

QuickScan

USER MANUAL

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Welcome to QuickScan™ from EnviroLogix!

QuickScan is a novel quantification and traceability system that combines the latest digital imaging technology with advanced mathematical processing. Using a standard PC platform, QuickScan provides rapid, objective and quantitative results for a variety of EnviroLogix test kits. Features of the QuickScan system include:

- Flexibility in reading single test strips or multi-strip "combs" comprised of up to 10 tests;
- Per-lot quantitative standards integrated into a unique barcode system for each test strip, ensuring precise measurement across different manufactured lots and eliminating the need to calibrate the imaging device;
- Instantaneous data storage, where test results can be emailed, printed or analyzed at any time;
- A simple Microsoft Windows® interface, familiar with users worldwide and minimizing training time; and
- A complete, turnkey hardware and software solution, which includes a slim, stylish, 15.6" touch-screen PC. Alternatively, QuickScan easily integrates with customers' existing computer systems.

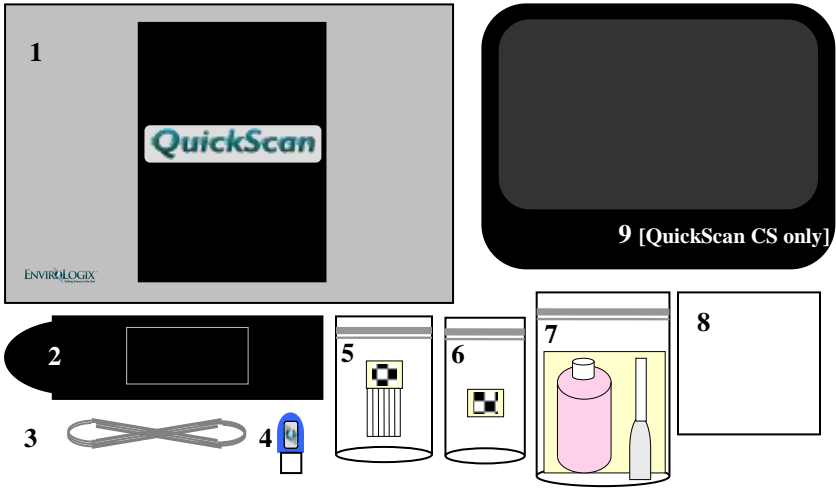
Accuracy of the QuickScan system is influenced by proper operation of the EnviroLogix test kits themselves. Test kit procedures are explained in EnviroLogix Product Inserts. Inserts ship with each test kit package and can also be found on our website.

We invite you to experience our technology. Should you have questions not addressed in this User Manual, please contact the EnviroLogix QuickScan Team at 1-866-408-4597 (toll-free, US) or email quickscan@envirologix.com. Hours of operation are from 8 am to 5 pm EST, Monday through Friday.

Thank You!

The EnviroLogix QuickScan Team

PACKAGE CONTENTS



1. QuickScan imager / scanner
2. Strip / comb carrier with compression plate
3. Scanner-to-PC USB connect cable
4. USB software key
5. QuickScan Check Comb
6. QuickScan Check Card
7. QuickScan Cleaning Kit
8. White card for cleaning and servicing
9. Touch screen PC (QuickScan CS, see PC packaging for details of use)

INTENDED USE

QuickScan is part of a quantification and traceability system intended for use with specific barcoded EnviroLogix test kits. These kits, including QuickComb™, QuickStix™ and QuickTox™, are designed to analyze a variety of analytes and compounds. QuickScan will not analyze test kits from any other manufacturer. (See the Barcode Labels section for a list of EnviroLogix test kits for QuickScan.)

EnviroLogix provides test kits to detect such targets as proteins expressed by genetic modifications in crops, mycotoxins, algal toxins, chemical contaminants, and plant pathogens. Interest in detecting and measuring these targets lies in many industries, including agricultural biotechnology, grain merchandising, food and animal feed processing.

The QuickScan imager is not intended for any use other than reading EnviroLogix test strips or combs. Using the imager in unintended ways may affect QuickScan's ability to provide accurate, consistent test results.

INSTALLATION

A member of the EnviroLogix QuickScan Team will normally be on hand to install the QuickScan system and train users in its application. Installation includes uploading QuickScan software to the customer's PC (if not purchasing QuickScan CS), and connecting the PC and the digital imager.

All components required for installation are supplied (see Package Contents). If using an existing PC, it should have the following minimum specifications:

- 1.0 GHz processor speed
- 250 MB free hard disk space, with at least 1GB recommended for data storage
- 512 MB RAM
- 2 Universal Serial Bus ports 1.1 or 2.0 (one port for the scanner; another for the software key)
- Standard 101/102 key keyboard
- Color monitor or LCD with 800 x 600 pixels and 16-bit color quality
- Microsoft Windows XP® (Service Pack 3), Windows Vista, or Windows 7 (32 bit)
- Adobe Reader® (formerly Acrobat Reader)

Optional Components:

- CD-ROM drive
- Microsoft Excel®

A host PC can be in most formats (desktop, tower, laptop or netbook). Installation of the host PC should be done according to the manufacturer's specifications. If an optional USB mouse pointer or printer is needed, a corresponding number of USB device ports will be required. This can be easily accomplished by using an external USB hub or "splitter."

