

SmartMan Quality Control Improvement – Data Analysis Software

V20 and later

Contents

SmartMan Quality Control Improvement – Data Analysis Software	1
4.0 OVERVIEW OF PROCESS	2
4.1 SET UP	2
4.2 HOW TO SHOW MEANINGFUL RESULTS	2
4.2.1 Step 1: Define the group	2
4.2.2 Step 2: Filter the Results	2
4.2.3 Step 3: Show the Graph	3
4.3 CONVENTIONS IN THE SOFTWARE	3
4.3.1 The Roller Wheels	3
4.3.2 Continue Button	4
4.3.3 The Radio Buttons	4
4.3.4 The Violet or Green Buttons	4
4.4 HOW TO DEFINE THE TOTAL GROUP (ROLLER WHEEL 1)	5
4.4.1 Define the Group	5
4.4.2 Create Group	5
4.4.3 Exclude Data	5
4.4.4 Assign Data	6
4.4.5 Dates for Data	6
4.4.6 Select Keycode Data	7
4.5 HOW TO FILTER RESULTS (RADIO BUTTONS)	7
4.5.1 Radio Buttons	8
4.5.2 Activities Button	8
4.5.3 Sequence	10
4.5.4 Level	10
4.6 DISPLAY FILTERED RESULTS (ROLLER WHEEL 2)	11
4.6.1 Show Graphs	11
4.6.2 Field View	12
4.6.3 Decile	12
4.6.4 Compliance	12
4.6.5 Clear Graph	12
4.6.6 Set Score Range	13
4.6.7 Export Data	13

4.6.8 Step Through	13
4.7 EXPORT RESULTS	13

4.0 OVERVIEW OF PROCESS

4.1 SET UP

To use the SmartMan QCI Module, you must first have a valid setup by SmartMan. SmartMan will link your QCI module to the results with your specific key codes. You may have many key codes or you may only have one key code. All results under those key codes and which have been submitted to the server will be accessible to you.

Once activated, you will receive a login and password from SmartMan. Once that is complete you can begin.

Since you are accessing data which is on a server, you do not need to be connected to a manikin to view these results. You must have access to the internet at all times.

- Download and install the Software.
- Click on the icon.
- You will be asked for your login and password.

4.2 HOW TO SHOW MEANINGFUL RESULTS

There are three stages to getting to a result. Each stage allows you to narrow down what you want to look at and then gives you a display of what that data looks like. You will likely have to do this several times to filter the data in a way which shows the information you are looking for.

4.2.1 Step 1: Define the group

This is the total group of all of the results that you wish to work with during this session. This does not have to be all of the results that are on the server. You can change the total group when you want.

Defining the Group does not change the original results data on the server.

You define the group to be used in this session through Roller Wheel 1, which has a slight bluish shade around it. You define the group by selecting the Key Code then excluding or including results files. Then you create the group.

4.2.2 Step 2: Filter the Results

You can show a graph of all the results from the total group which you defined in the previous step, or you can apply a filter to the total group so you can show results from a selection of that group.

You do this by filtering the results of the group. By using filters you do not change the results stored on the SmartMan server in any way. Filters change the results examined by the software when making the graph. Results can be filtered by activity, score, date, attempt number, etc.

The second Roller Wheel (with a slight brownish color around it) and the Radio Buttons are used to filter results. You can apply and un-apply these filters quickly to see how the data looks.

4.2.3 Step 3: Show the Graph

Once you have filtered the group in as many ways as you wish, set the second roller wheel to “Show Graphs” and click “Continue”. Often you will want to change a filter or two then show graphs again.

Once you have the filter set to show information the way you want it, you can export those filtered results.

Summary of Procedure
1. Define Group
2. Filter Results
3. Show Results in a graph
4. Change & Show or Export

4.3 CONVENTIONS IN THE SOFTWARE

4.3.1 The Roller Wheels

The roller wheels are at the top left of the Admin Module screen. Put your mouse onto the selection and move your mouse up and down. The selection wheel will roll up and down. Place the selection you want in the center for the roller wheel. Click on “Continue” to activate your selection.

There are two roller wheels.



The first Roller Wheel is used to Define the Group of results which you will include for the session. It has a slight bluish color around the outer edge.

