Setup Guide
Posi 3 USB
Computerized Performance Tester for Air-Supplied Breathing Apparatus

Honeywell

Honeywell Analytics, Inc.
405 Barclay Blvd
Lincolnshire, IL 60069
(800) 711-6776
FAX (800) 995-4992
www.honeywellanalytics.com
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⚠CAUTION

The Posi 3 USB Computerized SCBA Test Bench has been designed to evaluate the performance of Self Contained Breathing Apparatus and other types of respiratory protective equipment. In order to ensure that performance evaluations are conducted and recorded properly, it is essential that the instructions in this manual be read, fully understood, and followed.

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Signal Words

The following signal words, as defined by ANSI Z535.4-1998, are used in the Posi 3 USB Setup Guide.

⚠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.

Warnings and Cautions

⚠WARNING Do not open the Posi 3 USB's case while it is powered up. Contact with the Posi 3 USB's powered internal circuitry may lead to death or serious injury.

⚠WARNING SCBA Cylinders are under considerable pressure. Always follow the manufacturer's recommendations for proper handling when working with compressed air cylinders. Failure to follow the manufacturer's recommendations may lead to death or serious injury.

⚠WARNING Replace the AC mains line cord ONLY with a cord having electrical ratings equivalent to those of the line cord supplied with the unit.

1. Overview

The Posi 3 USB is a computerized test bench designed to evaluate the performance of a completely assembled self-contained breathing apparatus (SCBA) and other types of air-supplied respiratory protective equipment.

This Setup Guide is designed to provide the user with step-by-step instructions for the initial setup of the Posi 3 USB.

Instructions for running tests are contained in the Posi 3 USB Help File.

1.1 Installation Overview

Prior to performing tests, the following items must be accomplished:

1. Remove the Posi 3 USB and the accessories from the shipping cartons and verify that all parts are present. See section 2 for the complete parts list.

Do not discard the shipping cartons and packing materials – they are necessary for returning the Posi 3 USB to Honeywell Analytics for its annual calibration.

2. Verify that your PC meets the OS and hardware requirements as described in sections 3.1 and 3.2 below.
3. Install the software (see section 4 below).
4. Attach the head, plug in the Posi 3 USB and connect the PC to the Posi 3 USB. Then turn the Posi 3 USB on (see section 5 below).
5. Launch the software (see section 6 below). If this is the initial use of the software, "**Setup**" is both the user name and the password for the initial opening of the software.
6. Create a user that has the rights to create and modify apparatus data in the software. (see section 6.2)
7. Enter information about the breathing apparatus models into the software. This section can be disregarded by users with manufacturer-specific software. See section 6.3.
8. Assign the serial number of the breathing apparatus to the model/apparatus info that was created.
9. Attach the breathing apparatus to the Posi 3 USB (see section 7 below).
10. Perform Tests. See the Posi 3 USB Help File for further information about testing.

1.2 Note on Brand-Specific Software

The Posi 3 USB is the standard tester for every major brand of SCBA. Most SCBA manufacturers offer brand-specific software that personalizes the Posi 3 USB for that particular brand of SCBA.

Users who plan to service their own SCBA must purchase brand-specific software, which is available directly from the SCBA manufacturer. Brand-specific software includes all relevant data on the manufacturer's current models and also includes the manufacturer's first stage pressure requirements. Standard Posi 3 USB Software does not provide pass/fail tolerances for first stage performance.

Brand-specific software is planned for most manufacturers. Currently the following OEM versions of software are available:

- Honeywell Safety Products U.S.
- MSA
- Dräger
- ISI
- Interspiro
- Scott

Honeywell Analytics expects to release other OEM versions in the near future.

In most cases, the SCBA manufacturer will provide a model-specific adapter for the medium pressure connection.

Use of the first stage manifold in conjunction with brand-specific software allows the user to test specific breathing apparatus to the tolerances specified by the SCBA manufacturer and allows the user to easily isolate problem components.

1.3 Calibration Requirement

The Posi 3 USB must be calibrated annually to maintain the accuracy of the internal transducers. Calibration must be performed either by Honeywell Analytics, or by a Honeywell-authorized repair facility.

Posi 3 USB units located in North America must be returned to the Honeywell Analytics factory annually for calibration. Contact Honeywell Analytics for a Return Authorization Number (RA#) prior to returning the Posi 3 USB.

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1.4 Software License

Each copy of Posi 3 USB Software is licensed to the user who purchased it. The name of the registered user will appear during the software installation procedure.

The license information may be viewed at any time through the Help - About screen.

The software license information is stored in the record of each breathing test that is performed, and will be displayed on the breathing test results when printed.

2. Out of the box

The Posi 3 USB is delivered with the following items:

- Posi 3 USB
- Head Assembly (w/attached Tygon™ tube)
- Low Pressure Manifold*
- High Pressure Manifold*
- First Stage Manifold*
- Head Gasket
- 4 Standoffs
- 4 Tightening Knobs
- CD-ROM with BA Test Software
- Setup Guide
- Quick Start Guide
- USB Cable
- Power Cable
- 3 High Pressure Manifold Replacement O-Rings*
- 3 Low Pressure Manifold Replacement O-Rings*
- High Pressure Manifold Replacement Hex-Head Screw*
- Spare Fuses (2)
- Microphone (optional)

* not included with the internal manifold European Model.

3. PC Requirements

3.1 Software

The Posi 3 USB Software has the following OS requirements:

- Windows XP to Windows 7, 32 or 64 bit. For versions above Windows 7, see the label on the software CD or contact the factory.

In order to install the software, the software installer must log on as system administrator.

Hardware

⚠CAUTION Make sure that your computer system meets the minimum requirements prior to attempting to install or use Posi 3 USB Software. Inadequate system resources may prevent the software from operating properly on your system. The minimum specifications for the computer used to run Posi 3 USB Software vary according to the operating system used.

- Pentium 4 processor 2.0 GHz or higher
- 512 MB RAM
- 50 MB hard drive space
- USB 2.0 Port
- CD ROM drive (for installation of software)

4. Software

4.1 Software Installation

All Posi3 USB software end users must have permission to modify the following areas of the PC:

1. The registry section HKEY_LOCAL_MACHINE\SOFTWARE\Sperian\Posi3USB and all its subsections.
2. The folder location C:\Program Files\Sperian\Posi3USB and all its subfolders.

It may be necessary to contact your IT department so they can provide you with the necessary access.

Disabling any anti-virus software on the PC will significantly increase the speed of the installation.

Note: Copies of the most recent Posi 3 USB reference materials are included in the software installation. Once installation is complete, the latest Posi 3 USB Manual will be located on the PC's hard drive under C:\ Program Files \ Sperian \ Posi3USB \ Standard.

1. To install your Posi 3 USB software place the CD-ROM into your computer's CD tray and close the tray. If the software installation fails to launch, use Windows Explorer to locate the CD-ROM drive and run the "BATestSetup.exe" program. The following three screens will be shown in succession.

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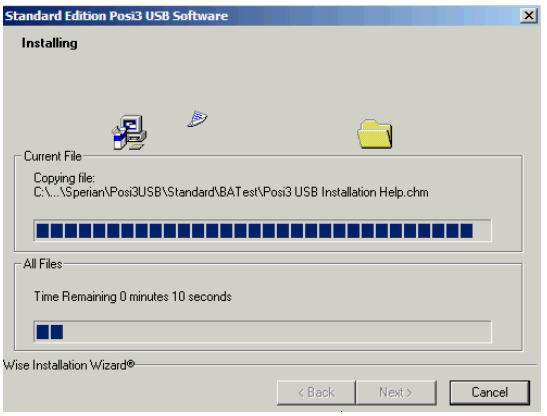

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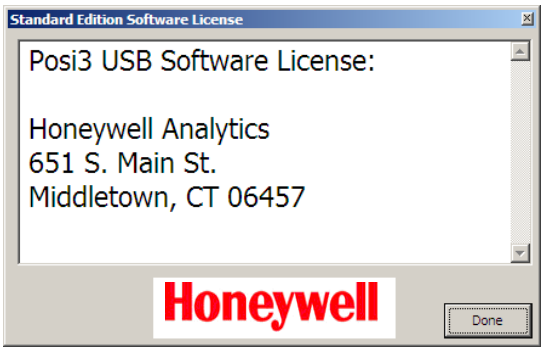
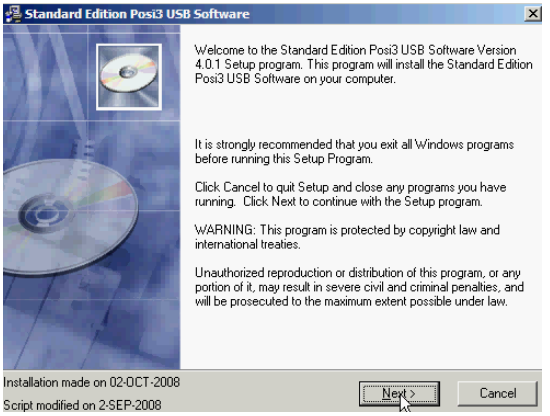
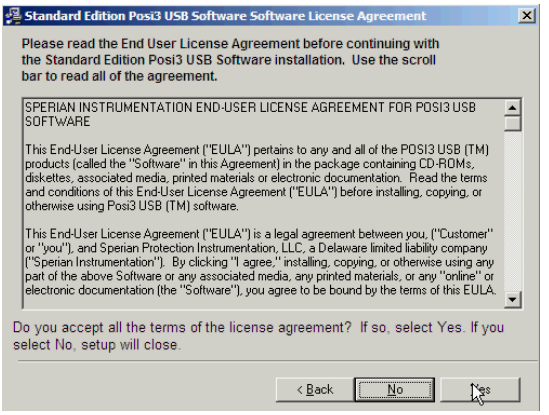


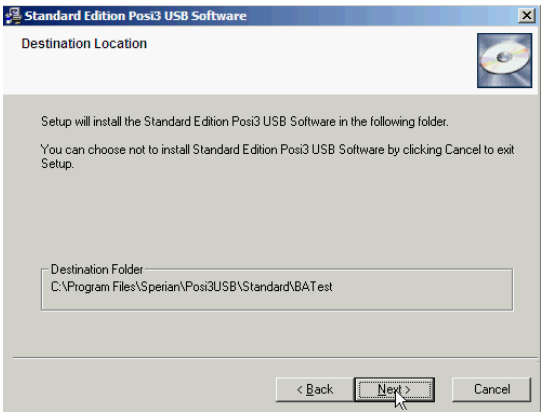
2. Click "Done".



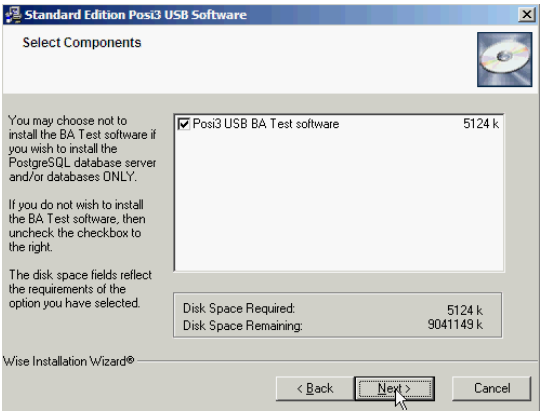
3. The software will recommend closing out all existing Windows Programs to streamline the installation. Click "Next".