CALIBRATION

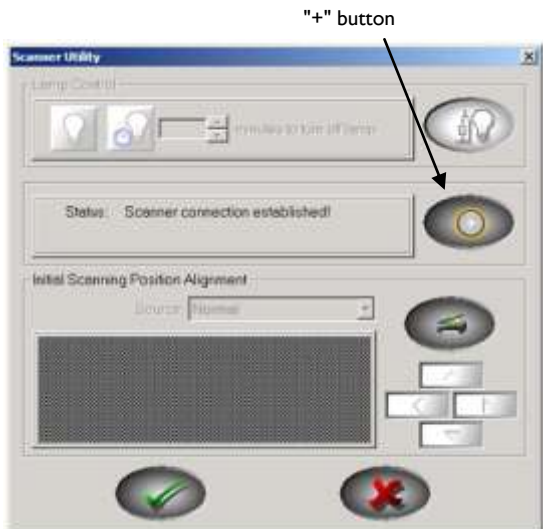
Calibration only needs to be performed upon installation and will occur automatically the first time the QuickScan program is opened. It is not normally performed unless the USB cable has been disconnected or the host PC has changed. The program will automatically calibrate the scanner every 14 days.

Before processing EnviroLogix test strips for the first time, the QuickScan imager must be calibrated. Calibration ensures the highest image quality possible and verifies communication between the imager and PC.

Calibrate QuickScan by double clicking the **Calibrate** icon on the PC desktop. In the Scanner Utility dialogue box, click the "+" button on the right side. Wait about 15 seconds. When the calibration is complete, click the green check mark at the bottom of the window to save the calibration and close the dialogue box.

The scanner can also be calibrated by opening the QuickScan program and clicking the Set Up button. Click the Calibrate button at the bottom of the screen. The program will indicate that the scanner is being calibrated, which will only take a few seconds.

Incorrect calibration may lead to "streaky" images in the QuickScan Results Screen, or the inability of the system to locate barcodes on the test strips, invalidating test results. If a problem develops with the calibration process, contact the QuickScan Team at 1-866-408-4597 or quickscan@envirologix.com.



OPERATION

Turning on the host PC will provide power for the scanner. The USB software key must be inserted before starting QuickScan. From the PC desktop, double click the QuickScan (QS) icon. The software will start and the Main Menu will appear on the PC screen. (If QuickScan has been placed in the Windows start-up folder, the software will open automatically upon start up.)



Main Menu

The Main Menu screen (right) is the starting point for all QuickScan operations. The Menu features several utilities:



Operator and Location

The user can input the name of the QuickScan operator and location into these entry fields. (**Please note:** Do not use commas, as they disrupt the communication of data). This information is stored and reported across all test runs until the information is changed. QuickScan will default to the most recently stored information upon start up.

Previous Operators and Locations are stored in a drop-down menu. Just



click the entry box, delete the current name, and enter the first letter of a previous name. All previous names beginning with that letter will appear.

Read Test

Clicking the Read Test button begins the strip-scanning process. EnviroLogix test kits must be run according to their Product Inserts and placed correctly into the strip carrier before activating Read Test.

Clean Test

The Clean Test utility starts a procedure to help determine whether dust or debris has entered the scanning area, potentially affecting test results. (See Cleaning and Servicing below.)

DataLog

The DataLog button allows quick access to the DataLog, a depository of all test results. DataLog files can be edited, viewed, saved, printed, or deleted by choosing the appropriate utility within the DataLog Viewer. Select rows can be saved, printed, or deleted. Also, pdf Reports can be viewed and printed.

- To view a Report, highlight a row from the desired report and click the "View Report" button. (See "Print Report" below for more details.)

- To print a Report, highlight a row from the desired report and click the “Print” button. A dialog window will ask if you wish to print DataLog rows or pdf Reports. (To set up a printer, see the next section.)
- To make edits, click the box where the change is to be made and edit the content. Only columns in white (entry fields) are editable; gray columns cannot be edited. To save edits, click the “Save Edits” button.
- To save the DataLog, click the “Save” button to select file location and name. Select rows can be saved by highlighting the desired rows prior to clicking Save. The existing DataLog in the QuickScan program will continue to accumulate data unless deleted, in which case a new DataLog will begin. If you will be viewing the file you are saving with Excel, save the file as a .csv file.
- Print or delete the DataLog by clicking the Print or Delete button. To print or delete only select rows, highlight the desired rows prior to clicking Print or Delete. Orientation of the DataLog when printed (Portrait or Landscape) can be selected in the Settings tab of the Set Up screen.
- Data can be sorted by clicking the column header at the top of the screen. The data will return to its original location when the DataLog is closed.
- If column header titles are changed or a new Language is selected (see Set Up, Settings), the changes will occur in the DataLog immediately. As backup, the program will automatically save a copy of the DataLog prior to the changes.
- Note: to unselect highlighted rows, click the rows while holding down the <Ctrl> key.

