

Users Guide

Version 3.061

To ensure accurate results:



COVER THE BUBBLE COMPLETELY: Right  Wrong   

Recalibrate when using new forms or paper stock!

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Hardware Installation

The BubbleScan does not require a power connection. It is connected directly to a Windows PC via a RS-232 serial or USB connection.

RS-232 serial:

Simply connect the 9-pin serial cable from the BubbleScan to your PC.

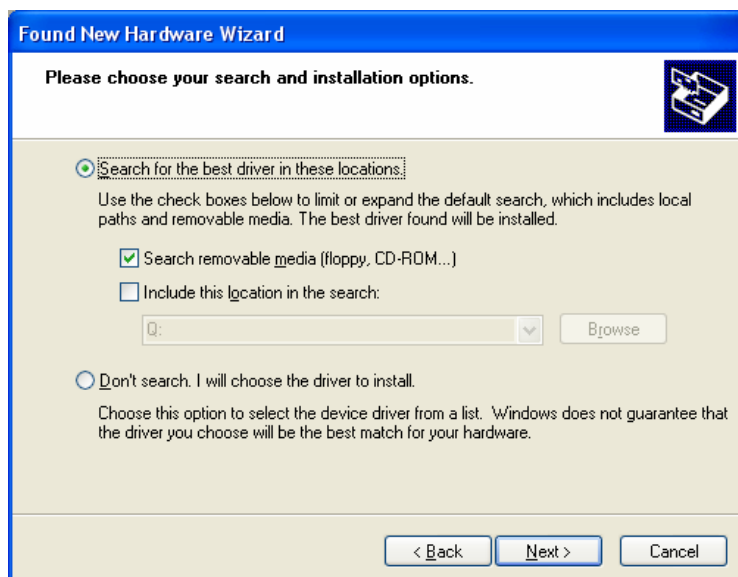
USB:

A USB connection requires the installation of the USB Drivers. This is a two step installation. The following explains how to do this under Windows XP:

1. Insert the BubbleScan CD into your CD-ROM drive.
2. Connect the USB cable from the BubbleScan to your PC. Your PC should detect the new Hardware. [Older Windows versions may require that you restart the PC before Windows detects the new hardware.]
3. Select '**Install from a list or specific location (Advanced)**'.



4. Select '**Search removable media**'.



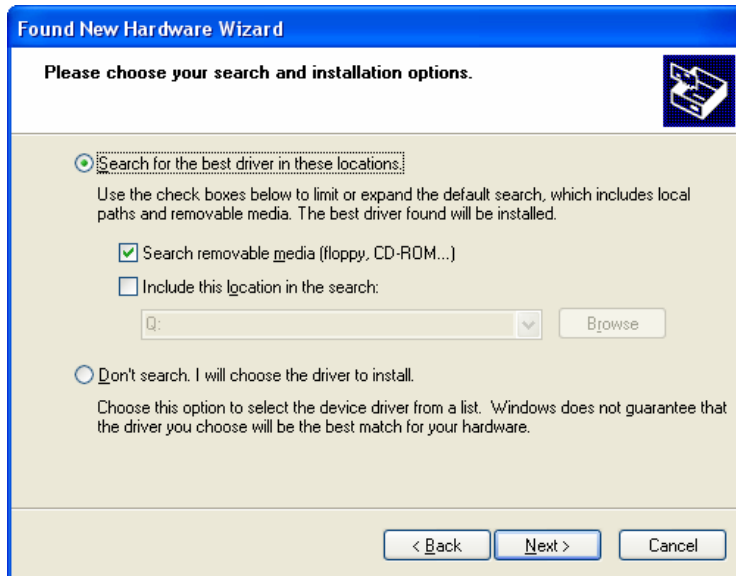


5. Windows will search the CD for the driver files and then post a warning message. Select **<Continue Anyway>**. Windows will install the USB driver.

6. Click **<Finish>** to complete the USB Grader installation.



7. Windows will now install software for the newly created USB Serial Port. Select **'Install from a list or specific location (Advanced)'**.



8. Select 'Search removable media'.



9. Windows will search the CD for the driver files and then post a warning message. Select <Continue Anyway>. Windows will now install the new software.
10. Click <Finish> when the installation is complete.
11. Disconnect the USB cable from the PC and reconnect it after a few seconds.

Your new hardware is now ready to use.

Software Installation

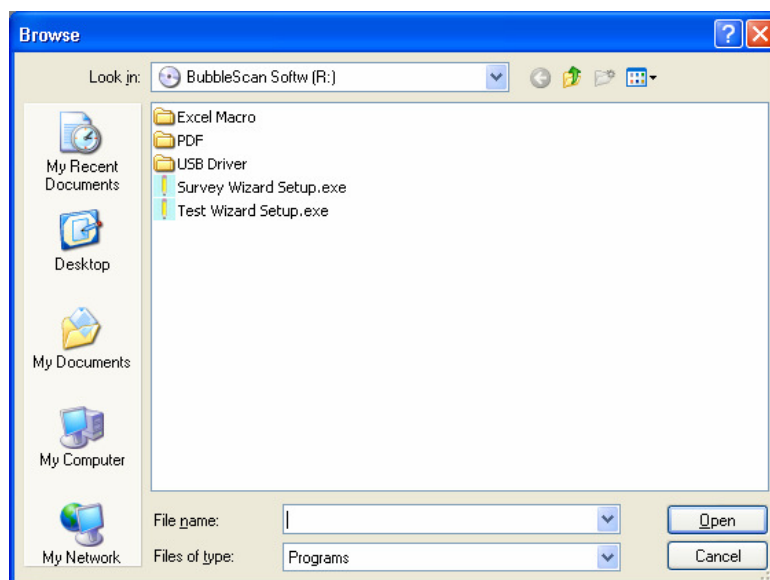
Your CD contains installation files for three software programs.

Test Wizard: Captures and scores test data. Generate Student, Summary and Analysis Reports for printing and/or export.

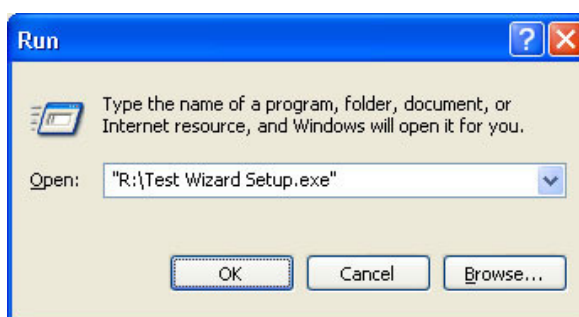
Survey Wizard: Captures raw data In comma- or tab-delimited text format.

Scan2xls: Drops raw data directly into a Microsoft Excel spreadsheet for immediate data verification and manipulation.