4. At the Software's End User License Agreement screen click Yes to accept the terms. Click No to end the installation.

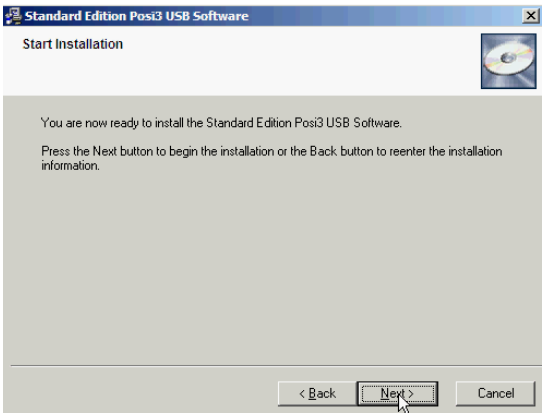


5. The Posi 3 USB Software is loaded into the destination folder a C:\ Program Files \ Sperian \ Posi3USB \ Standard \ BA Test. Click "Next" to continue.

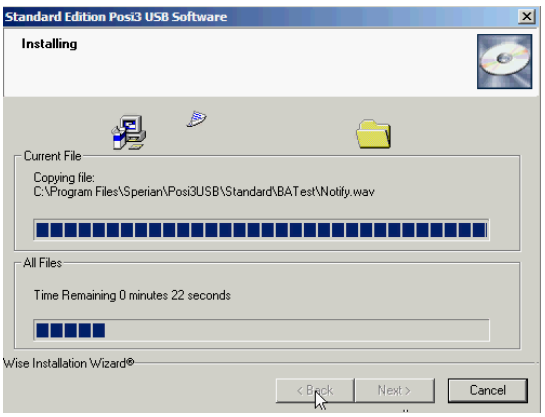


The Select Components screen allows the user to install the PostgreSQL database server without installing the Posi 3 USB Software. The checkbox to install the Posi 3 USB BA Test Software is selected by default. Most users will leave the checkbox selected. To install the PostgreSQL database server only, uncheck the box.

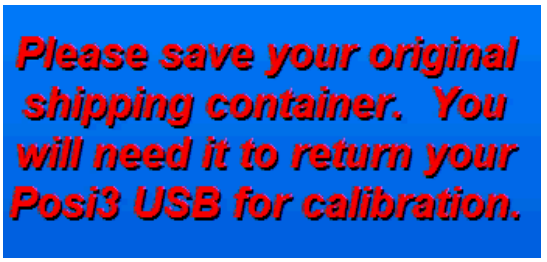
6. Click “Next” to continue.

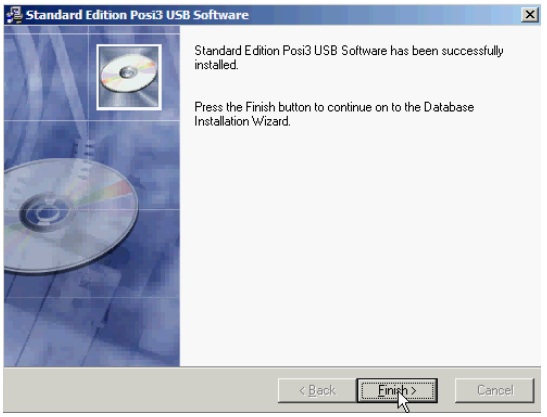


7. Click “Next” to begin the installation.



A note to save your original shipping container will be shown. At the time this manual was written, the minimum cost to replace the cardboard box for the Posi 3 USB is $50 plus shipping.





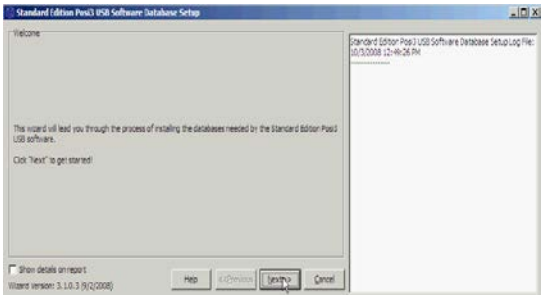
8. Click Finish.

Database Setup

The database setup screen has already been launched. If the database setup screen is minimized, click the icon on the task bar to make it visible.

Help is available during the database setup procedure. Press the F1 key at any time to view the Help File for this section.

Note: Administrator-level system access is required to implement some of the changes necessary to install the PostgreSQL database server. Do not begin the installation without administrator-level system access.



9. Click “Next”.

The software will prompt to either install a database server or log on to an existing server. (If the server has already been

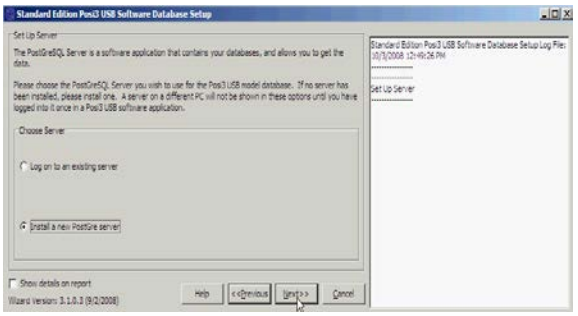
installed on this PC, the option to install the server will be "grayed out" and unavailable.)

10. To connect to a server that is already installed on a different PC, select "Connect to existing server". Otherwise select “Install a new PostGre Server” at left.

Occasionally a network firewall will prevent the database service from starting properly. The wizard will automatically test the firewall when the Choose Server Installation screen is launched. If an error message is shown that indicates there is a problem with the firewall, contact your network administrator for help in resolving the problem. Click the "Firewall Test" button on the Choose Server Installation screen to test the firewall after making changes.

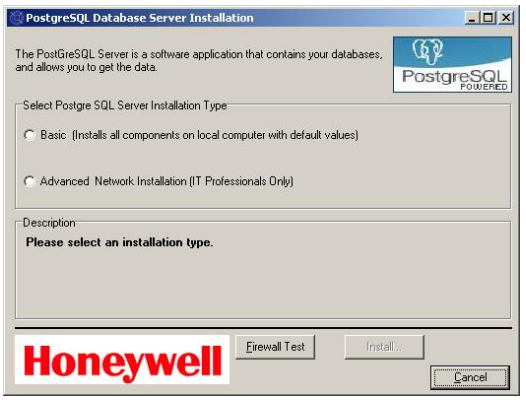
When the firewall test is done, Windows Vista will automatically launch a security alert screen to allow you to unblock the firewall for the installation.

In Vista, click "Unblock" in order to install the database server.



11. Click “Next”

The Server Installation Type selection screen will be shown.



The Posi 3 USB Database Install Wizard gives you two options for the database server installation:

The **Basic Installation** installs the server on your PC with default settings and can be used in most cases. Most of the options can be changed after the installation is complete by changing the client access settings, as described in section 4.2.

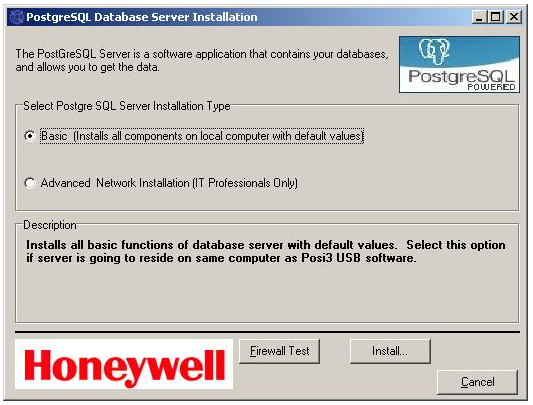
The **Advanced Installation** allows the user to choose a number of configuration settings during the installation process and is required to allow remote client access to the database over a network.

Note: *The PostgreSQL Advanced Installation Instructions begin in section 4.2 and should be read thoroughly before starting the advanced installation. Only IT Professionals should perform the Advanced Network Installation.*

Note: If your network is set up so that new users are automatically granted administrative rights, do not proceed. You must access the Windows Control Panel followed by User Accounts and create a new user manually without administrative rights for Advanced Network Installation.

12. Select the type of installation. Most users will select the Basic Installation. The Advanced Network Installation should only be performed by IT Professionals.

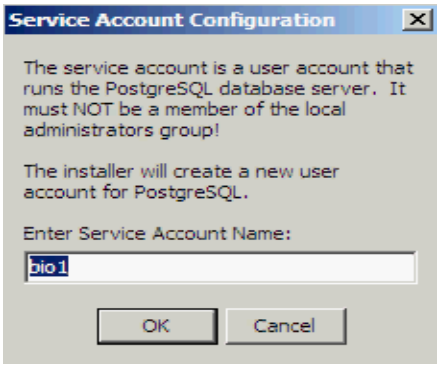
Basic PostgreSQL Database Server Installation



13. Click Install.

For the basic server installation, the only choice required is the Service Account name. The Service Account is a user account that is set up by the server installation on the PC to be used by the PostgreSQL server. The PostgreSQL installation requires that the Service Account must **not** have administrator rights over the computer.

A default value of "bio1" is automatically entered for the Service Account name. This name can be changed, but the user account must be new and must not already exist on the PC.

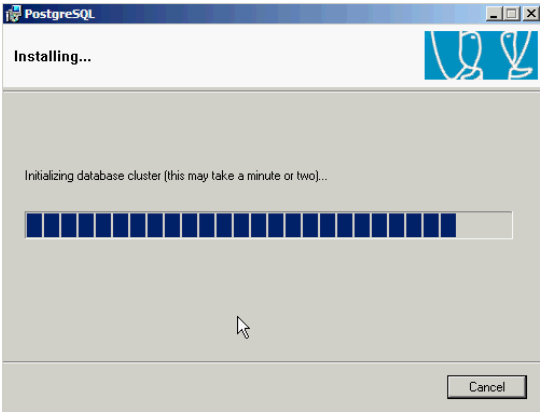


14. Enter the name of the Service Account and press OK.

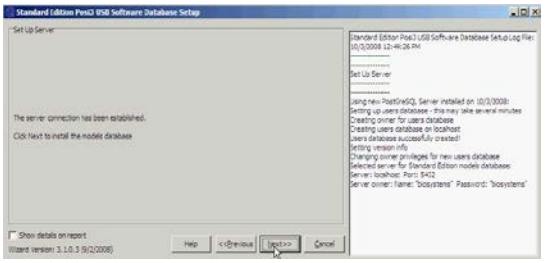
A number of screens will be shown as the Installation proceeds. During the Basic Installation, the database server will be installed on the PC with the default values.

Please note that the server installation is a separate application. If you switch to other applications while it is installing, it may become hidden behind the database installation wizard or another application.

Do not continue with the database installation wizard until the database server installation is complete.

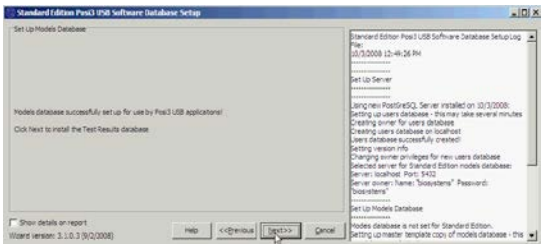


Once the server installation is complete and the connection is established, the software will prompt for server selection and install the models database. If using the database server that was just installed, it will be selected automatically.



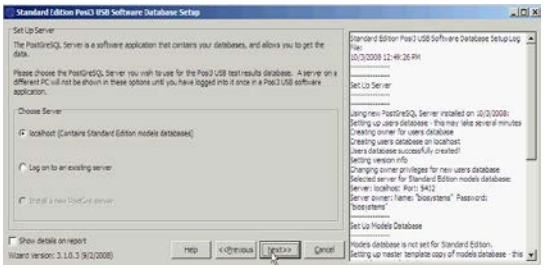
15. Click “Next” to continue.

Once the models database is installed, the software will prompt to install the test results database.