□ Set Up

The Set Up button opens a window for optional settings as well as general QuickScan version information.

- Settings Tab
 - Printers to be used by the QuickScan System are selected using the drop-down menus for Report Printer and Receipt Printer. Any printer configured in the host PC’s printers folder may be selected. If no Receipt Printer is selected, the Results screen will not show a “Print Receipt” button.
 - The DataLog Orientation setting allows for the selection of Portrait or Landscape for the orientation of the DataLog when it is printed.
 - The Language setting allows selection of English or Portuguese language.
 - The Result Alignment setting allows selection of alignment for results in the Results Table. “Right,” “Center,” and “Left” align the

data accordingly. “Mixed” will center qualitative data and align quantitative data to the right.



- The Field Separator setting applies punctuation to test data exported via the Export Log function. The Field Separator must be set to a comma.
- The Export DataLog button allows for the selection of the location of the DataLog file. Currently it defaults to *C:/EnviroLogix/QuickScan/Export*
- The Results Table Column Titles setting allows the user to edit the column headers of entry fields. Select the original title from QuickScan Titles, then edit a new title into the New Titles box. To remove a column from the Results table, simply delete the text in the New Titles box. Changes will occur in the DataLog and Results screens immediately; there is no need to delete the DataLog or to restart the program. As backup, the program will automatically save a copy of the DataLog prior to changes.

To change a title, select the title you desire to change from the “QuickScan Titles” drop-down menu. For example:

Drop-down menu:



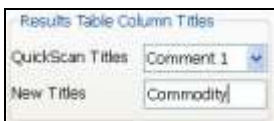
Select Comment 1:



Comment 1 will appear in New Titles box: Delete “Comment 1”:



Type in your new title:

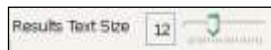


New title in Results screen:

QuickScan Results Table 1 Test Kit			
	Sample ID	Supplier	Commodity
1			

Note: if you leave the “New Titles” box blank, then the column is removed from the Results screen. Do not remove the Sample ID column – you must make an entry in this column in order to save or print any results.

- The Result Text Size setting allows selection of font size in the Results table and DataLog.

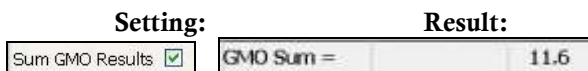


- Selections Tab

- AutoFill selections: rather than re-enter the same information for each strip in the Results screen, enter it once, click Enter, and the program will automatically fill all rows with the same information for you. This feature will occur only to those entry fields you select.
- The Record All Results setting specifies that strips with error messages are recorded in the DataLog and Report.



- The Always Update DataLog setting will save all data to DataLog, even if no Sample ID is entered in Results screen.
- The Sum GMO Results setting will total the GMO results within a scan. GMOs from corn and GMOs from soy will be summed separately. Sum will appear in Results Table and Report. For the purposes of summing the totals, <LOQ is considered zero.



- The Save All Reports setting will automatically save a pdf report for all scans as long as a Sample ID is entered. If this option is selected, the Save Report button will not appear in the Results screen.

- Details Tab

- The Supported Test Kits box shows the EnviroLogix test kits that are currently supported on the QuickScan system.
- Contact information for EnviroLogix Tech Support is provided.

- Download Tab

- Updates can be easily downloaded from the EnviroLogix web site using the Download feature. Click the Download button to automatically download new upgrades, then click OK to install. If the PC does not have Internet service, upgrades can be downloaded to a flash drive, then transferred to the QuickScan PC in the C:\EnviroLogix\QuickScan\Download folder. The upgrades are automatically installed by restarting the QuickScan program.

