

## 5.2 SmartMan Manual – 5. Results 2. Ventilations

v5.1 and later Current version v5.3.3.3

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### 5.2 Results Ventilations

Results are an accurate analysis of every practice or test performed on SmartMan. This document provides a description of the detail found in the results for chest compressions. Results are displayed as soon as an activity is complete.

Alternatively you can come back and view the results at a later time. To do this, follow this procedure:

1. Login to person whose results you wish to display,
2. In the Actions Menu, click on View Previous Results.
3. Click Compressions
4. Click on the results you wish to display

#### Ventilations 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. Notice the areas circled in green.

**Circle 1 = Percentage Score**

**Circle 2 = More Scores**

**Circle 3 = Real Time Feedback Area**

**Circle 4 = Show More Detailed Analysis Button**



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

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### 5.2.1 The Percentage Score

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.

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### 5.2.2 More Scores

This area provides more detail on the performance.

<b>Scores</b>	Final Score:	60.1%	Vents (Vol):	90%
	Ventilations:	10	Vents (Rate):	60%
	Avg T(insp):	1.09s	Intervals:	44.4%

Besides the final score it provides the following information.

Final Score: This is the overall percentage score

Ventilations: How many ventilations were actually performed

Avg T (insp): The average inspiration time (time of squeezing the BVM)

Vent (Vol): Percentage of ventilations correct for volume of inspiration only

Vents (Rate): Percentage of ventilations correct for rate only

Intervals: Percentage of ventilations correct for interval timing

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## 5.2.3 Real Time Feedback Area

### 5.2.3.1 The Colored Bars

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 how they are performing ventilations.

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### 5.2.3.2 Rate and Volume of Giving a Breath

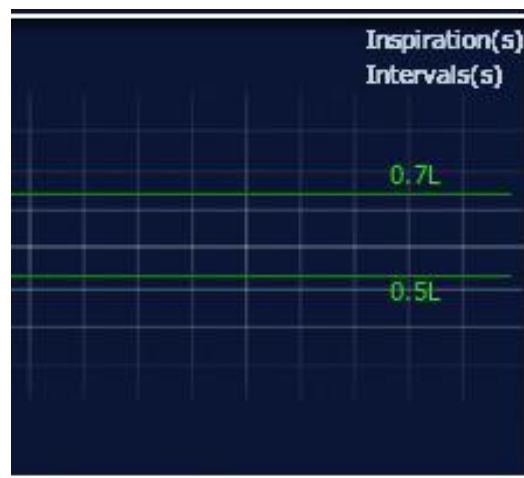
The same colors are used in rescue breaths and ventilations given in CPR as for chest compressions. When performing ventilations on a patient, you must provide the correct volume of air and give the patient that volume at the correct rate.

The rate and volume information is quickly displayed by the color and length of the vertical bars.

SmartMan will detect if air goes into the stomach but the bars will only display information related to what goes into the lungs.

#### Volume of Inspiration





The two horizontal green lines on the screen show the target volume for each ventilation. For an adult it is between 0.5l and 0.7l. The target is close to 0.6L.



#### Rate and Volume

The colored bars show rate at which the breath is given as well as the volume as indicated in the picture above. The target in SmartMan is always to produce bright green. This means that all parameters are correct.

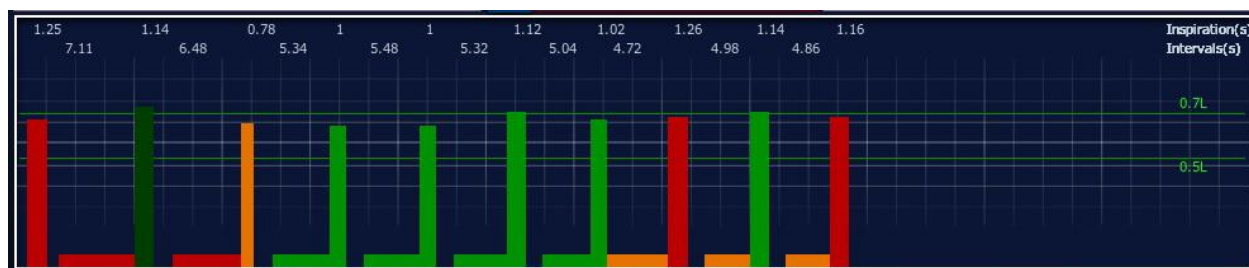
Here is a summary of what the colors mean during ventilations.