After you make selections to define the group, place the roller wheel on “Create Group” and press “Continue”. This will load your group results and move to the second roller wheel.



The second Roller Wheel is used to show a graph of the results you filtered from the group you defined. It also allows you to filter results by the Score Range. It has a slight brown color around the outer edge.

Once you filter these results, move the roller wheel to "Show Graphs". This will give you a display of those results.

This wheel allows you to display the filtered results in several different ways. You can show the graph, show the field view, show the compliance scores on the graphs, show how scores fall into deciles.

You can also export results meeting the current filter conditions from this wheel as well.

4.3.2 Continue Button

This button is used to activate all selections made in either of the roller wheels.



When you have placed a selection in the middle of the roller wheels, you activate that selection by clicking on the Continue Button. The button will turn olive color when the cursor is over it.

4.3.3 The Radio Buttons

These buttons allow you to filter which results will be used to make the graphs you want to display.



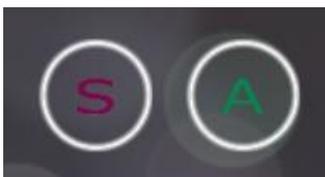
These are the 'Activities', 'Sequence' and 'Level' buttons to the right of the roller wheel.

Click on the button to open a selection related to that button. The button will turn olive when the cursor is over it.

When it is open, click anywhere else to close that selection again.

4.3.4 The Violet or Green Buttons

These indicate whether the selection will be included or excluded when the graph is displayed.



Once you have clicked on one of the radio buttons you will be given a second menu. These are toggles; if you click any option it will turn on or off.

When the button is green the results will be included in the graph.

When the button is violet the results will be omitted from the graph.

4.4 HOW TO DEFINE THE TOTAL GROUP (ROLLER WHEEL 1)

4.4.1 Define the Group

This is done with the first roller wheel. It will appear as soon as you have logged in and the program has verified access to the database. This is where you determine what group of results you wish to look at during the session. The default when you first enter is to gather all results from all of the key codes listed with your account.

Making changes to the data through this wheel does not change the overall results data on the server. You can change the overall group that you are including at any time.

Use the following buttons to define an overall group.

- [Create Group](#)
- [Exclude Data](#)
- [Assign Data](#)
- [Dates for Data](#)
- [Key Code Data](#)

4.4.2 Create Group

The “Create Group” selection will create the group which you define. It will load your results so that you can later filter the results and show them in a graph format.

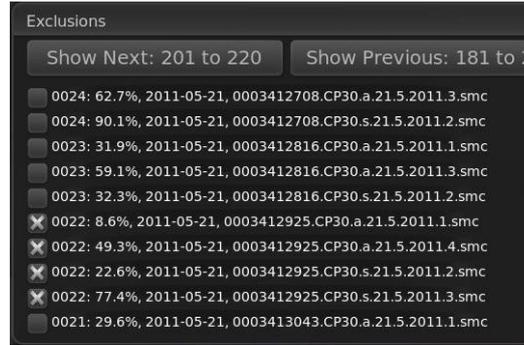


If you want all results from all of your key codes to form your group, then as soon as you login, click “Continue”.

If you want to change some of the parameters, use the other selections on the roller wheel to modify specific aspects. Then come back to this selection and press “Continue”. This does not change any results in the database.

4.4.3 Exclude Data

Often the complete database will have some results which you do not want to include in the group of results you wish to analyze. For example you may have a few results that were completed by people who were visiting or when you were showing the system to other people. Or the system may have been used for a Saturday training program with a group from outside of your organization. When you select “Exclude Data” you are given a window with your activity results. Click on the “Show Next” and the “Show Previous” buttons to display a different set of results.



The results are displayed in alphanumeric order according to the file name.

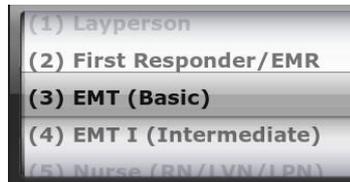
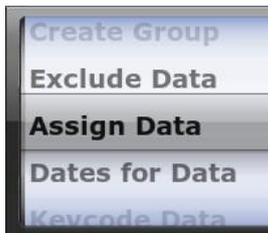
Click in the space to place an X in the result you want to exclude. Click again to remove the X. When finished, you



are given the option to update or not, the changes you have made.