1. Insert the CD into your PC's CD-ROM drive.



2. Click <Start>– <Run>– then browse to your CD-ROM drive. Select the file ‘**Test Wizard Setup.exe**’ or ‘**Survey Wizard Setup.exe**’ or ‘**Scan2xls Setup.exe**’. Click <Open>.

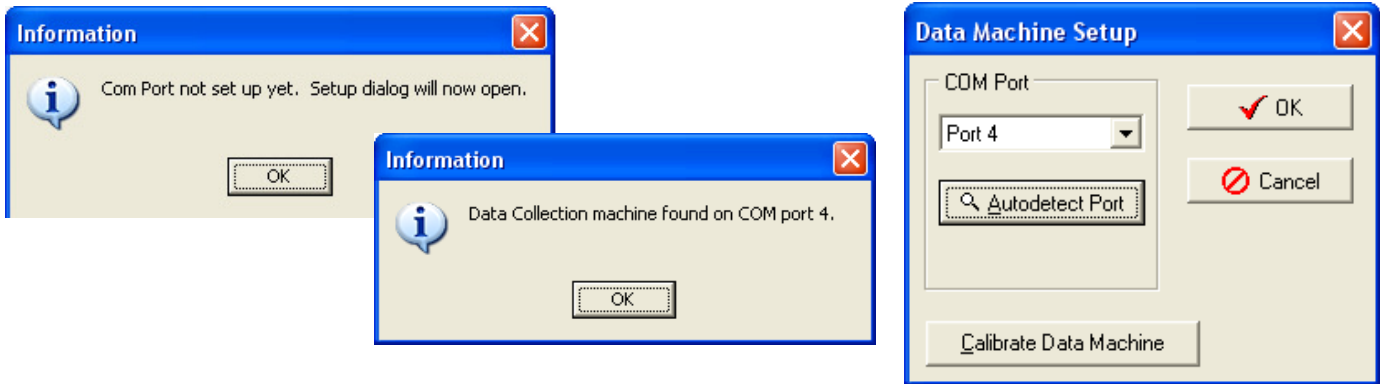


3. Click <OK>.
4. Follow the prompts until the software is installed on your PC.
5. **VISTA USERS:** DO NOT INSTALL TEST WIZARD IN THE DEFAULT DIRECTORY IN PROGRAM FILES. INSTEAD, CREATE A NEW DIRECTORY OUTSIDE OF PROGRAM FILES AND INSTALL TEST WIZARD THERE.
6. To install another Wizard, simply repeat steps 2 through 4.

Test Wizard

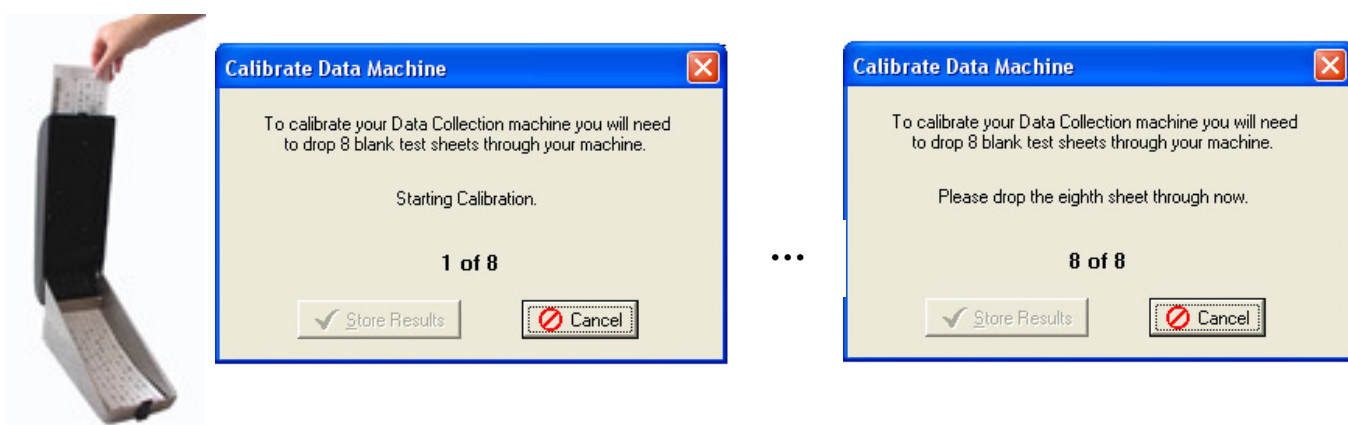
Port Detection and Calibration

1. If you haven't already done so, position the BubbleScan on a flat, steady surface and connect it to the PC.
2. Start the Test Wizard.
(Start – All Programs – Test Wizard – Test Wizard)



3. If the software is unable to detect the presence of the BubbleScan, it will prompt you to **auto-detect the port**.
4. Click <OK> when the wizard has found the 'Data Collection machine'.
5. Select <Calibrate Data Machine>.

Whenever you switch paper stock or forms you MUST recalibrate!

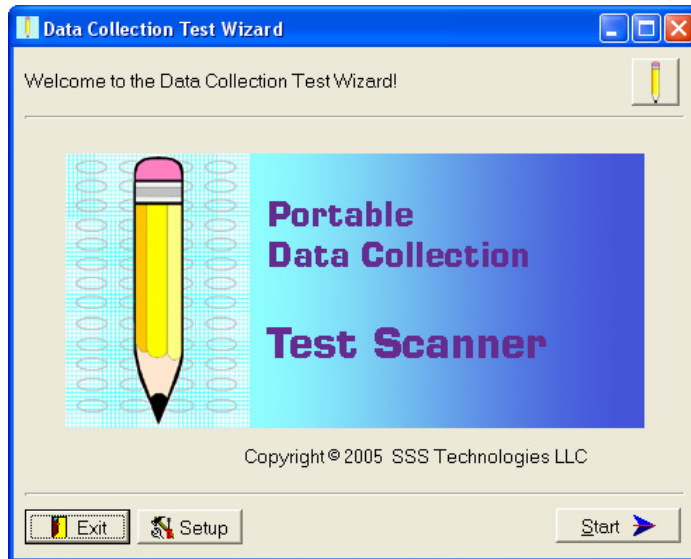


6. Open the BubbleScan and drop **eight separate, unmarked** answer forms through the BubbleScan. The long black line at the bottom of the answer form faces down.
7. After the eighth form has been dropped the Test Wizard will automatically store the results. Click <OK> twice.