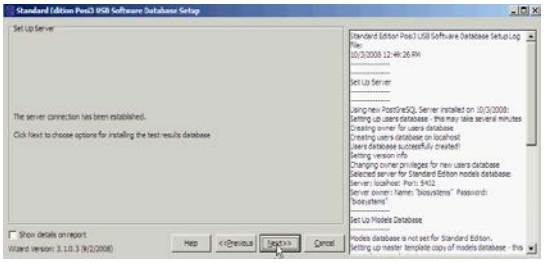
16. Click “Next” to continue.

The software will then prompt for the selection of the PostGreSQL Server for the database that will be used to store test results.

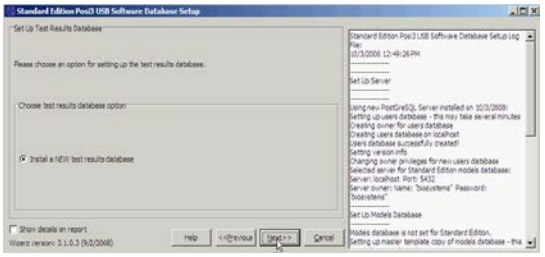


17. Click “localhost” unless a different server will be used. Then click “Next”.

Once the connection is established, the software will prompt you to choose options for the test results database.

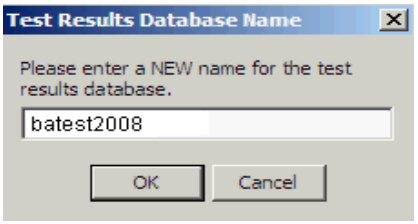


18. Click “Next” to continue.



19. Select “Install a NEW test results database” and click “Next”.

The software will then prompt for the name of the test results database.

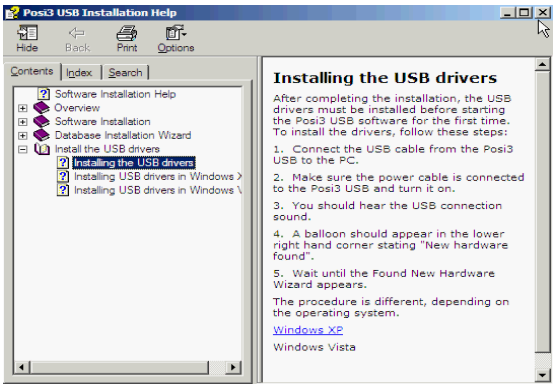


20. Name the test results database and click OK.

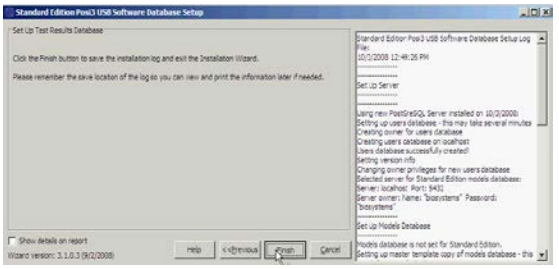
USB Driver Installation

The section of the Posi 3 USB Help File will be shown detailing the installation of the USB drivers.

Note: The USB Driver must be installed prior to running the software. The USB Driver is required to establish communication between the PC and the Posi 3 USB.

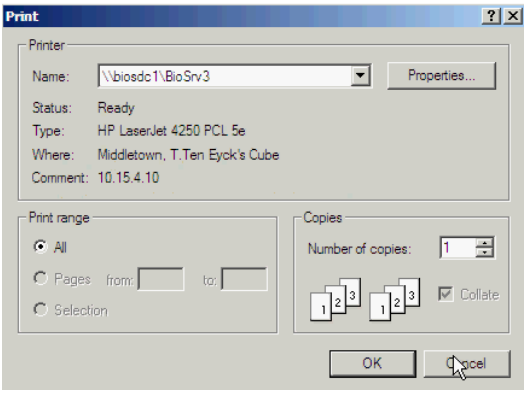


21. Follow the instructions, and then close the help window.



22. Click the Finish Button to complete the installation.

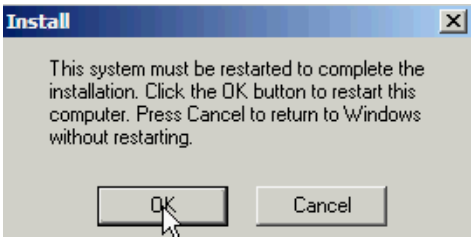
The software automatically displays a print dialog box with the option to print the Installation Log. The Installation Log contains detailed information related to the PostGreSQL database server, the test results database and the models database. A printed copy of the Installation Log may be helpful if any problems occurring during the rest of the installation.



23. Click OK to print.

The Installation Log is also saved to the local hard drive at the address given on the screen.

24. Click OK to continue.



25. **The PC must be restarted to complete the software installation**. Press OK to continue and restart the PC. Click Cancel to return to Windows.

Some network domains are set up so that system policies are only enforced on startup. Restarting the PC finalizes all settings that have been changed during the installation.

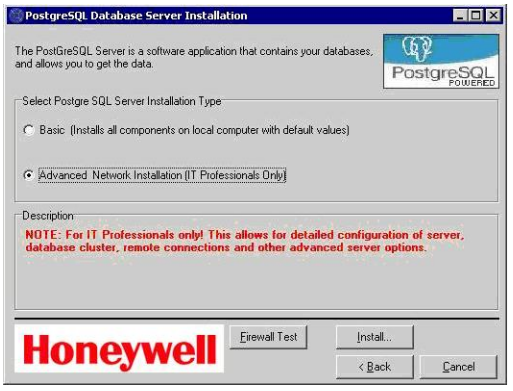
This concludes the basic software setup.

4.2 Advanced Server Installation

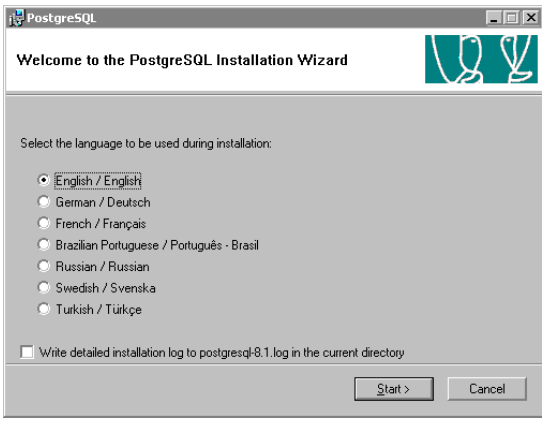
The advanced database server installation allows the user to customize the installation process and is required if errors occur during the basic server installation procedure or if remote client access to the database is required over a network.

Most of the options can be changed after the installation is complete by changing the client access settings. See section 4.3 for instructions.

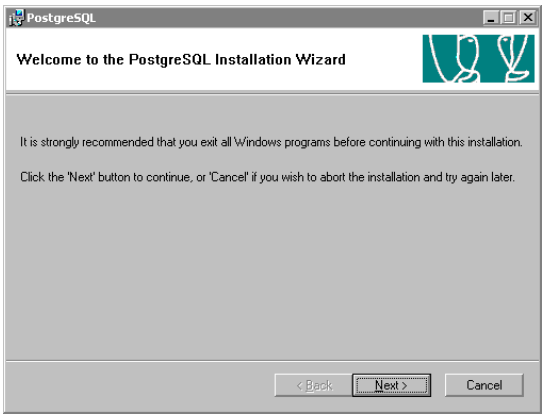
Note: If your network is set up so that new users are automatically granted administrative rights, do not proceed. You must access the Windows Control Panel followed by User Accounts and create a new user manually without administrative rights for Advanced Network Installation.



To perform the Advance Network Installation, choose the Advanced option from the Server Installation Types (section 4.1 step 11) and click Install.

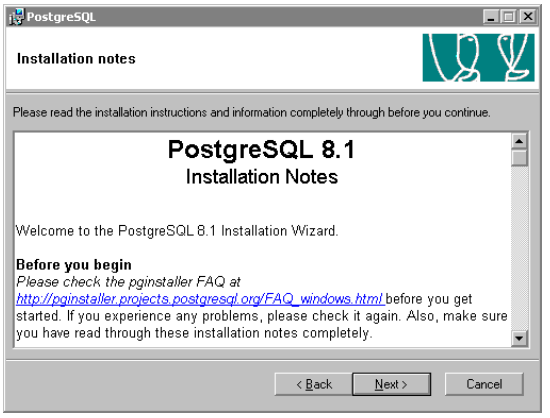


Select the language that will be used during the installation and click "Start" to begin.



Close out all Window programs except the Posi 3 USB installation and Help Files, the Database Installation Wizard, and the PostgreSQL installation wizard.

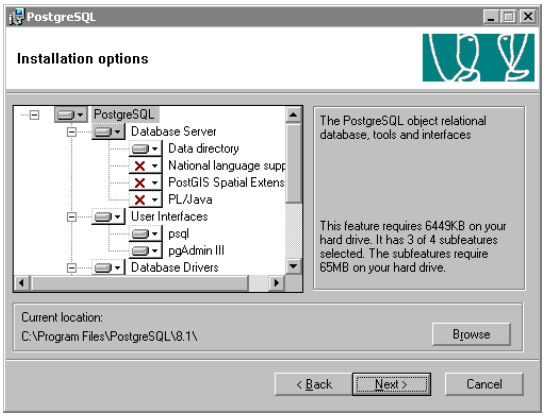
Click "Next".



The PostgreSQL Installation Notes contain information on the legal status of the PostgreSQL software, and a link to the FAQ (Frequently Asked Questions) section of the PostgreSQL installer website. For those not

familiar with this type of installation, reading this material is recommended.

Click "Next" to proceed to Installation Options.

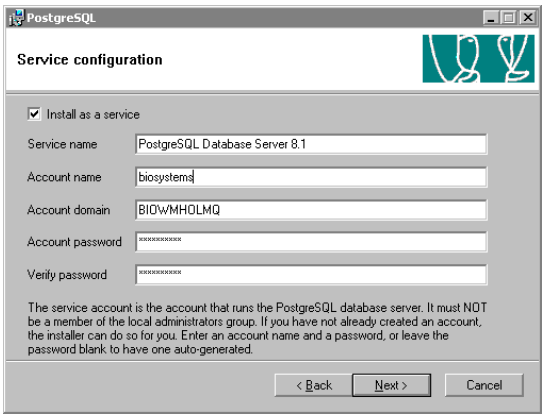


The Installation Options window allows the user to choose the locations for the various components of the database server. The screen defaults to choosing the location for all components of PostgreSQL, which is indicated by highlighting "PostgreSQL" in the tree view pane. The current location selected is shown below the tree view. To change the location, click the "Browse" button and navigate to the new location.

PostgreSQL recommends installing all components of the database server to the same location.

Honeywell Analytics recommends installing the database server to a network location that is scheduled for regular system backups to prevent the accidental loss of data. For more information on network storage, consult your IT department.

Click Next to continue to the Service Configuration screen.



The Service Account is a Windows User Account that is set up on the PC to be used by the PostgreSQL server.

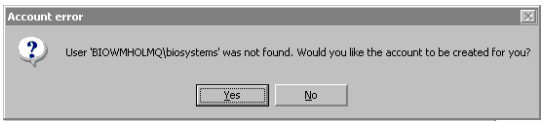
The service configuration screen allows the user to enter an account name and password that will be used for the Service Account. The Service name and Account domain are automatically filled in, and should be left unchanged unless a user account for the PostgreSQL Server has already been set up. In this case enter the User Account name and password to access the account.

To have the installation set up the account, leave the default account name of “postgres”, or enter another account name of your choice. If a new account is being created, the password may be left blank and the installation will automatically generate one.