4.4.4 Assign Data

This selection allows you to place a tag on a result to assign it to a specific profession.



This tag makes it easy at a later time to show graphs of the results of those particular groups.



To the right is an example of the professions which might be used to make a group.



If the profession you wish to choose is not in the first ten, those after 10 are simply labeled with letters.

4.4.5 Dates for Data

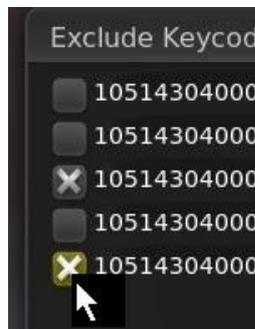
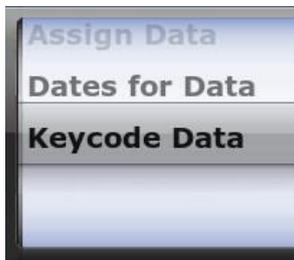
This selection allows you to specify results that fit within a specific date range. Roll to the Day, Month and Year when you wish to start including results. Then click on the "Start Date" button.



Roll to the Day, Month and Year you wish to be the end for including results. Then click on the “End Date” button. Click “Continue” to return to the Main roller wheel.

4.4.6 Select Keycode Data

This selection allows you to exclude the results performed on particular key codes. If you different key codes for different groups that are trained on SmartMan, this is an efficient way to quickly sort results. For example you might use one key code for a group of EMT’s and another key code for a group of nurses. You can then immediately sort results for either group by themselves by excluding the other key codes.



When the key codes listed with your account are displayed in the window, click in the space to place an X in the result you want to exclude. Placing an X in the box will exclude results on that key code from being a part of this group.

Click again to remove the X.

When finished, click “Continue”.

Once you have made all the selections you wish, return the roller wheel to the top. This is “Create Group” and click “Continue”. The Admin Module will create the group which you have defined.

4.5 HOW TO FILTER RESULTS (RADIO BUTTONS)

Once you have defined the group in the previous section, the Admin Module will collect all of the results which meet these conditions. The program will then move to the second Roller Wheel and the Radio Buttons.

You may wish to display a graph of all of those results as they are, or you may wish to display graphs on subsets of those results. To display results with specific characteristics, you apply filters. Applying filters does NOT change the results data stored on the SmartMan Server. It only changes which information is analyzed and displayed in the graphs.

On the second Roller Wheel there is one selection that is also a filter. This is the “Score Range” which allows you to create a graph of a specific range of scores.

4.5.1 Radio Buttons

The radio buttons allow you to examine specific features of the activities on the SmartMan Skills Menu. With these 3 buttons you can choose which activity (skill),

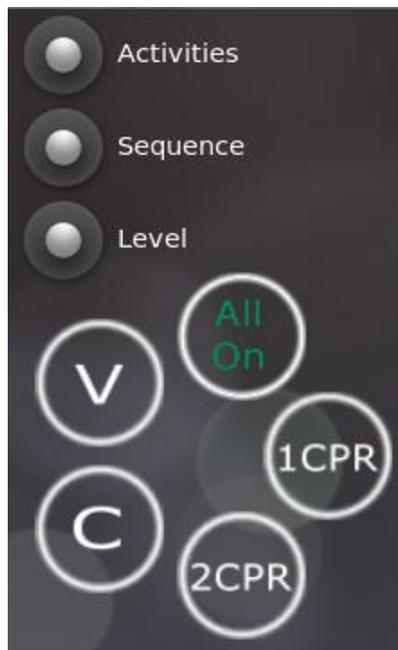


which attempt and whether it was a standard or advanced level activity. These all directly relate to which activities people performed on SmartMan

Click on a button to produce a further menu. Click anywhere on the screen and the second menu will disappear.

4.5.2 Activities Button

With this button, you select the activity you wish to be included. You can change this to show different results as often as you wish. When you click on the button the following menu will appear. You can include or exclude any combination of skills.



Activities Buttons

All On: This toggles all of the following buttons to on (**green**) or off (**violet**)

Each of the other buttons will open a Menu where you select the activity.