- Cutoffs Tab

- By default, the QuickScan software will display and record “Accept” on the Results screen. The Cutoff feature allows the user to select an Action other than “Accept” as the default when test results are equal to or greater than a user-defined cutoff level. When the Cutoff feature is used, the program allows the user to select Accept, Pending, or Redirect as a default Action in the Results screen.
- Cutoffs can be defined for each of the Mycotoxin test kits. The cutoff will be applied to each individual result within the results screen, even if multiple strips of the same test are scanned at one time. Thus, strips from multiple samples can be scanned at one time; and each one will be compared individually to its respective cutoff. Likewise, multiple Mycotoxin test kits run and scanned from the same sample will be evaluated independently using the cutoffs for each mycotoxin.
- For GMOs, the defined cutoff will be applied to the Summed GMO result within the scan, either for corn or for soy. Thus, when using the cutoff feature, strips from only one sample should be scanned at a time.
- If multiple GMO test kits from the same sample are scanned at one time (for example, a comb and a single strip), the program will sum the results and display the same Action for each. Please note, to view the calculated GMO Sum, this option must be enabled in the Selections tab.
- Cutoff levels that are met or exceeded will be flagged on the Results screen in the Error column. A user-defined message (such as the default “Exceeds Cutoff”) will appear shaded in red. Users can change the default error message in the Cutoffs tab. The Action column will display the default action selected by the user in the Cutoffs tab. Please note, the user can override the default Action in the Results screen by using the toggle.

- **Help**

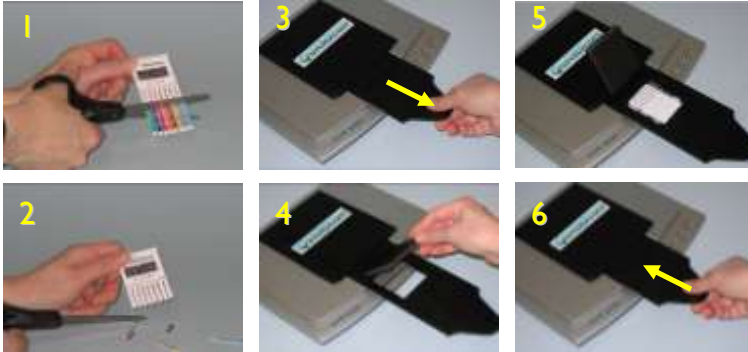
The Help button activates an electronic version of the QuickScan User Guide, indexed by topic. It also provides contact information for EnviroLogix Customer Service. Each screen in the QuickScan program has a Help button. When the Help button is clicked, the program will open the file to the relevant section.

- **Exit**

The Exit button closes the QuickScan application, and ends the strip-reading session.

Reading Test Strips

Test strips and combs must be read immediately after the required reaction time, i.e., while still "wet." (Details of test kit operation can be found in each Kit's Product Insert.) Before reading tests, verify or edit the operator/location information at the bottom of the Main Menu.



With scissors, cut the reacted test strips just above the colored arrow tape (1, 2). Using the protruding carrier handle, gently withdraw the black test strip carrier from the body of the scanner (3). Withdraw the carrier far enough to expose the black compression plate. With fingertips, lift the plate to expose a nested opening within the carrier (4). This slot is where test strips are placed.

To minimize dirt or debris on the scanning surface, try not to lift the imager / scanner cover while removing the carrier. The carrier can be completely removed from the body of the scanner without damaging the unit, but is not recommended. If this happens, simply reinsert the carrier into the slide rails, lifting the scanner cover as little as possible, and gently push.

Place the strips into the carrier slot (5). The barcode on the strips should be placed face down and fit against the back of the lowest nested slot, with the cut ends of the strip pointing toward the scanner. Close the compression plate, and gently push the carrier back into the casing (6).



When loading a QuickComb for corn or soy testing, horizontal placement of the comb within the carrier is unimportant, provided the comb is loaded as specified above.

When reading single strips, up to four individually barcoded tests can be read at one time. Proper spacing is important, so numbered positions have been etched into the carrier. Load the strips using the step-by-step instructions above, carefully placing them in the desired positions. Place the first strip in Position 1, flush against the side of the carrier. Place the next strip in Position 2, the third in

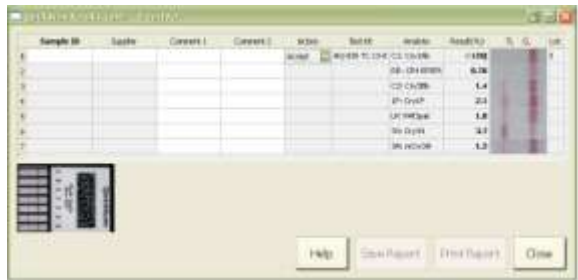


Position 3, and the last in Position 4, flush against the other side of the carrier. QuickScan will report strip results in the order in which they are placed, from right to left, position 1 to position 4. (Note: a misplaced strip or scanning error will affect the order in which strips are reported.)

QuickScan will also read a comb and a single strip simultaneously. Place the single strip in Position 1, flush against the side of the carrier. Next, place the comb flush against the side of the carrier at Position 4. From the Main Menu, click Read Test. The reading process will take several seconds before QuickScan advances to the Results Screen. At that time, remove strips from the carrier in preparation for the next read.

Interpreting Results

Following the reading process, test results are automatically displayed in a separate Results Screen (see example, right). The screen features a Results Table, an image of the scanned strips, and utility buttons for recording and documenting test results.