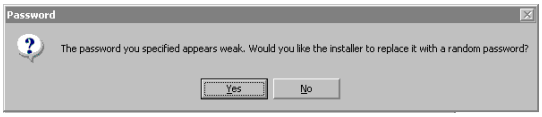
Note: Some networks are set up so that newly created users receive administrative rights by default. If your network is set up this way, you must set up a new user account that will be used as the service account manually and limit the system rights so that the PostgreSQL account does not have administrator rights.

Click "Next" to proceed.

The following two screens may be shown depending on the configuration of your network and your password choice.

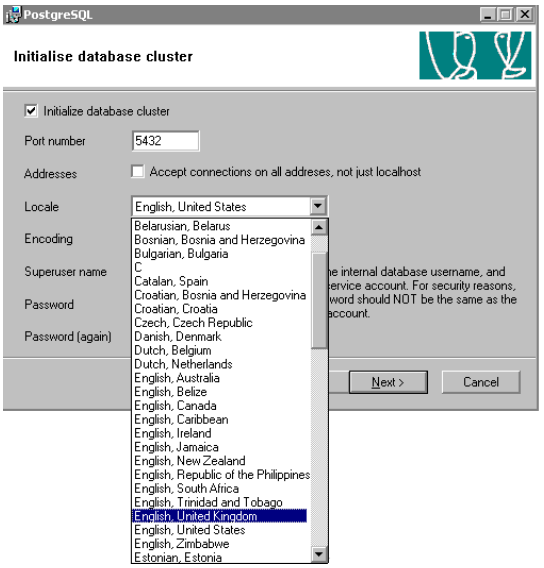


Click "Yes" to create the new account.

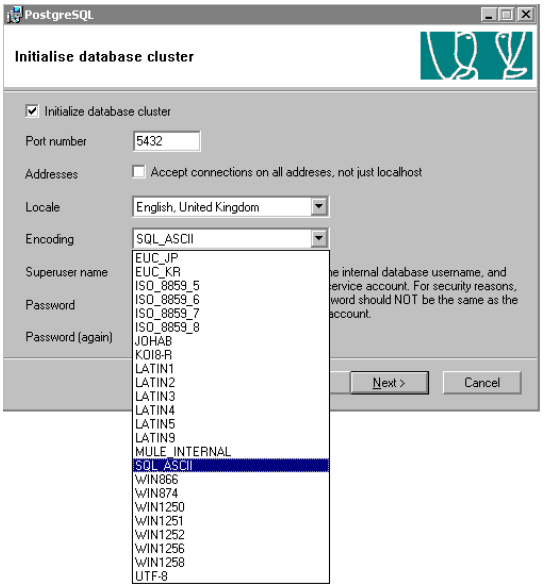


Click "Yes" to have the system create a randomly generated password.

Initialize database cluster



At the Locale drop down box, select the appropriate locale.



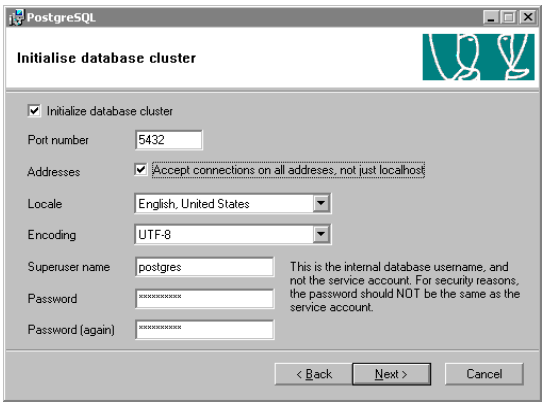
At the Encoding drop down box, change the default SQL_ASCII to UTF-8.

The database cluster Superuser is used internally by the database server, and is *not* the service account. (The default names that the PostgreSQL installation chooses for the service account and the superuser are the same, which can be confusing.)

Choose a password. It is very important to remember the password entered on this screen, as it will be used later in this installation.

PLEASE WRITE THE PASSWORD DOWN HERE FOR FUTURE REFERENCE.

PASSWORD:

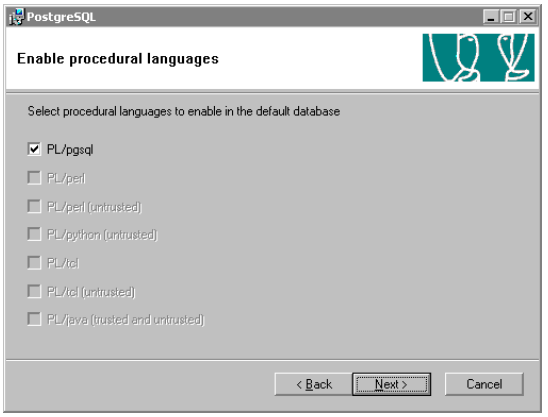


In order to allow database access from external addresses (clients on different computers), click the checkbox next to Addresses.

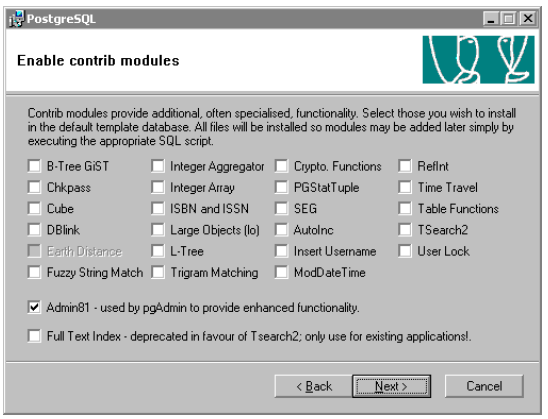
When the selections on the database cluster screen are complete click "Next" to continue.

The following message will appear. See the section on Client Access Settings for more information.

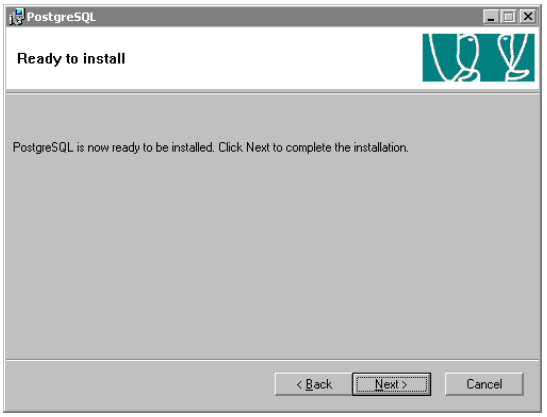
The Procedural Language settings will then be shown.



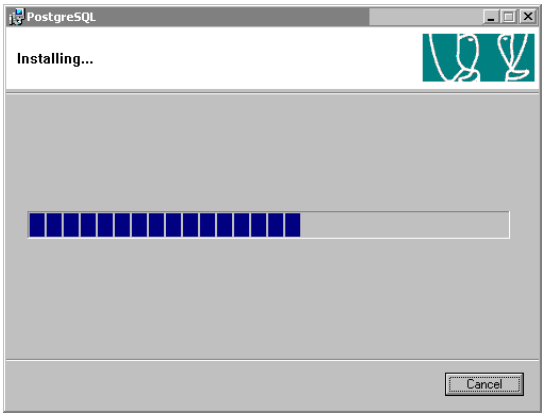
Select "PL/pgsql" and click "Next".



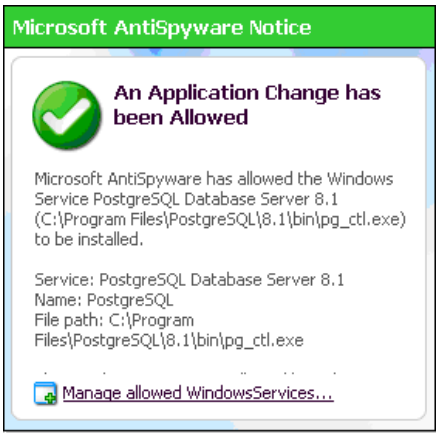
Select Admin81 only and click “Next”.

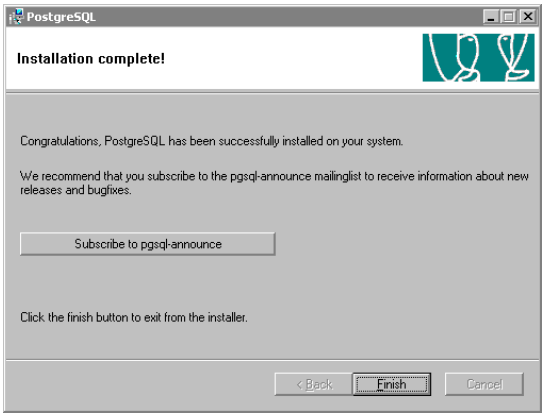


Click "Next" to proceed with the installation.



If Antispyware is installed on the PC, the following notice may be shown. Please disregard this notice.





Once the installation is complete, click "Finish" to return to the Database Installation Wizard.

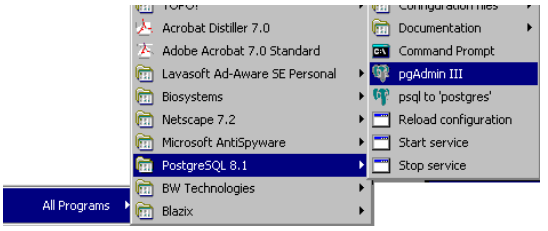
Postgre Client Access Settings

The database server's client access settings control access to the database when it is located on a network with multiple users.

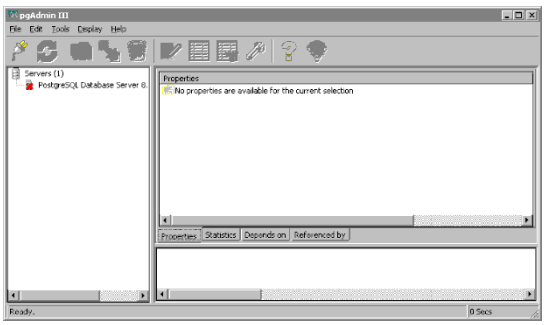
PostgreSQL's client access settings must be configured prior to use. This is done automatically in the basic server installation, but must be done manually when the advanced server installation is used.

The client access setting can be changed at any time by following this procedure.

The PostgreSQL database is configured through the pgAdmin III application located at Programs / PostgreSQL 8.1 / pgAdmin III.



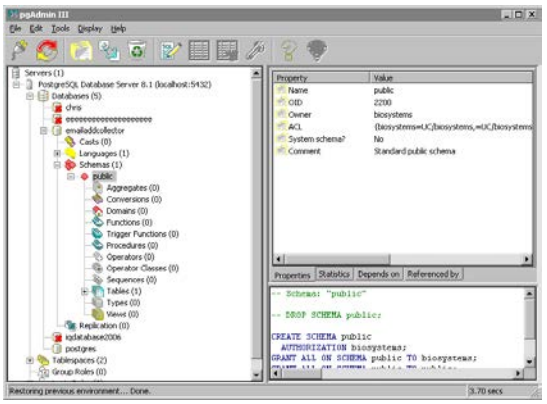
Once the application launches, the following screen will be shown.



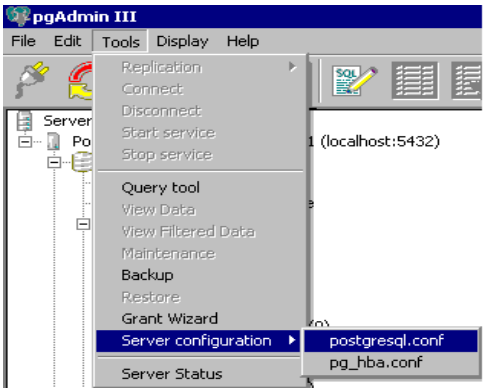
In the left pane under the Server List, double click on "PostgreSQL Database Server 8.1".

Enter the password that was entered for the cluster Superuser in the advanced installation. For those who performed the basic installation, the password is "biosystems".