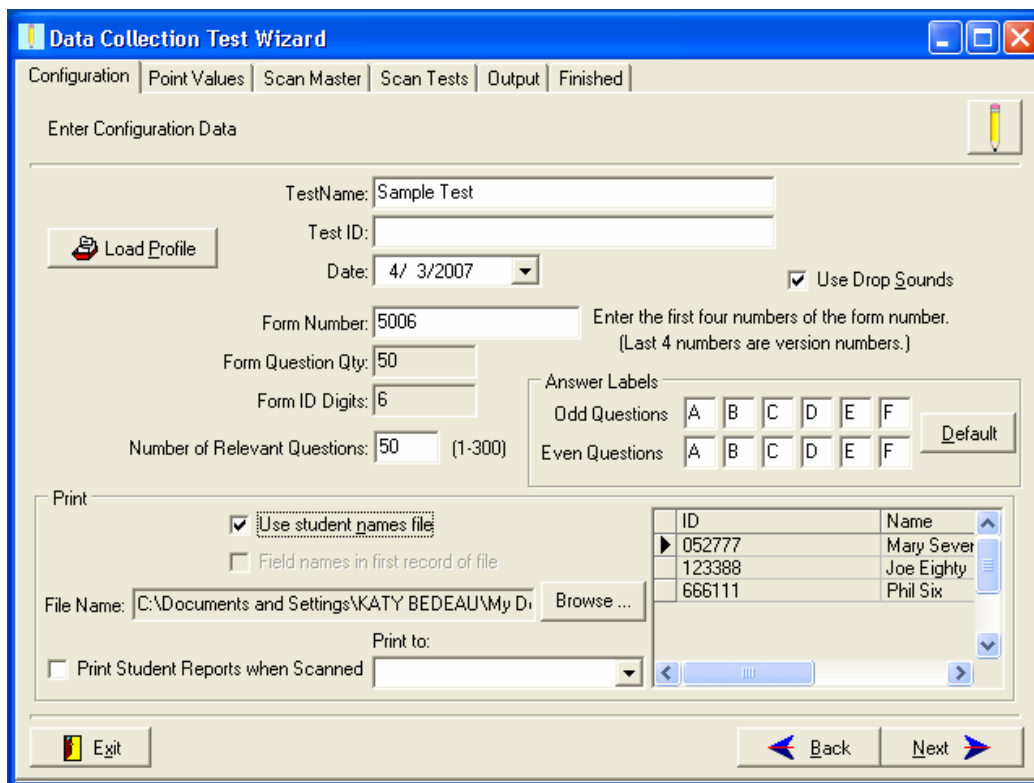
You are now ready to start scoring tests.

Operation of the Test Wizard

The Test Wizard captures and scores data and provides a series of useful report and export options.



1. Click <Start> to start the Test Wizard.



2. Enter a 'Test Name' along with a 'Test ID' and if desired change the 'Date'. This information will show up in the BubbleScan report as well as in the name of the report file.

Enter the **Form Number**. The Form Number consists of the first four digits of the form ID printed on each answer sheet. The standard form number is xxyzzzz where xx is the number of answer rows, yy is the number of ID digits, and zzzz is a four digit form ID. Multi-page tests require that the same form be used for all pages.

The '**Number of Relevant Questions**' tells the Test Wizard how many questions the test consists of regardless of how many pages the test spans.

The wizard cannot detect page numbers, so be sure to drop multi-page tests in sequence. E.g. You are taking a 130 question test and are using 3 sheets of form 50060705 for it. Each form has a six digit ID block and 50 question rows. The first time the scanner reads a unique ID, it will read all 50 question rows as answers 1-50. The second time the scanner sees the same ID it will read all 50 question rows on that form as answers 51-100. The third time the scanner sees the same ID it will read only the first 30 question rows as answers 101-130.

In the '**Answer Labels**' section you can select what labels to the answers will be. It is divided into 'Odd Questions' and 'Even Questions'. You may use numbers or letters, or a combination of both.

Just click on the label you want to modify then change it.

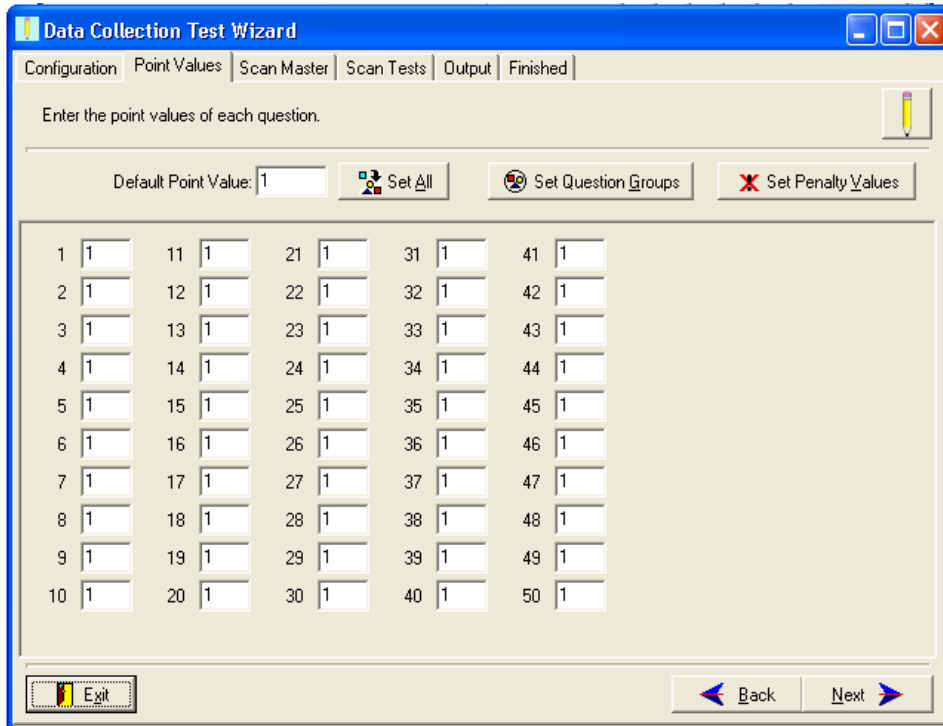
In the '**Print**' section you can select to have a Student Report printed automatically as soon as a student's test has been scanned completely.

This Student Report can show just the student's ID (default) or his/her name. To include the **student's name** on the report, you need to specify a name file. This name file is a simple text file (extension .txt) where each line contains a valid student ID, a <tab>, and the student's name. If you need to create this file manually, we suggest you use NOTEPAD or another very basic text editor to eliminate including any unwanted (hidden) control codes.