□ Results Table

QuickScan generates a table that matches the analyte or compound tested with the corresponding test result. Results are presented in a quantitative range specific to each test, and in measurement scales applicable to the target. For example, the measurement scale for GMO strips is percent (%) while the scale for mycotoxins is ppb or ppm.

Sample ID	Sample	Comment 1	Comment 2	Action	Test Kit	Units	Result(s)	U	L	Lot
1				Accept	AQ-036 TC 13-0	Cl: Cry1Ab	<LOQ			
2						Bt: CryEPSPS	0.96			
3						C3: Cry3Bb	1.5			
4						Pr: CryF	2.2			
5						UP: PAT/pat	1.9			
6						3A: Cry3A	3.7			
7						3B: wCv3B	1.5			

- For GMO tests, results will fall between <LOQ (the limit of quantitation) and the upper limit of the quantitative range. (See the Product Insert for each test kit for more detail.)

If “Sum GMO Results” was selected in the Set Up, the program will automatically calculate the GMO total and display it in the last row of the Results Table.

- For mycotoxin tests, the results will fall between <LOD (the limit of detection) and the upper limit of the quantitative range. A “Select Dilution” column will appear in the Results table. Select 1:1 for samples run in the standard test protocol, or select the appropriate dilution for high samples that are further diluted. (See the Product Insert for each test kit for more detail.) Please note, do not use the “Select Dilution” function for results that are <LOD.

Calculation of test results is determined by measuring line intensities of each strip. The calculation uses lot-specific standard curves embedded within the barcodes on each strip. This mathematical procedure is unique for each analyte or compound being tested.

More about "Select Dilution"

If you run a mycotoxin test kit with a high result, it can be further diluted, as per the Product Insert. Aflatoxin and Fumonisin specify a 1 part in 6 dilution (1:6) and DON specifies a 1 part in 2 dilution (1:2).

For example, Aflatoxin – if no dilution was made, leave the selection at 1:1 (1 part in 1), or neat. The final result is 11 ppb:

Test Kit	Analyte	Select Dilution	Result(ppb)
AQ-109 BG	AF: Aflatoxin	1:1	11

If a dilution was made as per the Product Insert, click the down arrow in the Selection Dilution field. Choose the 1:6 dilution from the drop-down menu:

Test Kit	Analyte	Select Dilution	Result(ppb)
AQ-109 BG	AF: Aflatoxin	1:1	11
		1:1	
		1:6	

The program will then automatically calculate the actual result, 65 ppb:

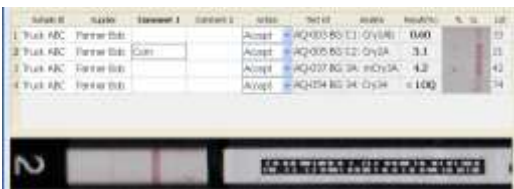
Test Kit	Analyte	Select Dilution	Result(ppb)
AQ-109 BG	AF: Aflatoxin	1:6	65

Please note, the results are given in 2 significant digits. While appearing to multiply 6 x 11, it is actually multiplying an original result that goes out several decimal places, for example, 10.8938.

The Results Table features five user-input options, intended to enhance the traceability of deliveries or shipments. A drop-down menu for the first four columns will remember the last 20 entries made. Previous entries can be selected without re-typing them. The entries in the drop-down menu can be removed by holding the Control key, arrow down to the item you wish to remove, and hitting the Delete key. If multiple test kits are scanned at one

time, the program can autofill the entries for all kits after the first has been entered. You can override the autofill by re-entering the desired text in the appropriate box. (See "Operation, Setup" for detail on Results Table Column Titles.)

- A scale-ticket number or trace identification number can be entered into the box directly under the "**Sample ID**" header (please note, as before, do not use commas).
- A supplier name or number can be entered directly into the box under the "**Supplier**" header (again, no commas).
- Notes or comments can be added to the "**Comment 1**" and "**Comment 2**" columns. (See "Operation, Setup, Results Table Column Titles".)
- The operator has the option to select **Accept**, **Redirect** or **Pending** (for the materials being delivered or shipped) in the drop-down box directly under the "**Action**" header. QuickScan software defaults to Accept.

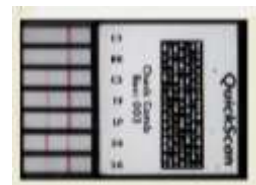


Row 2 highlighted, Image 2 shown

If more than one strip has been loaded into the carrier, scroll down the Sample ID column to view the image of the strip for that row of data. The image will also show the strip's position in the carrier;

ie, highlight row 2, see the image in position 2. (Note: a misplaced strip or scanning error will affect the order in which strips are reported.)

The QuickScan Results Screen provides a digital image of the scanned strip or comb. The image shows the identification label / barcode on the strip, test lines, and the strips themselves.