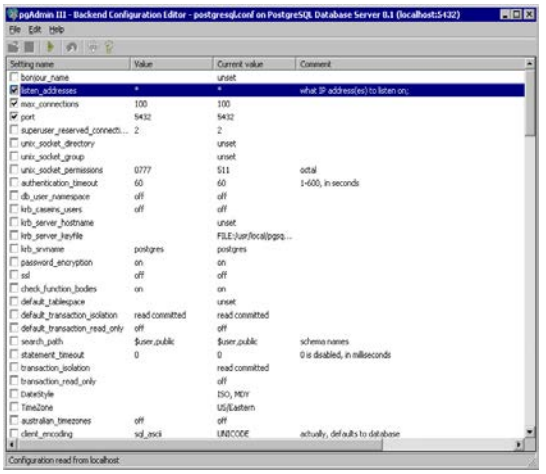
Click OK. The server information screen will then be shown.



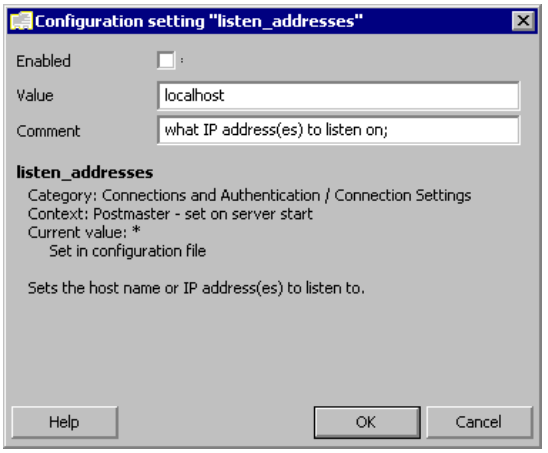
From the Tools Menu select Server Configuration / postgresql.conf to access the PostgreSQL backend configuration settings.



The "Backend Configuration Editor" screen will be shown.



In the "Backend Configuration Editor", double-click on "listen_addresses" to access the configuration settings for listen addresses.

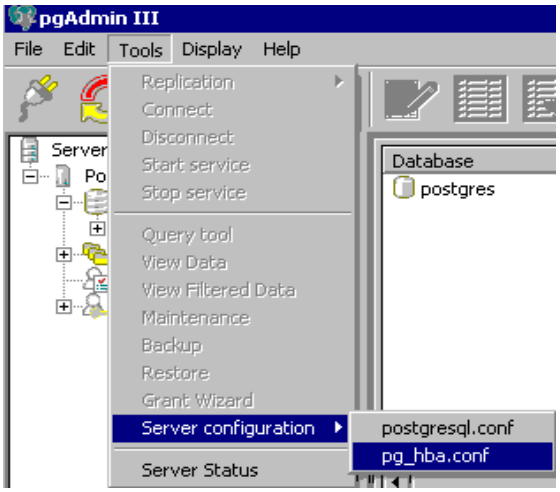


Click on the "Enabled" box. The default entry for the Value input box is "localhost". To limit the database access to the host PC, the setting should be "localhost".

To grant client access to clients that are NOT on this PC, the value should be changed to an asterisk ("*"). The asterisk setting allows the PC that is creating the database to continue to access the database along with the listen addresses that will be specified in the Client Access Configuration screen.

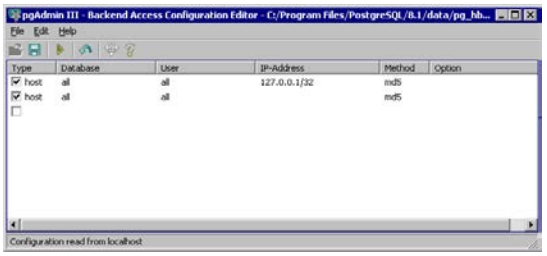
Click OK and return to the main pgAdmin III screen.

The “Backend Access Configuration” must also be changed for other clients to have access.

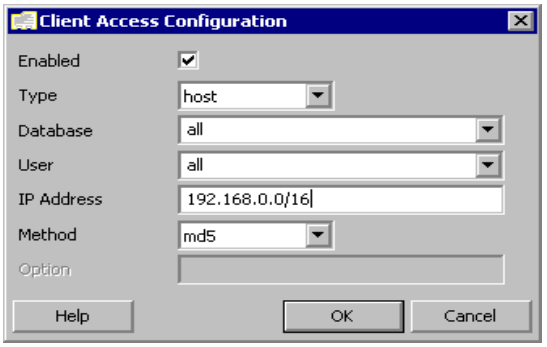


From the “pgAdmin III” screen, access the Tools menu and select Server Configuration / pg_hba.conf to access the Backend Access Configuration Editor.

Three options will be shown the first time this screen is launched after installation. The checkbox at the left of each option indicates whether or not it is enabled. The first two options may or may not be enabled, depending on network configuration. *Do not change them*. The unchecked, final option will be configured for the Posi 3 USB software's client access.



Double-click the bottom option to configure the client access settings.



The client access configuration window allows the user to control access to the Posi 3 USB databases through the PostgreSQL database server. The settings allow the user to specify the parameters that need to be met for the client (external) to access the databases (internal).

To set up client access, first click on the checkbox next to "Enabled".

For more information about the choices in any of the drop-down boxes, click the Help button.

The "Type" setting should be "host", although other settings are available.

Under "Database", select the database that should be accessible by the client, or leave it set to "All". To limit the client's access to only the PostgreSQL database(s), select "postgres".

Under "User", enter a specific user account name or user group as the network would recognize it.

Enter the IP Address filter for the user or user group. *See the Posi 3 USB Installation help file for more information and examples or consult your IT department.*

Honeywell Analytics recommends that "Method" be set to "md5".

Once Client Access is properly configured, click the Close “X” button to close the Backend Access Configuration Editor.

Software installation is now complete.

5. Hardware Setup

5.1 Installing the test head

The test head must be mounted to the top of the Posi 3 USB chassis. A gasket installed between the top of the bellows assembly and the bottom of the test head guards against leakage. A Tygon™ tube connects the static pressure port located in the left eye of the test head with a hose barb fitting on the bellows chamber base plate. The head is secured by four mounting standoffs and four tightening knobs.

To install the test head on the Posi 3 USB chassis:

1. Make sure the base of the test head, gasket, and bellows chamber inlet area (where the test head will be mounted) are clean and free of dust and/or other contaminants.
2. Screw the four standoffs into place at the top of the Posi 3 USB chassis by hand until they are

tight. ***No tools are necessary. Do not over tighten!*** The hexagonal standoffs may have an arrow etched into one of the sides. The arrow on the standoff should be pointing upwards when the standoff is properly positioned.

3. Center the head gasket into position on the bellows chamber inlet between the standoffs.

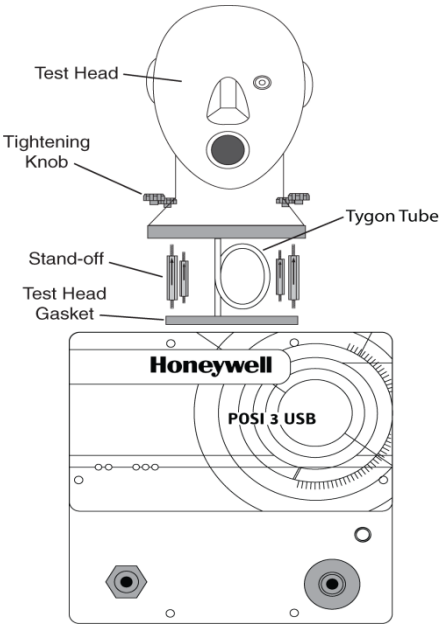


Figure 5.1 Test head and mounting hardware

4. Connect one end of the Tygon™ tubing to the bottom of the head and the other end to the brass hose barb located inside the bellows chamber.

   This tubing is used to connect the static pressure port in the left eye of the test head with the Low Pressure and Activation Pressure transducers located on the inside of the Posi 3 USB chassis.

5. Carefully align the test head with the mounting standoffs, and slide the head into place on the Posi 3 USB chassis. Make sure the Tygon™ tube from step 4 is not caught or pinched as you slide the head into place.

6. Install the four tightening knobs on top of the threaded standoffs by hand.

   No tools are necessary. Do not over tighten!

5.2 Connect the Posi 3 USB to the PC

The Posi 3 USB is connected to the PC via USB cable. Once the software is installed and the Posi 3 USB is assembled, use the USB cable to attach the Posi 3 USB to the PC.

5.3 Turn on the power

To turn the Posi 3 USB on, simply plug the power cord of the Posi 3 USB into a grounded outlet and flip the rocker switch located on the rear panel of the Posi 3 USB chassis.

Note: Honeywell Analytics recommends that the Posi 3 USB be plugged into a surge protector. Failure to use a surge protector may lead to sporadic loss of communication between the Posi 3 USB and the PC.

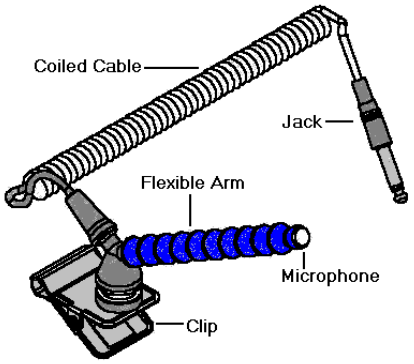
⚠CAUTION Do not attach the pressure-reducing manifold, or mount an SCBA facepiece on the test head prior to turning the Posi 3 USB on. Doing so prior to completion of the electronic self test and startup sequence may result in damage to the Posi 3 USB and/or incorrect test data.

*The USB Drivers **must** be installed prior to launching the Posi 3 USB software. The USB driver installation is covered in section 4.1 above (see step 21) and is also discussed in the Posi 3 USB Installation Help File.*

5.4 Install the microphone (optional)

If the Posi 3 USB includes the Sound Detection System (SDS), the microphone will need to be installed prior to launching the software.

1. Plug the microphone into the port located on the Posi 3 USB's left front panel over the medium pressure inlet.



Microphone and Carrier Arm Assembly

2. The software will automatically recognize the microphone when the Posi 3 USB is initialized.

The microphone is only used in the Complete SCBA Test. For further instructions on using the microphone, see the Posi 3 USB Help File.

6. Launch the Software

To launch the software, either double click on the Posi 3 USB icon located on your PC's desktop screen or click on the start button to access All Programs / Honeywell / Posi3 USB / Standard Edition / SCBA Test

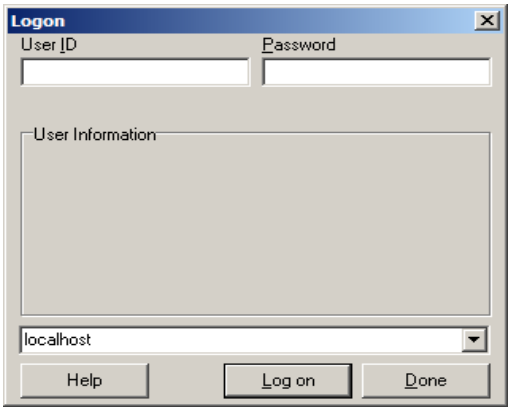
6.1 Pre-Test Requirements

Before the software will allow the testing of breathing apparatus, the following requirements must be met:

1. Log in to the software (see section 6.2).
2. Set up a new user account with the ability to create and test apparatus in the software. The Setup User doesn't have these rights, so at least one new user must be created (See section 6.3).
3. Create an apparatus model in the software (See section 6.4). Users with OEM software versions will not have this option because the apparatus models are included in the OEM software's built-in database and cannot be modified.
4. Assign a serial number to the apparatus you want to test (See section 6.5)

6.2 Initial Login

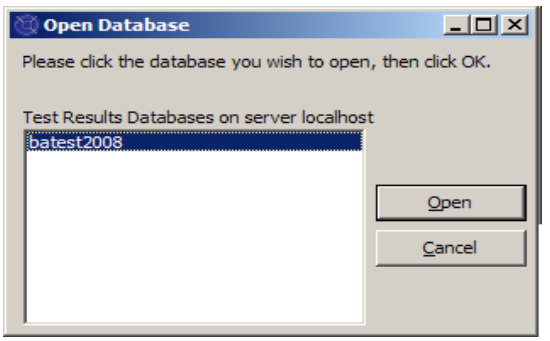
At the initial software launch, there will be no system users in the database, so an initial User ID and Password are used to enter the software.



