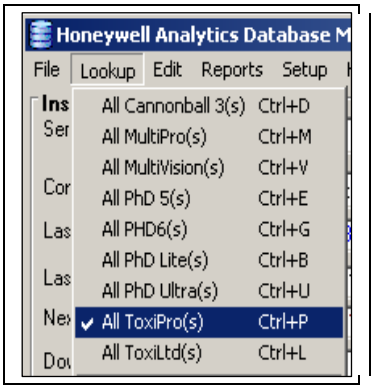
The detector type is checked in the upper box when the Lookup menu is activated.

Specific search options within the designated recordset are located in the lower sections of the Lookup menu and include searches by specific information, such as by serial number, by user-defined fields. A specific search of the recordset may also be made for instruments that need calibration.



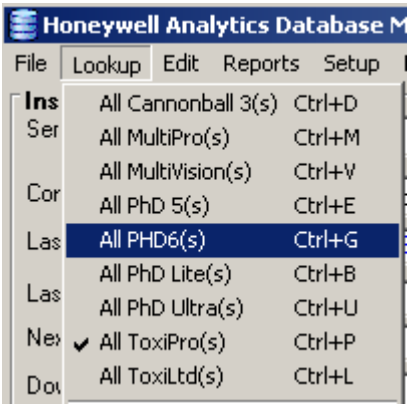
Note: Instrument readings and other session data that are downloaded from the detector may not be accessed through the Database Manager program. Session data must be accessed through the BioTrak or BioTrak II program. See the appropriate BioTrak Reference Manual for details.

When the Lookup menu is first accessed, the instruments in the current recordset will be indicated with a check mark. In the image below, the current recordset is “All ToxiPro(s)”.



5.2.1 Search by instrument type

To search the database for specific types of instruments (e.g. All PHD 6(s), select the instrument type from the uppermost section under lookup.

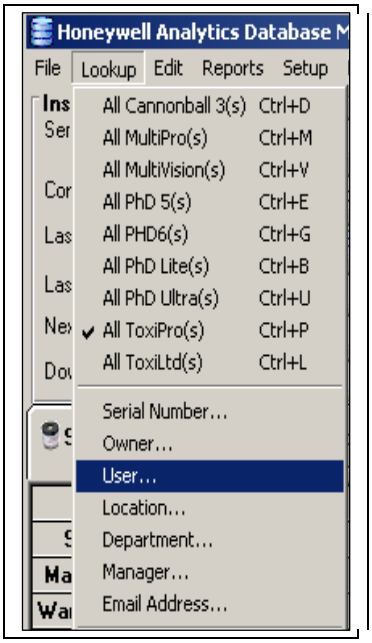


The database will then be searched for all instruments of the specified type and the recordset will be shown. Once the search is completed, the control bar at the bottom of the screen may be used to scroll through the new recordset.

For more information on the Control Bar, see section 4.2.3 above.

5.2.2 Search with specific information

If specific information is known in addition to the instrument type, such as the instrument's serial number, owner, user, location, department, manager or e-mail address, click on the appropriate search option in the second section under "Lookup".

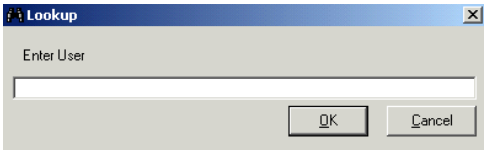


Note that when a search of this type is initiated, you are performing a search within the current recordset only.

One of the drawbacks to using this type of search is that the search entry must match file data exactly to return data.

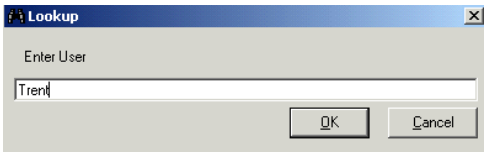
As an example, if you know instrument type and the user's name but not the serial number of the instrument, click on Lookup / User… with the correct instrument type selected.

The following screen will then be shown:



Enter the name of the user. To reduce the chance for errors, type as few characters as possible to narrow down the lookup. If the entire name is typed in, the corresponding entry in the database must match it exactly or no data will be shown. As an example, if an instrument is listed as owned by "Michael Smith", and the name "Mike Smith" is typed in, the query will not show the results for "Michael Smith". Alternately, if the name "Smith" alone is typed in, the instruments belonging to "Michael Smith" and those belonging to any other person whose name is listed as "Smith" will be shown.

In the following example, the user name "Trent" is sufficient to narrow the database.

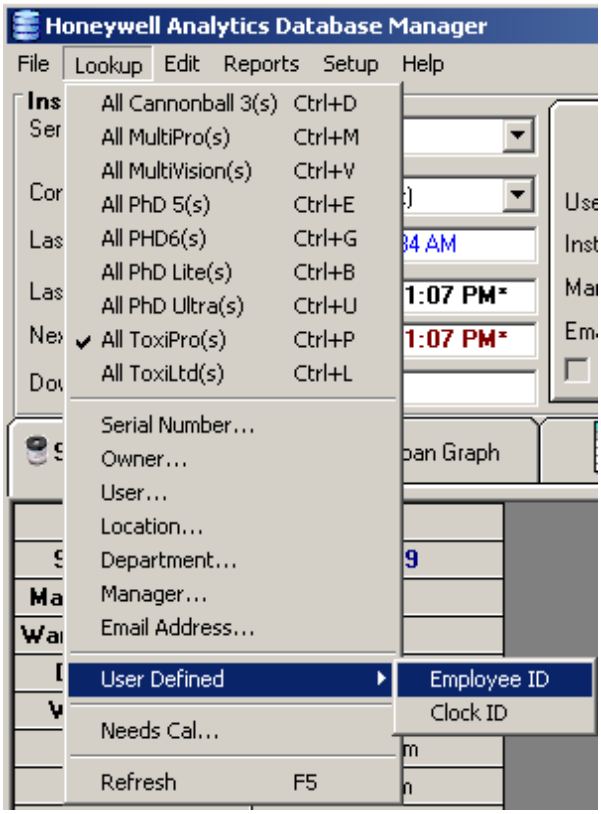


Since there is only one person named Trent in our database, this query will locate the instruments of the selected type whose owner is “Trent”. Click “OK” to continue.

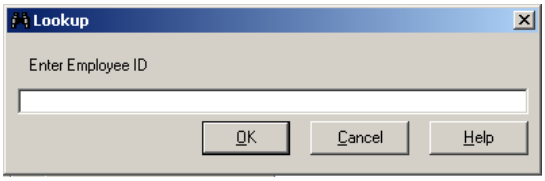
5.2.3 Search by User-Defined field

Once user-defined fields have been set up though the Setup / Options menu (see section 5.5.3), the new fields may be used to search the database.

To view the user-defined fields, click on the Lookup menu and then drag the mouse over “User Defined”. The user defined options will then be shown.



Select the appropriate option. The Lookup input window will be shown.

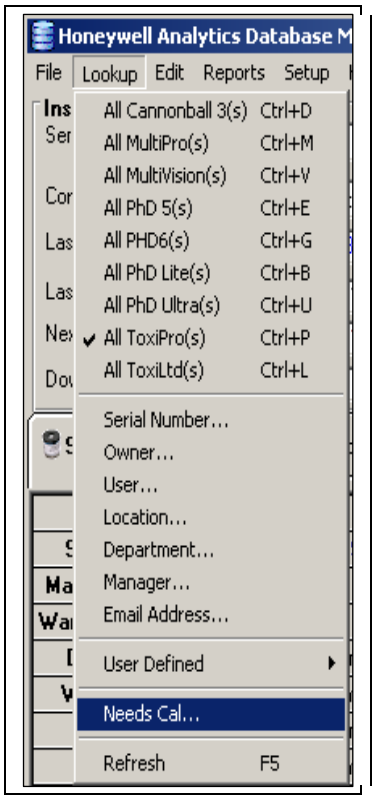


Enter the information and press “OK” to execute the search.

Note: The information that is entered into the Lookup input window must match the entry in the database exactly for this search to work properly.

5.2.4 Search by Needs Cal…

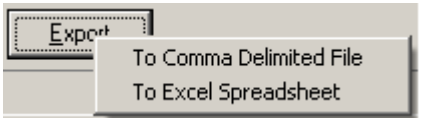
To search for instruments of the selected type that need calibration, click on Lookup / Needs Cal.



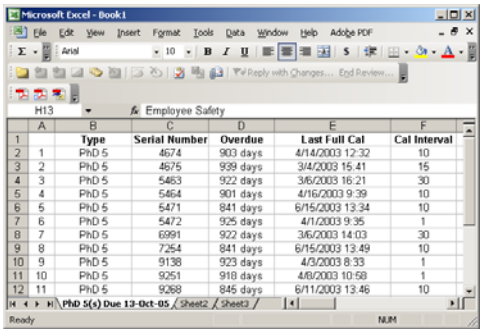
Since “All ToxiPro(s)” is selected in the upper window, ToxiPros that need calibration will be listed in the report.

5.2.4.1 Print Needs Cal Report

Press the “Export” button at the bottom left of the calibration due screen to create a Needs Cal Report for the current recordset. Two options are available. The report can be compiled as either a Comma Delimited File (.csv) or as an Excel spreadsheet (.xls).



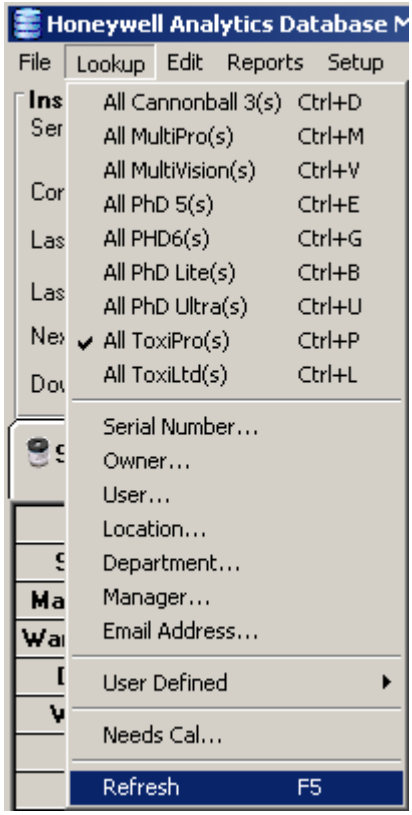
The Excel program will be automatically launched if “To Excel Spreadsheet” is chosen.



From Excel, select Print from the File Menu to print the report.

5.2.5 Refresh

The refresh command is used to update the database on networks where multiple PCs are able to access the database at the same time. To refresh the screen, click on Lookup / Refresh.



A refresh may also be accomplished by pressing the F5 key.

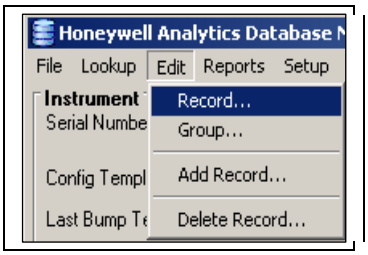
5.3 Edit Menu

The edit menu option allows the user to edit or delete instrument information. Edits may be performed to current individual record or to the current group of records (recordset).

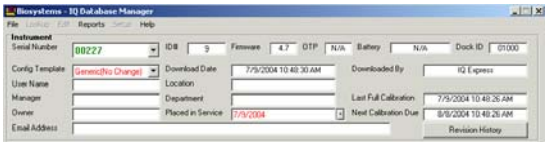
Note: Calibration records and certain other types of data may not be modified by the user.

5.3.1 Edit Record

To edit the instrument record that is currently shown, select Edit / Record.



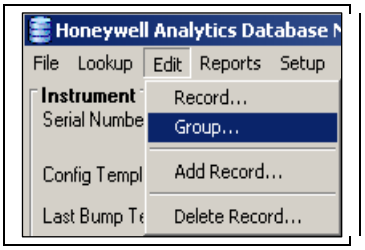
Once Edit / Record is selected, information can be added to the input boxes in the upper section of the form. Information that can be changed will appear in red. Most blank fields will also accept information.



Once the file has been updated, press the “OK” button at the lower right to save the changes.

5.3.2 Edit Group

To edit the current recordset, select Edit / Group.



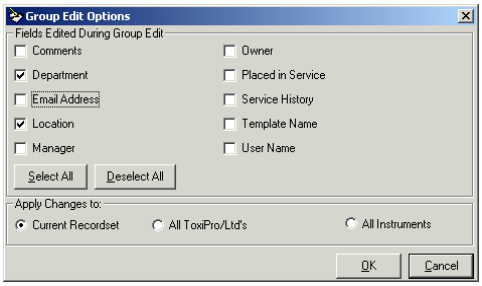
Note: Changes to any of the fields through the Edit / Group option will be made to every instrument in the current recordset.

For instructions on locating specific instruments, see the Lookup option above in section 5.2.

Once Edit / Group is selected, enter information into the input boxes as needed in the upper section of the form. Information that can be

edited will appear in red. Most blank fields will also accept information.

Once the fields have been updated, press the "OK" button at the lower right, the Group Edit Options screen will be shown, which will require you to confirm the group edit.



The Group Edit Options screen is designed to prevent accidental mass replacements of information in the database by forcing the user to acknowledge the specific changes and the instruments to which the changes should be applied.