The Results Screen also features five utility buttons, explained below:

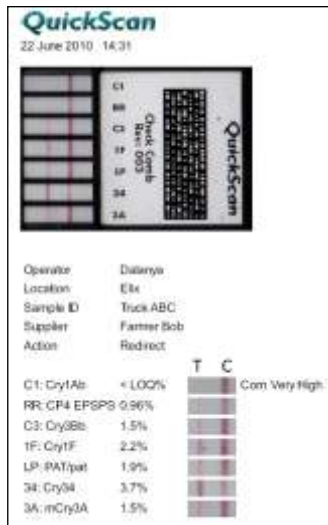
☐ **Save Report**

The Save Report button saves test results, sample identification data, and an image of each scanned strip or comb into an Adobe Acrobat (.PDF) file. Reports can be accessed from the DataLog on the Main Menu or a shortcut on the desktop, and are stored in a subfolder within the QuickScan directory: C:\EnviroLogix\QuickScan\Reports. Reports in the folder can be identified by time and date saved, as well as by the Sample ID assigned to a test. Reports can be opened, printed or emailed at any time. A Sample ID must be entered in the Results Table in order to create a Report.

Each report consumes about 130 KB of hard disk storage. Each 1 GB of storage on a host PC can hold nearly 7,700 reports. Thus, a 10 GB hard disk on the host PC can hold nearly 77,000 reports.

❑ **Print Report**

Pressing the Print Report button sends the Report file (see Save Report above) to any printer selected from the QuickScan configuration window. Available printers are the same as those configured on the host PC. A Sample ID must be entered in order to print. Unless the Save Report utility has been activated, however, the content of the printed report will not be permanently saved in the Report folder. Printing automatically appends the permanent Export Log (see Export Log below).



❑ **Print Receipt**

Print Receipt sends an abbreviated Report file to any thermal printer selected from the QuickScan configuration window. The printed receipt does not include an image of the tested strips. (See Print Report above for more information.) A thermal printer is offered through EnviroLogix as an accessory item (ACC 138). The Print Receipt button only appears if a receipt printer was selected in the Set Up screen.

❑ **Help**

The Help utility activates an electronic version of the QuickScan User Manual, indexed by topic. It also provides contact information for EnviroLogix Customer Service.

❑ **Close**

Pressing the Close utility button closes the Results Screen and removes options to save or print reports. Closing the results screen without having entered a Sample ID will generate a dialogue box warning that data will be lost and asking for a sample identifier. *If no Sample ID is entered, QuickScan will not export or save any results data.*

DataLog

Activating any utility buttons on the Results Screen will automatically export test results to a permanent Export Log file, the DataLog. *The exception to this rule occurs when closing the Results Screen without entering a Sample ID.*

The file contains all test results from all test strips read on the QuickScan Reader (see example below). Data is stored in the QuickScan directory C:\EnviroLogix\QuickScan\Export (unless the file path was changed in the Set Up screen), and can easily be accessed by clicking the “DataLog” button on the Main screen. This opens the file in a friendly format for analysis, printing, or archiving.

WARNING: Although the file may also be opened by other programs that recognize a .csv format such as Microsoft Excel, the data log file **must not** be in use or open with these other programs when the QuickScan Reader is in operation. The data file will be locked and all subsequent results **will be lost**. Use the DataLog button to save this file elsewhere if needed.



The screenshot shows a window titled "DataLog" with a table of test results. The table has columns for Data and Time, Report, Operator, Location, Test Kit, Action, Supplier, Sample ID, and Analyte. Below the table are buttons for Help, Open File, Save Entry, Save File, Delete, View Report, Print, and Close. A "Save the Data" button is also visible at the bottom right.

Data and Time	Report	Operator	Location	Test Kit	Action	Supplier	Sample ID	Analyte
174 24-Aug-2011 10:12:42		Colaruso	Elb	IQ-436 TC 1-079	Accept	2011	CS-CY14	CS-CY14
175 24-Aug-2011 10:12:42		Colaruso	Elb	IQ-436 TC 1-079	Accept	2011	CS-CY40	CS-CY40
176 24-Aug-2011 10:12:42		Colaruso	Elb	IQ-436 TC 1-079	Accept	2011	CS-CY41	CS-CY41
177 24-Aug-2011 10:12:42		Colaruso	Elb	IQ-436 TC 1-079	Accept	2011	CS-CY38	CS-CY38
178 24-Aug-2011 10:12:42		Colaruso	Elb	IQ-436 TC 1-079	Accept	2011	1P-CY17	1P-CY17
179 24-Aug-2011 10:12:42		Colaruso	Elb	IQ-436 TC 1-079	Accept	2011	2B-CY24	2B-CY24
180 24-Aug-2011 10:12:42		Colaruso	Elb	IQ-436 TC 1-079	Accept	2011	2D-CY04	2D-CY04
181 24-Aug-2011 10:12:42		Colaruso	Elb	IQ-436 TC 1-079	Accept	2011	2E-CY38	2E-CY38
182 24-Aug-2011 10:12:42		Colaruso	Elb	IQ-436 TC 1-079	Accept	2011	1B-CY11	1B-CY11
183 24-Aug-2011 10:12:42		Colaruso	Elb	IQ-436 TC 1-079	Accept	2011	2C-CY08	2C-CY08
184 24-Aug-2011 10:12:42		Colaruso	Elb	IQ-436 TC 1-079	Accept	2011	1P-CY17	1P-CY17
185 24-Aug-2011 10:12:42		Colaruso	Elb	IQ-436 TC 1-079	Accept	2011	1B-CY11	1B-CY11
186 24-Aug-2011 10:12:42		Colaruso	Elb	IQ-436 TC 1-079	Accept	2011	2D-CY04	2D-CY04
187 24-Aug-2011 10:12:42		Colaruso	Elb	IQ-436 TC 1-079	Accept	2011	2B-CY24	2B-CY24

