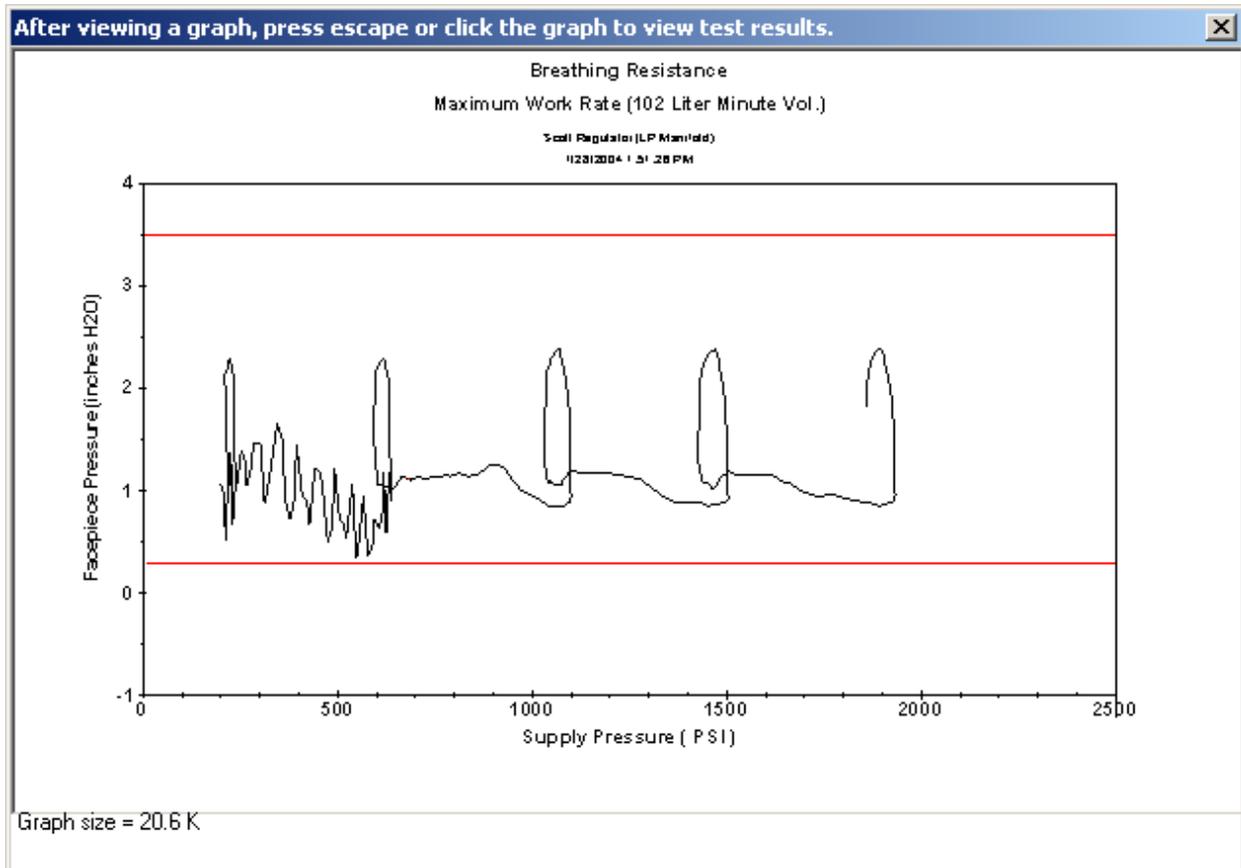


Troubleshooting Guide

PosiChek³

BA Test Bench



Honeywell

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Part number 13-271 Version 2
27 August 2012
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CAUTION

The PosiChek³ 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.

PosiChek³ Troubleshooting Guide

Part Number 13-271

Version 2

Copyright 2012

by

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1. Overview

This manual is designed to help users who are experiencing problems with the PosiChek software and hardware.

This manual assumes a basic knowledge of BA, PC and PosiChek operations. Please consult the PosiChek reference manual for detailed directions on basic procedures.

Note: If you are having a problem connecting your BA to the PosiChek, you probably need special adapters that are available through the BA manufacturer.

If you are unable to solve the problem through the use of this manual, please call the Honeywell Analytics Service Department at (800) 711 6776 or (847) 955-8200. Please use a telephone that is located near the PosiChek and the PC.

2. User and data problems

2.1 Unable to remember password

If you are unable to remember your password, there are two other ways to log into the system.

At first launch of the software, the system contains a single active user, the setup technician, whose password is "setup". This is discussed at length in section 2.7 of the PosiChek Reference Manual. Logging in with the password "setup" will normally give the user full system rights, so the user will be able to access and modify user and apparatus data as needed. The "setup technician" may also be able to create new users.

If the setup technician has been removed from the user list, or if the setup technician's system rights have been modified, and you are unable to

log on with another valid password, please contact the Honeywell Analytics Service Department at (800) 711 6776 for help. The Service Technician may be able to suggest another password to log you on to the system.

2.2 Unable to access

When a menu item is "grayed out", it is inaccessible. Menu items may be "grayed out" for a number of reasons.

2.2.1 Test menu is "grayed out"

If the all of the test functions on the menu except the Cylinder Test are grayed out, you are probably running PosiChek software "offline". Initialize the PosiChek as discussed in section 3.1.1 of the PosiChek Reference Manual to conduct tests.

The test menu will also be "grayed out" if the database that is currently open is configured as "read-only". In this case, change the configuration of the database so that it can accept test results, then re-attempt testing.

Note: The Sample32.mdb database that is included with the PosiChek3 software is "read only". Test menu options will be "grayed out" in the Sample32.mdb database.

2.2.2 User or apparatus info is "grayed out"

If you are logged into the system and are unable to modify the user list, apparatus list or test results, then you probably do not have adequate system rights for the PosiChek software. PosiChek system rights are discussed in detail in section 5.2.1 of the PosiChek Reference Manual. It may be necessary for the system administrator, or someone with a higher level of system rights, to log into the system and change your system access settings.'

Some apparatus menu items will be “grayed out” if the database that is currently open is set to “read-only. In this case, change the configuration of the database so that it can accept test results, then re-attempt testing.

Apparatus information will always be “grayed out” in OEM versions of the PosiChek software. All apparatus information in OEM software versions is pre-programmed to meet the manufacturer’s specifications. In the unlikely event that you need to make modifications to apparatus information in OEM software versions, contact the BA manufacturer.

2.2.3 Print menu is “grayed out” in View Apparatus screen

Whenever a database is opened, the software asks if you would like to view the apparatus that are due for testing. If you click Yes, the apparatus due for testing will be shown, but the Print Menu will be grayed out.

To print only the list of apparatus that are due for testing, click on the “Done” button. When the software returns to the main screen, select “View Apparatus”. Then click on the “Actions” button (lower left) and select “Show Only apparatus...”. From “Show Only...” select “Due Before”. The software will prompt you for the date. Enter today’s date and click OK. The list of apparatus due for testing within one month will then be shown. To print the list, click on the “Actions” button followed by “Print”.

2.3 Unable to find serial number in Select Apparatus for Testing Screen

If a serial number cannot be located, perform the following steps:

1. Click cancel and check for alternate spellings of the model name and re-execute the search. To locate the apparatus, the spelling of the model name entered for the search must exactly match the spelling of the model name in the apparatus types database.
2. Use the View / Apparatus menu choice to access the entire apparatus list. Once the serial number is located, you will be able to view the apparatus type (model) as it appears in the database for the apparatus. If the apparatus type (model) is misspelled, correct the apparatus type (model) information as discussed in section 6.2.10 of the PosiChek Reference Manual.

3. Transducer problems

3.1 Message: Calibration due

The PosiChek remembers the calibration due date of each of the internal transducers and will display the “Calibration Due” message when appropriate.

In order to ensure accurate test results, the PosiChek’s internal transducer assembly must be calibrated annually. Since calibration requires specialized test equipment, the procedure is typically done at the factory.

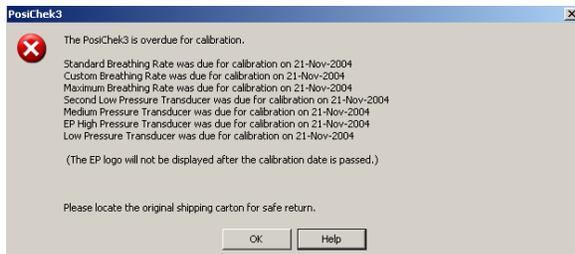
PosiCheks located in North America must be returned to Honeywell Analytics for calibration. Contact Honeywell Analytics for a Return Authorization Number (RA#) prior to returning the PosiChek.