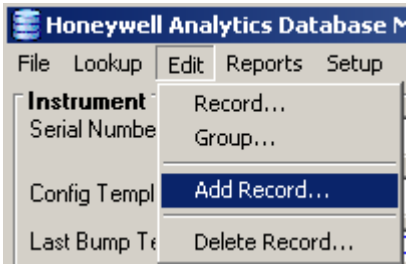
The window is divided into two sections. The upper section contains the information fields that may have been modified during the edit. Select the fields that were modified during the edit that should be applied to the recordset. In the example above, the entries made in the fields "Department" and "Location" will be entered into every record in the current recordset.

The lower section of the window allows the user to decide whether the changes should be applied to the current recordset, all instruments of the current type, or to all instruments in general. Click on the appropriate selection.

Once the fields and recordset for the changes have been selected, click "OK" to continue. The changes will then be implemented.

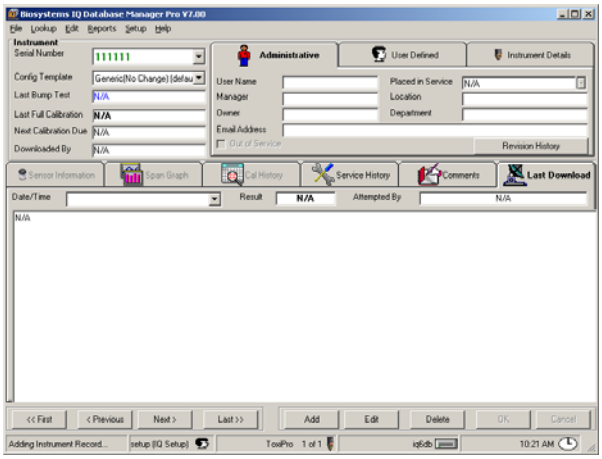
5.3.3 Add Record

The Add Record option in the Edit Menu allows the user to enter the information for an instrument, including the instrument serial number, before the instrument actually interfaces with an IQ System. To add a record select Edit / Add Record.



The software will prompt for the serial number of the new instrument.

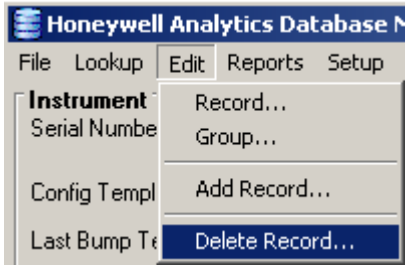
Enter the serial number. The record will then be shown on the main screen.



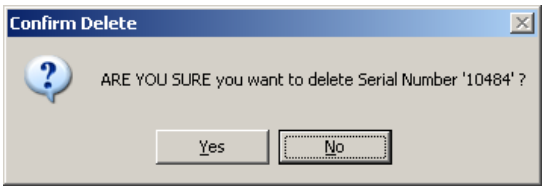
Click Edit in the lower control bar to make changes to the record. Fields that have information in them that can be edited will appear in red. Most blank fields will also accept information.

5.3.4 Delete Record

To delete the instrument record that is currently shown, select Edit / Delete Record.



The software will prompt you to confirm the deletion.



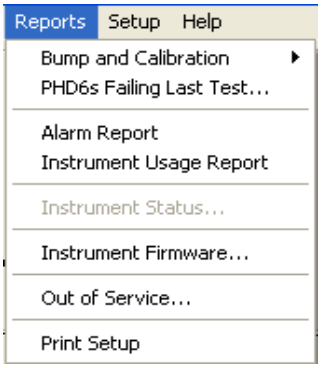
Note: A record may not be retrieved once it has been deleted. Instead of deleting the instrument, you may wish to take it out of service.

An instrument can be taken out of service by checking the checkbox on the Administrative tab while editing the instrument record.

Click “Yes” to proceed with the deletion of the record.

5.4 Reports Menu

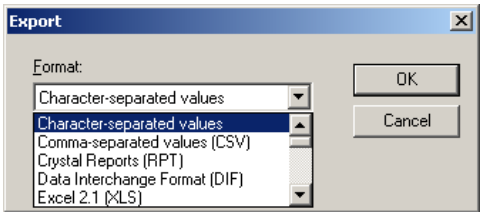
Report options and controls are located in the Reports menu.



Once a report option is selected and the report is generated, the report may be printed or exported as needed by the user.

Controls for printing and exporting are located near the top of the screen.

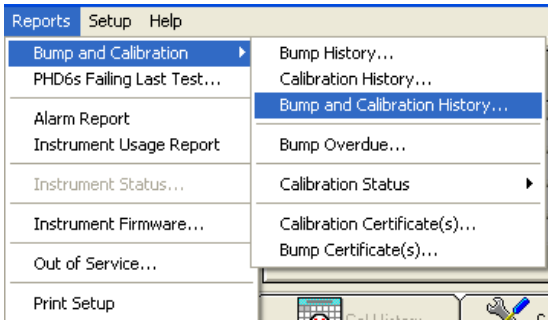
Reports may be exported in a variety of forms. When the export key is clicked, a window is shown with the options.



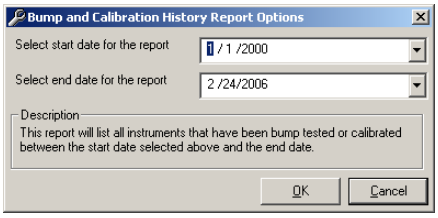
5.4.1 Bump and Calibration Histories

The first three options in the Reports Menu are Bump History, Calibration History and Bump and Calibration History. These options allow the user to print specific reports from the database about the current recordset.

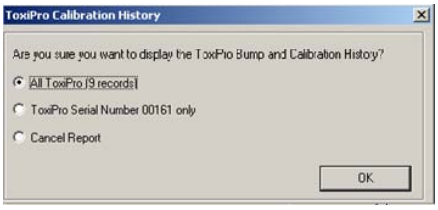
Note: The Bump Reports may not be available for certain instruments.



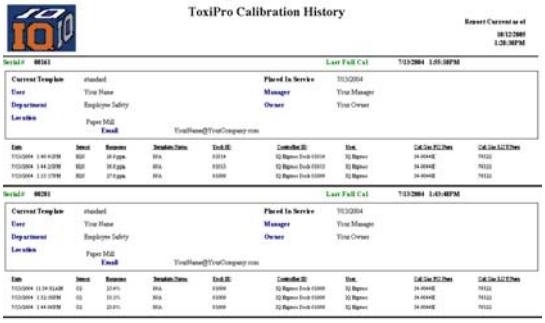
The report options window will be shown.



Specify the start and end dates for the report.



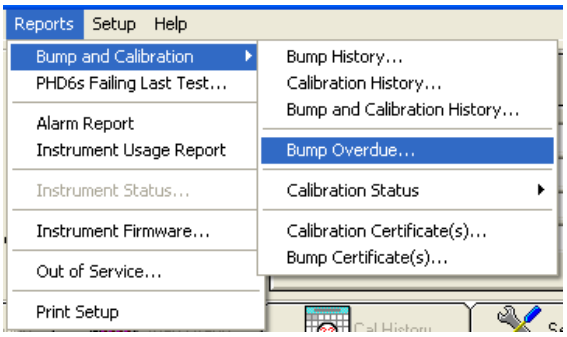
Select the report for the current record (1 instrument) or for the current recordset (all instruments). The report will then be shown.



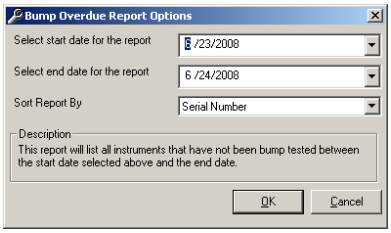
5.4.2 Bump Overdue Report

The bump overdue report lists all instruments in the current recordset that are overdue for a bump test.

The Bump Overdue option is not available for all detector types.



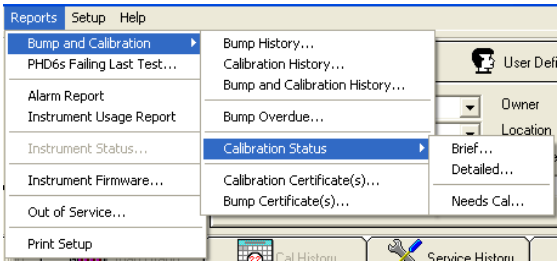
The options window will be shown.



Select the start and end dates for the report, change the sort method if necessary and press "OK". The report will then be generated and will show any instruments that were overdue for a bump test during the specified timeframe.

5.4.3 Calibration Status Report

To generate a Calibration Status Report for the current recordset, select Calibration Status from the Reports Menu. Three options will be shown: Brief, Detailed and Needs Cal.

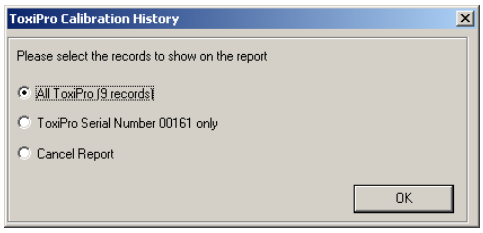


The Brief Status Report lists the instruments in the current recordset and shows their current calibration interval and status.

The Detailed Status Report creates a separate report with a full calibration history for each instrument in the current recordset.

The Needs Cal Report lists all instruments in the current recordset that have passed their calibration due date.

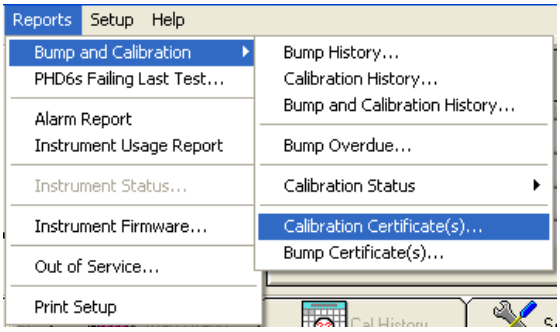
Once a report is selected a window will be shown that requires the selection of either the current recordset or just the current record.



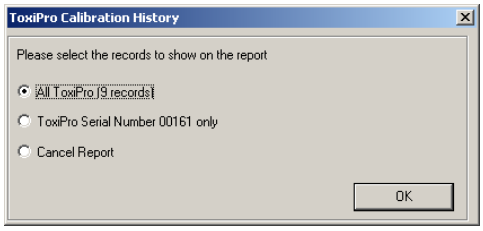
Select the appropriate report, or Cancel Report and click "OK".

5.4.4 Calibration and Bump Certificates

To view or print bump or calibration certificates select the appropriate choice from the Reports menu.



Once a report is selected a window will be shown that requires the selection of either the current recordset or just the current record.

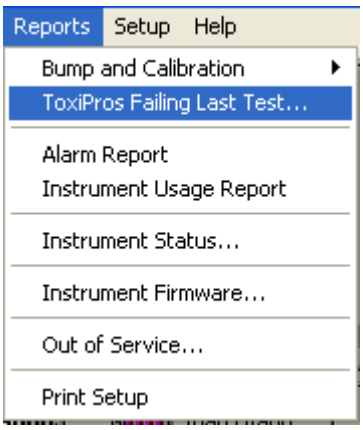


Select the appropriate report and click "OK" to view the report.

Calibration Certificates may be viewed on the screen, printed directly or exported as needed.

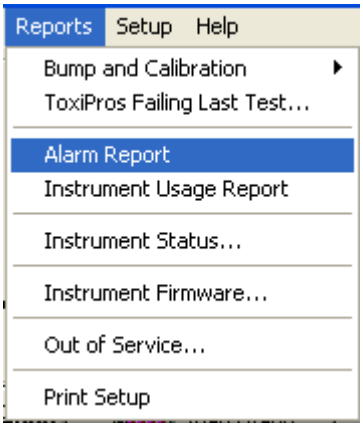
5.4.5 Instrument Failing Last Test Report

The Instrument Failing Last Test report is a list instruments' failing testing during the last time the instrument was placed in the dock. The report is constrained to the instrument type selected.



Alarm Report

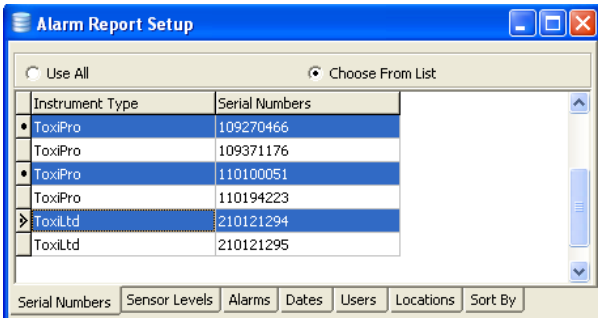
The alarm report is a list alarm occurring during a defined time interval.



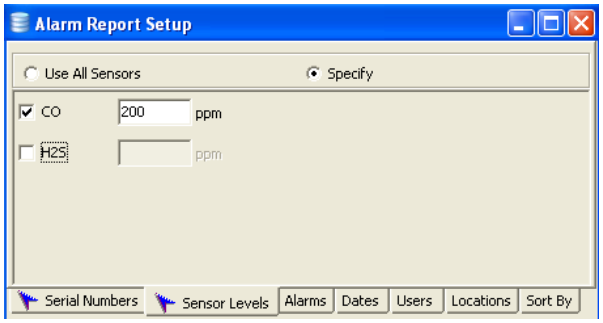
The report can be defined by a number of parameters and sorting criteria – instrument user, location, instrument serial number, sensor type, alarm type, and/or date range.

The parameters are selected on a series of tabs. The tab selections are saved and will be the default parameters the next time the report is selected. A blue flag will indicate when limiting parameters are selected.