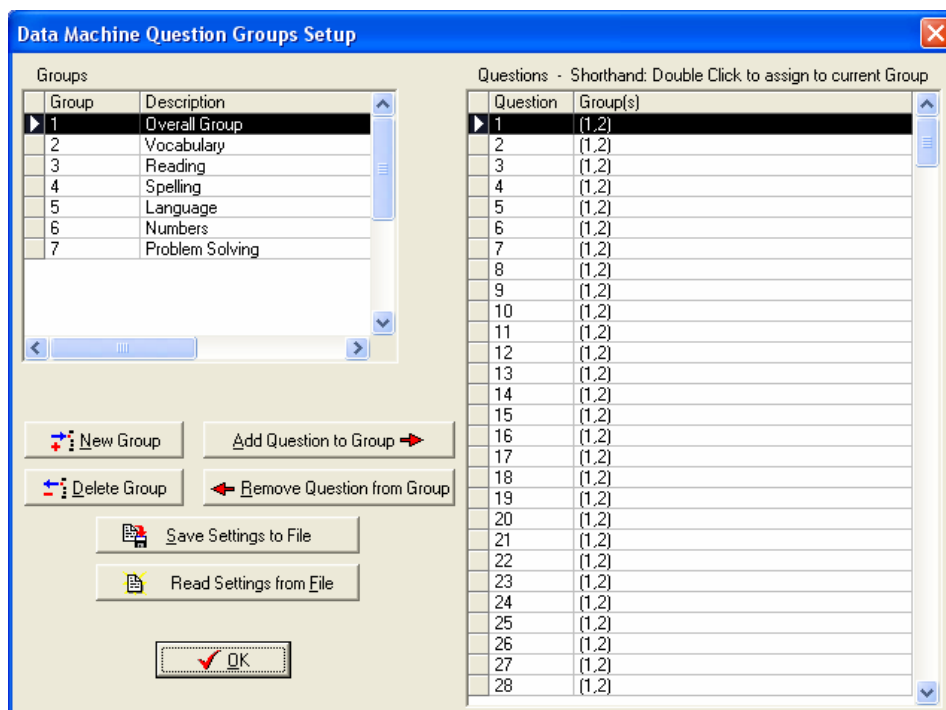
Please note: The number of digits in the name file must match the number of digits on the physical form –even if you are not utilizing all of the digits.

If you have previously stored a '**Profile**', you can now retrieve it by clicking <**Load Profile**>. A Profile consists of the Test Name, Test ID, Form Number, Number of Relevant Questions, Point Values, and the answer to the Master Test. Loading a Profile will populate all these values with saved data. It can easily be changed as you proceed through the setup.

3. Click <**Next**>.

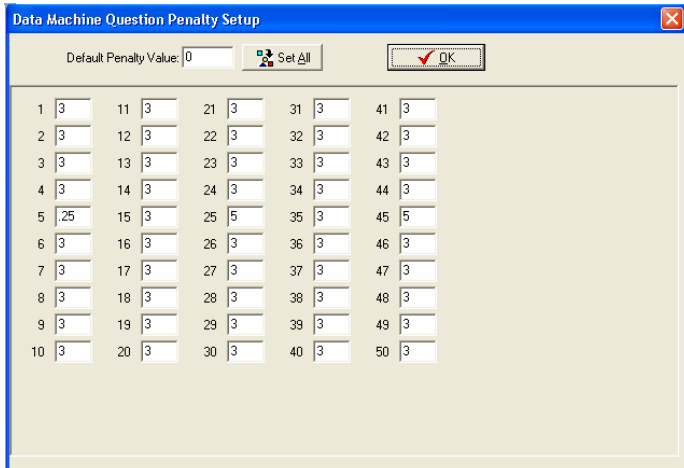


4. Enter the Default **Point Value** for all questions. Or select to customize the individual point values. Point values may be decimals.
5. Click **<Set Questions Groups>** to assign questions to sub-groups you create.

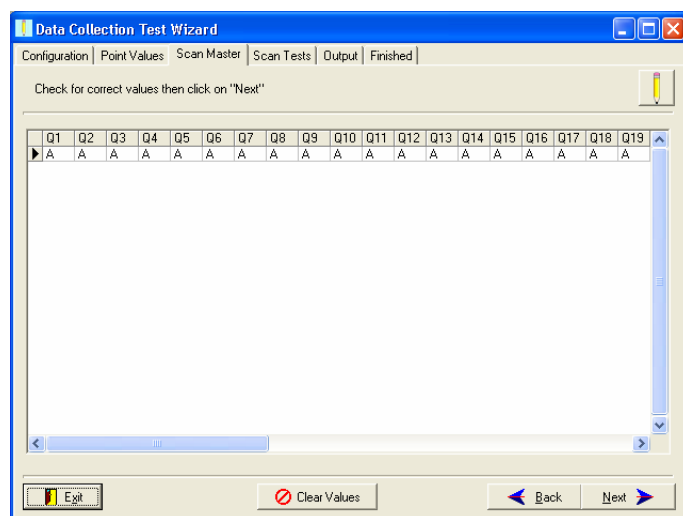


6. Create the desired groups (click on **<New Group>**) and then assign questions to these groups. The easiest way to accomplish this is to select the group from the left table, then double-click the desired question in the right table.
7. Select **<Save Settings to File>** to store your group assignments for easy retrieval in the future.

8. Click **<Set Penalty Values>** to assign penalty points to questions. You may enter a Default Penalty Value and set all questions to have the same penalty value. You may also input a value in the box next to any question. In the example below, all but question 5, 25, and 45 have the same value set. You may also use decimals as a value.



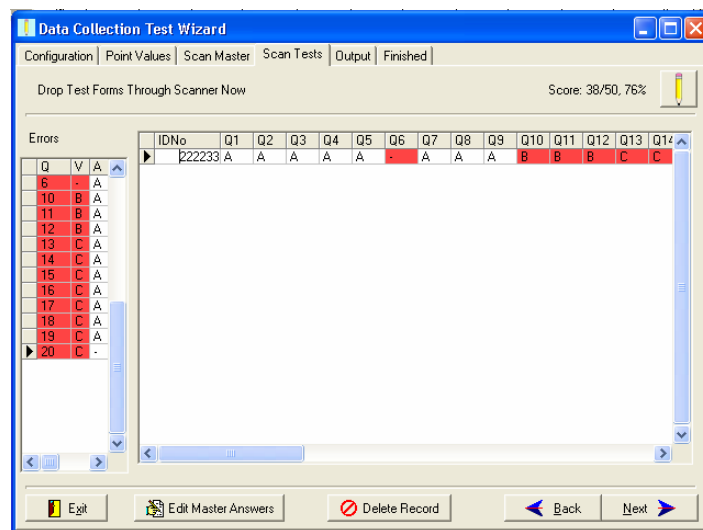
9. Click **<OK>** to return to the previous screen, then **<Next>** to begin scanning.
10. Drop the master test form(s). This is an answer sheet that contains all the correct answers. The student ID number section on the master form is ignored.



11. Values in the 'Scan Master' window can be edited if necessary. Click the <**Clear Values**> button to delete a scanned master, then rescan the master test sheet. Click <**Next**> to proceed.