(800) 711-6776 or (847) 955-8200

The PosiChek software is designed to automatically inform you of the calibration status of the internal transducer assembly.

⚠CAUTION Testing done with a PosiChek that is overdue for calibration may provide inaccurate test results.

If more than a year has gone by since the last calibration, the software will display a message for each transducer that is due for calibration. Under normal circumstances, all transducers will be due for calibration on the same date. The following message will be shown at software start-up if the PosiChek recognizes that transducers are due for calibration.



Press “OK” to acknowledge the warning and turn off the calibration due message. The PosiChek will operate normally once the warning message is acknowledged. The calibration due message will be shown whenever the PosiChek is turned on or initialized until the test bench is successfully calibrated.

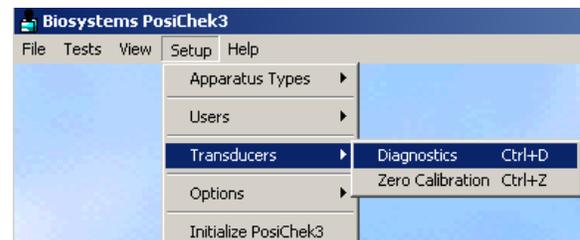
Note: The calibration status of the transducer assembly is automatically logged by the PosiChek software during tests. Any data acquired from tests that are performed after the calibration due reminder has been acknowledged will indicate the overdue status of the transducers.

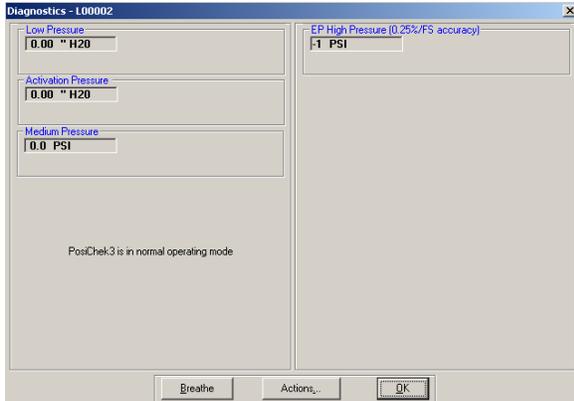
3.2 Message: Transducers out of range

The “Transducers out of range” message can indicate a number of problems. Perform the following instructions in order to rule out the

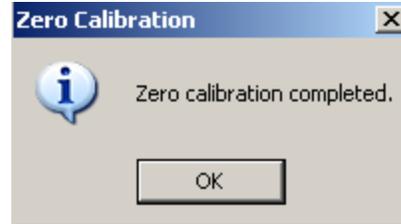
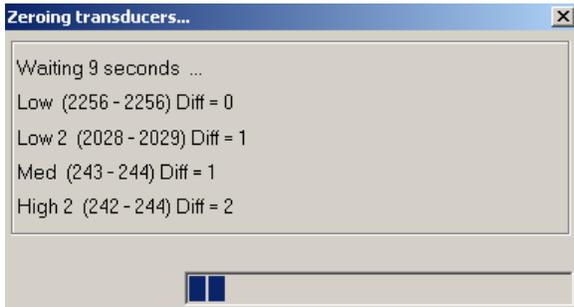
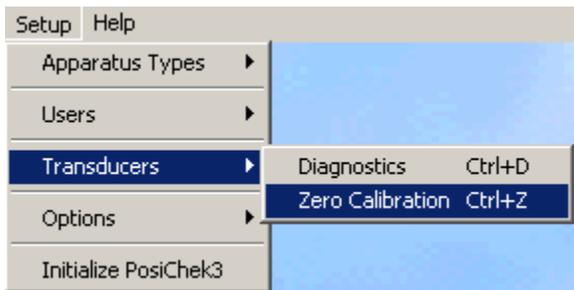
simpler and more likely causes before performing more complex procedures.

1. Remove the facepiece and all manifolds from the PosiChek. Then try to initialize the PosiChek again. See Section 3.1.1 of the PosiChek Reference Manual for the initialization procedure. If this fails to correct the problem, proceed to step 2.
2. When the software prompts you stating that a transducer count is out of range, click no each time the message appears in order to determine which transducers are out of range. If only the Low Pressure and Activation Pressure transducers are out of range, it may indicate that the tube that connects the head to the bellows is crimped. Remove the head and check the tube. Then carefully replace the head and reinitialize the PosiChek. See Section 3.1.1 of the PosiChek Reference Manual for the initialization procedure. If this fails to correct the problem, proceed to step 3.
3. From the main menu bar select Setup / Transducers / Diagnostics and verify that all transducers are reading close to zero and moving slightly.



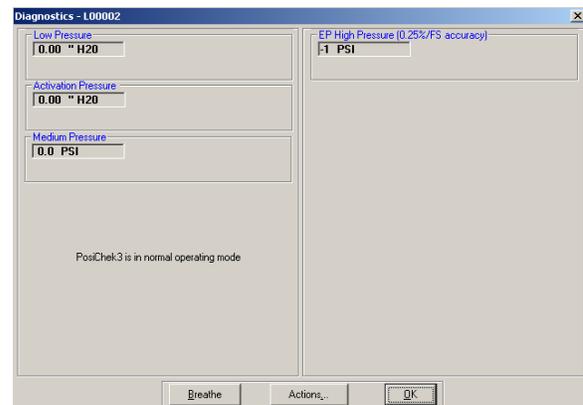


If any of the transducers reads a number that is not close to zero, click OK, and then choose the menu item Setup / Transducers / Zero Calibration to zero the transducers. Make sure that the facepiece has been removed from the PosiChek test head prior to zeroing the transducers.



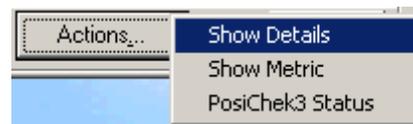
Note: A transducer stability test will automatically be performed following the transducer zero calibration.

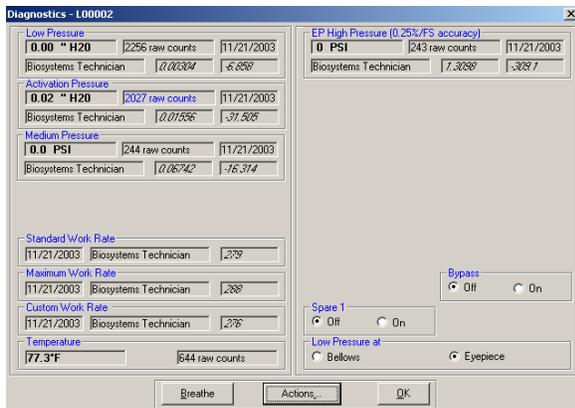
Once the zero calibration has been completed, click OK and return to the diagnostics screen.



If each of the transducers now reads a number that is close to zero, click OK and return to testing. If the problem persists, continue to step 4.

- From the Setup / Transducers / Diagnostics screen, click on the Actions button followed by "Show Details" to view the raw counts of each transducer.





If the raw count of any transducer is 0 or 4095, this may indicate that data from the transducer is not being transmitted to the circuit board of the PosiChek. A reading of 4095 may also indicate that the pressure on the transducer is above the maximum allowable pressure. To rule out data transmission problems due to bad connections, **first disconnect the PosiChek from the power source, PC and printer.** Then remove the left side panel and gently push each electrical connector into its socket. Once this is done, reassemble the PosiChek. Then reconnect it to the electrical socket and the PC, reboot the program and check the transducer counts again. If the problem persists, continue to step 5. If realigning the electrical connections results in a change in the transducer counts in the Diagnostics screen, click OK, and then zero calibrate the transducers as discussed above in step 3.

5. If the transducer counts remain at 0 or 4095, it may indicate a physical wiring problem. Contact Honeywell Analytics for further instructions.

3.3 Message: Raw count variation is out of range

If the message “Raw count variation is out of range” is displayed during initialization or during a zero calibration, it is an indication that the PosiChek has failed the transducer stability test. The transducer stability test can fail for a number of reasons including minor changes in pressure on the transducers.