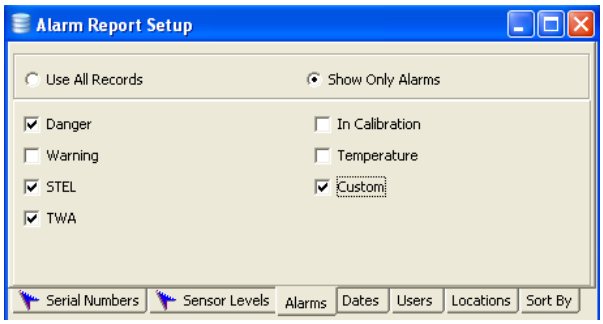
The Serial Number tab allows limiting the instrument serial numbers included in the report. Multiple instruments can be selected when holding the CTRL key while selecting an instrument.



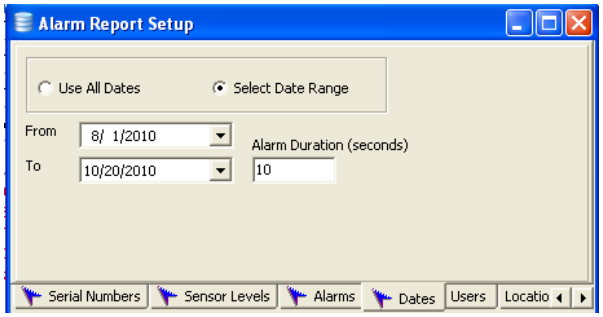
The Sensor Level tab allows limiting the report based on sensor type and alarm level. The alarm level can be typed in the text box.



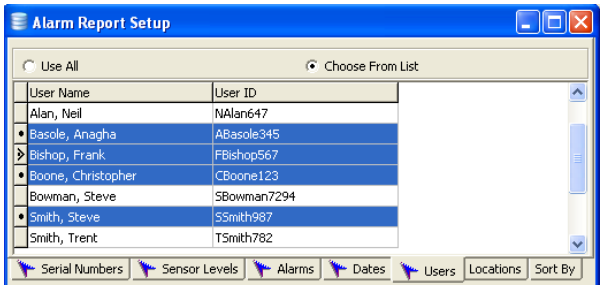
The Alarms tab allows limiting the report based on alarm type.



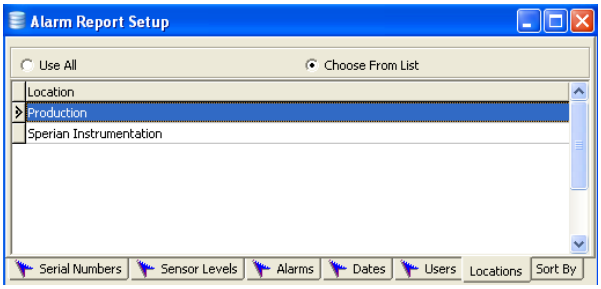
The Dates tab allows limiting the report based on a date range and duration of the alarm. The dates are selected from a drop down calendar control and the alarm duration can be typed in the text box.



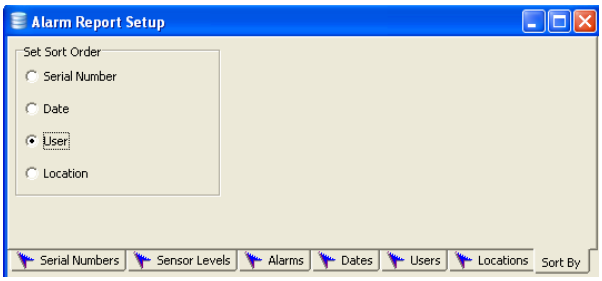
The Users tab allows limiting the report based on instrument user.



The Locations tab allows limiting the report based on instrument location.

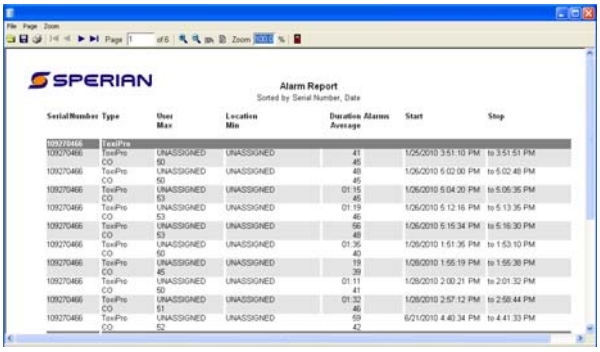


The report can be sorted by instrument serial number, date, instrument user or location.



The “Defaults” button on the bottom of the form will restore the limiting parameters to program defaults. The blue flags will be cleared.

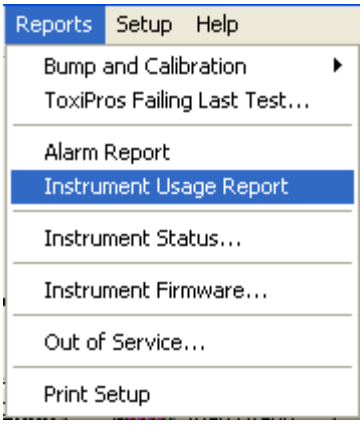
Select the “Preview” button on the bottom of the form to view the results. The report can be printed from the preview screen.



Select the “PDF” button to create a PDF formatted version of your report.

5.4.7 Instrument Usage Report

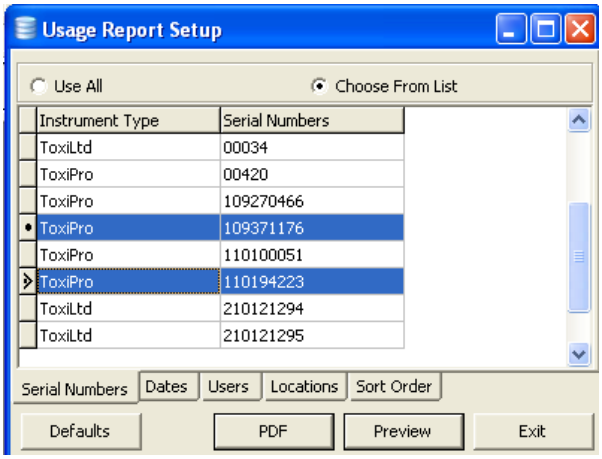
The instrument usage report ~~is~~ lists instrument usage by user.



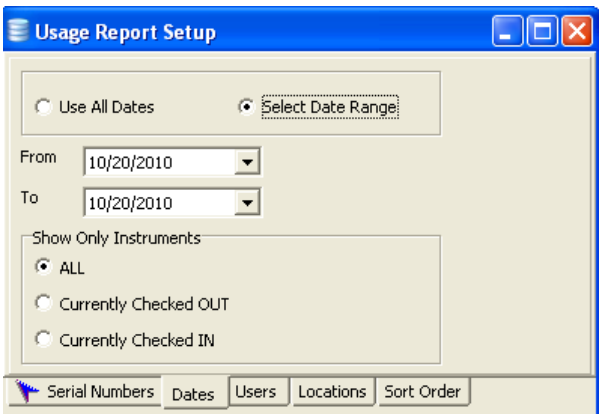
The report can be defined by many parameters and sorting criteria – instrument serial number, date range, instrument user and/or location.

The parameters are selected on a series of tabs. The selections on these tabs are saved and will be the default parameters the next time the report is selected. A blue flag will indicate when limiting parameters are selected.

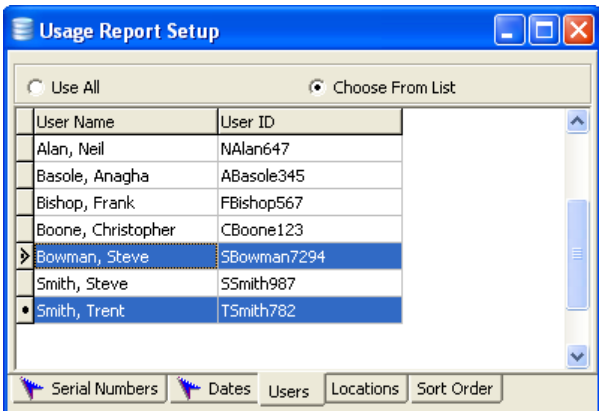
The Serial Number tab allows limiting the instrument serial numbers included in the report. Multiple instruments can be selected when holding the CTRL key while selecting an instrument.



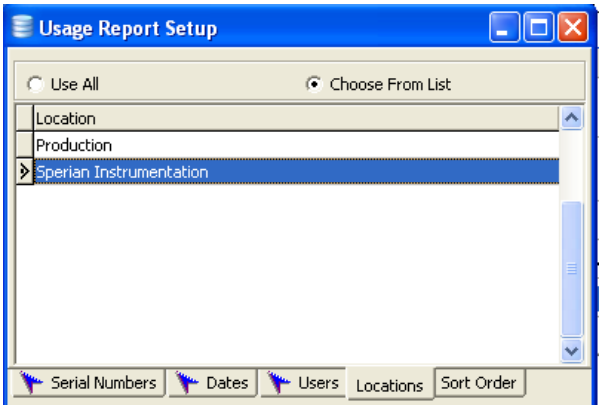
The Dates tab allows limiting the report based on a date range and the check out status of the instrument. The range is selected from a drop down calendar control.



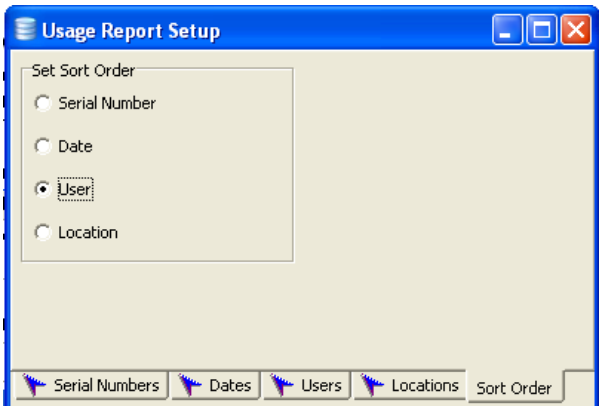
The Users tab allows limiting the report based on user.



The Locations tab allows limiting the report based on location.

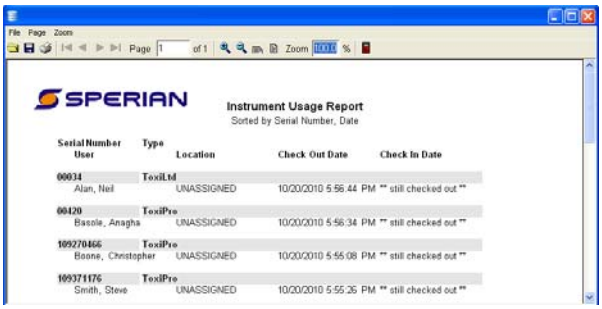


The report can be sorted by instrument serial number, date, instrument user or location.



The “Defaults” button on the bottom of the form will restore the parameters to program defaults. The blue flags will be cleared from each tab.

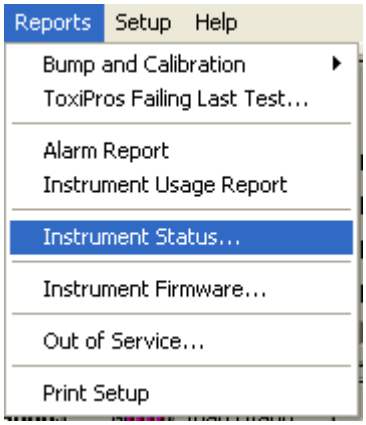
Select the “Preview” button on the bottom of the form to view the results. The report can be printed from the preview screen.

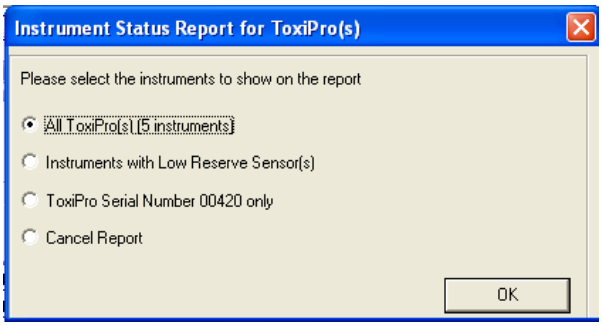


Select the “PDF” button to create a PDF formatted version of your report.

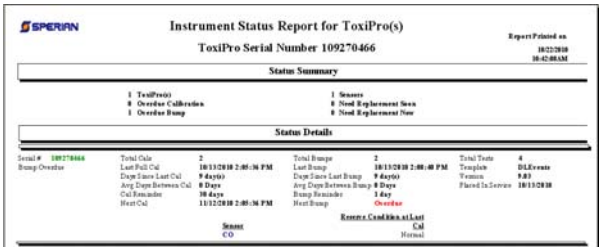
5.4.8 Instrument Status Report

The instrument status report will list the current status of each instrument and its sensors in easy to understand format. The report will list general information about instrument grouping – how many are overdue for bump testing and calibration and how many sensors need replacing. The report will list status details for each instrument.