 <p>Bright Green means inspiration rate &amp; volume was correct..</p>	 <p>Dark Green means inspiration rate was correct but the volume was too little or too much.</p>	 <p>Orange means inspiration was too fast; it took too short a time.</p>	 <p>Red means inspiration was too slow. It is to be delivered over a span of 1 second.</p>
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### An Example

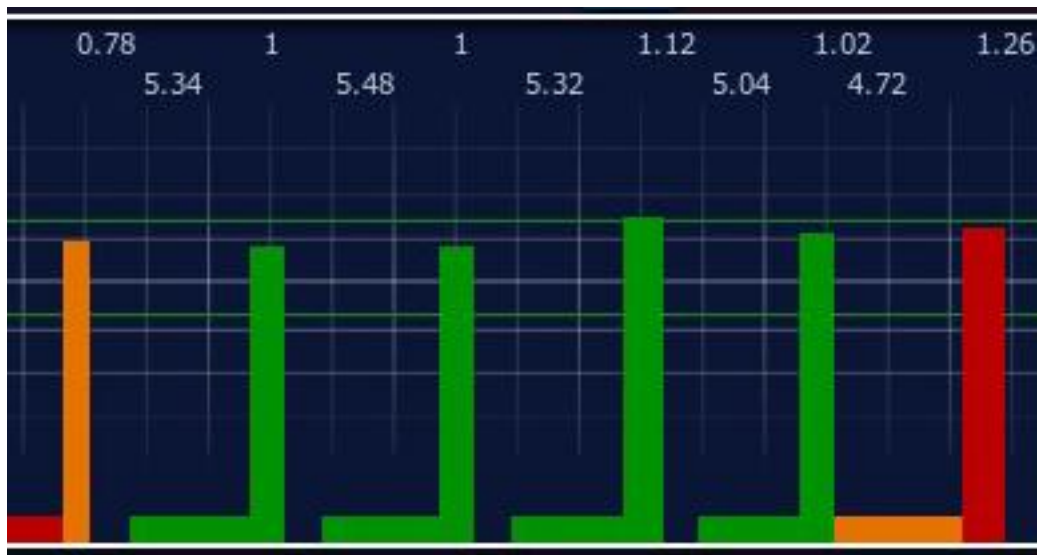
Below is a sample from the SmartMan screen for 1 minute of rescue breathing. You can tell at a glance that the middle ventilations were very good as they are bright green as are the intervals. There is one that is orange which means it is too fast and several are red with means they were too slow.



Close Up of a section of the above graph

When the 1 minute cycle has finished, SmartMan will provide a screen showing the total performance. It will also add 2 sets of numbers for each breath.

1. The top number is the exact time of the inspiration; ie the time that the air was being pushed into the lungs. The target time for this is 1.0 seconds. In the close up cutaway shown below, inspiration times were 0.78, 1, 1, 1.12, 1.02, 1.26 seconds.
2. The lower number is the exact interval from the start of 1 breath until the start of the next breath. The target time for this is 6.0 seconds. In the close up cutaway shown below, inspiration interval times were 5.34, 5.48 5.32, 5.04 4.72. The last ventilation was too soon.
3. The volume of the inspiration is indicated by the vertical lines on the screen. Below we see that all inspirations volumes are between the lines and are thus within the target area.






### 5.2.3.3 Interval Between breaths

You must also consider the time between each ventilation. This information is provided in the horizontal bars. SmartMan will display the interval as a horizontal bar between each inspiration.

The interval for Rescue Breaths is about 6 seconds from the start of one ventilation to the start of the next ventilation (i.e. performed at a rate of about 10 per minute).