1. Remove the facepiece, manifolds and anything else attached to the PosiChek or the test head. Then reinitialize the PosiChek (see section 3.1.1 of the PosiChek Reference Manual). If the message reappears, proceed to step 2.
2. From the main menu choose Setup / Transducers / Zero Calibration to make sure the transducers are zeroed correctly. If the error message returns, perform the zero calibration a second time. If the message is displayed a third time, there may be a hardware issue involved. Call Honeywell Analytics for details.

3.4 EP Transducer is not indicated on Software or Test

The Enhanced Precision logo is only displayed when all of the following conditions are met:

1. The PosiChek is equipped with an Enhanced Precision transducer.
2. The EP transducer has been calibrated within the previous year by Honeywell Analytics with the appropriate calibration instruments.

PosiCheks located in North America must be returned to the Honeywell Analytics annually for calibration. Contact Honeywell Analytics for a

**Return Authorization Number (RA#)
prior to returning the PosiChek.**

4. Communication problems

If communication problems arise between the PosiChek and the PC, see section 4.1 to rule out simple solutions prior to moving on to other sections.

4.1 Resolving basic communications issues

The following basic steps should be taken when the PosiChek is not communicating with the PC during the initialization sequence.

1. Make sure the PosiChek is plugged in to a wall outlet and is turned on.
2. If the PosiChek is already turned on, then turn it off and turn it back on. (This will reset the printer passthru, if it is turned on.)
3. Make sure the parallel port cable is firmly plugged in between the parallel port on the computer and the PosiChek.
4. Click OK several times on the Initialization screen to make sure you have attempted to establish communication through all available parallel ports.

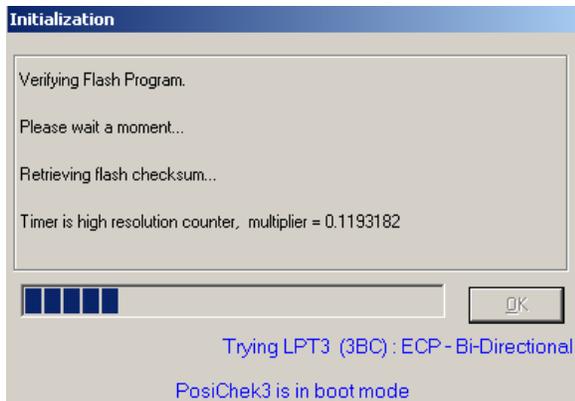
If communications have still not been reestablished, proceed to section 4.2.

4.2 Unable to establish communication between the PC and the PosiChek

1. Turn off the PosiChek and unplug the computer interface cable. Wait at least 5 seconds, then reconnect the interface cable and turn the PosiChek back on. Follow the initialization procedure as discussed in section 3.1.1 of the PosiChek Reference Manual. If this fails to

establish the connection, proceed to step 2.

2. Verify that the parallel port is correctly set up. In Windows 98, 2000, XP you can check this by double clicking the Settings icon and then accessing the Control Panel. From the Control Panel select System and then click on the Device Manager tab. Click the + to the left of "Printer Port" to view all printer ports. Verify that the LPT port does not have a red X or question mark by it. If the port appears to be functioning properly, proceed to step 3.
3. Check that the parallel port and cable are working correctly by plugging the parallel port cable into a printer instead of the PosiChek, and printing a test page on the printer. In order to make sure the parallel port cable is working correctly, make sure you use the same cable you are trying to use to connect the PosiChek. If the cable is defective, install a new printer cable (IEEE 1284 DB25 Male/Centronics 36 Male).
4. If this is the initial setup of the PosiChek, you may need to change the mode of the parallel port in your BIOS settings. If the software is unable to communicate with the PosiChek, it reports the parallel port mode during the initialization process at the bottom of the screen.



Note: In the picture above, LPT3 is configured in ECP Bi-Directional mode.

If the mode given is anything other than ECP or Standard SPP, changing the mode may allow communication to be established. To access BIOS settings, refer to your PC's operating instructions to change your parallel port mode. The preferred parallel port mode for the PosiChek is "ECP". If "ECP" fails to work, select an Output Only mode, which may appear as "Normal", "SPP", "Standard", "Unidirectional" or "Output Only". If the PC's parallel port is operating in any of these modes and the PC is still unable to communicate with the PosiChek, proceed to step 5.

5. If you've completed steps 1-4 above and you are still unable to establish communications with the PosiChek, call Honeywell Analytics.

4.2.1 Unable to Complete Initialization

After establishing communication with the PosiChek, the computer goes through an initialization process. During this process, the flash version in the PosiChek is checked for errors, the lung is centered, the calibration values are read, and the transducers are zeroed

and checked for stability. Occasionally, problems are encountered during the initialization sequence that prevent the initialization from being completed. In general, it is a good idea to call Honeywell Analytics for help with these problems. The most common reasons for initialization failure are listed below.

- Too many errors when loading the flash (see below)
- Unable to center the lung (see below)
- Errors in calibration values (see below)
- Transducers due for calibration (see section 3.1 above.)
- Transducers out of range (see section 3.2 above)
- Raw count variation out of range (see section 3.2, proceed to step 3)

Too many errors when loading the flash

This error tends to occur when a new version of the flash has been partially loaded. Always complete the loading of the flash before moving on to other projects. Try to reload the flash first, then call Honeywell Analytics for further help with this problem.

Unable to center the lung

There are several reasons why the PosiChek may be unable to center the lung.

1. Attempting initialization with a sealed facepiece on the PosiChek's head. If this occurs, the software will recognize the vacuum created when the lung moves and will stop the lung before damage occurs. Remove the facepiece or break the seal. Then

turn the PosiChek off and back on, and repeat the initialization process.

2. Breathing stopped when the lung was at the exact top or bottom of the breathing cycle, which can cause the PosiChek to have difficulty restarting the bellows. To verify, **first disconnect the PosiChek from the power source and the PC.** Then remove the side panel of the PosiChek.

If the lung is centered, the aluminum part of the arm that attaches the motor to the lung should be parallel to the floor (horizontal). If the lung is at the top or bottom of the cycle, the arm will be touching one of the limit switches, which look like wires.

Before proceeding further, examine the motor arm to make sure all screws are securely fastened, and the arm is securely attached to the motor and lung.

If the lung appears to be at the top or bottom of the cycle and will not move, manually force the lung back toward the center. The lung does not need to be exactly centered.

Once the bellows has been moved towards the center, replace the side panel. Then plug the PosiChek back in and reconnect the PosiChek to the PC. Turn the PosiChek back on and select Run Tests. The lung should center during the initialization process.

If this fails to correct the problem, or if this is a recurring problem, the PosiChek may need to be repaired. Call Honeywell Analytics for further information.

Errors in calibration values

Calibration values are required for the PosiChek to be able to breathe or read pressures. The calibration values are important, so 2 copies of them are kept in the PosiChek.

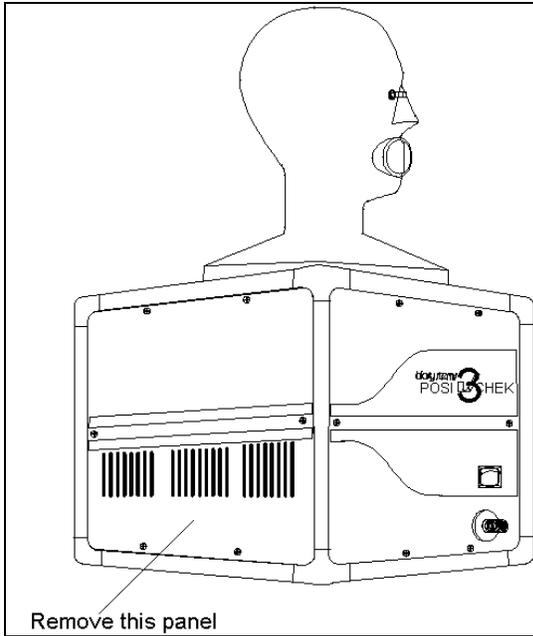
Occasionally, one copy will become corrupted, and the software will inform you that it is replacing this copy with the other one. Although this is unusual, it should not be a cause for alarm.

Occasionally, both copies of the calibration values are lost. The only solution for this is to send the PosiChek back to Honeywell Analytics for recalibration.

4.2.2 Verifying PosiChek operation without a computer

To verify operation of the PosiChek without a computer, use this procedure:

1. **Disconnect the PosiChek from the power source, PC and printer.** Turn the PosiChek so that the power switch and manifold connector are at the right, and remove the left side panel.