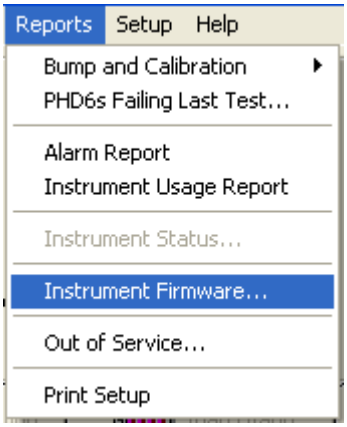


Once a report is selected a window will be shown that requires the selection of either all instruments, only instruments with Low Span Reserve, or only the current instrument. The report will then be shown.

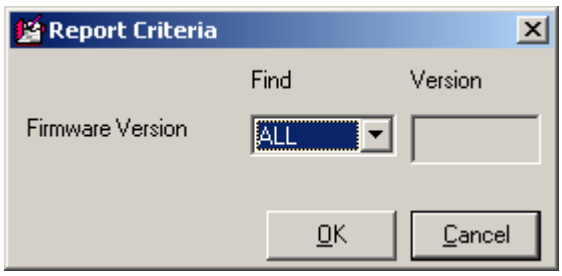


5.4.9 Instrument Firmware Report

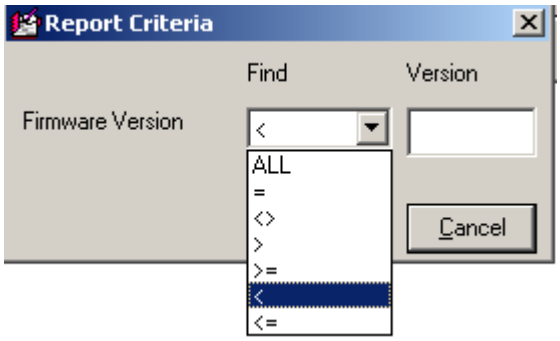
The instrument firmware report is a simple list of the instruments in the current recordset along with their versions of instrument firmware. To generate the instrument firmware report, select Instrument Firmware from the Reports Menu.



A Search Criteria window will be shown which allows the recordset to be narrowed to specific instruments

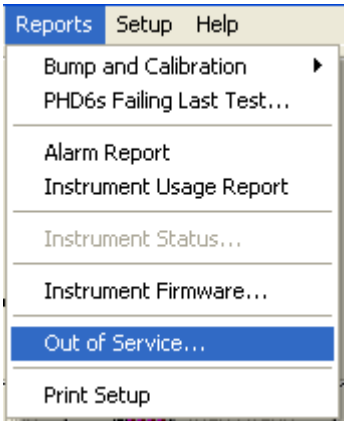


Select All or use the built-in search mechanism to narrow the results.



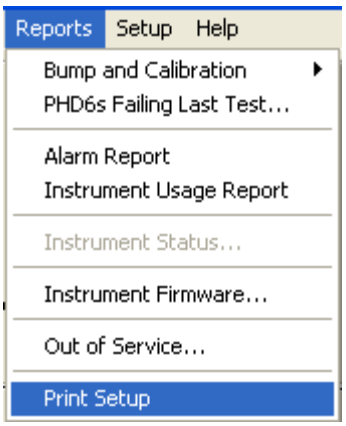
Out of Service Report

Instruments may be marked “Out of Service” on the Administrative Tab. Instruments marked “Out of Service” will not appear in generated reports. To view instruments in the current recordset that are currently marked out of service, click on “Out of Service” in the Reports Menu.



5.4.11 Print Setup

To access the print controls for the reports menu, click on Reports / Print Setup.



A standard print settings window will be shown. The screen will vary according to your operating system and the options of the printers installed on your PC.

5.5 Setup Menu

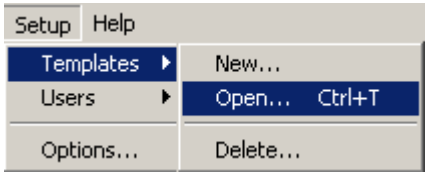
The setup menu provides access to user information, template information and other options.

5.5.1 Setup / Templates

In IQ Systems, Templates are used to control operations associated with specific instrumentsThe template comprises eight tabbed pages that access the modifiable operating information for any gas detector that is assigned to that specific template.

To create a new template, click on Setup / Templates / New and proceed to section 5.5.1.1 – 5.5.1.7 for instructions concerning template settings. New templates are automatically opened when they are created.

To open an existing template, click on Setup / Templates / Open and select the template from the list that is shown. Then proceed to section 5.5.1.1 – 5.5.1.7 for instructions concerning template settings.



Note that any changes made to a template will only be applied to the template that is currently open.

To delete a template, click on Setup / Templates / Delete and select the template from the list that is shown.

Some selections have drop down lists. In some case, a value can be set by typing in a value (alarm levels, calibration gas value, etc). The following defines the common values in the drop down lists:

'No Change': This is normal default for all selections. When selected, the selection is not modified from its current setting.

'Use Default': The setting is modified to the factory default.

'Enabled': The setting is enabled.

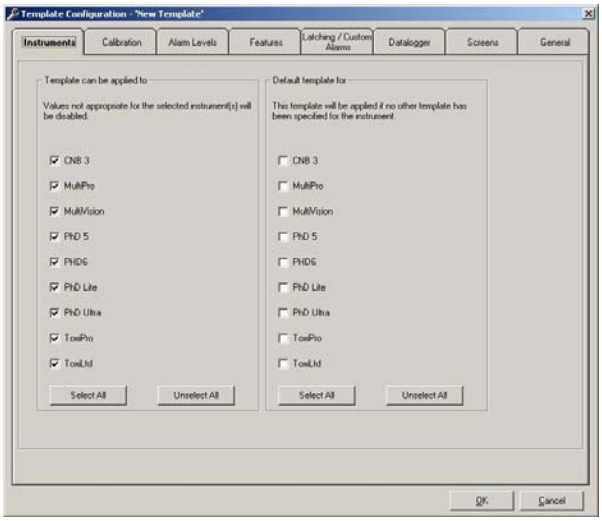
'Disabled': The setting is disabled.

For instructions on how to assign an instrument to a template, see section 4.2.4.

⚠WARNING Changes made to a template will be automatically uploaded to all instruments assigned to that template when the instrument is linked to the IQ System. Some changes will directly affect the functionality of the detector.

5.5.1.1 Instruments Tab

Once a template is opened, the Instruments tab will be shown.



The Instruments tab contains two columns.

The column on the left shows the instruments that the current template can be applied to. Selections made here will appear in the main screen as options in the Configuration Template selection for the instrument listed.

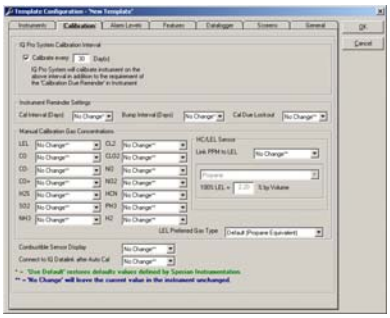
See section 4.2.4 for instructions on assigning a specific template to a specific instrument.

The column on the right shows instruments for which this template is or will be the default template. For example, if the template named "standard" is applied to ToxiPro and a new ToxiPro is detected in the system, the "standard" template will automatically be assigned to that ToxiPro.

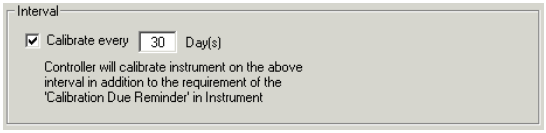
Note that the instrument must be selected in the left column (Instruments the template can be applied to) before it can be selected in the right column (Instruments for which this is the default template).

5.5.1.2 Calibration Tab

The calibration template has controls for the calibration interval, the calibration due reminder, the calibration gas concentrations and the combustible sensor display setting.

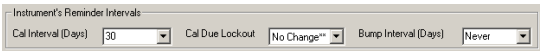


For IQ Calibration Stations, the calibration interval controls the interval at which the controller will automatically initiate calibrations. The checkbox must be checked for the setting to be enabled.



The calibration due interval can be set to an interval in days (between 1 and 180), to "Never" or to "No Change". Setting the interval to "Never" will effectively disable the calibration due reminder interval. Setting it to "No Change" will leave the interval setting in the instrument as it is.

The Instrument's Reminder Intervals are shown in the middle of the calibration tab.



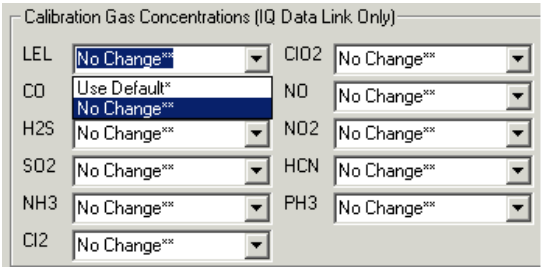
The instrument's calibration and bump test reminder intervals can be set to any numbers of days between 0 and 180. To have the IQ Calibration Station perform a bump test or full instrument calibration every time an instrument assigned to this template is placed in the dock, set the interval to 0 days.

The Cal Due Lockout function will cause the instrument to automatically initiate the calibration procedure if it is turned on when calibration is due. If the calibration is not performed with the Cal Due Lockout enabled, the instrument will automatically shut itself down. For more information on the calibration due lockout function, see the instrument's reference manual.

Note: The instrument firmware must support the Bump Interval and the Cal Due Lockout function for these items to be active in the software.

For recommendations concerning the calibration interval, see Appendix A.

The calibration gas concentration settings only apply to manual calibrations. The settings can be a numeric value, "No Change" or "Use Default".

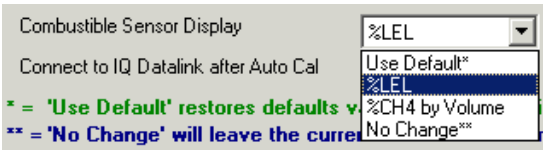


⚠WARNING Calibration gas concentrations entered in the Calibration Gas Concentrations section will be automatically uploaded to instruments and will be used in subsequent calibrations until the user changes them again. Calibration gas concentration settings must match actual calibration gas values to ensure accurate gas detector calibration. Non-matching calibration gas and calibration gas values may lead to dangerously inaccurate readings.

Numeric entries will be automatically uploaded to the instrument once it is linked to the IQ System. The "Use Default" setting restores the standard factory-programmed value. "No Change" leaves the existing value that is already programmed into the instrument.

The IQ Calibration Station software contains its own calibration gas concentration values for the gases used in the system. The concentrations listed in the IQ Controller software are automatically adopted whenever the IQ Controller performs a calibration.

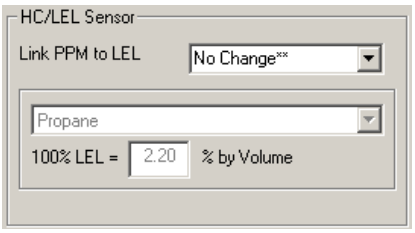
The combustible sensor display controls whether the combustible gas reading is shown in terms of %LEL or %CH_4 by volume.



The "Use Default" setting restores the standard factory-programmed value. "No Change" leaves the existing value that is already programmed into the instrument.

Note: Not all instruments offer the ability to modify the combustible sensor display settings.

At the far right of the screen, there are settings for the HC/LEL sensor, which is only available in the Cannonball3.



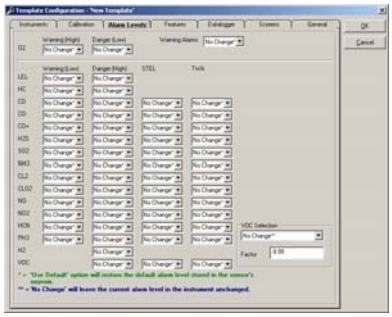
See the Cannonball3 Reference Manual prior to changing the HC/LEL Sensor's settings.

5.5.1.3 Alarm Levels Tab

The alarm levels tab contains controls for the instrument's gas level alarms.

⚠WARNING Modifications to the instrument's alarm settings may cause the detector to fail to respond to potentially dangerous atmospheric conditions.

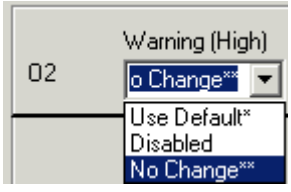
Changes made to a template will be automatically uploaded to all instruments assigned to that template when the instrument is linked to the IQ System.



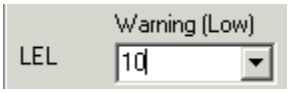
One danger and one warning alarm is included for instruments equipped with oxygen or LEL sensors (including the HC sensor). Toxic gas sensors include up to 4 alarms: Warning, Danger, STEL and TWA.

The default configuration for alarm settings is "No Change". For fields in which "No Change" is selected, the IQ System will not reprogram the instrument alarms during the interface.

Other options include "Use Default" and "Disabled". The "Use Default" option replaces the existing alarm setting with the instrument's default setting. Select "Disabled" to disable the alarm entirely.



The final option is to type the new alarm level into the field. Select the alarm setting and type in the new setting.



Press the "OK" button at the bottom of the window once the alarms have been modified as needed.

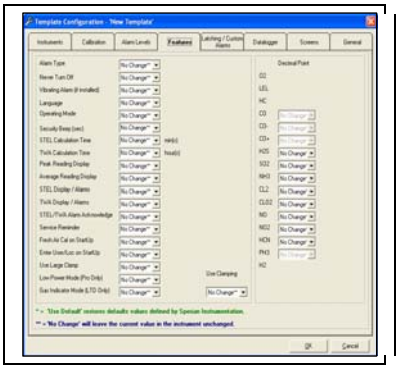
5.5.1.4 Features Tab

The features tab contains controls for Operating Mode, Security Beep, Latching Alarm, OK Mode Alarm Latch, Language settings, and the decimal point settings for all sensors with an optional decimal point and many others.