The initial User ID and password are both "Setup".

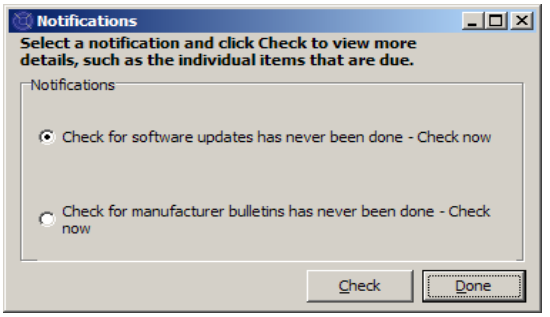
Note: User ID and Password are case sensitive.

After successful login, the software will prompt the user to open the test results database that was created during the installation procedure (see section 4.1 step 19 above).



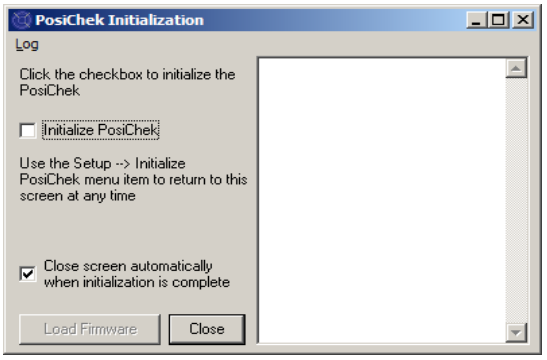
Select the database and click Open.

The software will offer the option to search for software updates and/or manufacturers bulletins.



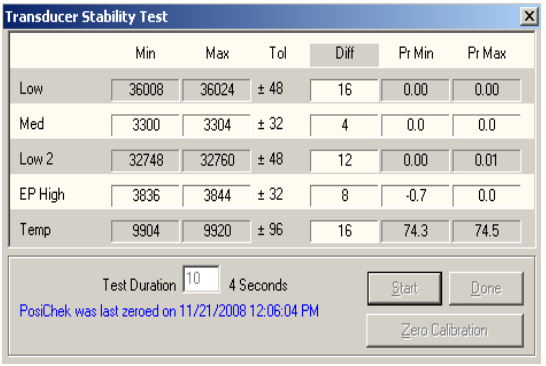
If you wish to check for either of these items, click on the appropriate options and then click Check.

Click “Done” to proceed to the initialization.



At the initialization screen, click the “Initialize PosiChek” checkbox to establish communication with the instrument. The software must be able to communicate with the Posi 3 USB in order to perform tests.

The Transducer Stability Test screen will be shown.



Once the Transducer Stability Test is passed the main screen will be shown.

6.3 Set up a User Account

A new user with the ability to test breathing apparatus must be created before testing can occur.

The Setup user has the ability to create new users, but does not have the ability to test apparatus.

6.3.1 User Permission Levels

User access is divided into five levels.

Level 0: No longer allowed to use the software

Level 1: View Test Results

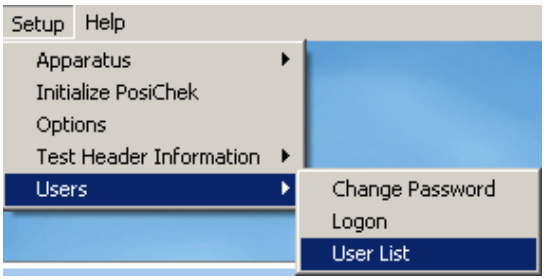
Level 2: Perform and View Tests

Level 3: Add Users, View Tests

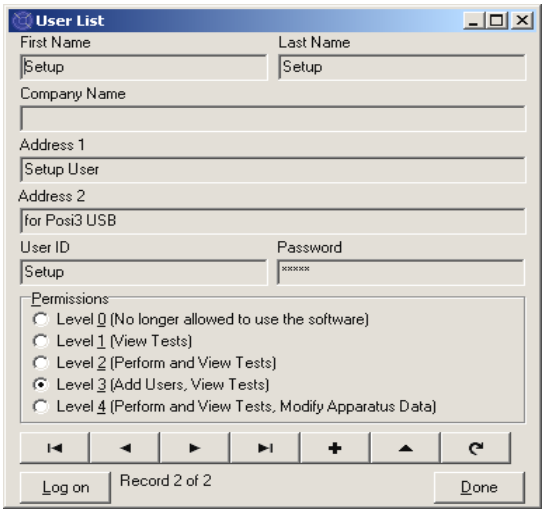
Level 4: Perform and View Tests, Modify Apparatus Data.

6.3.2 Create a New User

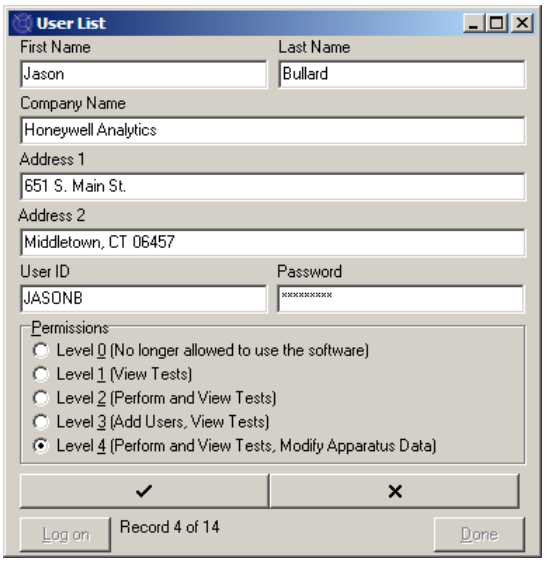
1. To create a new user, click on Setup / Users / User List.



The User List screen will be shown.



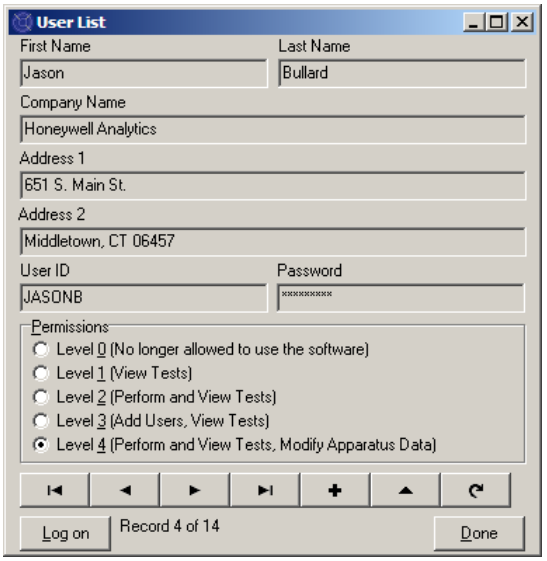
2. Click on the + button to add a new user.



3. Enter the user’s information (as needed). The User ID field and the Password field must be completed.

4. Set the Permissions level as needed.
5. Click on the Check button to save the information.

6. Click Done when finished adding users.



6.3.3 Edit User Data

To edit an existing user's information, enter the User List as described above and click on the up arrow.

Once the user's information has been changed, click on the Check button to save the information.

6.4 Add Apparatus Models

Note: The Model Configuration Wizard is only available in Standard Version Posi 3 USB software. Brand-specific versions of software come with pre-installed models and do not allow end users to configure models.

All SCBA are made up of similar components including a facepiece, a first stage regulator, a second stage regulator, alarms, gauges and an air cylinder. Although every SCBA is unique, there are general similarities from model to model that Honeywell Analytics uses to set the appropriate baseline values for testing these components.

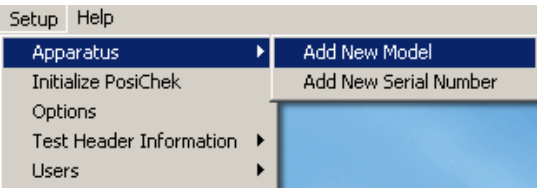
The Model Configuration Wizard allows the user to select components to create specific models from the available of SCBA, Airline Apparatus, and Facepieces that are used in testing.

Once the type of apparatus is selected, the Model Configuration Wizard will automatically run through the appropriate setup procedure. The user will need to configure the model so that it matches the physical specifications of the apparatus.

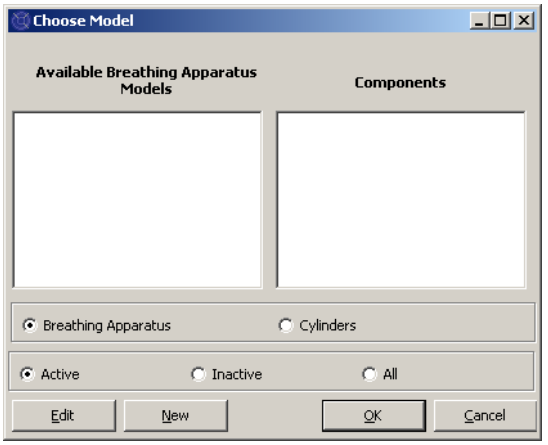
The testing procedure is automatically defined for the apparatus model that is selected at the time of testing. That apparatus is configured in the software by this procedure.

The user entering apparatus information must have level 4 software access or the Add New Model and/or Add New Serial Number options may be unavailable. See section 6.3.1 for a description of user software permissions.

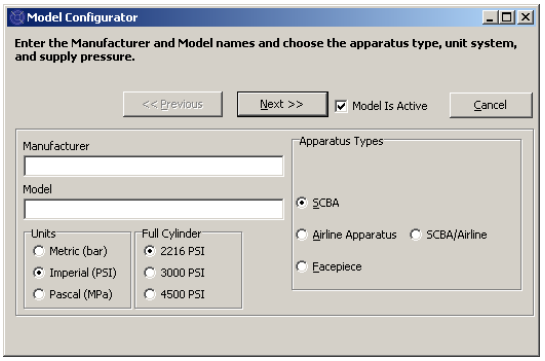
1. To enter a new apparatus, first select Setup / Apparatus / Add New Model.



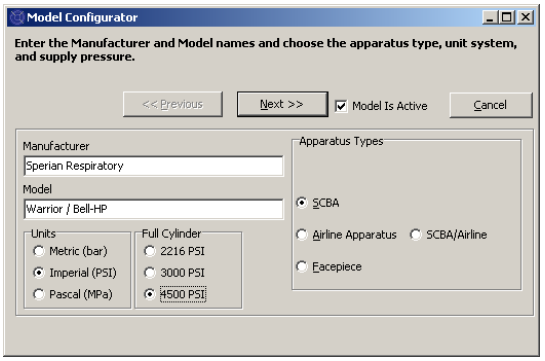
2. The Choose Model Screen will be shown and will show a list of all models that are available for testing. If this is the initial software launch, the fields will be blank.