2. Near the top left corner of the PC board are four sets of tiny headers with three pins each. One of them is labeled JMP11 and has a blue connector on the two leftmost pins. Move the connector so that it is on the two rightmost pins.

⚠WARNING The final step in this procedure involves powering up the PosiChek while leaving the side cover off. Do not touch any of the internal workings of the PosiChek while it is plugged in.

3. Plug the PosiChek in and turn it back on.

If the bellows centers and starts to breath, disconnect the PosiChek from the electrical outlet and reassemble it. You have just established that your PosiChek is functional, which means that it is not communicating with the PC. Proceed to section 4.3 below for a discussion of communication problems.

If the bellows doesn't move, check that all four green LEDs on the right

side of the board are lit. If they are not lit, one of the power supplies is malfunctioning. If they are lit, this may indicate a hardware problem. In either case, call Honeywell Analytics for further instructions.

4.3 Computer loses communication with PosiChek

If the PosiChek loses communication with the PC, perform the following steps:

1. At the alert window, click OK to resume testing. If this fails proceed to step 2.
2. Reinitialize the connection as discussed in section 3.1.1 of the PosiChek Reference Manual.
3. Both the PosiChek and the PC should be plugged into a surge protector and properly grounded. Power surges can trigger the loss of communication between the PC and the PosiChek.
4. If this problem occurs frequently and the entire system is properly grounded, it may be the printer cable. Replace it. (IEEE 1284 DB25 Male/Centronics 36 Male).

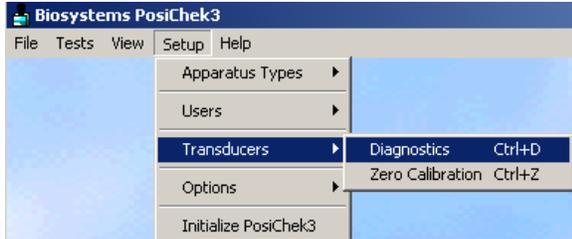
Note: Honeywell Analytics recommends that the PosiChek be plugged into a surge protector. Failure to use a surge protector may lead to sporadic communication problems between the PosiChek and the PC.

If the communication problem persists, call Honeywell Analytics for additional information.

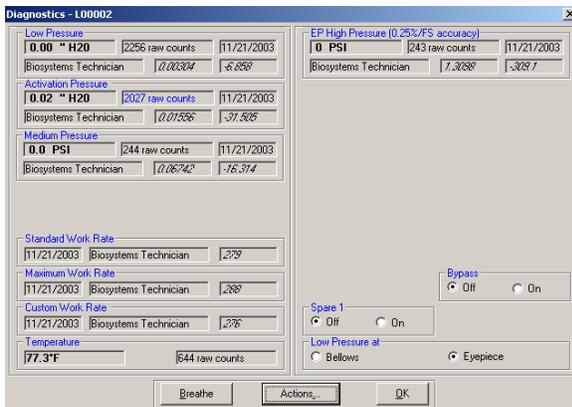
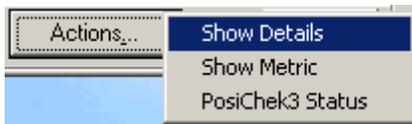
4.3.1 Verifying loss of communication

Upon loss of communication, transducer readings may become erratic or

incorrect and the PosiChek lung may fail to move. To determine if the transducers are being read correctly, select the menu item Setup / Transducers / Diagnostics



Click on the “Actions” button followed by “Show Details”.



The display will show a box for each transducer labeled *Raw Counts*. The values in these boxes should change by 1 or 2 counts every few seconds. If none of these values change, your computer may have lost communication with the PosiChek.

4.3.2 Resuming communications

Once you’ve determined that communications have been lost, perform the following procedure to resume communications.

1. Vent or remove the facepiece.
2. Use the menu item Setup / Initialize PosiChek to reestablish

communications. You must turn off the PosiChek and turn it back on during this step. Initialization is discussed in greater detail in section 3.1.1 of the PosiChek Reference Manual.

5. Printer problems

5.1 Message: Printer not responding

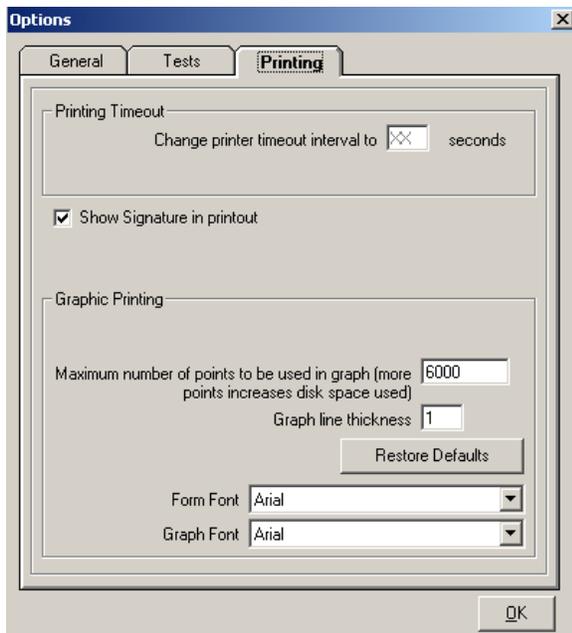
The PosiChek software is the only application that knows how to turn on the printer passthru in the PosiChek. Other applications (such as Microsoft Word) do not know how to turn it on. In order to allow you to print from these applications, whenever the PosiChek software is exited, the printer passthru is turned on permanently. As long as the PosiChek is left on, other applications can print through it. In order to communicate with the PosiChek again, you must turn the PosiChek off and back on.

If the “Printer not responding” message is shown, perform the following steps:

1. Click on Cancel to end the attempt to print. Check the printer port and printer cable connections. Then try again. If you still get the “Printer not responding” message, proceed to step 2.
2. If the printer was working last time you tried it and a second printer cable is available, change the printer cable. If this fails to correct the problem, proceed to step 3.
3. Change the printing timeout value by choosing Setup from the main menu followed by Options / General.



Click on the Printing tab. The following screen will then be shown.



If you are printing through the parallel port on the PosiChek, increase the printer timeout value (i.e. if it is set at 30 seconds, change it to 40 seconds). The maximum value allowed is 60 seconds. This will increase the amount of time the printer passthru inside the PosiChek is turned on while printing.

See section 5.2.1 below for more details on the Printer Timeout Interval.

5.2 Printer passthru settings

There are two basic configurations for using a printer with the PosiChek.

5.2.1 PC – PosiChek – Printer.

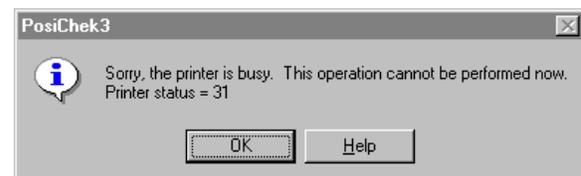
In this configuration, the printer is connected to the PosiChek, which is connected to the PC. This means that all print jobs must pass through the PosiChek on their way to the printer.

When a printout is done through the PosiChek, a printer passthru inside the PosiChek is turned on. The computer cannot communicate with the PosiChek while the passthru is turned on. The PosiChek "watches" the parallel port to see if additional information is being passed through. When a certain amount of time passes, the PosiChek assumes the printout is finished and turns the passthru off. It will then accept commands from the computer again.

The amount of time the PosiChek will wait before turning off the passthru is called the Printer Timeout Interval. If needed, this can be adjusted in the Setup - Options - General menu item as discussed in section 5.1 above.

If you attempt to perform an action that requires communication with the PosiChek while the printer passthru is on, you will get a message informing you that the printer is busy.

Occasionally, the software will have trouble determining that the printer passthru has been turned off, and you will get this message in error.

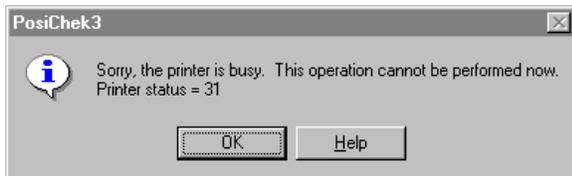


See section 5.2.3 below for more detailed instructions on the "Printer is Busy" message.

5.2.2 Independent PC – printer connections.

In this configuration, the printer is **not** connected to the PC through the PosiChek. This includes cases where a network printer is used, or the printer is attached directly to the computer via a second parallel port or some other type of connection.