Note 1: Features vary with instrument type. The following lists all instrument features supported for all instrument types.

For further details on a supported feature, see the detector's operating or reference manual.

To view only the features available for a certain instrument type(s), select only the instrument type(s) on the Instruments tab.

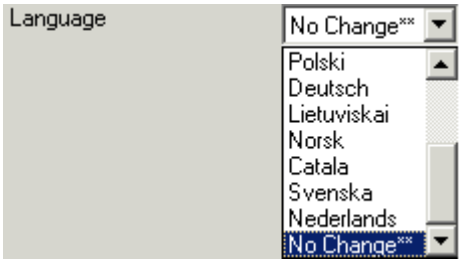


The "Alarm Type" is selectable on some instruments. Use the "Alarm Type" control to select the alarm type, use the factory default or don't change it.

If the "Never Turn Off mode" is enabled, the instrument will not be able to be turned off by the user. This option can be enabled, disabled, use the factory default or not changed.

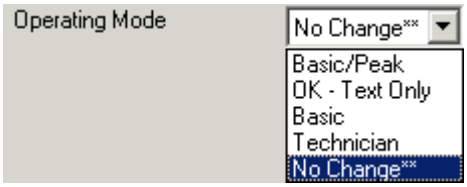
If an instrument has a vibrator installed, the following option can enable or disable the vibrator, or not change the current setting.

Some instruments support language selection. Use the language settings control to select the instrument's operating language.



Note: If a language is selected that is not supported by the gas detector, the detector will revert to operation in English.

The "Operating Mode" setting can be set to any operating mode available for the specific instrument or not changed.

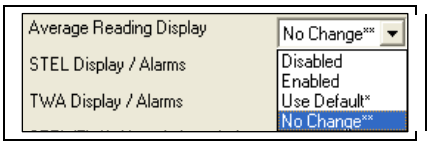


The "Security Beep" can be set to a specific interval in seconds, disabled or to not changed.

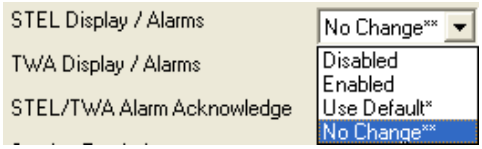
To enter a new interval (in seconds), type the new interval into the text box.

The "Peak Readings Display" setting may be enabled, disabled, set to factory default or not changed.

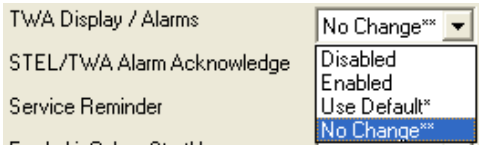
The "Average Readings Display" may be enabled, disabled, set to factory default or not changed.



The “STEL Display / Alarms” may be enabled, disabled, set to factory default or not changed as needed.



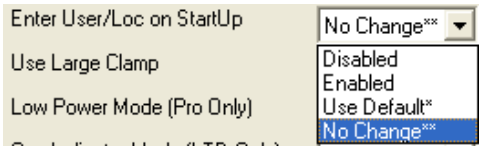
The “TWA Display / Alarms” may be enabled, disabled, set to factory default or not changed.



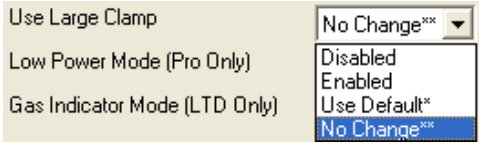
The “STEL/TWA Alarm Acknowledge” may be enabled, disabled, set to factory default or not changed.

The “Fresh Air Cal on StartUp” may be enabled, disabled, set to factory default or not changed.

The “Enter User/Loc on StartUp” may be enabled, disabled, set to factory default or not changed.

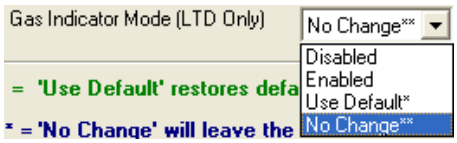


The “Use Large Clamp” may be enabled, disabled, set to factory default or not changed.

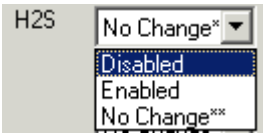


The “Low Power Mode” may be enabled, disabled, set to factory default or not changed.

The “Gas Indicator Mode” may be enabled, disabled, set to factory default or not changed.



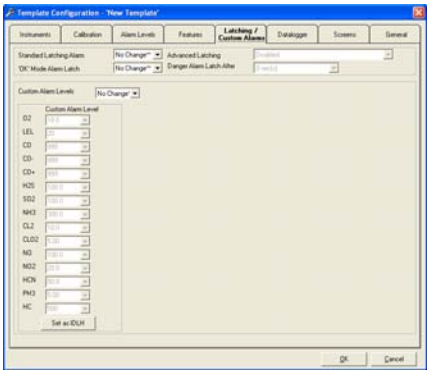
On the right side of the screen are the decimal point settings for the sensors. Each sensor type decimal point may be enabled, disabled, set to factory default or not changed.



⚠WARNING Changes made to a template will be automatically uploaded to all instruments associated with the template when the instrument is linked/docked in the IQ System. Changes will directly affect the functionality of the detector.

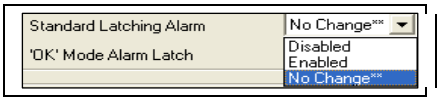
5.5.1.5 Latching / Custom Alarms Tab

The Latching and Custom Alarms tab contains the controls to set the standard and advanced latching, OK Mode and alarm latch and enabling, disabling or defining a custom alarm level. Please refer to your instrument manual to determine if it supports a custom alarm.



The Standard Latching Alarm can be set to “Enabled”, “Disabled” or no change. If the “Standard Latching Alarm” is enabled, the “Advanced Latching” cannot be used.

Latching



For a detailed description of the latching alarm, see the detector’s operating or reference manual.

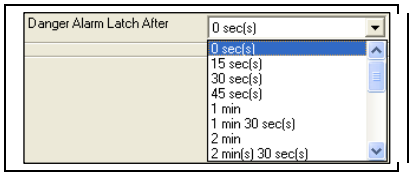
The OK Mode Alarm Latch can be set to “Enabled”, “Disabled” or to “No Change”.

For a detailed description of the OK Alarm Latch, see the detector's operating or reference manual.

Note: To use the "Advanced Latching", the "Standard Latching" must be set to disabled.

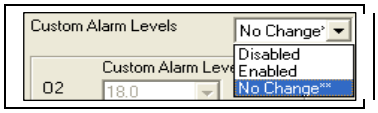
The Advanced Latching can be set to "Disabled", "Latch Enabled – Dock/Instrument Reset", "Latch Enabled – Dock Reset Only" or set to "No Change".

The "Latch Enabled – Dock/Instrument Reset" option allows the Advanced Latch to reset by pressing the instrument's Mode button or by inserting it into a dock. The "Latch Enabled – Dock Reset Only" option allows the Advanced Latch only to be reset by inserting the instrument into a dock.

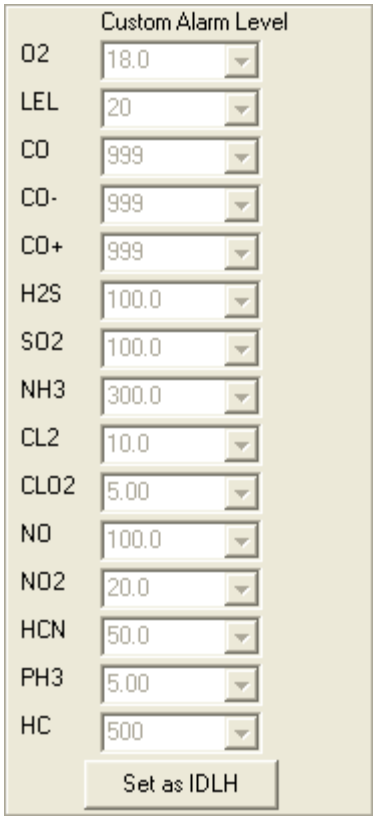


The "Danger Alarm Latch After" option allows the user to define the minimum duration of a danger alarm before the instrument will latch the alarm. The duration is selectable from a drop down list.

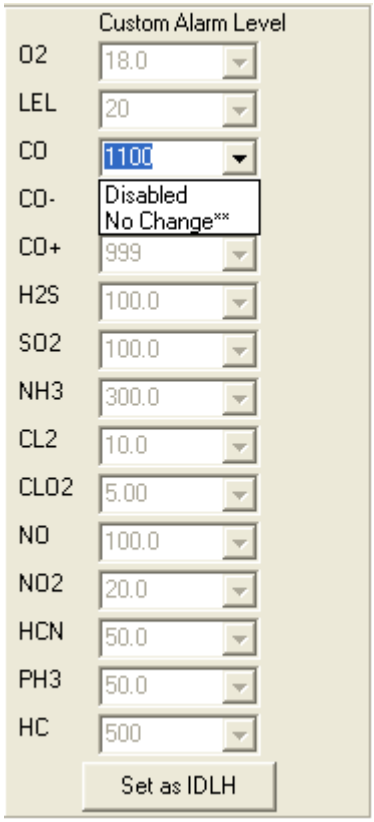
Custom Alarm



The "Custom Alarm Level" is a user defined alarm above the Danger alarm and can be defined for each sensor type. The Custom Alarm selections are "Disabled", "Enabled", or set for "No Change".



Note: To use the Custom alarm, a Danger alarm must be defined for each sensor type first. The Danger alarm can defined on the Alarm Levels tab



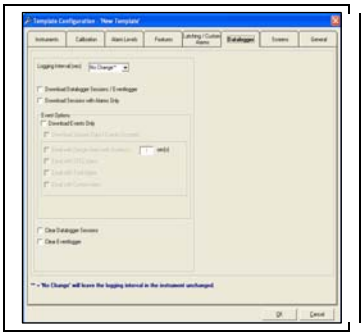
. After the Danger alarm is defined for a sensor type, the custom alarm for the sensor type becomes available under the “Custom Alarm Level” after clicking on a different active control.

The Custom Alarm level can be set to a specific level, disabled or not changed. After the level is entered, it will be validated to ensure it is above the Danger alarm level for the sensor type. The “Set as IDLH” button sets the alarm level to the IDLH level for the sensor type.

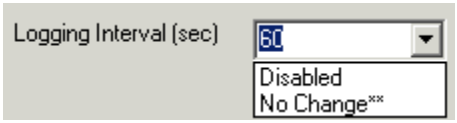
Note: If the Custom alarm level is reached, the alarm is automatically latched and can only be reset by dock insertion. The event and session data will automatically be downloaded.

5.5.1.6 Datalogger Tab

The datalogger tab contains the Logging Interval setting and the download Datalogger / Eventlogger control options.



The datalogger samples continuously, so the data stream must be broken into intervals to be recorded. The datalogging interval defines the frequency of the breaks in the data stream. The interval may be set to a value between one second and one hour. An interval of 60 seconds is most common.



For further details on the sampling interval, see the gas detector’s reference manual.

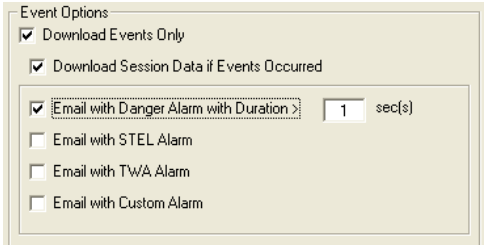
Directly beneath the datalogging interval setting are two check boxes that control whether the IQ System automatically downloads and clears the datalogger during the instrument's configuration.

One of the real strengths of the IQ System is its ability to manage large amounts of data. To automatically extract instrument data from the detectors whenever they are in contact with the IQ System, click the box next to "Download Datalogger". If "Download Datalogger" is not clicked, data will not be extracted from the detector and may be overwritten by new data as it is generated.

The PHD6 has the additional option to download only session data containing alarms.

Note: Instrument readings and other session data that are downloaded from the detector are stored in the IQ database and may not be accessed through the Database Manager software. Session data must be accessed through the BioTrak II program. See the BioTrak II Reference Manual for details.

Event Options allow the downloading of instrument events and allow the system to make some downloading and email decisions. Select "Download Events Only" to enable these options. The "Download Session Data if Events Occurred" option will force the docking program to download the session data if any new events are detected. A "new event" is an event an already in the database.



The email options for Danger, STEL, TWA and Custom alarms when selected will force the docking applications to generate an email when a new event of the select type occurs. The email with for a Danger alarm also has an additional parameter to specify the length of the alarm before the email is generated.

Note: See the section on setting up email in the IQ System before enabling these options. Email is set up on the Email tab of the Options screen.

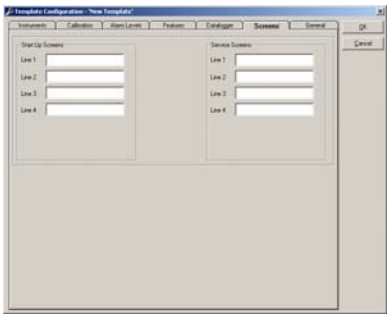
Clear Datalogger / Eventlogger

Click the box next to “Clear Datalogger” or "Clear Eventlogger" to clear this data whenever the IQ System configures the instrument.