12. Drop the first student answer sheet through the scanner.



13. The student's answers will appear as the last entry in the table.

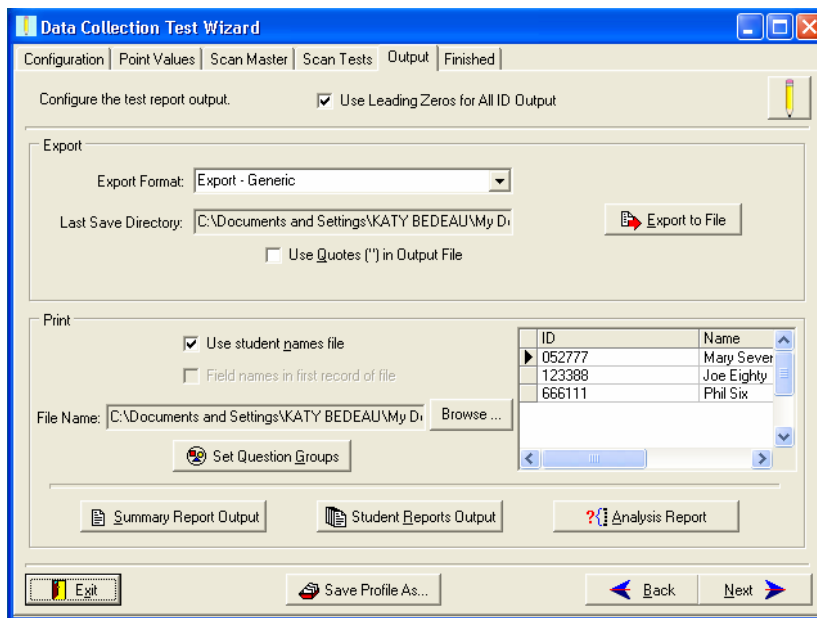
Only one answer per question is acceptable.

Errors or 'ambiguous' answers are listed on the left side of the screen and otherwise shown as red fields in the main table. Entries can be edited on this page, or entire records deleted. When changing an answer on this page, make sure to move the cursor to another field to save the new answer.

A letter (**A-F**) in the red field indicates the student's answer. A question mark (?) appears for an ambiguous answer, i.e. more than one bubble was marked in a row. A dash mark (-) appears when no bubble was marked in the respective row.

When you are ready, simply continue to drop the next student's answer sheet through the BubbleScan. Each student's results are automatically captured – and printed if you selected this option in the beginning.

14. When you have dropped the last student test, click <**Next**>.



15. The Output options are as follows.

Select **'Use Leading Zeros for All ID Output'** to keep all digits the same length by reporting them with leading zeros if necessary.

The **Export** Format stores data in gradebook-ready comma- or tab-delimited text format. The following is a brief description of the available export options.

The examples were generated by scoring 3 sample tests, where

- Gordon Brown, ID: 000012, scored 46 points. His answer for question 1 was A, for question 2- A, for question 3 – A, and so forth.
- James Dean, ID: 000013, scored a perfect 50 points. His answer for question was C, for question 2 – B, for question 3 – C, and so forth.
- Eric Cordales, ID: 523232, scored only 3 points. His answers were q1 – B, q2 – B, q3 – A, and so forth.
- 1 point was assigned to each question. The first 5 questions were assigned to a sub-group.
- “Use Leading Zeros for All ID Output” was selected.

'Generic', **'Gradespeed'**, and **'Gradequick'** save ID numbers with final test scores. Fields are separated by a [tab].

Example:

```
000012    46
000013    50
523232    3
```

Notes: For compatibility, Gradequick format saves data with 3 tabs between ID and points.

'Detailed' saves ID numbers with individual answers. Fields are separated by a [tab].

Example:

"000012","Gordon Brown","46","AC","AB","AC","AD","E",...

"000013","James Dean","50","C","B","C","D","E","F","E","F","E", ...

"523232","Eric Cordales","3","BC","B","AC","BD","BE","AF", ...

Note: The second letter in each answer field is the correct answer.

Print provides more detailed reports that can be printed, archived as pdf, or saved as web-ready html files (best viewed through Internet Explorer).

All printable reports and the 'Summary' export options can include the actual student names. This information is imported from a simple text file where each line contains a valid student ID, a <tab>, and a name.

The **Summary Report** lists the student ID, the optional student name, the point score and the % score.

The **Student Report** prints an individual report for each student containing ID, name, point and % score, and individual answers for each question together with the correct answers.

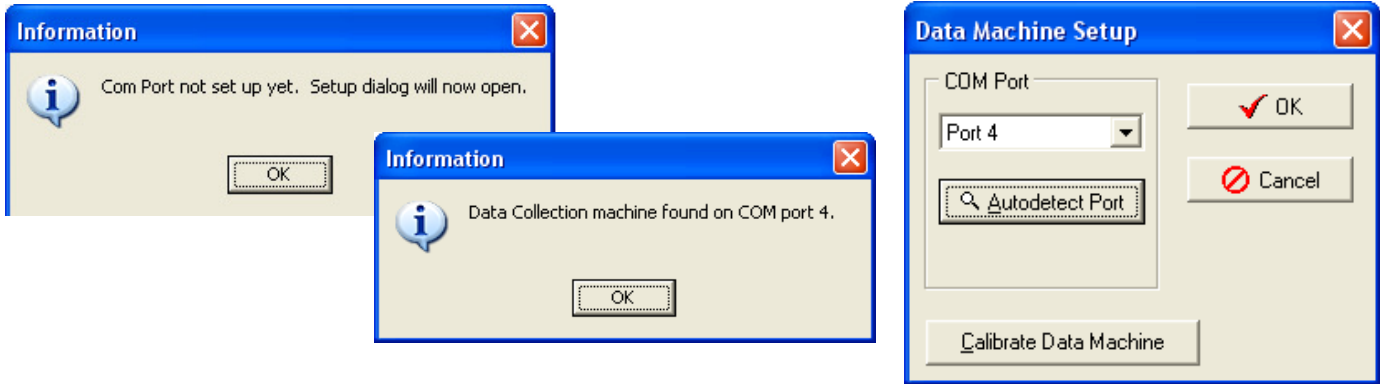
The **Analysis Report** gives statistical information such as answer popularity (how was each question was answered), averages, and standard deviations. This information can also be exported as a simple text file for further analysis by Excel or similar programs.

If you haven't already done so, you may assign questions to groups you create (<**Set Question Groups**>) as well as save your setup profile (<**Save Profile As..**>).