In this case, the printer passthru should NOT be turned on. A Printer Timeout Interval of 1 second is used to indicate that the printer passthru should not be used. If the passthru is turned on, you will get the Printer Busy message repeatedly.



Use the Setup - Options - General menu item to set the Printer Timeout Interval to 1 second. See section 5.1 above for more detailed instructions.

5.2.3 Message: Printer is Busy

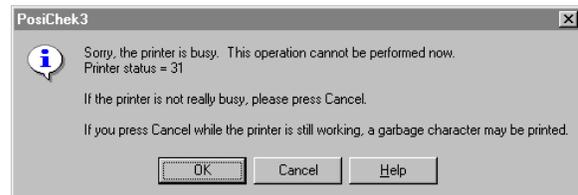
This message appears when the software thinks the printer passthru in the PosiChek is turned on, and you attempt an action that requires communication with the PosiChek.

The PosiChek software is the only application that knows how to turn on the printer passthru in the PosiChek. Other applications (such as Microsoft Word) do not know how to turn it on. In order to allow you to print from these applications, whenever the PosiChek software is exited, the printer passthru is turned on permanently. As long as the PosiChek is left on, other applications can print through it. In order to communicate with the PosiChek again,

you must turn the PosiChek off and back on.

The following steps may be used to clear this message.

Wait a few seconds and try to print again. After three attempts, a cancel button will appear on the message. If the printout still hasn't begun, click the cancel button. (If something is being printed, this will cause unrecognizable characters to appear on the printout.)



It may take two attempts to cancel the printer busy message.

If the message will not clear after repeated attempts, go to Setup - Initialize PosiChek and reestablish communication with the PosiChek. See section 3.1.1 of the PosiChek Reference Manual for details.

If the error message is preventing you from accessing the "Initialize PosiChek" menu command, turn the PosiChek off and then back on again. When the PosiChek goes into "boot mode" you will be able to bypass the message and initialize the instrument.

To prevent this message from appearing in the future you may want to go to Setup - Options - General, and change the Printer Timeout Interval.

If the printer is NOT attached to the PosiChek, change the Printer Timeout Interval to 1 second. This indicates to the software that the printer passthru should not be used.

If the printer is attached to the PosiChek, make the Printer Timeout Interval a little shorter. However, if the Printer Timeout Interval is too short, the passthru may be turned off in the middle of the print, which would cause the computer to lose communication with the printer and part of the printout will be lost.

5.3 Message: Printer not installed (Run Time Error 484)

This error occurs if you attempt to run the PosiChek software without a printer installed on your PC. The PosiChek software requires a printer to be installed, even if you do not intend to print anything.

To check if a printer is installed, open the Control Panel and double-click the Printers icon. (On Windows 98 you can open the printers icon from the Start menu.)

You will see a list of the installed printers.

To install a printer, double-click the Add Printer button in the Printers window. If you have not purchased your printer yet, you can install any printer for the time being. Just remember to delete this printer later after you have installed the one you actually intend to use.

5.4 Printout appears garbled

A garbled printout usually indicates that the printer's resolution setting is too low. In Windows 98, 2000, XP, go to the Control Panel / Settings / Printers and look at the properties of the printer you are using. If possible, increase the printer's resolution. Screen resolution is much lower than print resolution. A minimum setting of 150 dots per inch (dpi) is recommended.

5.5 Unable to print from other applications while printer is connected to PosiChek

The PosiChek software is the only application that knows how to turn on the printer passthru in the PosiChek. Other applications (such as Microsoft Word) do not know how to turn it on. In order to allow you to print from these applications, whenever the PosiChek software is exited, the printer passthru is turned on permanently. As long as the PosiChek is left on, other applications can print through it. In order to communicate with the PosiChek again, you must turn the PosiChek off and back on.

The PosiChek software uses the parallel port to communicate with the PosiChek hardware while it is running. Other applications will not be able to print through the parallel port while the PosiChek software is running and in communication with the hardware.

To correct this problem, first try exiting the PosiChek software and then try to print again. Be sure to leave the PosiChek running. When you exit the PosiChek software, the hardware is left in a mode where it will pass all data through to the printer that is attached to the PosiChek.

Note: If your printer is connected through the PosiChek to your PC, the PosiChek must be turned on for print commands from the PC to reach the printer.

Note: If the PosiChek software is installed on a desktop-style PC, it is strongly suggested that a second parallel port be installed and that the printer timeout be set to 1 second.

If you have turned the PosiChek off, you must turn it back on, restart the

software, establish communication with the PosiChek, and exit the software normally without turning off the PosiChek hardware to print through the PosiChek.

5.6 All fields are blank in printed test report

If all fields appear blank in a printed report, it may be due to a blank record that has somehow been saved into the database. To eliminate any blank records from the database, use the View / Test Results command and the View Test Data command to locate the blank apparatus and/or blank tests and delete them.

See section 6.2.1 of the PosiChek reference manual for details on deleting a record from the database.

6. Specific test problems

6.1 Unable to pass facepiece leak test

Failure to pass the facepiece leak test is usually caused by either a leak in the system or a loss of communications between the PC and the PosiChek.

6.1.1 Leaks in the system

A leak in the system may be located in the BA, in the interface between the PosiChek and the BA, or in the PosiChek itself. Begin by ruling out the obvious parts of the BA, then move on to the connection fittings as follows:

The most common reason for failure to pass the facepiece test is that the facepiece is not correctly sealed on the test head. The facepiece may be either too loose or too tight. Even a small leak in the facepiece seal can cause the failure of the facepiece leak test. Try resetting the head onto the PosiChek and then retest.

Once the facepiece has been reset, and you are reasonably sure that it has been eliminated as the source of the failure, check the bypass valve in the facepiece. If it is open, close it and retest.

Once the bypass valve has been ruled out, make sure that the cylinder valve is closed. An open cylinder valve will not allow the PosiChek to induce the vacuum necessary to pass the facepiece test. If the cylinder valve is found to be open, close it and retest.

Once the cylinder valve is ruled out, check all of the other fittings on the BA. If any are open (for instance the threaded CGA fitting used to connect the Apparatus with the cylinder), close them and retest.

If you are performing the Complete SCBA Test, make sure that the appropriate high or low pressure manifold is connected from the BA to the PosiChek.

If the facepiece still fails the test after the potential leaks above have been ruled out, then it is time to consider that the facepiece itself may be defective. If possible, install a new facepiece and retest. If the second facepiece passes the leak test, it's a good indication that the first facepiece was defective. If both facepieces fail, then the problem may involve leakage around the test head gasket. Remove the test head, make sure the gasket and head seating surfaces are clean and dry, and reinstall the test head as discussed in Section 2.6.1 of the PosiChek Reference Manual.

6.1.2 The computer has lost communication with the PosiChek.

In this case you may notice that the facepiece pressure remains at a

constant value of -6.9" H₂O. Before testing, make sure the PosiChek is still in communication with the software. See Section 4 above on communication losses.

6.2 Pressure is too low to continue testing

When the system is re-pressurized, the PosiChek will continue to display the "pressurize manifold screen" for a short time while the pressure settles. If the pressure settles below the required amount, the message will remain and you will need to repressurize the system.

If you've already re-pressurized the system, and the message persists, it may be caused by apparatus information that was entered incorrectly.

First check to see if you are testing a low pressure (2216 PSI) apparatus. If you are, then it is possible that the Apparatus Type information is incorrect. Choose the menu item Setup / Apparatus Types / View Apparatus Types and choose the Apparatus Information tab. If the apparatus information lists high pressure (4500PSI), and the BA is low pressure (2216PSI), then the low pressure BA doesn't have enough pressure even while fully charged to meet the minimum pressure requirement for testing a high pressure SCBA. Tests on high pressure SCBA require a minimum of 3200 PSI. If this is the case, click on the "Actions" button and select "change". Then change the high pressure setting to low pressure and click "OK".

6.3 Last test date is not being updated

If the test due date or last test date is not being updated, it is most likely because the required tests have either

not been performed, or because the apparatus has failed one of the required tests. For an in-depth discussion of the conditions under which the test due date is updated, see section 3.12 of the PosiChek Reference Manual.

To make changes to the list of required tests for the Complete SCBA Test and Airline Apparatus Test see section 5.3.2.1.1 of the PosiChek Reference Manual.