Selecting "Clear Datalogger" or "Clear Eventlogger" without selecting to download this data will result in lost data.

5.5.1.7 Screens Tab

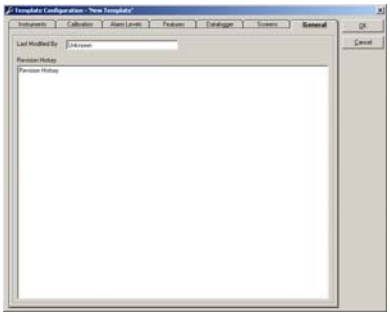
The screens tab is shown for instruments with user-configurable opening and service screens. At the time of the publication of this manual, the PHD6 is the only detector capable of this function.



Entries made in the right column will be shown upon instrument startup. Entries made in the left column will be shown when the service screens are accessed via the PHD6’s Main Menu.

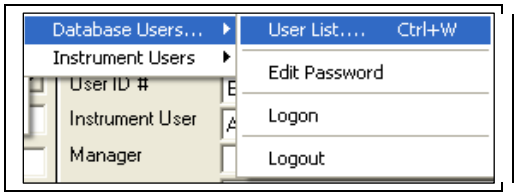
5.5.1.8 General Tab

The General Tab contains a record of the individual who was logged in when the template was last modified and a revision history for the template.



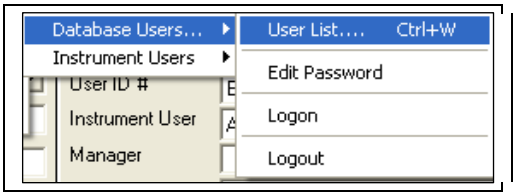
Setup / Database Users

Database user information is entered through the Setup / Database Users/ User List menu option.

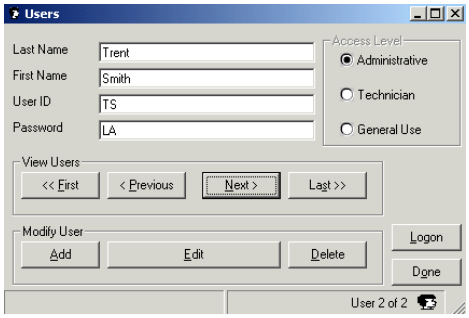


5.5.2.1 User List

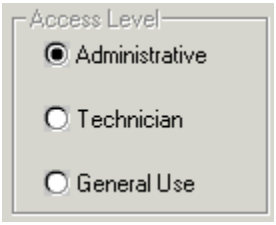
The user list shows all information associated with the registered users of the system. To access the user list, select Setup / Database Users / User List.



The Users window will then be shown.



The information from one user will be shown. Programmed user information appears at the top of the screen and includes the user’s first name, last name, ID, password and access level.



Access Level is a three-tiered system.

“**Administrative”** grants the individual access to the entire system. Both user and template information can be modified.

“Technician” grants access to template information, but denies access to user information.

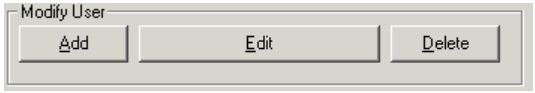
“General Use” allows the individual to use the IQ system, but denies access to both user and template information.

The four buttons in the middle of the screen are used to scroll through the user list.

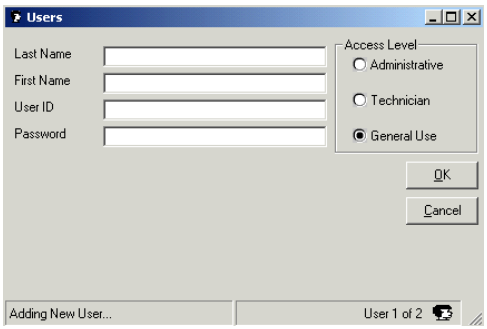
Only one user’s information will be shown at any one time.

5.5.2.2 Add, Edit and Delete Users

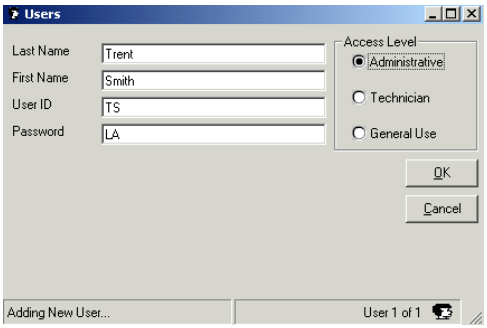
The Modify User section at the bottom of the User screen is used to enter new users, delete existing users and to modify existing user information.



To add a new user, press the “Add” button. A blank user screen will be shown.



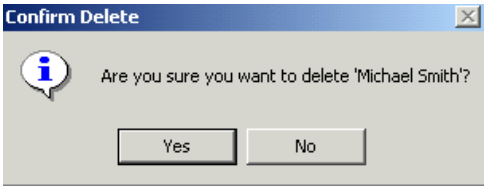
Press “OK” once the first name, last name, user ID, password and access level have been entered.



To edit user data, first locate the user by using the View Users controls at the center of the screen. Once the user name is located, press the Edit button and make any necessary changes. Once the information has been modified press “OK”.

To delete a user, first locate the user’s information. Once the specific user’s information is shown, press the delete button. The display will automatically prompt you to confirm the deletion of the user.

Note: The user that is currently logged in may not be deleted.

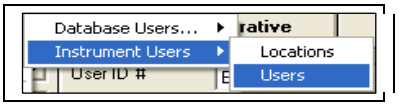


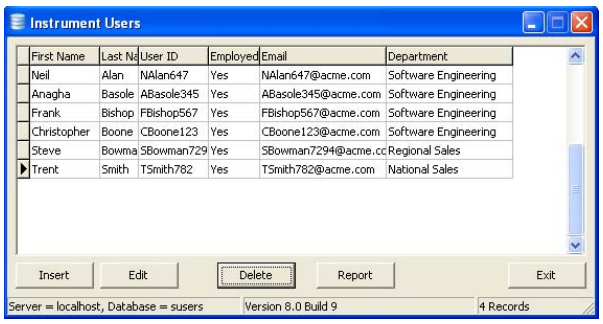
Press “Yes” to confirm the deletion.

Note: To maintain the security of the IQ System, the user name “Setup” with the password “IQ” should be deleted once a new administrative user has been entered into the system.

Setup / Instrument Users

A list of instrument users can be created to allow an instrument to be assigned to a specific user. This assignment will allow the IQ system to track instrument usage and exposure levels by a user or an instrument. Instrument user information is entered through the Setup / Instrument Users/ User List menu option.



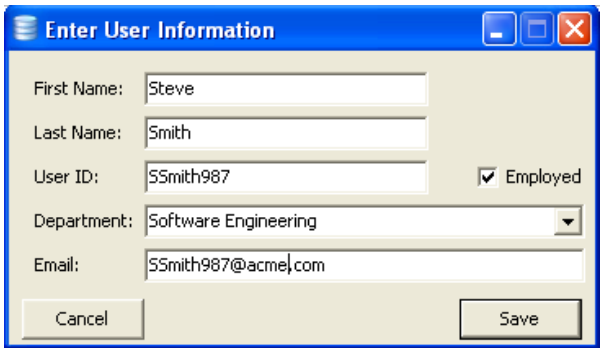


Add, Edit and Delete Instrument Users

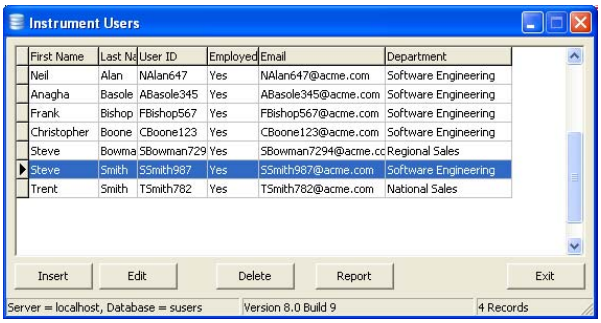
The “Insert” button at the bottom of the Instrument User screen is used to enter a new instrument user. The “Edit” button allows the editing of a user. The “Delete” button allows the deletion of a user.

Add User

Select the “Insert” button.



Select the ‘Save’ button after the first name, last name, user ID, department, email and employee status have been entered. The new user will appear in the list.



Edit User

Select the "Edit" button and modify the information. Select the "Save" button to save your changes or "Cancel" button to abandon them.

Delete User

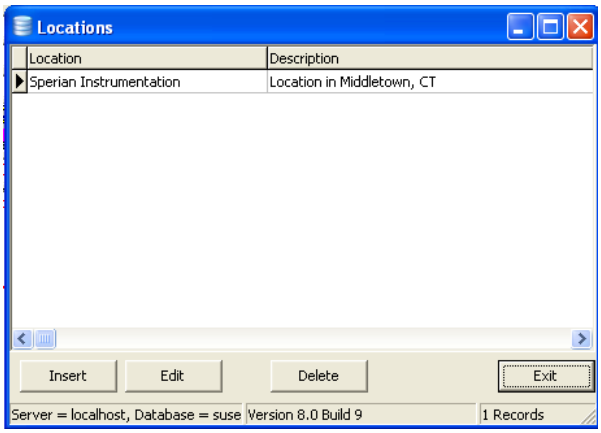
Select a user from the list and select the "Delete" button. **Note: It is better practice to mark the instrument user as unemployed by removing the "employed" check mark rather than to delete a user.**

User List

A user report listing all users can be created and printed by selecting the "Report" button.

Setup / Instrument Locations

A list of instrument locations can be created to allow an instrument to be assigned to a specific location. This assignment will allow the IQ system to track instrument usage and exposure levels by location. Instrument location information is entered through the Setup / Instrument Users/ User List menu option.

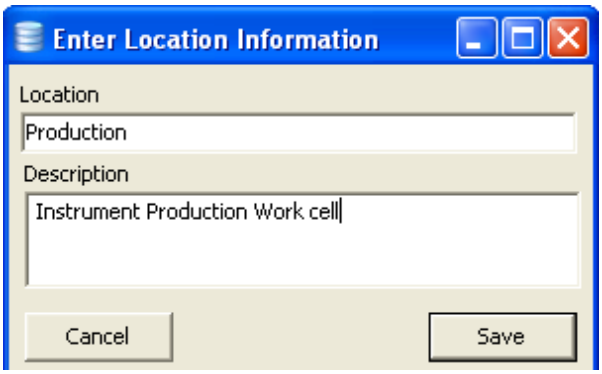


Add, Edit and Delete Locations

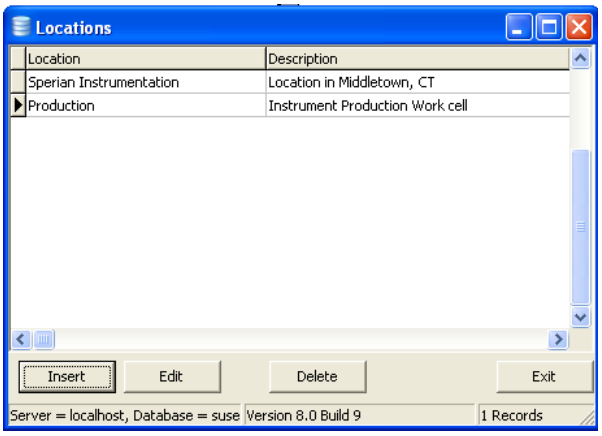
The "Insert" button at the bottom of the Locations screen is used to enter a new instrument location. The "Edit" button allows the editing of a location. The "Delete" button allows the deletion of a location.

Add Location

Select the "Insert" button.



Select the 'Save' button after the location name and description. The new location will appear in the list.



Edit Location

Select the "Edit" button and modify the information. Select the "Save" button to save your changes or "Cancel" button to abandon them.

Delete Location

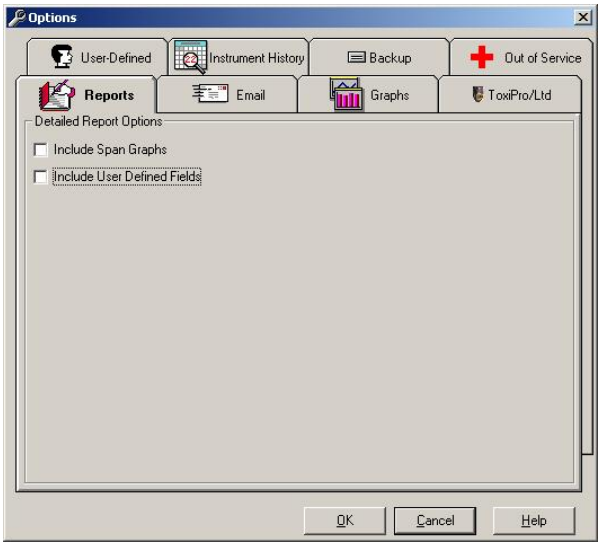
Select a location from the list and select the "Delete" button. **Note: Best practice is not to delete a location, that way the history of the location is available if needed.**

Setup / Options

The Setup / Options menu contains controls for file backup, e-mail, graphing and reports. Click on "File / Options…" to access the Options screen.

The options screen is comprised of tabbed pages for: Reports, E-mail, Graphs, ToxiPro/Ltd, User-Defined, Calibration History, Database Backup, and Out of Service.