Survey Wizard

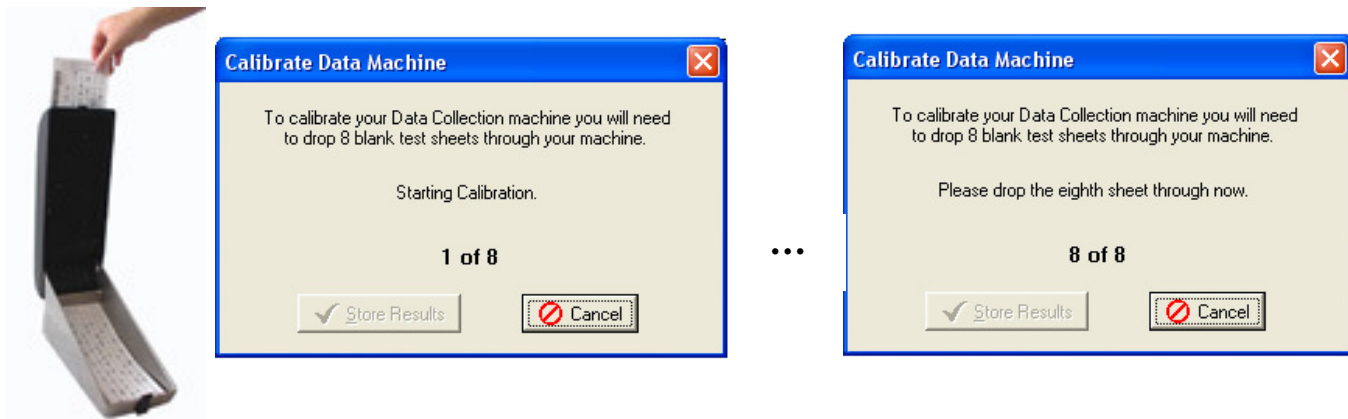
Port Detection and Calibration

1. If you haven't already done so, position the BubbleScan on a flat, steady surface and connect it to the PC.
2. Start the Test Wizard.
(Start – All Programs – Survey Wizard – Survey Wizard)



11. If the software is unable to detect the presence of the BubbleScan, it will prompt you to **auto-detect the port**.
12. Click <OK> when the wizard has found the 'Data Collection machine'.
13. Select <Calibrate Data Machine>.

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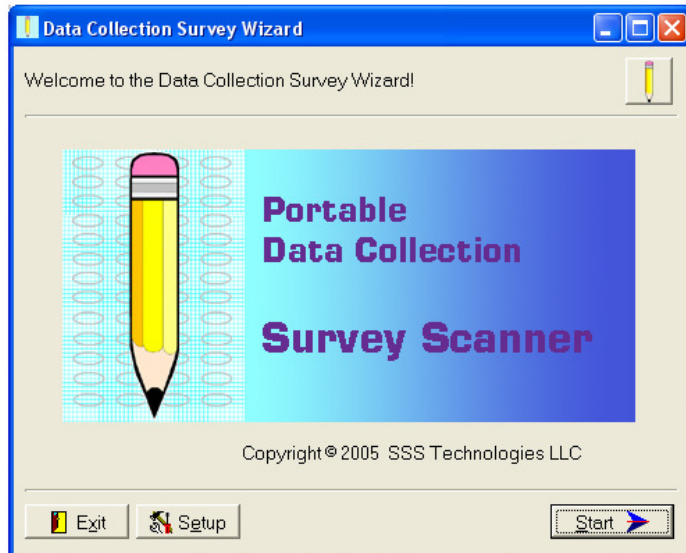


14. Open the BubbleScan and drop **eight separate, unmarked** answer forms through the BubbleScan. The long black line at the bottom of the answer form faces down. If you are using custom forms, you might need to calibrate with special 'calibration' forms. Please check with Academy Technologies.
15. After the eighth form has been dropped the Survey Wizard will automatically store the results. Click <OK> twice.

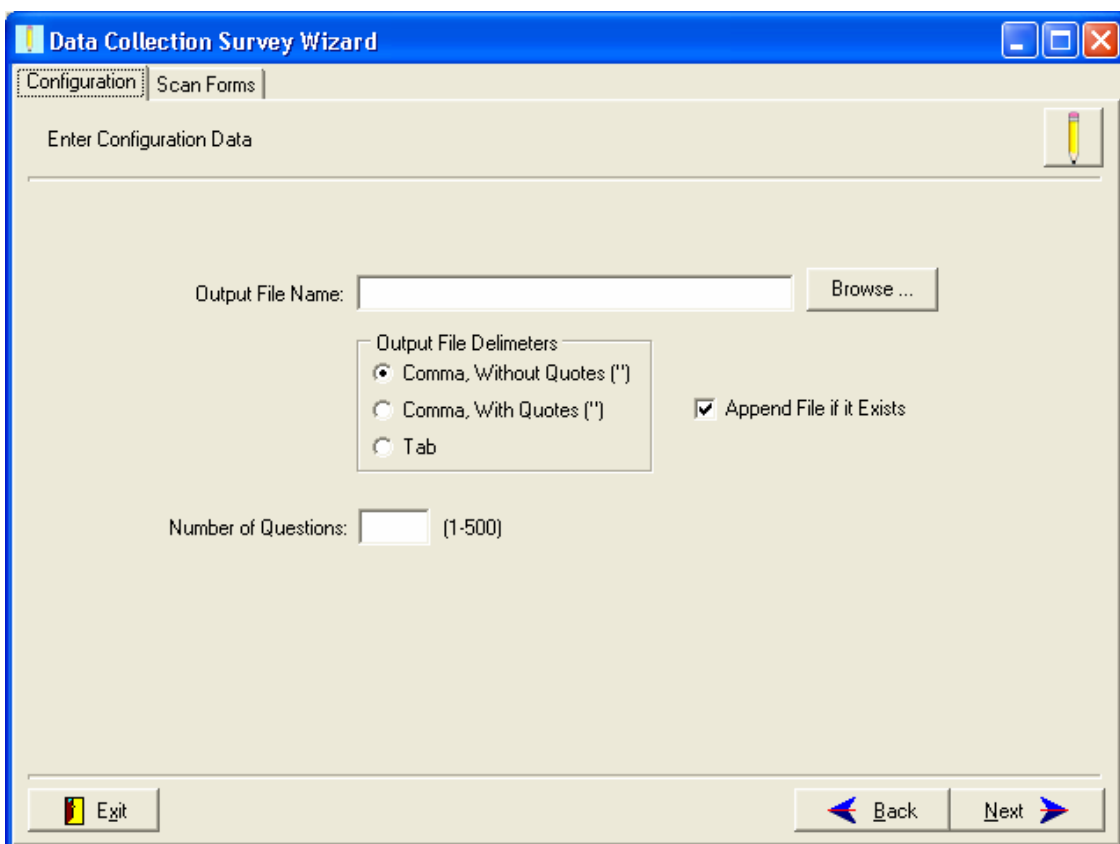
You are now ready to start capturing data.

Operation of the Survey Wizard

The Survey Wizard will save all captured data in a comma- or tab-delimited format.