6.4 Unable to save test results to a floppy disk

Note: Due to the fragile nature of floppy disks, Honeywell Analytics recommends saving all test data to the PC's hard drive and then exporting test results to back-up media such as floppy disks, zip disks and CDs.

If you are unable to save test data (or to export test data) to a floppy disk, first check that the write protection tab on the disk is in the unlocked position. If this still fails to correct the problem, use the Windows Explorer to examine the size of the test results database. A standard floppy disk can hold about 1.4 megabytes of information. If the data exceeds the available space on the disk, then you will be unable to save the data to that disk.

6.5 Unable to pass Maximum Rate Breathing Test

Examine the breathing graph to determine exactly what is failing and proceed to the appropriate subsection below.

6.5.1 Facepiece pressure too low

In this section, the symptom will be in **bold**, with the solution following.

Symptom: Facepiece pressure falls just below the lower limit on the graph.

Adjust the static facepiece pressure by readjusting the facepiece. If the unit has already passed the static pressure test, you may still need to improve the facepiece seal within the allowable limits for static facepiece pressure.

Symptom: Facepiece pressure falls below the lower limit on the graph.

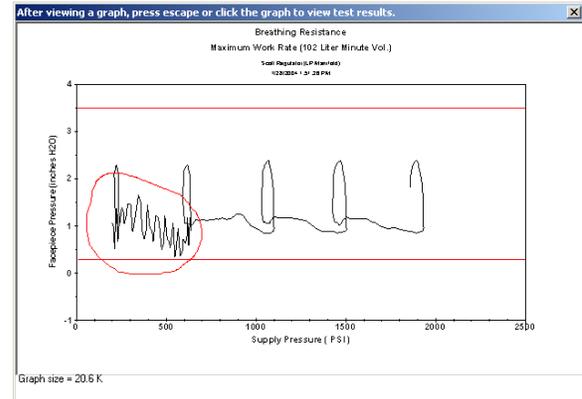
If the facepiece pressure is falling significantly below the lower limit on the graph, the tygon tube that is used to connect the facepiece transducer to the pressure port in the eye may be disconnected. Remove the head and make sure this tube is connected to both hose barbs -- the one on the bottom of the head, and the one on the base plate of the bellows and that it was not pinched while the head was being attached.

A low facepiece pressure can also occur if the nose cup of the facepiece has been removed. The pressure in the facepiece is read through the eye of the PosiChek. The nose cup isolates the eye from the mouth and lung area and "smoothes out" the pressure variations that are produced by the breathing cycle. If the nose cup is missing, it should be reinstalled before re-attempting the test.

Symptom: "Chugging"

"Chugging" (when the regulator makes a snoring noise during breathing) may cause an imbalance of the piston in the regulator that will affect facepiece pressure. The bellows in the PosiChek (and other breathing machines) is fairly stiff, so oscillation can occur due to the imbalance of the piston in the regulator.

To eliminate this problem, first adjust the facepiece so the regulator is more in line with the mouth of the PosiChek. If you repair your own breathing apparatus, you can also try changing the demand piston in the regulator.



6.5.2 Facepiece pressure too high

Facepiece pressures that are above the upper limit may be caused by a sticky exhalation valve. The exhalation valve is tested during the facepiece leak test, so if the exhalation valve activation pressure was high, you should have been notified.

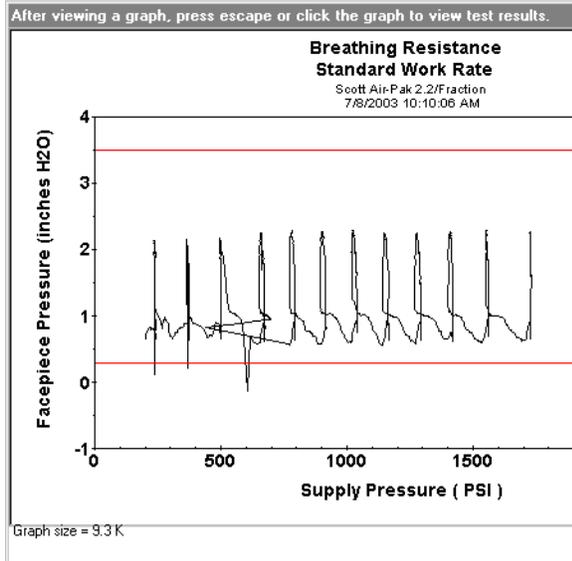
Make sure the regulator is attached to the facepiece according to manufacturer's instructions. For instance, with some models, it is possible to attach the regulator upside down, which may cause it to fail the breathing test.

6.5.3 Medium pressure is failing

If you have an OEM version of the software that has pass/fail values for medium pressure, and the medium pressure performance is failing, refer to the manufacturer's instructions for remedial action on the first stage regulator / pressure reducer.

6.5.4 Spikes in Breathing Graph

Occasionally spikes will appear in the breathing graphs, which are clearly erroneous. The graph below illustrates spikes in the facepiece pressure and supply pressure readings.



Possible causes:

Software

Your PosiChek software is extremely outdated. Software versions 2.47 or older may experience spikes when running on a computer with a fast CPU. Make sure your software version is higher than 2.85. If your software is older than this, Honeywell Analytics may be able to give you a free upgrade.

Printer cable

You may need to replace your printer cable. Make sure you use an IEEE 1284 compliant cable.

Other programs running

Other programs running in the background may adversely affect the PosiChek software. Disable these programs one by one to determine if any of them is causing the problem. If the

PosiChek software is the only program running, see section 7.1 for instructions on recognizing and disabling the background printer monitor.

Ground issues

Check the grounding of the power outlet to which the PosiChek, computer, and printer are connected. An inexpensive grounding test device can be purchased at Radio Shack. If any component is not grounded, the flow of air through the system can cause a build up of static electricity, which can cause the spikes. This problem is usually most severe in winter or during dry weather. Running the software on a laptop computer may also present a grounding problem, since the power supply on a laptop is generally not grounded. If all other potential causes have been ruled out, and you are running a laptop PC, try installing the software on a different computer.

6.5.5 Incorrect Manifold Size

If this message appears after the breathing test in the Complete SCBA Test sequence, it *may* indicate that the manifold you are using is not the correct size for the model you have chosen to test.



The message above was produced by running a breathing resistance test on a 4500 PSI SCBA and high pressure manifold, but choosing a 2216 PSI model in the Select SCBA for testing screen.

It is important to use the correct size manifold when testing an SCBA. The value for the bypass flow is calculated based on the manifold size, so if an incorrect manifold is used, the bypass flow value will be calculated incorrectly. In addition, if the manifold used is too small, it will be emptied too quickly and the SCBA will not be adequately tested at all pressures during the breathing, alarm accuracy, and pressure gauge tests. If it is too large, it will be emptied too slowly, and the tests will take longer than necessary to perform.

The single end of the manifold should be attached to the PosiChek high pressure inlet. The T end should be attached to the SCBA and the high pressure source. If you add any additional hose or piping between the manifold and the high pressure source, you must place a valve at the connection of the piping to the manifold, so that the manifold can be isolated from the additional piping.

Occasionally this message may be shown in error. The software indicates how far off the volume is at the bottom of the message. If the manifold size is off by 30% or less, you are sure it is the correct size, and the message does not appear after every breathing test, then you may continue testing. Contact Honeywell Analytics for further details.

7. Software problems

7.1 Message: “FLASH program may be old or faulty”

The “Flash program may be old or faulty” message will appear for two reasons:

1. You have just installed a new version of the PosiChek software on your PC.
2. Something has happened to “corrupt” the FLASH program on the computer chip in your PosiChek.

The software will prompt you to as to whether you’d like to reload the flash program now. Answer Yes to this message. The flash program will then begin to load.

If a message appears stating that there has been an error loading the flash program, first replace the printer cable and try to reload the flash program. If the new printer cable still fails to correct the problem, call Honeywell Analytics Technical Support Department for additional advice. In many cases the Service Technician will be able to diagnose and lead you through the corrective procedure over the phone. It will be helpful if you are able to determine which software version is installed on your PC before calling the factory. Use the Help / About menu choice to check the software version and software date.

7.2 Message: “Disk I/O Error During Read (Run-time error 3040)”

Run-time error 3040 indicates a physical problem with the disk being used to store the test results. This error is frequently encountered by users of PosiChek software whose computer is located in a dusty environment. Fortunately, the problem can almost always be fixed by doing a ScanDisk.

