

## SmartMan Manual – 5. Results 1. Compressions

V5.1 and later

### Results Chest Compressions

SmartMan saves the results of all Skills Menu Practices and Tests

Results are an accurate analysis of every practice or test performed on SmartMan. Below is a description of the detail found in the results for chest compressions.

### Results Main Page

When a practice or test is completed the screen will appear as in the picture below. Each area contains information about the skills performed. Note the number on the circled areas. Each area contains details on some aspect of the performance.

- 1 Score
- 2 More Scores
- 3 Colored Bars
- 4 Show Next Cycle Button
5. More Detailed Analysis Button



Below is a detailed description of the information in each area and what it means.

## 1. The Score (Percentage)

The overall score for the performance appears in the top right hand side of the screen.

This is calculated from all of the sub skills considered to be important to performing that skill and the degree of accuracy required to perform that skill.

The score allows individuals to set a target achievement level. It is also useful in allowing individuals to compare their current score with their previous scores and how others have done in the same skill.

## 2. More Scores

This area provides more detail on the performance.



Besides the final score it provides the following information.

Final Score: This is the overall percentage score

Compressions: How many compressions are actually produced and the target number

Time Taken: The actual time taken and the target time

Compressions (Depth): Percentage of compressions accurate for depth

Compressions (Rate): Percentage of compressions accurate for rate

Depth, Rate, Release: Percentage of compressions accurate for all three

## 3. Colored Bars

### The Colors

The colored bars give a quick easy way for the person performing a skill on SmartMan to know how they are performing and what they need to change in order to receive a high score. The higher score means they are performing better quality compressions.

The person aims to produce pure bright green bars at all times. If there is any other color, then he or she needs to modify their performance on compressions.



Bright Green means everything is correct.



Dark Green means correct rate but incorrect depth



Orange means rate too fast.



Orange means rate too fast.

### Depth Indications on Screen



The two green horizontal lines on the screen show the target depth of the compression. Push the chest until the bar goes between these two green lines.

The compressions should be at least 5.0cm and not more than 6.0cm (roughly 2.0 inches and 2.5inches). The EU specifies a top limit for depth but the AHA does not. It cites there is no evidence to say that compressions deeper than this are beneficial.

The red line is the maximum depth for that manikin. It is the point at which you bounce off the bottom.

### More Detail on Depth of Chest Compressions

Yellow bar on the bottom: This shows the amount that the chest has not been released. The higher it is from the bottom, the greater the non-release.

Yellow bar on the top: This shows that the depth went deeper than 2.5" (greater than 6.0cm).

Red bar on the top: This means that the chest hit the maximum depth of the manikin. The yellow on top will turn red if you hit the bottom



### An Example

Here is an example taken from a set of 30 compressions. Each bar on the graph was produced **as the chest was compressed**. It was produced in real time and it can be reviewed.

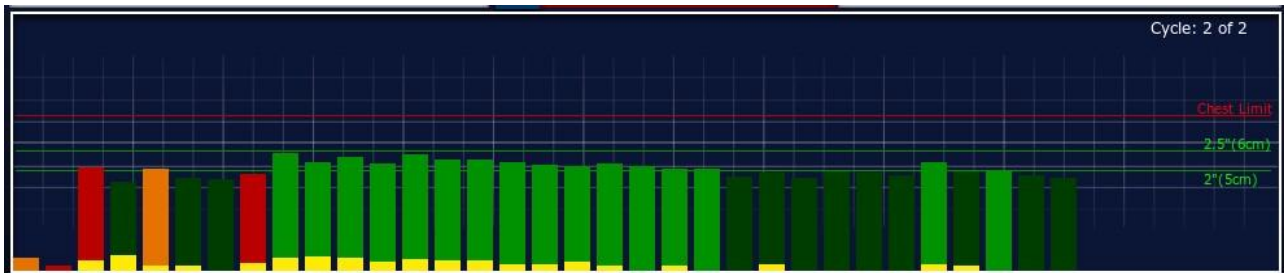
In the graph below,

The red bars indicate the compressions were too slow.

The yellow on the bottom indicates a lot of the compressions were performed without proper release of the chest. The amount of non-release varied.

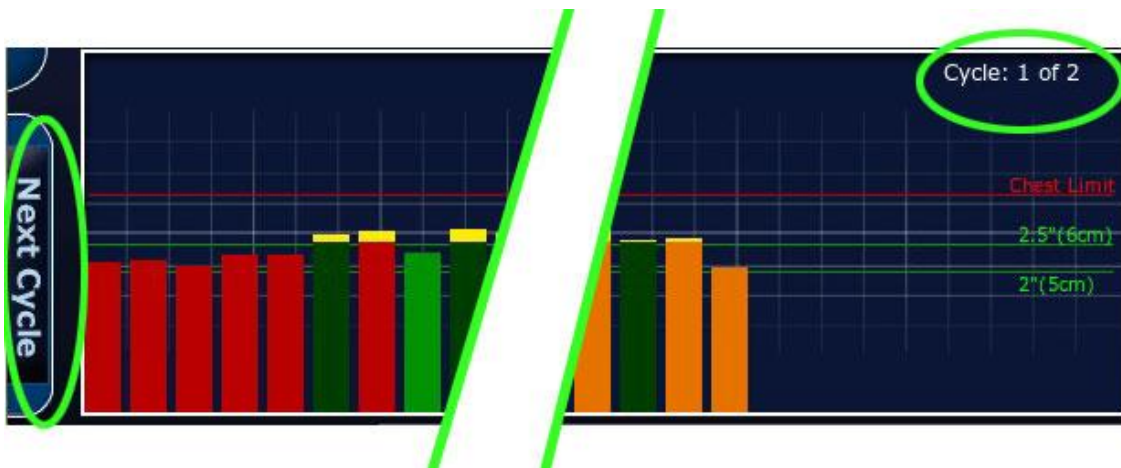
The bright green indicates that many of the compressions were performed at the correct rate, the correct depth. However many have a yellow bar below them meaning that the chest was not fully released.