V: Ventilations Activities

C: Compressions Activities

1CPR: 1 Person CPR

2CPR: 2 Person CPR

Each of the buttons leads to a further selection. See below for detail.



“C” is for the chest compressions activities performed in SmartMan.

C30P: Compressions 30 Practice

C30T: Compressions 30 Test

C200P: Compressions 200 Practice

C200T: Compressions 200 test

Click on any button to turn it off (**violet**) so that those results will not be included.



“V” is for the Ventilations activities performed in SmartMan.

V10T: Rescue Breath Test

V10P: Rescue Breath Practice

V2T: CPR Ventilations Test

V2P: CPR Ventilations Practice

Click on any button to turn it off (**violet**) so that those results will not be included.



“1CPR” is for the activities performed in 1 Person CPR in SmartMan.

1RT: 1 Person CPR Test

2RT: 2 Person CPR Practice

Click on any button to turn it off (**violet**) so that those results will not be included.

“2CPR” is for the activities



performed in 2 Person CPR and in Advanced Airway in SmartMan.

For 2 Person CPR

2RT: 2 Rescuer CPR Test

2RP: 2 Rescuer CPR Practice

For Advanced Airway

2RAP: 2 Rescuer Practice

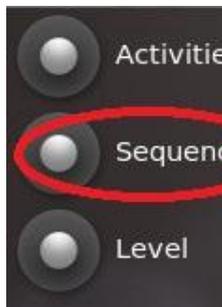
2RAT: 2 Rescuer Practice

2RTT: 2 Rescuer Timed Test

2RTP: 2 Rescuer Timed Practice

Click on any button to turn it off (violet) so that those results will not be included.

4.5.3 Sequence



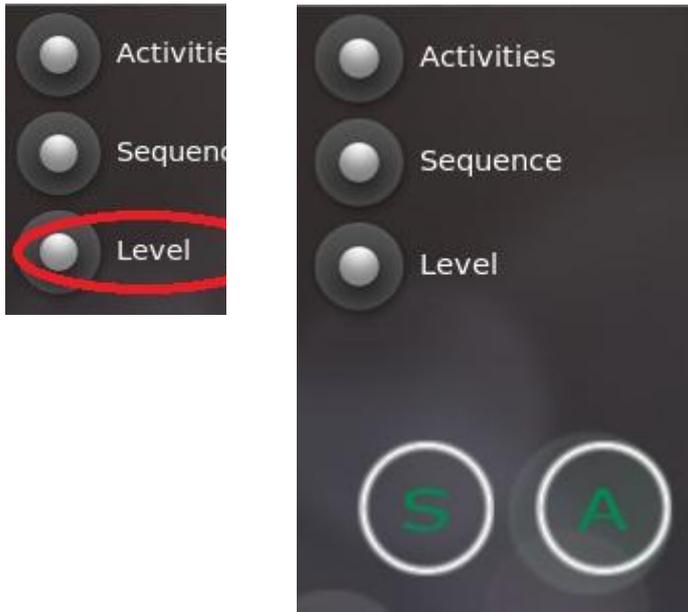
This button is used to include or exclude the number of attempts of an activity that you wish to display.

In this example, the first and second results will be included in the results. This may have been a pre-test and a post-test.

Click on any button to turn it on or off. In this example attempts 3 to 9 are off (violet) so those results will not be included.

4.5.4 Level

This button relates to whether the person who performed the activity was able to see the real



time feedback or not.

S: Standard. The real time feedback was displayed on the screen when the activity was performed.

A: Advanced: The real time feedback was NOT displayed on the screen while the activity was performed.

Click on any button to turn it off (violet) so that those results will not be included.

With all of these buttons set as you want, you are ready to display the information.

4.6 DISPLAY FILTERED RESULTS (ROLLER WHEEL 2)

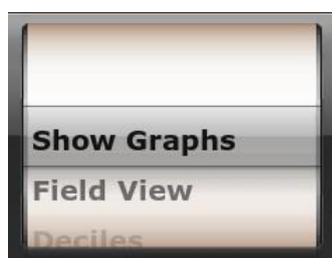
The following selections are controlled in the second Roller Wheel. Notice that this has a slightly brown shade around the edges. Through selections on this wheel you determine how you want to display the filtered results. There are several ways you can display the results information.