1. Click <Start> to start the Survey Wizard.



2. Select the directory and file name for your survey data file. Choose the extension '.txt' or '.csv'.

If you select an existing survey file, your data will be replaced, unless you select 'Append Data'.

3. Enter the **'Number of Questions'**.

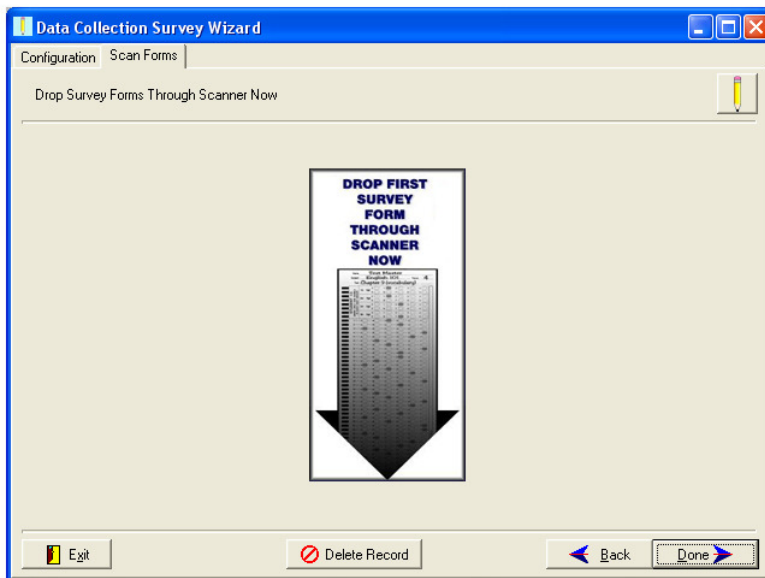
The Survey Wizard treats each line which starts with a timing mark (black rectangle on the far left side of the form) as a 'Question'. Once the specified number of 'Questions' have been detected regardless of the number of forms it takes, data in subsequent rows on a form will be discarded. Dropping a new form after the specified number of 'Questions' has been reached begins a new record.

E.g. You specify a value of '60'. The forms you use have 25 answer lines each. The Survey Wizard will report 25 answers of the first form, 25 answers of the second form and only the first 10 answers of the third form.

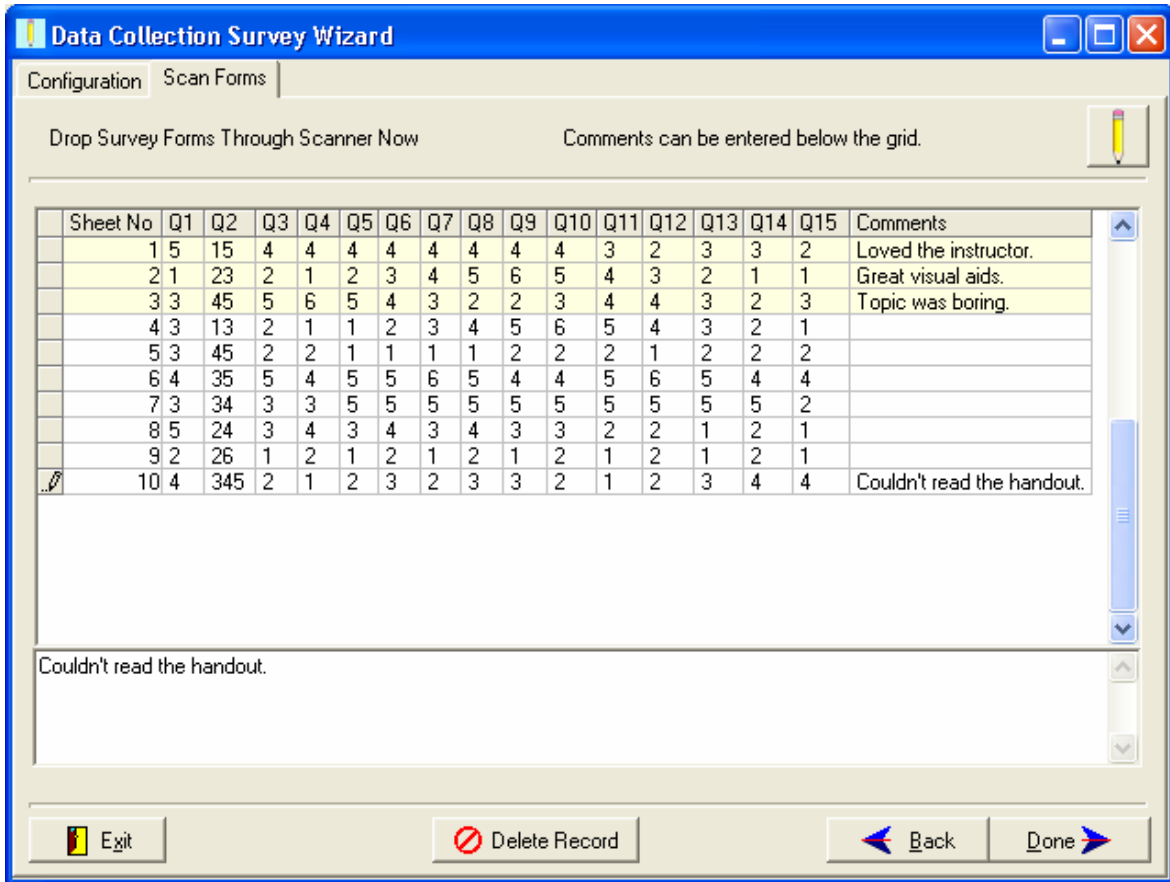
Multiple answers in a line will be reported. E.g. a value of 134 means that the first, third and fourth bubble in a line were marked.

Be aware, that the Survey Wizard does not recognize ID's. All pages belonging to a given survey must be dropped in sequence.

Click **<Next>**.



4. Drop one survey form after the other through the scanner. Enter any comments.



5. The scan results will be listed.

The most recent record is always on the bottom.

Individual values can be changed manually.