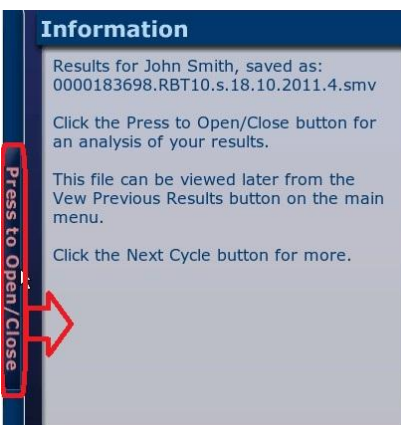
For the ventilations performed during CPR, the second ventilation should be performed as soon as the air has expired from the previous ventilation. This is about 1 second from the start of the first ventilation to the start of the second ventilation.

-  Bright Green means the time from the start of one breath to the start of the next breath was correct.
-  Orange means the interval between breaths was too short.
-  Red means the interval between breaths was too long.

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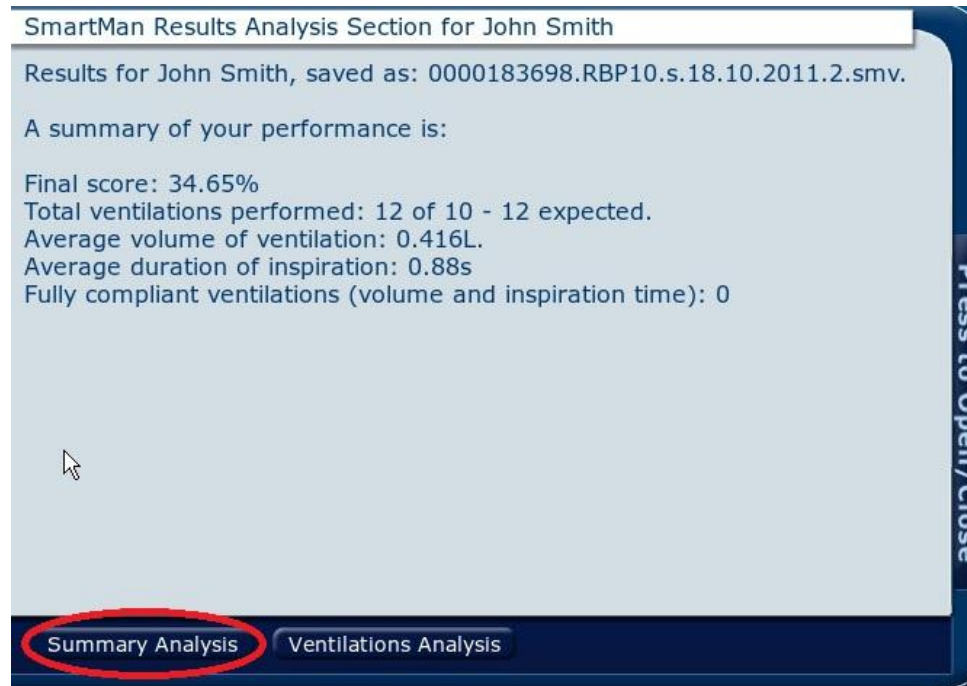
### 5.2.4 Show More Detailed Analysis Button

To see further detail on any skills performance, click on the button at the far left edge of the page. See area number 4 in the picture at the top.



#### 5.2.4.1 Results Analysis – Summary Button

This will reveal the Summary Analysis page as seen below.



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 Ventilations performed: number performed of the target number

Average volume of ventilation: actual average volume of ventilations performed

Average duration of ventilation: actual average of duration of ventilations performed

Fully compliant ventilations (volume and duration): how many ventilations were 100% correct

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

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#### 5.2.4.2 Results Analysis - Ventilations Analysis Button

This area displays the performance information for volume, rate of ventilation and intervals grouped by category. The target values are in green. See the picture below for an example.

## SmartMan Results Analysis Section for John Smith

Summary of your ventilations performance.

Vol.(litres)	0	-	0.3	-	0.4	-	0.5	-	0.6	-	0.7	-	0.8+	SCORE
Ventilations:	4		0		3		3		2		0		0	41.7

Inspirations (s)	0	-	0.5	-	0.75	-	0.85	-	1.15	-	1.25	-	1.5+	SCORE
Ventilations:	5		6		0		0		0		0		1	0

Intervals (s)	0	-	3	-	4	-	5	-	6	-	7	-	8	SCORE
Ventilations:	0		0		0		6		4		0		1	54.5

Summary Analysis

Ventilations Analysis

Press to Open/Close

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

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### 5.2.5 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

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