Prior to performing a ScanDisk it is important to shut down any applications that you have running. These should all be listed on the Task Bar, next to the

Start Button. If you have a screen saver active, this could also interfere with the ScanDisk, which may take as long as 20 minutes to complete. Click your Start Button, and go to **Start - Settings - Control Panel**. Double click the **Display** icon, and choose the Screen Saver tab. To turn off the screen saver, drop down the box where the name of the screen saver is displayed and change it to (none). After you are done with the ScanDisk you can turn it back on.

To perform a ScanDisk click the Start Button, and go to **Start - Programs - Accessories - System Tools - ScanDisk**. On the ScanDisk screen that appears, make sure the PC's hard drive is selected, which it typically the "C:" drive (unless you are trying to scan a floppy disk). The **Thorough** option should be selected, and the **Automatically Fix Errors** box should be checked. Click **Start** to start the ScanDisk. The ScanDisk will usually take between 5 and 20 minutes to complete. When it is completed, the computer will display a summary screen to inform you how many errors were found and repaired.

7.3 Message: "Database is Read-Only"

The message "Database is Read Only" will be shown for any of the following reasons:

1. Database file is located on a read only medium such as a CD or a floppy disk with the write tab pulled.
Solution: To correct this situation on a floppy disk remove the disk from the drive, move the write tab so that it covers the hole, reinsert the disk, and access the database again. CD technology is changing quickly.

Depending on your system, you may be able to write directly to your CD drive. In most cases, CDs may be used for data storage, but may not be actively written to.

2. The database is set to read-only.
Solution: Locate the database file and right click on the file icon to access the database properties file. Then change the read-only setting so that the file is not read-only. If the database resides on a drive that you do not have write access to, see problem three below. A short-term solution may be to copy the file to another location, such as your local hard drive, and perform the tests that you need to perform. Remember that these tests will not be automatically uploaded to the main database. You may need to manually clear the read-only attribute of the file on your hard drive.
3. The database is located on a network in a location where you do not have write-access.
Solution: Change your network access settings.

7.3.1 Opening a database in read-only mode

If you choose to open a Test Results Database in read-only mode, the software can perform any operation with the database that does not require writing to the database. This includes viewing and printing test results and viewing and printing serial numbers.

The following things may NOT be done if the Test Results Database is read-only:

1. Perform a test

2. Export to or from the database. (Tagging a record for Export requires writing to the database.)
3. Add or change apparatus information of any kind.
4. Change the Test Due Interval, Overhaul Due Interval, Test Notification Interval, or Overhaul Notification Interval.

7.4 Message: Cannot Open File (Run-time error 3051)

This error can have a number of causes. If the software can be launched, but you experience this error when attempting to open a test results database, then the database may be read-only. If you experience this error before the main screen of the PosiChek software is displayed, then it has to do with the permission level of the user who is currently logged onto the computer.

7.5 Symptom: Software can only be run by an administrator

On some computers, the permission level of a normal user does not permit access to any of the databases used by the PosiChek software. This situation can only occur in Windows NT-based operating systems (NT, 2000, and XP). The error message given may vary according to the operating system or configuration being used. The main symptom is that the software works fine when run on an Administrator's password, but will not even launch when run by a normal user.

If the file system of the computer is NTFS, this problem can be corrected by giving the normal user file-level permission on the folder containing the PosiChek software executable. Detailed

instructions on how to do this are shown below. Note that if several different manufacturer-specific versions of the software are used, this procedure needs to be done for each version.

If the computer uses a FAT file system, then the only way to get around this problem is to give the logged on user a higher level of permission.

To give the normal user file-level permission:

1. Log on as an administrator.
2. Determine the location of the PosiChek software folder. (The manufacturer-specific versions of PosiChek software are all in different locations.) To do this, right-click on the desktop icon and select Properties. The full path of the executable will be shown on the Shortcut tab in the Target window. Write the path down for use in the next steps. (Click Cancel to close the window.)
3. Determine if the file system is NTFS. Double-click on My Computer or start Windows Explorer. Right-click on the drive the PosiChek software is located on and select properties. (The drive is the first letter in the path obtained in step 1 above.) The File System will be displayed on the General tab of the properties. The File System MUST be NTFS in order to continue with the next steps. (Click Cancel to close the window.)
4. If you do not wish to give all normal users a higher level of permission on the folder with the PosiChek software, it will be more convenient to make a new group of users that will have this permission. Start the user manager utility on your computer and create a new user

group. Add all users who will be using the PosiChek software to the group.

5. Locate the folder that contains the PosiChek software using My Computer or the Windows Explorer. Right-click on the folder and select Properties, then select the Security tab.
6. Click the Add button (at the top right). A new window will appear which will allow you to add the group you created for PosiChek users. Click OK to return to the Security tab.
7. On the Security tab, click on the PosiChek user group. Under Permissions, check the Allow box for Full Control (at the top of the list). All the other boxes will automatically be checked.
8. Click on the Users user group. Make sure NONE of the permissions listed are denied. If a member of the PosiChek user group belongs to another group that has permissions denied on this folder, then that member may continue to get the error 3051. Other than unchecking any Deny boxes, the permissions should probably be left unchanged. (Click OK to close the window.)
9. Repeat this procedure for all versions of PosiChek software that are present on the computer.
10. The normal user can now log on and use the PosiChek software.

7.6 Message: Database is being used by another user

In addition to the normal record locking provided by the Jet database drivers, the entire database occasionally needs

to be locked while performing a task. Most of these tasks are actions where the user "tags" records and then selects OK to perform the action. While one user has the Tag Lock set on the database, no other user can perform any of the actions that would cause the Tag Lock to be set. All of the actions cause the Tag Lock to be set only momentarily except for File - Export.

If a second user tries to perform any of the tasks that require the Tag Lock while the Tag Lock is set, a message will be displayed. The message shows a list of the network neighborhood names of all the computers connected to the database.

Occasionally the Tag Lock can be set in error. If no other users are connected to the database, then the lock is automatically cleared without informing you. In situations where a number of users are connected to the database all day, if the lock is set in error, it can only be automatically cleared if everyone closes the database. The lock will then be cleared when the last person with it open tries to do any of the actions listed below. The File – Export is the best choice since it can easily be canceled.)

The actions that cause the Tag Lock to be set are as follows:

File - Save As -- the Tag Lock is set until the save operation is complete. This usually only takes several seconds.

File - Export -- the Tag Lock is set THE WHOLE TIME the File Export screen is displayed.

File - Exit -- the Tag Lock is set for a few seconds if any records were deleted in the database, so that the database can be compacted.

Select Serial Number for testing screen
- Delete -- the Tag Lock is set until the delete operation is complete.

View - Test Results - View Test Data -
Delete -- the Tag Lock is set until the delete operation is complete.

View - Test Results - View Test List -
Delete -- the Tag Lock is set until the delete operation is complete.

View - Apparatus - Delete -- the Tag Lock is set until the delete operation is complete.

View - Apparatus - Edit Model, Serial Number, Location, Other ID, etc. -- the Tag Lock is set momentarily when editing any of these items.

View - Apparatus - Print Selected -- the Tag Lock is set until the print operation is complete.

8. Specific Instructions

This section will include specific instructions for procedures that may be necessary to resolve common problems with the PosiChek3.

8.1 Disabling the Background Printer Monitor

Software running in the background on your computer may adversely affect the PosiChek software. It may interfere with communication between the computer and PosiChek, or cause spikes in the breathing graph.

In this case, you may also notice that other actions are affected as well. A simple way to check for this is to move the mouse smoothly around the screen at a medium rate of speed. If the cursor on the screen moves in a jerky, uneven way, this is a symptom of this problem.

Follow the directions below to disable the background printer monitor. If this does not help, try disabling other programs running in the background using the same method.

Programs running in the background are usually shown in the system tray. (The system tray is a group of small icons shown on the computer's task bar, which is usually located near the time at the bottom right corner of the screen.)

When you pause the mouse over an icon in the system tray, a balloon help item will tell you the name of the program. First, determine if any of the icons are for a print monitor. The icon will probably contain the manufacturer and model of your printer in its description.

Right click on the icon to display its popup menu. Several options should appear in the menu, including Open, and an option to Pause, Disable, Unload, or Exit the program. It is important to understand what each of these actions means:

Open - the application associated with the background program will appear on the screen. This will let you use the full functionality of the program.