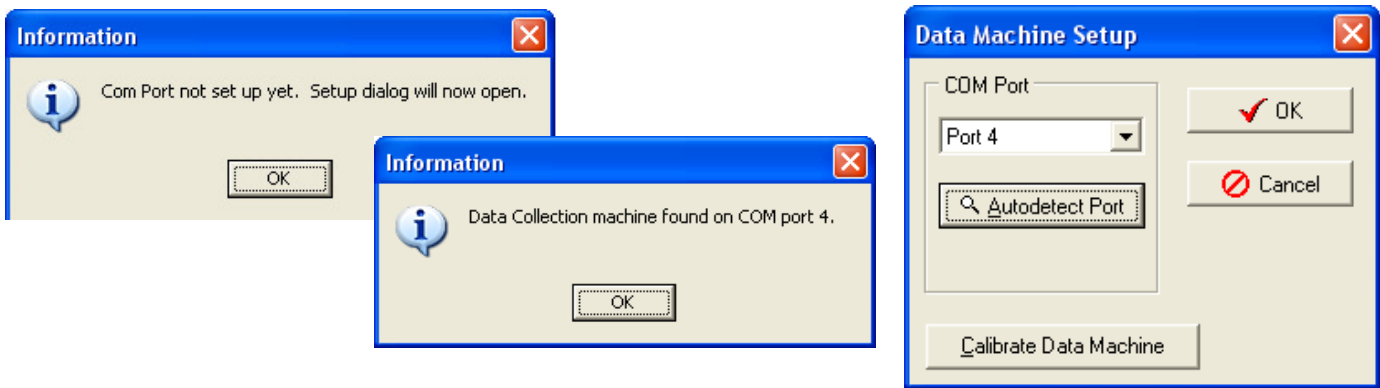
Individual records can be deleted by placing the cursor in the respective row and clicking **<Delete Record>**.

The Survey Wizard appends a **'comment'** field at the end of every record. Enter comments in the field below the answer grid when a given record is selected or enter comments directly into the comment field at the end of every record. Avoid " , " (comma) as this character is reserved as the delimiter for the data file.

Scan2xls Wizard

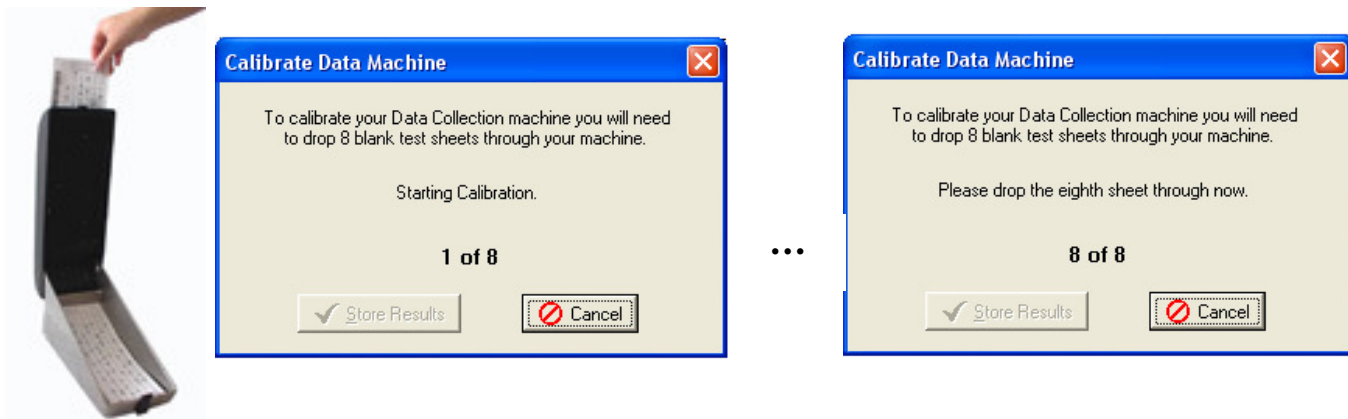
Port Detection and Calibration

1. If you haven't already done so, position the BubbleScan on a flat, steady surface and connect it to the PC.
2. Start the Scan2xls Wizard.
(Start – All Programs – Scan2xls – Scan2xls)



3. If the software is unable to detect the presence of the BubbleScan, it will prompt you to **auto-detect the port**.
4. Click <OK> when the wizard has found the 'Data Collection machine'.
5. Select <Calibrate Data Machine>.

Whenever you switch paper stock or forms you MUST recalibrate!



6. Open the BubbleScan and drop **eight separate, unmarked** answer forms through the BubbleScan. The long black line at the bottom of the answer form faces down. If you are using custom forms, you might need to calibrate with special 'calibration' forms. Please check with Academy Technologies.
7. After the eighth form has been dropped the Survey Wizard will automatically store the results. Click <OK> twice.

You are now ready to start capturing data.

Operation of the Scan2xls Wizard

The Scan2xls Wizard will dump all data directly into an Excel Worksheet.

1. If you currently have an Excel spreadsheet running, exit Excel.



2. Click <**File**> and select
 - a. **New** - then specify a file name in the directory of your choice to create a new, blank data file.
 - b. **Open** – then select the desired data file.
3. Click <**Utilities**> and select
 - a. <**Multiple Bubble Mode**> – to collect data from more than one bubble per answer line.
 - b. <**Single Bubble Mode**> – to collect data from only one bubble per answer line.
4. With an Excel spreadsheet opened, click <**Scan**> and select **Start Scanning**.



5. Begin dropping answer forms through the scanner.
 - a. Each form is treated as a record.
 - b. Data is deposited into the first empty row.
 - c. Scan2xls reports 66 fields with every record. If you are writing your own macro, you should monitor the 66th column (BN) for changes to trigger a macro.
 - d. If you are using one of our macro files, please refer to macro-specific documentation.

**Academy Technologies
Warranty Information
US & Canada Only**

Effective June 1, 2006

All BubbleScan 101 units purchased from Academy Technologies come with a **one-year warranty coverage**.

The original warranty period may be extended for up to 4 more years by purchasing such coverage from Academy Technologies while the BubbleScan unit is (1) still under the original warranty, (2) under warranty extension, or (3) within 30 days after a paid repair¹ has been performed on the BubbleScan unit by Academy Technologies.

OUR COMMITMENT

During the warranty period:

- We will ship a replacement from our stock of refurbished (or at our discretion new) BubbleScan units should your BubbleScan 101 fail during normal use (US/Canada Ground shipping included).
- We will make available to you via Internet any upgrades to the Survey, Scan2xls and Test Wizards bundled with the BubbleScan 101.
- We will provide you with free technical support via E-mail or our toll-free number (888-456-SCAN).

YOUR COMMITMENT

During the warranty period:

- You will pay fees for warranty extensions in full when due ².
- Before exchanging a unit, you will first contact Academy Technologies to verify product failure and to obtain an RMA number.
- You will promptly and at your expense return the defective BubbleScan unit within 1 week after receiving the replacement or pay the then current BubbleScan rental fees.

Notes:

¹) Currently \$299.00 per out-of-warranty repair.

²) Currently \$39/year payable on net30 terms or via credit card. Failure to pay fees for warranty extensions when due will invalidate coverage.

Contact us for additional **forms** – custom or standard.

We can help you **tabulate survey data**.

Let us write a custom Excel macro for your requirements.

Need an OMR scanner for a special project or conference?

Now you can **rent** the BubbleScan
on a week-by-week basis or
month-by-month

Visit

www.BubbleScan.com

for more information.