Reports Options

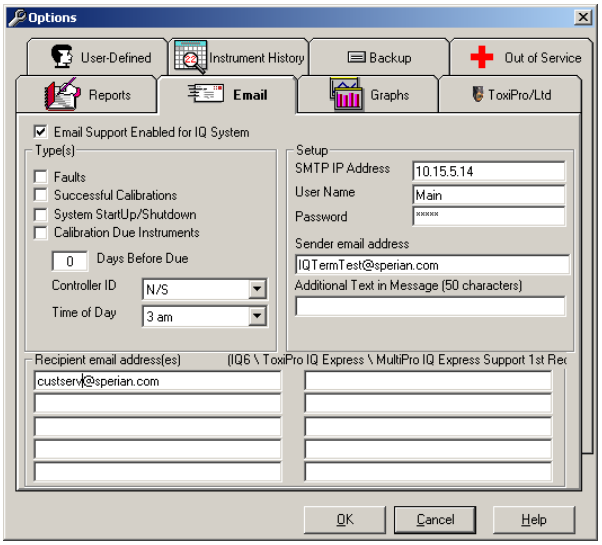


The Reports tab controls whether span graphs and/or user defined fields will be included in reports that are generated by the system.

Click on the checkbox to include the span graphs and/or user-defined fields as appropriate.

E-mail Options

The E-mail tab in the Setup Options Menu contains all necessary internal system controls to set up and use IQ's e-mail function. Options on when to send emails are set on the Datalogger tab of the Templates screen.



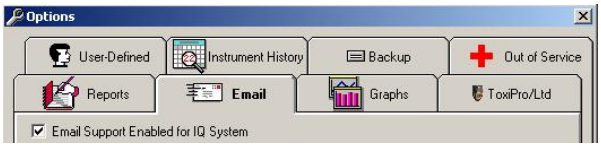
The mail server's SMTP listener task must be enabled for the IQ System to be able to send out e-mail. Please contact your e-mail system administrator for further details.

Note: Although the full range of e-mail options is supported by the IQ Controller, IQ Express systems are limited to sending e-mail for system faults to the single address listed first in the upper left corner of the "Recipient e-mail addresses".

The IQ System can be programmed to send e-mail to a list of up to ten e-mail addresses for a variety of reasons, from confirming calibrations to notification of problems with the system. (See note above for limitations regarding IQ Express systems.)

Perform the following steps to set up the IQ System's e-mail function:

1. If the E-mail Enabled option is not selected, click on the box next to "E-mail Enabled". Notice that the remaining options in the window will be enabled.

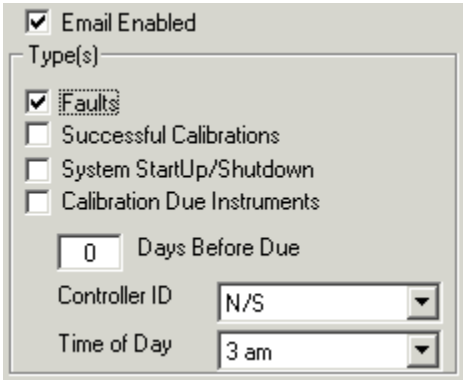


   Directly below the E-mail Enabled check box are the qualifiers that the PC will use to determine when e-mail will be sent. Any combination of the boxes may be checked.

2. To have the system send e-mail when it detects a system fault, click on the check box next to "Faults". Faults can be triggered by any of the following causes:

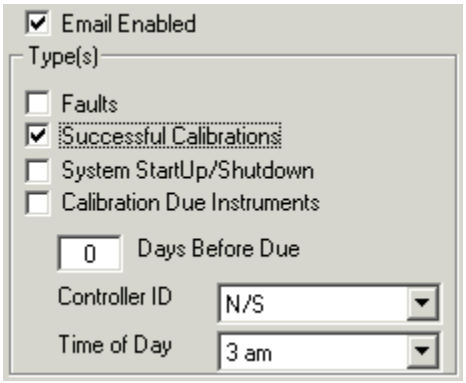
   - Instrument fails calibration for any reason

- Empty calibration gas cylinder



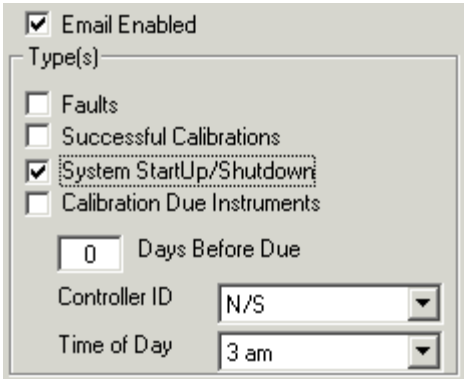
Note: Steps 3-6 may be disregarded if the IQ Database Manager program will only be used with IQ Express Systems. IQ Express Systems are only capable of sending e-mail for Faults. The Faults option must be checked for IQ Express to create e-mail.

3. To send e-mail following every successful calibration click on the check box next to "Successful Calibrations".

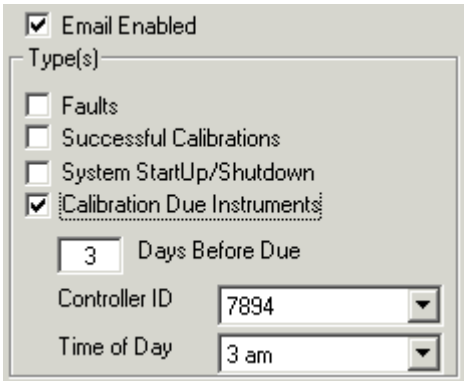


Note: Choosing to send e-mail following successful calibrations means that the each address on the recipient list will receive an e-mail whenever a detector is calibrated. Depending on the number of gas detectors in your system and your chosen calibration frequency, this could result in a large amount of e-mail.

4. To send e-mail whenever the IQ Controller System is turned on or shut down, click on the check box next to "System StartUp/Shutdown".



5. To send e-mail whenever the IQ System Controller determines that an instrument is due for calibration click on the check box next to "Calibration Due Instruments".



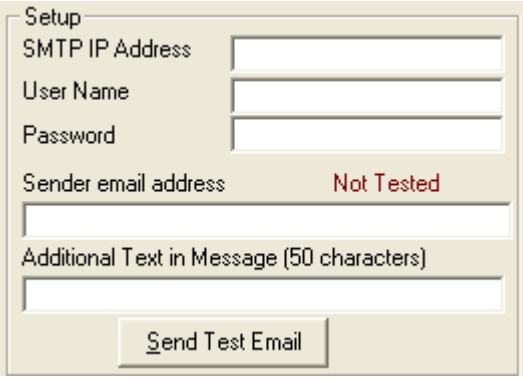
6. Directly beneath the "Calibration Due Instruments" checkbox are three controls that apply only to the calibration due reminder e-mails.

   The IQ Controller program assesses the calibration status of all instruments in the database once per day. The Controller will e-mail a calibration reminder for all instruments due for calibration within the number of days specified in the "Days Before Due" box.

   Database Manager has to interface with an IQ Controller to send e-mail. For standalone IQ Systems (systems with only one IQ Controller), the Controller ID will default to the only controller detected. For Networked IQ Systems in which multiple controllers are online with a single database, select the Controller ID that will send the e-mail for all instruments needing calibration.

   The time of day setting determines when the calibration reminder will be sent.

7. To the right of the e-mail type options are the set up controls.

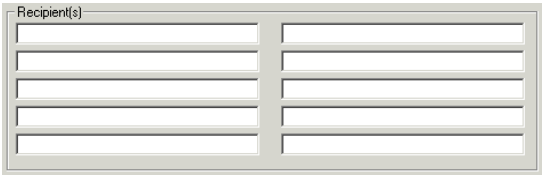


The SMTP IP Address is the unique code that represents your e-mail server on the World Wide Web or within your network. You may need to consult your IT department to get this number. Enter the SMTP IP address of your e-mail server in the appropriate box. The standard Internet format for the SMTP IP address is typically an 8-12 digit number with three decimal points (e.g. 000.000.000.000). Some email systems will require a User Name and Password. Enter the information in the appropriate boxes.

The box beneath "Sender" will appear in the e-mail as the originator of the e-mail. Enter "IQ System" (or something else that identifies the system) here.

Enter any additional text that you would like to be shown in the e-mail in the next box.

8. If the Database Manager Program is to be used with an IQ Controller, enter up to 10 e-mail addresses in the ten boxes below recipients. The addresses should be in standard e-mail format (e.g. me@thiscompany.com). As discussed above, IQ Express Systems will only use the e-mail address listed in the upper left corner of the recipient options.



9. Click the "Test" button in the set up window to test the e-mail system. If the test is successful, the red "Not Tested" line in set up will change to green and show "Tested". The system is then ready for use.

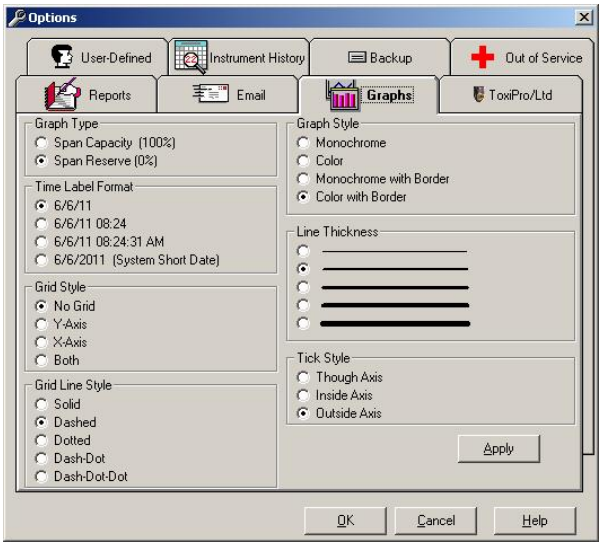
Note: Clicking the "Test" button initiates contact with the IQ Controller. The system must be tested before any e-mail can be sent.

5.5.5.3 Graphing Options

The Graphs tab in the File Options Menu contains all controls for the sensor performance graphs. Time Label formatting options are located directly below Graph Type. The style options, including grid layout, line style and thickness, and graph style can be modified to meet personal tastes. The Graph Type option at the upper left is the only setting that will affect the graph in any way other than stylistically.

The Graph Type can be set to Span Capacity or Span Reserve, which controls the baseline placement (at either 0% or 100%) for the sensor span graph. The baseline represents the sensor's low capacity limit, which is an indicator of the relative health of the sensor.

Setting the Graph Type to Span Capacity will cause the baseline (sensor low capacity limit) of the graph to be set at 100% on the graph. In this case, the observed span reserve will be indicated as a function of the 100% baseline. This means that if the sensor is healthy, it will have a span reserve value above 100%. Sensors need to be replaced when the span reserve dips below the 100% baseline value on the graph.



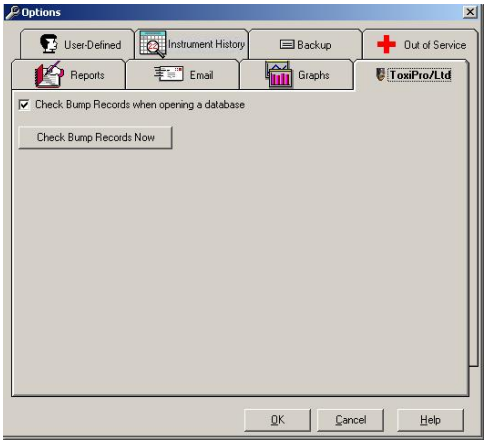
Setting the Graph Type to Span Reserve will shift the baseline of the graph to 0% on the graph. In this case, the observed span reserve will be indicated as a function of the 0% baseline. This means that if the sensor is healthy, it will have a positive span reserve value. Sensors showing a negative span value need to be replaced.

Once changes to the settings have been made press the "Apply" button.

5.5.5.4 ToxiPro/Ltd Options

The ToxiPro/ Ltd Option contains a single control: “Check Bump Records now”.

Note: This option was designed to address a ToxiPro instrument firmware issue that shows up in versions earlier than 5.73. This option should be disabled once all of your ToxiPro instruments are running on firmware version 5.73 or newer.

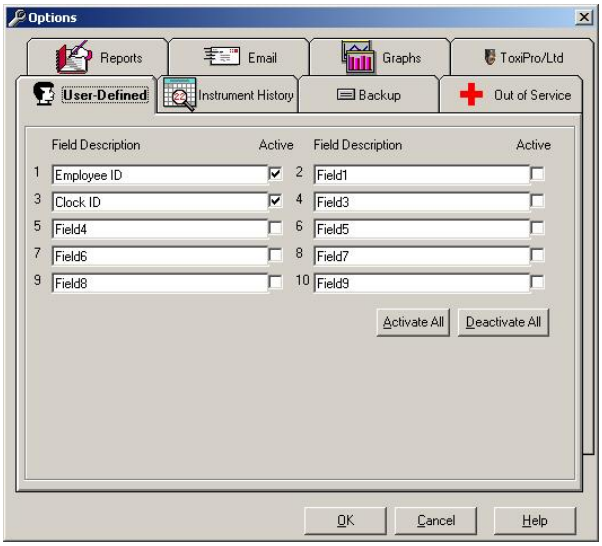


Click “Check Bump Records Now: to compare the bump test dates recorded for the instrument against those recorded for the sensor. If a discrepancy is found, the software will update the instrument date to match the sensor date. Because the check takes a significant amount of time, this option should be disabled once all of your ToxiPro instruments are running on firmware version 5.73 or newer.