This wheel also has control for setting the score range and for exporting data. It contains the following selections.

- Show Graphs
- Decile
- Compliance
- Clear Graph
- Score Range
- Export
- Step

4.6.1 Show Graphs

This selection is used to display the results from your group according to the filtering rules you have applied. Set the roller wheel to Show Graphs, then click on “Continue”.

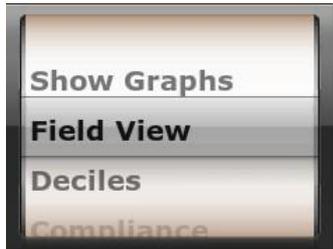


As you change your filters, that is as you change the settings in the radio buttons, you will use “Show Graphs” each time you want to see what the data looks like in a graph.

Doing this several times will help you to understand the scores in your data.

4.6.2 Field View

This selection will create a plot of all individual results which meet your filtering criteria. Some types of data reveal patterns best when they are seen all together.



This is a toggle, so you need to press “Continue” again after have the Field View on the screen in order to turn it off.

To move around the field view data plot use the arrow keys. If you have a roller on your mouse you can zoom in and out.

4.6.3 Decile

This will provide a tally of scores falling in each 10% range.



In the graph area, the decile will be displayed along the bottom and the number of people falling into each will be shown at the top of the graph area.

The totals are on the right hand side of the graphing area

4.6.4 Compliance

A compliance score is a skill that is performed 100% within the specifications in the guidelines. For example, in chest compressions, a chest compression is compliant if it is correct for depth, rate and full release of the chest.



The compliance score will show in two ways. This will show as a red bar on top of the blue bar in the graph. Also the average compliance score will show at the top beneath where N is displayed (the number of results in the group you filtered).

This is a toggle so you must click “Continue” a second time to turn this off.

4.6.5 Clear Graph

This clears the graph area.



This clears the graph that is currently display in the graph area.

4.6.6 Set Score Range

This selection allows you to filter your results by score. It allows you display results with specific score. For example, you may wish to show all scores below 50% or all scores above 80%.

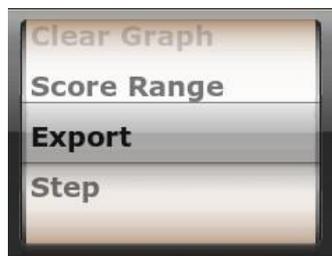


This button gives you two sliders going from 0% to 100%. You adjust these two sliders to select an upper and lower score range for the results you want to see.

You can set any range and obviously the high score setting must be higher than the low score setting.

4.6.7 Export Data

This select creates a csv and comma delimited files of the results.

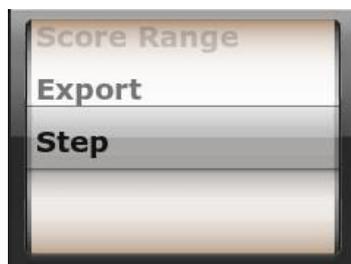


The results which are exported meet the filter conditions which are currently set.

The exported file contains many fields with scores for sub-skills. This allows you to perform a more detailed statistical analysis on the data.

4.6.8 Step Through

This is used to look at the data which is displayed with “Field View” one record at a time.



To use this, “Field View” must already be displayed. Each time you click “Continue” the field display will remove the first row of the graph.

This can be particularly useful if you are using a small number of results and you want to look at how individuals performed.

4.7 EXPORT RESULTS

Once you have filtered your results and are happy that they are defined the way you want, roll the wheel to “Export Results” and click on “Continue”.



The results which are exported meet the filter conditions.

This will create two files. One is a comma delimited file and the other is ready to be opened in Excel. It is a csv file.

The file will be the records which you selected when you defined the group and when you selected the filters. That file will have a lot more information than that displayed in the Admin Module. The exported file contains many fields with scores for sub-skills. This allows you to perform a more detailed statistical analysis on the data.

You can use the Admin Module to determine a specific group in one condition and the same group in another condition. Export the file for each condition and then perform a detailed analysis of the results.

If you are using the results for research, then you should use this feature. This allows you to perform a more detailed statistical analysis on the data.