BARCODE LABELS

EnviroLogix QuickStix, QuickTox and QuickComb Test Kits are manufactured with QuickScan barcodes. These barcodes are critical components of the measurement and traceability system. Barcodes contain:

- A product code that identifies each test strip.
- A manufacturing lot number of the test kit.
- Parameters for the lot-specific standard curve, used by QuickScan to interpret the color intensities of test lines on the strip and to quantify the result.

During operation, QuickScan sees the barcodes before reading the test lines, automatically identifying the information needed for processing. The barcode is specific to each manufactured lot and incorporates changes in test strip configuration and standard-curve parameters, providing greater precision and reducing the need for on-site system upgrades or re-calibrations.

Importantly, barcodes should not be removed from the strips, and should not be shared or exchanged across different strips. Altering the barcode in any way will affect performance of the QuickScan system. When processing strips, barcodes should be free of dirt, debris or liquid from the test sample.

As of July 2011, QuickScan will process the test strips in the table below. Some of these tests may be configured as a QuickComb, which combines many strips under a single barcode label.

Test Strip / Trait / Analyte		ID on Barcode	Test Strip / Trait / Analyte		ID on Barcode
GMO CORN	Cry1Ab	C1	GMO SOY	CP4 EPSPS	RS
	Cry9C	C9		PAT/ <i>pat</i>	LS
	CP4 EPSPS	RR			
	Cry3Bb	C3			
	Cry1F	1F	MYCO- TOXINS	Aflatoxin	AF
	PAT/ <i>pat</i>	LP		DON	DN
	Cry34	34		Fumonisin	FM
	mCry3A	3A		Ochratoxin OA	
	Cry2A	C2		Zearalenone ZN	
	GA21	21			
	VIP3A	VP			

If, for any reason, barcodes cannot be read, QuickScan will generate an error message in the Results Screen. (See Error Messages for more information.)

QUICKSCAN CHECK COMB

Included in your accessories is a Check Comb, used during installation to ensure the system is functioning normally. It can also be used by customers to document consistency and proper performance. To use, insert and read the comb as a normal QuickComb. You can enter "Check Comb" in the Sample ID column for ease of documentation and retrieval. On the back of each Check Comb is a label showing the expected values, which can be compared to the actual values collected after reading the Check Comb. If a Check Comb gives values outside the expected ranges, call Technical Support for assistance.

To ensure long-term stability and performance of the Check Comb, do not expose it to direct sunlight or dirty environments. Store it in the bag provided, in a drawer away from strong light. Check Combs will continue to produce Line Intensities within the expected values for at least two years if stored under these conditions. Mark the back of the CheckComb with the date received if needed.

QUICKSCAN CHECK CARD

Included in your accessories is a Check Card, used during installation to ensure the scanner is functioning normally. To use, insert the card into the carrier, barcode-down and lining up the numbers, then read it as a normal QuickComb. If the Results Screen appears, the scanner is functioning properly. Note: there will be no results, only error messages in the Error column.

CLEANING AND SERVICING

The QuickScan imager is designed to minimize dust or debris entering the scanner area and interfering with the reading of test strips. It is important to keep the scanner cover closed during daily operation. In addition, the following cleaning steps are recommended:

- At the start of daily operation, run a CleanTest procedure. Place the supplied white card directly onto the scanner plate. Press CleanTest on the Main Menu. Wait about 15 seconds. Any dust or debris on the plate will be displayed in the CleanTest results window, indicating a need to clean the surface with the QuickScan Cleaning Kit. CleanTest results can be viewed with different backgrounds and pixel colors by toggling the radio buttons in the results window. Close the window to return to the Main Menu.



clean



not so clean

TEST RESULTS WINDOWS

- Periodically examine the scanner surface for visible debris or markings. If the surface appears dirty, clean the glass plate with the QuickScan Cleaning Kit. If the scanner surface has been scratched or cracked in any way, contact EnviroLogix Technical Support.
- Periodically inspect the strip / comb carrier. Gently brush or wipe away any build up of sample material.