5.5.5.5 User Defined Options

The User Defined Options tab allows the user to set up distinct fields that can be used to identify the instrument in database searches. These fields can be used in the instrument search algorithm and can also be shown on instrument reports by checking the appropriate box on the Reports Options tab.

The values in the user defined fields may be viewed and edited on the user defined tab of the instrument section of the main screen.



To activate a field, click on the activate checkbox to the right of the field’s input box. The field may also be renamed as needed.

In the example below, the following fields were added: Employee Name, Manager, Employee ID Number and Location.

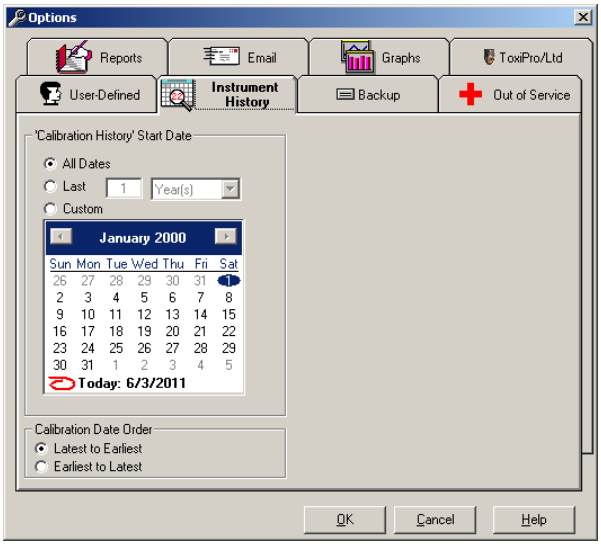
Once these fields have been created, they will be shown in the Lookup Menu under User-Defined. See section 5.3.2 for details.

5.5.5.6 Instrument History

The Calibration History Start Date that you set on this tab controls the records shown on the Calibration History tab of the main screen. Only records with a date equal to or later than the date you set on this tab will be shown. This allows you to view only records that are closer to today's date.

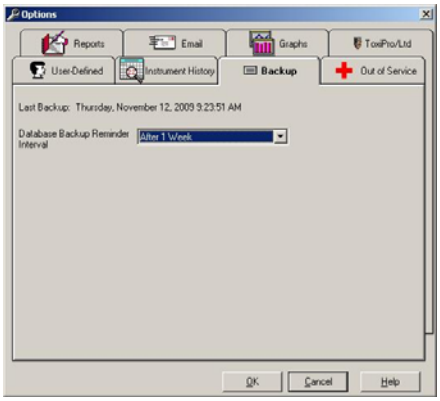
The Calibration History Start Date will also be used as the default start date for all reports generated.

If you wish to view all calibration records, select the All Dates option. This causes the software to search the calibration records of all instruments for the one with the earliest date. The Calibration History start date is then set to the earliest calibration date in the database.



Use the arrow on the upper right and left of the calendar to select the month and year. Then click on the appropriate day and select Set First Cal Date. The calibration history may also be modified to list from latest to earliest or earliest to latest by making the appropriate selection under Calibration Date Order.

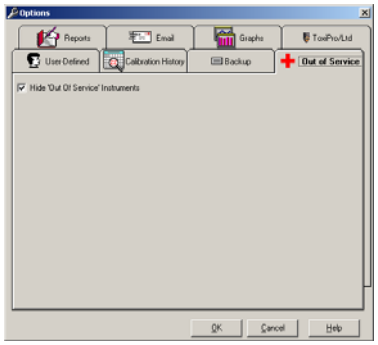
5.5.5.7 Backup



The backup tab contains a single control that determines the frequency of database backup reminders from Database Manager to the user. Options range from never to whole number increments between 1 and 6 weeks.

5.5.5.8 Out of Service

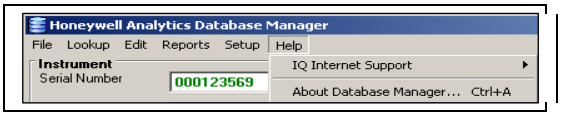
The Out of Service Option allows the user to delist instruments that have been marked out of service so they do not appear in standard reports but do appear in Out of Service reports. Select "Hide Out of Service Instruments" to delist these instruments.



Instruments can be taken out of service by checking the checkbox on the Administrative tab of the Instrument section of the main screen while editing the instrument record.

5.6 Help Menu

The Help Menu option has four options.

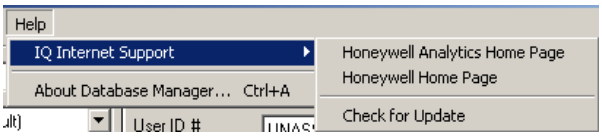


5.6.1 Contents and Search

The Contents and Search For options access the Database Manager's Internal Help File.

5.6.2 IQ Internet Support

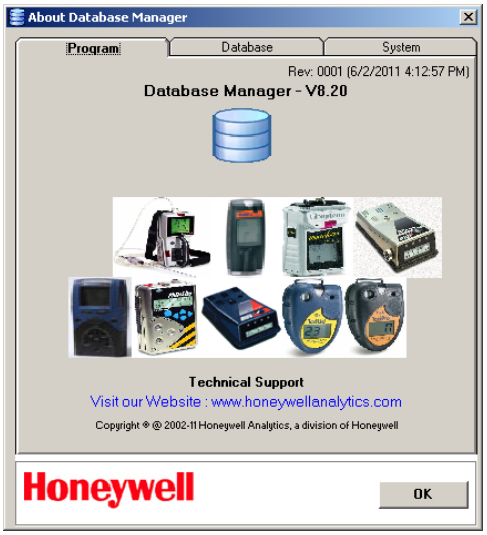
The IQ Internet Support Option provides links to various web sites operated by Honeywell.



The Check for Update links to Honeywell Analytics's software download website at:

http://www.biodownloads.com .

5.6.3 About IQ Database Manager.....



Select "About IQ Database Manager" to access Program, Database and System information.

The Program information tab shows the IQ Database Software version (in this case **V1.3**).

The Database tab shows information about the database, server name, and the number of instruments by type in the database.

The System tab shows the PC's operating system.

6. Database Manager Updates

Updates to the Database Manager program can be found on Honeywell Analytics's file download site, which is located at:

http://www.biodownloads.com

Launch the file after the download is complete. Once the new file has been downloaded, follow the instructions in section 2 above to complete the installation.

Note: The new software version may require a new manual. See the Honeywell Analytics website for manual updates at:

http://www.honeywellanalytics.com

6.1 Database update

Following a software upgrade, you may be required to update the database used by the IQ System. The software will automatically prompt you to initiate the update when you attempt to launch the new Database Manager program.

Click "Yes" to proceed with the update and follow the instructions.

Appendix A: Calibration Frequency

One of the most common questions that we are asked at Honeywell Analytics is: ***"How often should I calibrate my gas detector?"***

Sensor Reliability and Accuracy

Today's sensors are designed to provide years of reliable service. In fact, many sensors are designed so that with normal use they will only lose 5% of their sensitivity per year or 10% over a two-year period. Given this, it should be possible to use a sensor for up to two full years without significant loss of sensitivity.

Verification of Accuracy

With so many reasons why a sensor can lose sensitivity and given the fact that dependable sensors can be key to survival in a hazardous environment, frequent verification of sensor performance is paramount.

There is only one sure way to verify that a sensor can respond to the gas for which it is designed. That is to expose it to a known concentration of target gas and compare the reading with the concentration of the gas. This is referred to as a "bump" test. This test is very simple and takes only a few seconds to accomplish. **The safest course of action is to do a "bump" test prior to each day's use**. It is not necessary to make a calibration adjustment if the readings fall between 90%* and 120% of the expected value. As an example, if a CO sensor is checked using a gas concentration of 50 PPM it is not necessary to perform a calibration unless the readings are either below 45 PPM or above 60 PPM.

***The Canadian Standards Association (CSA) requires combustible gas sensors to undergo calibration when the displayed value during a bump test fails to fall between 100% and 120% of the expected value for the gas.**

Lengthening the Intervals between Verification of Accuracy

We are often asked whether there are any circumstances in which the period between accuracy checks may be lengthened.

Honeywell Analytics is not the only manufacturer to be asked this question! One of the professional organizations to which Honeywell Analytics belongs is the Industrial Safety Equipment Association (ISEA). The "Instrument Products" group of this organization has been very active in developing a protocol to clarify the minimum conditions under which the interval between accuracy checks may be lengthened.

A number of leading gas detection equipment manufacturers have participated in the development of the ISEA guidelines concerning calibration frequency. Honeywell Analytics' procedures closely follow these guidelines.

If your operating procedures do not permit daily checking of the sensors, Honeywell Analytics recommends the following procedure to establish a safe and prudent accuracy check schedule for your Honeywell instruments:

1. During a period of initial use of at least 10 days in the intended atmosphere, check the sensor response daily to be sure there is nothing in the atmosphere that is poisoning the sensor(s). The period of initial use must be of sufficient duration to ensure that the sensors are exposed to all conditions that might have an adverse effect on the sensors.
2. If these tests demonstrate that it is not necessary to make adjustments, the time between checks may be lengthened. The interval between accuracy checking should not exceed 30 days.
3. When the interval has been extended the toxic and combustible gas sensors should be replaced immediately upon warranty expiration. This will minimize the risk of failure during the interval between sensor checks.
4. The history of the instrument response between verifications should be kept. Any conditions, incidents, experiences, or exposure to contaminants that might have an adverse effect on the calibration state of the sensors should trigger immediate re-verification of accuracy before further use.
5. Any changes in the environment in which the instrument is being used, or changes in the work that is being performed, should trigger a resumption of daily checking.
6. If there is any doubt at any time as to the accuracy of the sensors, verify the accuracy of the sensors by exposing them to known concentration test gas before further use.

Gas detectors used for the detection of oxygen deficiencies, flammable gases and vapors, or toxic contaminants must be maintained and operated properly to do the job they were designed to do. Always follow the guidelines provided by the manufacturer for any gas detection equipment you use!

If there is any doubt regarding your gas detector's accuracy, do an accuracy check! All it takes is a few moments to verify whether or not your instruments are safe to use.

One Button Auto Calibration

While it is only necessary to do a "bump" test to ensure that the sensors are working properly, all current Honeywell gas detectors offer a one-button auto calibration feature. This feature allows you to calibrate a Honeywell gas detector in about the same time as it takes to complete a "bump" test. The use of automatic bump test and calibration stations can further simplify the tasks, while automatically maintaining records.

Don't take a chance with your life.
Verify accuracy frequently!

Please read also Honeywell Analytics' application note: *AN20010808 "Use of 'equivalent' calibration gas mixtures"*. This

application note provides procedures to ensure safe calibration of LEL sensors that are subject to silicone poisoning.

Honeywell Analytics Warranty Gas Detection Products

General

Honeywell Analytics, Inc. (hereafter Honeywell) warrants gas detectors, sensors and accessories manufactured and sold by Honeywell, to be free from defects in materials and workmanship for the periods listed in the tables below.

Damages to any Honeywell products that result from abuse, alteration, power fluctuations including surges and lightning strikes, incorrect voltage settings, incorrect batteries, or repair procedures not made in accordance with the Instrument's Reference Manual are not covered by the Honeywell warranty.

The obligation of Honeywell under this warranty is limited to the repair or replacement of components deemed by the Honeywell Instrument Service Department to have been defective under the scope of this standard warranty. To receive consideration for warranty repair or replacement procedures, products must be returned with transportation and shipping charges prepaid to Honeywell or to a Honeywell Authorized Warranty Service Center. It is necessary to obtain a return authorization number from Honeywell prior to shipment.

THIS WARRANTY IS EXPRESSLY IN LIEU OF ANY AND ALL OTHER WARRANTIES AND REPRESENTATIONS, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO, THE WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE. HONEYWELL WILL NOT BE LIABLE FOR LOSS OR DAMAGE OF ANY KIND CONNECTED TO THE USE OF ITS PRODUCTS OR FAILURE OF ITS PRODUCTS TO FUNCTION OR OPERATE PROPERLY.

Instrument & Accessory Warranty Periods

Product(s)	Warranty Period
PHD6™	2 years from date of purchase
ToxiPro®, MultiPro™	2 years from date of purchase
Battery packs and chargers, sampling pumps and other components, which by their design are consumed or depleted during normal operation, or which may require periodic replacement	One year from the date of purchase

Sensor Warranty Periods

Instrument(s)	Sensor Type(s)	Warranty Period
PHD6™, Cannonball3™, MultiPro™, ToxiPro®	O_2, LEL**, CO, CO+, H_2S & Duo-Tox	2 Years
	All Other Sensors	1 Year
All Others	All Sensors	1 Year

**** Damage to combustible gas sensors by acute or chronic exposure to known sensor poisons such as volatile lead (aviation gasoline additive), hydride gases such as phosphine, and volatile silicone gases emitted from silicone caulks/sealants, silicone rubber molded products, laboratory glassware greases, spray lubricants, heat transfer fluids, waxes & polishing compounds (neat or spray aerosols), mold release agents for plastics injection molding operations, waterproofing formulations, vinyl & leather preservatives, and hand lotions which may contain ingredients listed as cyclomethicone, dimethicone and polymethicone (at the discretion of Honeywell's Instrument Service department) void Honeywell's Standard Warranty as it applies to the replacement of combustible gas sensors.**