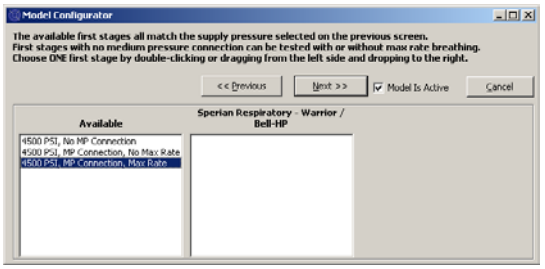
3. Click on New to enter the Model Configurator.



4. Enter the Manufacturer Name and the Model Name. Then select the units (Metric, Imperial or Pascal), select the pressure of the cylinder (2216 PSI, 3000 PSI or 4500 PSI) and select the type of apparatus (SCBA, Airline Apparatus, SCBA/Airline or Facepiece).



5. Once the basic configuration of the apparatus is entered, make sure that “Model Is Active” box is selected and click “Next”.



6. At the First Stage Selection screen Double Click on the appropriate first stage connection from the left column. The selection should then appear in the right column.

   In this example, we’re configuring the first stage for a 4500 PSI SCBA, so only first stages that can be used with 4500 PSI are shown:

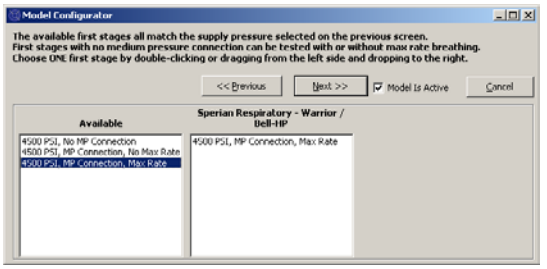
   4500 PSI, No MP Connection

   4500 PSI, MP Connection, No Max Rate

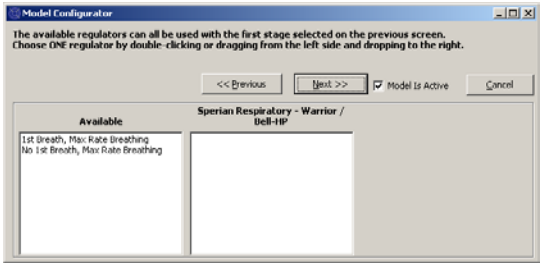
   4500 PSI, MP Connection, Max Rate

Note: MP Connection stands for Medium Pressure. For SCBA that are entered into the software with a Medium Pressure connection in the Standard software, the medium pressure readings will be shown on tests where it is appropriate. The Standard Software does not contain tolerances for the medium pressure tests, so there will be no indication whether the medium pressure portion of the tests passes or fails.

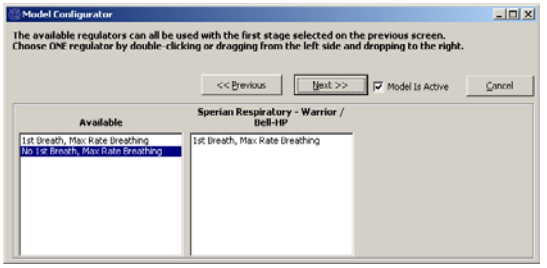
All brand-specific versions of Posi 3 USB Software include Medium Pressure tests where appropriate (as defined by the manufacturer). The inclusion of the Medium Pressure connection allows the user to test the output of the first stage according to the manufacturer's specifications.



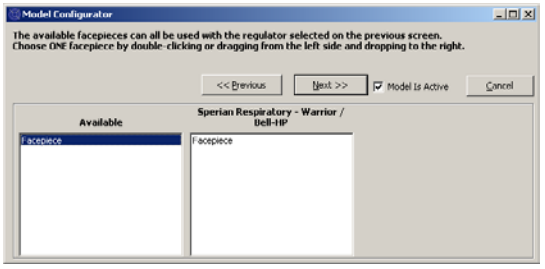
7. Once the selection is shown in the right column, click “Next”.



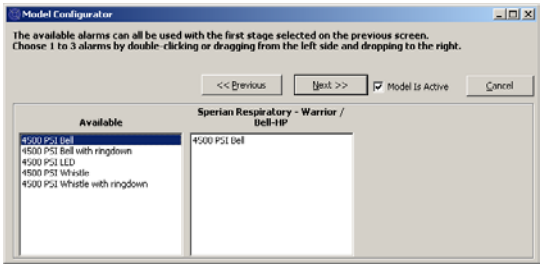
8. At the Regulator selection screen, double click on the appropriate regulator from the Available column so that it appears in the column at right.



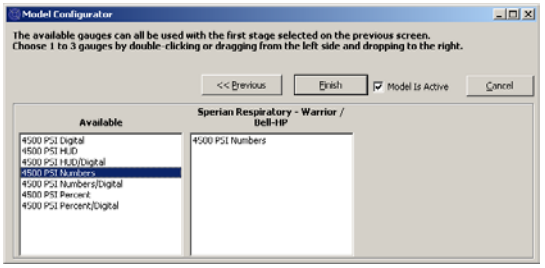
9. Once the selection is shown in the right column, click “Next”.



10. Double click on the Facepiece from the Available column so that it appears in the column at right. Then click “Next”.

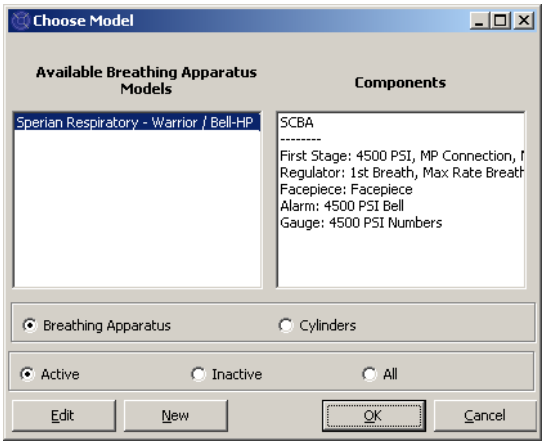


11. At the Alarms Selection screen, double click on the appropriate Alarm from the Available column so that the alarm appears in the column at right and click “Next”.



12. At the Gauge Selection screen, double click on the appropriate gauge from the Available column so that the gauge appears in the column at left and click “Finish”.

Once the model has been configured, the software will return to the Choose Model screen and the new model will be shown in the box at left. When selected, the components of that model will be shown in the box at right.

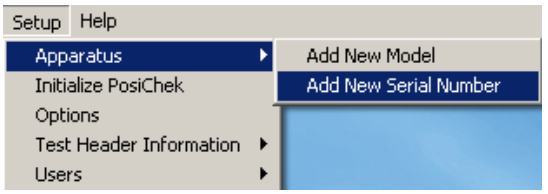


13. Click OK when finished adding models.

6.5 Add New Serial Number

Prior to assigning a serial number to an apparatus, the apparatus model information must be added to the models database.

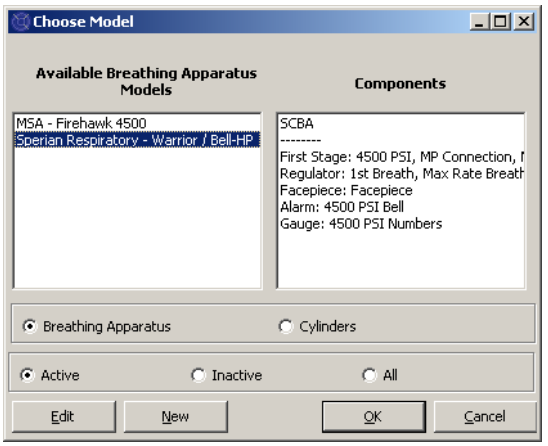
1. To add a new serial number to the software, first select Setup / Apparatus / Add New Serial Number.



The Choose Model Screen will be shown.

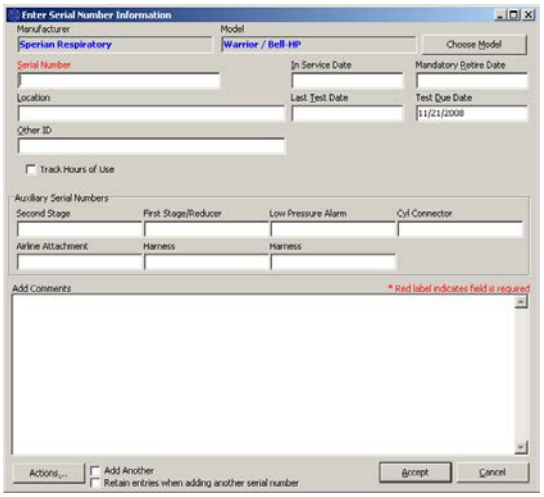
The default settings for the Choose Model screen are to display Active Breathing Apparatus. Options at the bottom allow that user to select from Breathing Apparatus or Cylinders and from Active, Inactive or All.

Inactive items cannot be selected for testing. To change the active / inactive setting for an item, right click on it and select “Set as Active” or “Set as Inactive” (as appropriate) from the menu options.

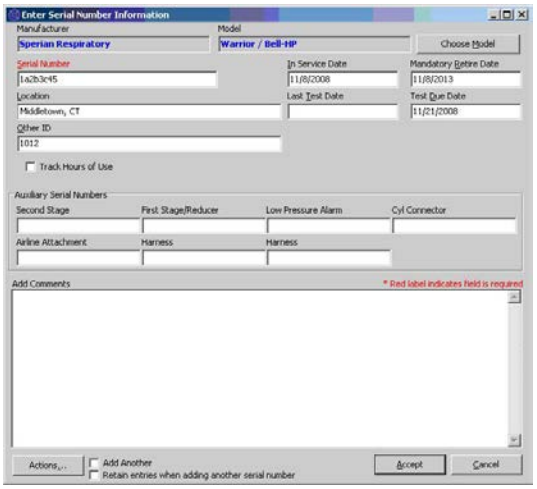


2. If the model for the serial number to be entered is shown, click on it to select it and click OK.

To add a new model, click the "New" button and refer to section 6.4 for instructions on adding a new model.



3. Enter the serial number and other specific information about the apparatus.



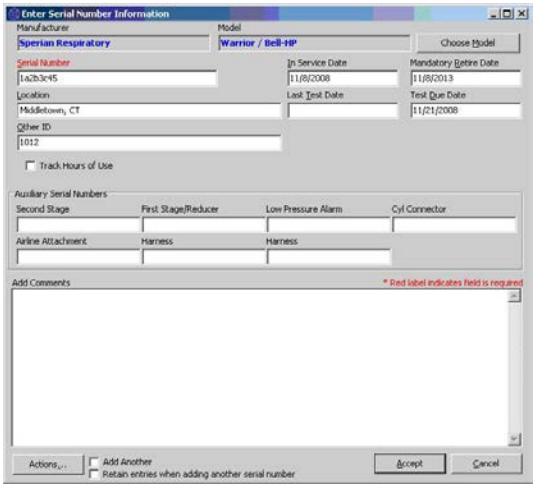
Some information shown on the serial number screen can be affected by the options chosen in the Setup / Options screen. The options can be displayed and changed by using the Actions button at the bottom of the screen.

Required fields are marked in red. The Serial Number field is always mandatory. The list of other required fields can be changed in the options menu.

The display of auxiliary IDs and overhaul dates is also controlled in the options screen. See the Posi 3 USB Help File for further details.

4. To enter another serial number that is identical in configuration to the first one, click on "Retain entries when adding another serial number" at the bottom, then click on "Add Another". The software will create a new Enter Serial Number Information screen while retaining the other information that has been entered.

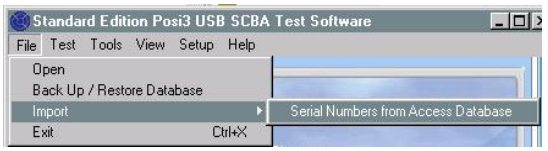
5. To enter another apparatus that has a different configuration from the first one, click "Add Another" and leave "Retain entries…." unchecked.