Disable, Pause - the program will stop whatever it is doing and wait until you tell it to start again. A red X will appear over the icon to indicate that it is disabled or paused. You can resume the program by right-clicking on the icon and selecting Enable or Continue. The program may be automatically re-enabled if Windows is rebooted,

Exit, Unload - the program will stop running, and the icon will disappear from the system tray. You can restart the application by finding it in the Programs

menu or Control Panel. The application has probably been configured to start automatically, which will mean that it will start again the next time you reboot your computer.

Once the background printer monitor is disabled, try running the software again. If the problem persists, disable the other programs in the system tray one by one and attempt to run the software again in order to determine which program is causing the problem. Once you have determined which program is causing the problem you can probably restart or re-enable the other programs.

The programs in the system tray probably perform actions that you normally want to occur, such as virus checking, task scheduling, and monitoring the printer. Once you find the program that needs to be unloaded or disabled, don't forget to unload or disable it EACH TIME you want to use the PosiChek software, and then reload or re-enable it when you are done.

8.2 Entering Dates

There are several places in PosiChek software where you will be prompted to enter a date. PosiChek software uses date formats provided by Windows. This means you can use many different formats for entering a date. For example, 5/6/00, 06-May-00, and May 6, 2000 will all be understood by the PosiChek software.

To enter dates prior to January 1, 2000, enter the full 4-digit year value (e.g. 1999). If you enter a 2 digit year, the Windows standard is to assume that the first two digits of the year are the same as the first two digits of the year of **today's** date. So if today's date is 1/15/04, and you enter a date of

12/15/99, the software will interpret this date as 12/15/2099.

Newer versions of Windows have a feature that allows you to specify the range of dates that can be entered with a 2-digit year. This feature can be found in the Control Panel under Regional Settings. For example, if this feature is set "When a two digit year is entered, interpret as a year between 1930 and 2029", then the date 12/15/99 would be interpreted as December 15th, 1999.

A number of users have requested the ability to input a date as only a month and year. This is possible if you enter a 4-digit year. For example, if you enter a date 5/02, the date will be interpreted as May 2nd of the current year. If you enter a date 5/2002, the date will be interpreted as May 1st, 2002.

Many locations outside the U.S. use a short date format of dd/mm/yy, instead of the mm/dd/yy short date format that is commonly used in the U.S. The short date format can be changed in the Control Panel under Regional Settings.

You must be careful to use the short date format that is specified on your computer. Windows will automatically adjust for dates that are obvious. For instance if your short date format is mm/dd/yy and you enter a date of 27/05/02, 27 cannot be a month, so it will be interpreted as May 27th, 2002. If you enter a date of 05/06/02, it will be interpreted as May 6th, 2002.

8.3 Entering Numbers

There are several places in the PosiChek software where you are asked to enter a number. You must make sure you use the correct decimal symbol when entering numbers. In the US, the decimal symbol is almost always a

period ("."). Other regions sometimes use a comma (","). The decimal symbol used by the computer is specified in the Regional Settings dialog box of the control panel.

The example shown below is the configuration commonly used in the United States.

The digit-grouping symbol is a comma, which is also a common decimal symbol in some regions. This can cause confusion if you try to use the comma as a decimal separator.

For example, suppose you tried to enter a number using the asterisk as the decimal symbol ("3*14"). In this case, the software would figure out that this is not a number, and tell you that you must enter a number.

But suppose you try to enter a number using a comma as the decimal separator (3,14). Because the comma can be used as the digit grouping symbol, it is legal to use it in a number. Therefore, the software will not warn you about this, but it may behave in an unpredictable way when deciding what the value of the number is. In this case, the number would probably be interpreted as "3".

9. Contacting Honeywell Analytics

**405 Barclay Boulevard
Lincolnshire, IL 60069
USA**

In the United States, Honeywell Analytics can be reached toll free at:

(800) 711-6776

Outside of the United States:

+1 (847) 955-8200

Fax

(800) 995-4992

E-mail:

analyticsserviceadministration@honeywell.com

or

Tech_serv@honeywell.com

If you are having a technical problem that is difficult to explain, Honeywell Analytics recommends e-mailing a copy of the software message to the Technical Service Department. See section 9.4 below for instructions on taking a screen shot.

9.1 Returning the PosiChek to Honeywell Analytics

The following steps are necessary to return the PosiChek to Honeywell Analytics:

1. Contact the Honeywell Analytics Service Department at (800) 711-6776 to obtain a "Return Authorization" number prior to shipment. A Honeywell Analytics Service Representative will record all relevant information or special instructions at that time.

Note: Please have the serial number of the PosiChek ready when you call for an RA#. Honeywell Analytics internal software requires a serial number before an RA# can be issued. The serial number is located on the back of the PosiChek underneath the power port. Serial numbers for standard PosiChek units always begins with "L".

2. To ensure safe transport it is preferable to use the original Honeywell Analytics packing materials when returning the PosiChek to Honeywell Analytics for service. If the original packing

materials are unavailable, a custom-made, foam lined PosiChek shipping box can also be obtained directly from Honeywell Analytics for \$50.00 (as of 4/2012) plus shipping. Specify part number 16-068 when placing an order.

Note: The PosiChek is a precision instrument. Take appropriate care when packing it for shipment.

3. Note the return authorization number clearly on the outside of the box when returning the PosiChek to the factory for service. Prominently showing the return authorization number on the outside of the box ensures that it is immediately identified and logged into our system at the time it is received. Proper tracking helps avoid unnecessary delays in completion of service procedures.

Note: The test head and pressure reducing manifold do not normally need to be returned to Honeywell Analytics for the calibration procedure unless a specific problem has been identified. If this is the case, the Honeywell Analytics technician will instruct you to include the head and/or pressure reducing manifold as necessary.

CAUTION: Always remove the headbolts prior to shipment. If the headbolts are left in place, extensive damage may occur in transit. This type of avoidable damage is generally not covered by shipping insurance, and is definitely not covered by the standard Honeywell Analytics warranty.

Please contact the Honeywell Analytics Service Department at (800)

711-6776 if you require any additional information.

9.2 Calibration details

In the course of the PosiChek calibration, Honeywell Analytics will check the calibration status of all the transducers. If any of the transducers is seriously out of calibration, it will be noted on the *As Received* portion of the Certificate of Calibration Results. If a transducer is seriously out of calibration, you may want to retest the equipment you tested shortly before sending your PosiChek in for service. During the service, we also check for and repair any mechanical problems that may have developed since the last time we serviced the instrument. The results of the transducer calibration are noted on the *As Shipped* portion of the Certificate of Calibration Results.

When we return the PosiChek to you, we include the Certificate and if necessary, a copy of the most recent version of similar PosiChek software. Honeywell Analytics recommends that you install the software if it is a newer version than you now have. The version of the software we send you will be shown on the front of the disks. You can check the version you have now by selecting the Help / About menu item.

Please contact the Honeywell Analytics Service Department at (800) 711-6776 if you require any additional information.

9.3 Calibration requirements

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

PosiCheks located in North America must be returned to the Honeywell

Analytics annually for calibration. Contact Honeywell Analytics for a Return Authorization Number (RA#) prior to returning the PosiChek.

(800) 711-6776 or (847) 955-8200

9.4 Screen Shots

Occasionally a problem may occur that is difficult to describe over the telephone. If you have access to email, you can save an image of what you see on the computer screen and email or fax it to a service representative at Honeywell Analytics. To save a screen shot, follow these steps:

Use the Print Screen keyboard button to save the image to the computer's clipboard. This button should be located on the upper right portion of the keyboard. If you hold down the ALT key while pressing the Print Screen key, only the active window or form will be saved.

Start up an application that will be able to accept the image on the clipboard. Microsoft Paint is a good choice. If this is not available on your computer, Microsoft Word can be used. To start Paint, click Start - Programs - Accessories. Paint should be located in this menu.

After launching the appropriate application, paste the image on the clipboard into the application. You can do this by using the keyboard shortcut <ctrl>V, or using the menu item Edit - Paste. If you are using Paint, it may tell you that the image being pasted is larger than the bitmap. Click Yes to paste the image.

Print the image by selecting File - Print. If you are going to email the image, you must save it to the hard disk by selecting File - Save As. If

you are using Paint, it is recommended that you use the "Save As Type" drop down box to reduce the number of colors so that the file size will be smaller. Monochrome is fine. If JPEG is available, the file size will be much smaller than a corresponding BMP file.

9.5 PosiChek Warranty Details

The full text of the PosiChek Warranty is located on the back page of the PosiChek3 Reference Manual.