The dark green indicates they were at the correct rate but in this case were not quite deep enough. They did not reach the minimum required depth.



#### 4. Show Next Cycle

The 'Next Cycle' button is on the lower far left edge of the screen. It is at the left edge of where the colored bars are displayed. When you click on this button, the screen will display the bars for the next cycle of 30 compressions.



In the top right of the bar area, it will indicate which cycle you are displaying.

Each time you click the Next Cycle button, it will show the results for the next cycle of compressions. Clicking the button again will scroll through each cycle until you are back at the first cycle again.

#### 5. Detailed Analysis

To see further detail on any skills performance, click on the button at the far left edge of the page. See area number 5 in the picture at the top. This button is just above the Next Cycle Button.

**Information**

Results for JohnSmith-1, saved as:  
0000194240.CP30.s.27.10.2011.1.smc

Click the Press to Open/Close button for  
an analysis of your results.

This file can be viewed later from the  
View Previous Results button on the main  
menu.

Click the Next Cycle button for more.

Press to Open/Close

### Summary Analysis

This will reveal the Summary Analysis page as seen below.

## SmartMan Results Analysis Section for Labora

Results for Labora, saved as:  
0000192250.CP30.s.2.11.2011.1.smc.

A summary of your performance is:

Final score: 44.2%  
Total compressions performed: 60 of 60  
Average depth of compression: 2.02in. (5.13) cm  
Average duration of compression: 0.61s  
Average rate of compression: 98/min  
Fully compliant compressions (depth, rate & release): 15 of 60

Time in activity: 49s (ideal: 37s)  
Total Hands Off Time (activity): 21.238s  
Hands Off Time (compressions): 10.54s  
Duty Cycle: 43.2%

Press to Open/Close

Summary Analysis

Compressions

Hands off & Duty

The screen will tell you the name of the person who is logged in along with the name of the results file which is being displayed.

The Summary Performance Information will be

Final Score: This is the overall percentage score

Total Compressions performed: number performed of the target number

Average depth of compression: actual average depth of compressions performed

Average duration of compressions: actual average duration of compressions performed

Average rate of compressions: average rate per minute of compressions performed

Fully compliant compressions (depth, rate, release): how many compressions were  
100% correct on all parameters

Time in activity: actual time for the activity versus the target time

Total Hands Off Time (activity): total time not on the chest including ventilation time

Hands Off Time (compressions): total time not on chest not including ventilation time

Duty Cycle: duty cycle

If you are viewing information at one of the other two buttons, click on the Summary Analysis button circled in red above, to return to the information.

Press the button at the right to close this window and return to the main results display page.

### Compressions

**SmartMan Results Analysis Section for JohnSmith-**

Summary of your chest compression performance.

Depths: (inches)	0	0.5	1.0	1.5	2.0	2.5	Max	SCORE
Compressions	0	0	1	16	36	2	7	58.1

Rate: (/min)	> 200	150	120	100	86	75	SCORE
Compressions:	0	0	35	26	0	1	41.9

Non Releases (inches)	0	0+	0.05	0.1	0.2	0.4	0.6	SCORE
Compressions:	2	57	2	1	0	0	0	98.4

Summary Analysis   **Compressions**   Hands off & Duty

Press to Open/Close

If you click on the Compressions Button you will see the depth, rate and on-release scores grouped by category. The target values are in green. See the picture below for an example.

Press the button at the right to close this window and return to the main results display page.

### Hands Off & Duty Cycle

The third button in this window is Hands Off and Duty Cycle. This provides detailed information related to how long has been spent in pressing/releasing the chest and delay times between compressions and time for ventilations.

The current guidelines specify the importance of spending as much time as possible in compressions. Also the stress on quality of CPR correlates with what is referred to as Duty Cycle. The guidelines site research which shows that a duty cycle below 50% relates to coronary pressure and whether blood flow has been establish through the brain. A lower score is better.

## SmartMan Results Analysis Section for JohnSmith-

Your results are:

- 1) Total hands off time: 5.397s of 33.7402s
- 2) Hands Off Time (compressions): -1.5 seconds.
- 3) Hands Off Time (ventilations): 6.897 with 4s recommended.
- 4) Your duty cycle value was 48.3%

**Total Hands Off Time:** Refers to the time when the rescuer is not actively performing chest compressions. This includes pauses between compressions plus the time for ventilations and change of rescuers.

**Hands Off Time (compressions):** The time during which the chest is not being compressed or released.

**Hands Off Time (ventilations):** The time during ventilations.

**Duty Cycle:** The time spent compressing the chest as a proportion of the time from the start of one compression to the start of the next compression.

Press to Open/Close

Summary Analysis

Compressions

Hands off & Duty

This screen provides details on the following points.

**Total hands off time:** This refers to the time when the rescuer is not actively performing chest compressions. This includes pauses between compressions plus the time for ventilations and, if applicable, change of rescuers.

**Hands Off Time (compressions):** This refers to the time when the chest is not being compressed and not being released.

**Hands Off Time (ventilations):** The time taken for ventilations.

**Duty Cycle:** The time spent compressing the chest as a proportion of the time from the start of one compression to the start of the next compression.

Press the button at the right to close this window and return to the main results display page.

### 6. Other Buttons

The main results page also contains a Print Screen Button and a Print Button.

See the section on “SmartMan Manual - 5. Results 5. Print” for more information on printing a file