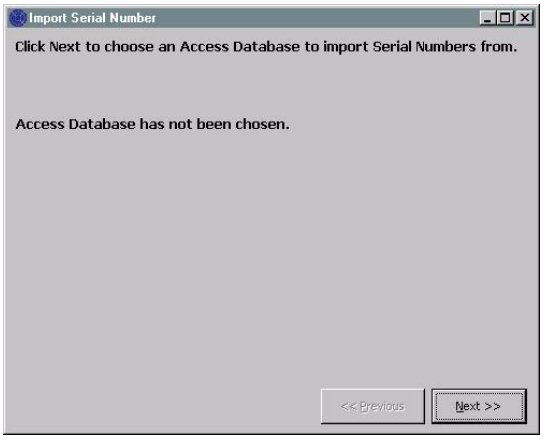
6. Once all of the apparatus have been entered, click "Accept" at the lower right.

6.6 Import Serial Numbers

For those who have been using the PosiChek3 Titanium Edition 32-Bit Software, it is possible to import apparatus information from the existing MS Access database into the new PostgreSQL database. To start the import, click on the File Menu followed by Import / Serial Numbers from Access Database.

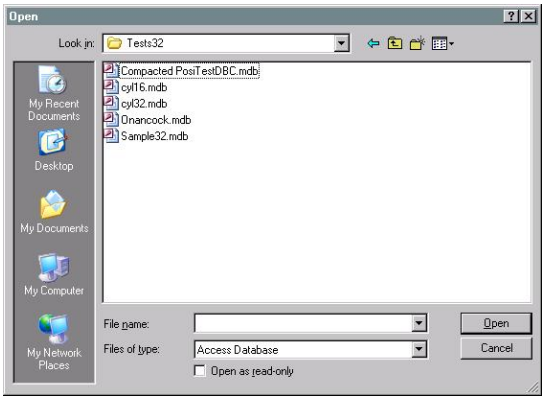


The Access Import Wizard screen will be shown.

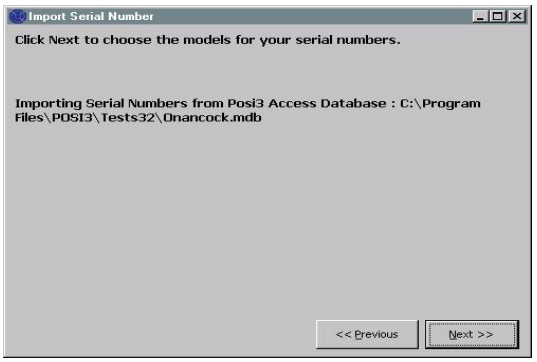


Click Next to select the Access database that will be imported into the PostgreSQL database.

A file – open dialog box will be shown and will automatically open at the default location for test results in the PosiChek3 software. If the database is located somewhere else, use the browse function to navigate to that location and select the database.

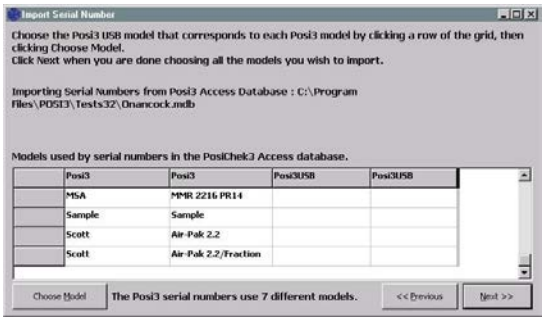


Click on a database to select it and click Open. The Import Serial Number screen will be shown along with the information about the Access Database.



Click Next to choose the models for import.

The screen will list all of the models in the selected database that have serial numbers assigned to them.



Select a row by clicking in it so the whole row appears highlighted and click the “Choose Model” button at lower left. The Choose Model screen will be shown. If the model that is being exported from Access matches an existing model in the new PostgreSQL database, then select it. Otherwise, click the “New” button and add the model specifications into the new database.

Continue with this process of selecting the serial numbers from the access database and exporting them into the new PostgreSQL database until all models have been entered.

Once all serial numbers have been successfully imported into the PostgreSQL database, click Next.

The software will show the numbers of serial numbers that were imported, and will show those that were not imported. Apparatus with serial numbers already present in the PostgreSQL database will not be imported.

7. Connect the breathing apparatus to the Posi 3 USB.

Now that the software is installed and running, and the Posi 3 USB is assembled, it is time to connect the breathing apparatus to the Posi 3 USB. One of the strengths of the Posi 3 USB is its adaptability. For simpler tests, the breathing apparatus’s facepiece serves as the only interface between the Posi 3 USB and the breathing apparatus. More complex tests require the use of a series of manifolds to deliver pressure levels from points in the breathing apparatus’s airstream to the Posi 3 USB’s internal transducers. Every breathing apparatus is different, so specific parts and instructions may be required for your breathing apparatus to be connected to the Posi 3 USB.

The Complete SCBA Test requires the following connections between the SCBA and the Posi 3 USB:

1. The breathing apparatus facepiece is put on the Posi 3 USB's anatomically correct test head, just as it would be placed on the head of a person. See section 7.2 below.
2. The appropriate high or low-pressure manifold is inserted between the cylinder and the first stage regulator and then connected to the high-pressure inlet fitting located at the lower right side on the front face of the Posi 3 USB. See section 7.3.
3. If possible, the first stage manifold is connected from a location downstream of the first stage regulator and upstream of the facepiece to the medium pressure inlet, which is located at the lower left side on the front panel of the Posi 3 USB. (See section 7.4)

7.1 Identify the major parts

First identify the three manifolds that are included with the Posi 3 USB*. Each of the manifolds comes with a factory label that identifies it by name and part number.

54-21-A03 Assembly, Manifold, 2250 PSI

The low pressure manifold can be recognized by its brass T-fitting and black handwheel. This manifold will be used with all low pressure SCBA (3000 PSI and below).

54-21-A02 Assembly, Manifold, 4500 PSI

The high pressure manifold can be recognized by its stainless steel T-fitting and handwheel. This manifold will be used with all high pressure SCBA (above 3000 PSI).

35-751 First Stage Manifold

The first stage manifold is a 3-foot long hose with identical Foster quick disconnect fittings on each end. A model-specific adapter is required to connect the first stage manifold to the breathing apparatus. The adapter must be obtained from the manufacturer of the breathing apparatus, and is typically sold in a kit that also includes the brand-specific software.

Brand and Model-Specific Parts

In many cases the high or low pressure manifold (as appropriate for the breathing apparatus) can be used without any special parts to connect the air source to the breathing apparatus and to the Posi 3 USB.

If testing the first stage a model-specific adapter and the first stage manifold are necessary to connect the breathing apparatus to the Posi 3 USB.

7.2 Attach the Facepiece

Position the facepiece squarely on the test head, and tighten the straps evenly. Make sure the face piece's inner sealing surface is flat, sealed to the test head, and that nothing compromises the integrity of the seal.

Make sure the nose cup is positioned over and across the test head nose.

Do not connect the second stage regulator to the facepiece until the software instructs you to do so. The facepiece must be vented and open to ambient air pressure when the facepiece leak test is started.

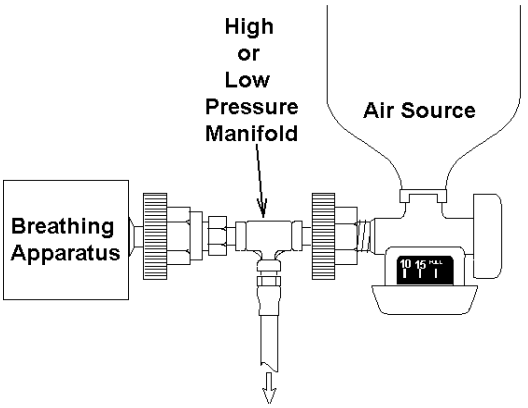
7.3 Attach the high or low pressure manifold

1. Turn off the cylinder valve on the SCBA to be tested and depressurize it by using the bypass.
2. Disconnect the SCBA from the cylinder. If the cylinder will not be used as the pressure source for testing, it can be removed during testing.
3. Select the manifold that matches the supply pressure of the SCBA and connect the handwheel on the single end of the pressure-reducing manifold to the Posi 3 USB through the high pressure inlet fitting located on the lower right front panel of the Posi 3 USB. Make sure the handwheel is tight.

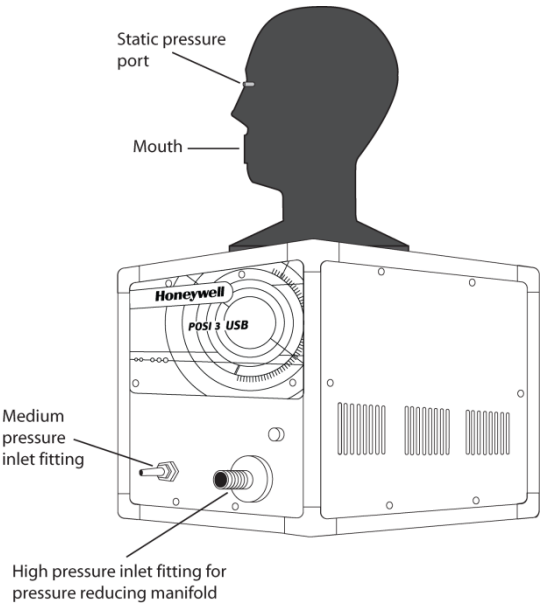
⚠WARNING The correct manifold must be used to ensure the correct results during the bypass flow test. Use of the incorrect manifold can lead to incorrect bypass flow test results, serious injury, or death.

⚠WARNING If a pressure supply other than a cylinder is used, make sure the supply regulator is set to the appropriate pressure.

⚠WARNING Do not attempt to service SCBA without the proper training from the SCBA's manufacturer.



4. Connect the handwheel on the open side of the T-fitting to the air source. Make sure the handwheel is tight and that any valve used for the pressure supply is located next to the T-fitting on the manifold.



⚠WARNING Make sure the manifold does not kink! Kinking can cause the hose to rupture, which can lead to serious injury, or death.

5. Connect the SCBA to the T-fitting on the manifold.

7.4 Attach the first stage manifold

An adapter is required to connect the first stage manifold to the breathing apparatus. First stage manifold adapters are specific to the SCBA and are only available from the SCBA manufacturer.

⚠WARNING Always follow the breathing apparatus manufacturer's instructions when connecting the first stage to the Posi 3 USB.

Note: Detailed connection instructions for a variety of models are available in the help files for the various brand-specific Posi 3 USB software versions.

You are now ready to begin testing your breathing apparatus. Refer to the help file for further instructions. The help file can be launched from the software at any time by using the **F1** key.

Appendix A: Operating Ranges

1. Power Requirements
    Line Voltage range 100 VAC to 125 VAC (use 2A input fuses); or
    220 VAC to 250 VAC (use 1A input fuses).
    Line Voltage selection Fuse change required; otherwise it is automatic.
    Line Frequency 50 to 60 Hz
    Maximum Power Consumption 60VA

2. Environmental Characteristics
    Ambient Temperature Ranges
    Operating 41º F to 113º F (5º C to 45º C)
    Storage 14º F to 113º F (-10º C to 45º C)
    Pollution Degree 2

3. Physical Characteristics
    Size (excluding head)
    Height 14.1 inches (358 mm)
    Width 13.5 inches (343 mm)
    Depth 16.0 inches (406 mm)
    Weight (excluding head) 34 pounds (15.4 kg)

4. Fuse requirements
    120 VAC Systems 2A, Slow Blow, 250 VAC, 5 x 20 mm
    220 VAC Systems 1A, Slow Blow, 250 VAC, 5 x 20 mm