ERROR MESSAGES

QuickScan has internal diagnostic capability that detects scanning, processing or configuration errors requiring corrective action. The following table identifies common error codes and recommended corrective actions.

Error Code	Description	Recommended Action
E3 – Scanner failed / scanner not found	Scanner is not connected to the host PC.	Connect scanner to host PC via USB cable. Select "Connect Plustek" in error box, if required. Be sure to calibrate the system if the cable has been disconnected or host PC changed.
Scanning error	QuickScan did not read the barcode properly.	Check that test strips have been placed correctly in the carrier, that the barcode is in place, and that no debris is on the barcode or the scanning surface.
No cassettes found	QuickScan cannot locate the test strips in the scanning area.	Check that the scanning surface is clear of obstructions, and that the strips have been placed in the carrier correctly. Press Read Test again.
E5 – Unknown Test	QuickScan did not recognize the test kit, and a software upgrade is probably required.	Check that the test strips have been placed correctly in the carrier, and read again. If error message reoccurs, contact EnviroLogix Tech Service.
Various codes for control lines, test lines and background	Imaging software cannot read the strips properly. Flow of liquid sample up the test strip may have been impeded or failed.	Examine the test strips for proper flow. Check that the strips have been placed correctly on the carrier. Consult test kit Product Insert for proper kit operation, as new test may need to be performed.
E20 – Printer not activated	A printer has not been selected in the QS configuration window, or intended printer not been installed on PC.	Make sure the intended printer has been installed on the host PC, and then select that printer in the QuickScan configuration window.
E30 – Outside image border	Test strips have been placed in carrier incorrectly.	Reposition strips and read again.

DIMENSIONS AND WEIGHT (QuickScan imager)

Length: 223 mm

Width: 276 mm

Height: 33 mm

Weight 3.46 lbs / 1.46 kg (with carrier and compression plate)

SAFETY AND PRECAUTIONS

1. QuickScan is a precision system that combines a digital imager with proprietary software. Never attempt to dismantle the scanner. There is a serious danger of a powerful electric shock. Never attempt to alter the software.
2. Do not leave or operate the scanner in locations exposed to direct sunlight.
3. Do not store or use the scanner close to a flame.
4. Do not drop the scanner or otherwise subject it to strong impact.
5. The QuickScan imager contains precision electronic components. To ensure that scanning operations are performed correctly, do not subject the imager to impact or shock while a scan is being run.
6. Do not use or store the scanner in very humid places; places subject to extreme temperature increases such as in direct sunlight, a closed car in summer, or extremely cold places; places subject to strong vibration; places affected by smoke or steam; places subject to strong magnetic fields (such as near motors, transformers, or magnets); sandy places, such as beaches or deserts, or places where there is wind-borne sand and dust.
7. Avoid moving the scanner suddenly from a cold location into a warm location, as condensation may occur.
8. The scanner should be cleaned on a regular basis, per the instructions provided in this User Manual.

ENVIROLOGIX LIMITED WARRANTY

EnviroLogix Inc. ("EnviroLogix") warrants the QuickScan imager / scanner against defects in materials and workmanship, when used in accordance with the applicable instructions, for a period of 12 months from the date of shipment.

QuickScan is a precision testing system that requires very careful handling.

This Warranty does not cover physical mishandling of the scanner in any manner, including but not limited to, storage or operation in an unprotected environment, excessive exposure to direct sunlight, liquid spillage on any part of the surface or interior, objects falling on top of the scanner and/or the scanner being dropped onto the floor or any other surface from any significant height.

If the QuickScan imager / scanner does not conform to this Limited Warranty and the customer notifies EnviroLogix in writing of such defects during the warranty period and returns the scanner to EnviroLogix for evaluation, EnviroLogix will repair or replace the scanner at its option.

During the period of defects evaluation, EnviroLogix will swap the defective scanner with a loaner unit from its loaner pool located at its Portland, Maine, headquarters. Upon completion of necessary repairs, or upon determining that a replacement unit will be provided to the customer, the loaned unit will be reverse-swapped with the customer's repaired unit or the replacement unit, as the case may be.

CUSTOMER SERVICE

EnviroLogix maintains a dedicated field staff and in-house technical support. For QuickScan questions or problems, please contact the QuickScan Team at 866-408-4597 (US toll free) or 207-797-0300. Ask for technical support for QuickScan. Help is also available via email: quickscan@envirologix.com. Our Internet address is www.envirologix.com. Business hours are from 8 am to 5 pm EST Monday through Friday.

TRADEMARKS

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