



SDC Rhythm XP Performance Measurement Tool

Any team serious about training needs to track their progress. SDC Rhythm XP would like to share the tool we developed. It was really helpful for us last year to quantify our strengths and weaknesses. Feel free to share it with anyone you want. We just request that you do not resell or use it for profit. We would also really appreciate your comments and suggestions. Enjoy!

Main features

- **Stop Watch:** You can time your jumps directly in the file and save the data
- **4-way or 8-way:** Can be selected with one click of a button
- **Times:** Breaks out hill vs flat time, randoms vs blocks
- **Exit:** Time to 1st point and 1st key (optional) allow you to quantify your exit and hill performance
- **Variable Hill Time:** You can adjust the time you consider "the hill".
- **Gap vs. Target:** You can set targets for scores and block / random times. A tool helps you determine if your block and random goals are in line with your target score
- **Info for each formation:**
 - Last time it was practiced
 - # if times exited
 - # of reps
 - # jumps
 - min, max and vantage times
- **Best Times:** Jump# and Time for each formation
- **Calculated Average Score:** Applies your most recent statistics to an "average draw" to estimate the team average, thereby removing bias due to focusing more on Randoms or Blocks in a given week or camp
- **Score Prediction:** Calculates your expected score on a given draw based on your most recent statistics We often compete against the spreadsheet prediction in mock meets
- **Min, Max Average times:** for each formations within a selected period
- **Charts:** Several charts are available to plot the result of the analysis and statistics
- **Menu:** This makes it easy to navigate the tool with limited excel experience
- **Error proof features:** Checks for the common errors and alerts the user. There is also an option to check the data before calculation. It just adds a few more seconds if you have a lot of data.
- **Fast calculation:** It takes about 5s to analyze 300 jumps



- **50 points maximum per jump:** That should be enough for most
- **25 weeks/training camps:** This could be extended if needed
- **Easy transfer to future versions:** We plan to release updates to fix bugs and make improvements based on your comments. The transfer of data will be automatic as long as you keep the data the way they are


Existing data transfer

If you would like to use this program but already have a lot of data in an existing file, we can help you transfer the data automatically. Contact all@rhythmskydiving.com for help.

How to use it (basic steps)

First, the security option in your excel application must be set to Medium or low. To check, open a blank excel file and go to: **Tools>Options>Security (Tab)>Macro Security> Set to "Medium"**

Once you've done this, open the file and click "Enable Macros" when prompted.

In all pages, the cells where you can input data are green with red border: 

Set the key parameters on the Menu page

- **Select mode:** 4-way or 8-way
- **Select Hill Time:** On the menu page. Enter the time you consider to be "on the hill." This is generally accepted as 8-10 seconds. Any formation started before this time will be considered on the hill. For more advanced team, the bottom of the hill might not affect your times that much. In such case, you may want to select a lower value to target a specific zone after exit.



Set your Targets in Dashboard

Click on "Dashboard" from the menu.

- You can enter the times you target and the score.
- To make sure the target times are in line with the targeted score, click on the "Target" button. A pop-up window allows you to set target times and see the resulting score from those times. If you don't know what times to select, you can set the values after you have timed a few jumps.

Estimated score with Target Times

You can change the target times and see an estimated score based on those times. The values will be added to your Dashboard if you click "Accept Change".

Randoms: 1.8
 Top Blocks: 2
 Blocks: 3.5
 Exit 1st point: 2.5
 Exit 1st Key: 3.5

Estimated Score: 14.2
 Your Target Score: 14

Buttons: Accept Change, Exit Only

Time your jumps

Click on "Time and Add New Jumps" from the menu.

- Date:** Enter the date of the jump. You can use the popup calendar by clicking on the icon on the left of the cell.
- Week#:** Enter the week# here. Start with 1.
- Exit formation:** By default, it is the 1st point once you enter the dive. We recommend leaving it this way even if you transition to the 1st point. This will help you keep track your performance on exit for all formation.
- Bust:** Enter the # of busts for this jump
- # Jumps that week:** Enter how many jumps you did that week. In order to keep a true count of your total jumps, you may want to include the jumps that you could not time. Over the course of your jump

Jump Input Form

General Information

Date	12/04/07
Week #	
Exit Formation	
Time to 1st Key (s)	7.0
# Bust for this jump	0
# Jumps that week	

Dive

Form. 1	
Form. 2	
Form. 3	
Form. 4	
Form. 5	

Buttons: Exit, Point, Copy to "Data" Sheet

General Information (Detailed)

Date	12/05/07
Week #	1
Exit Formation	17
Time to 1st Key (s)	
# Bust for this jump	0
# Jumps that week	20

Dive (Detailed)

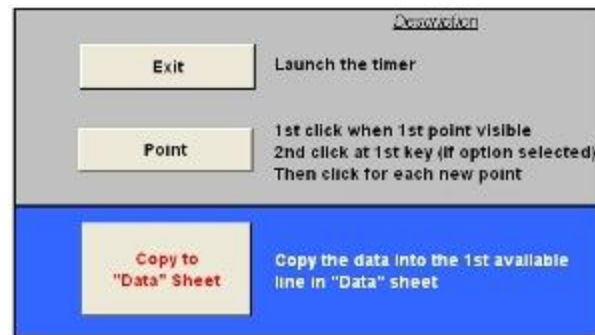
Form. 1	17
Form. 2	B
Form. 3	3
Form. 4	
Form. 5	

Track 1st key: Yes
 Beep On?: Yes



entry, the last value you enter will be the value used for that week. You can also update this in the sheet "Weekly Progress."

- **Dive:** Enter each formation starting from the top. Randoms must be in capital letters. If the dive has 3 points, leave the rest blank
- **Select this dive:** Once you've entered the dive, click on "Select this Dive or Reset" button. You can also use this button to redo the timing. Just click on it again and all the times for that jump will be erased.
- **Track 1st Key option:** If you would like to track the time between the first judgeable point and the first key, select "Yes." If you select this option, you must click once when you judge the exit formation complete, and once again with the first key. You may consider this a useful metric of exit performance.
- **Beep on:** This enables a beep every time you click while timing the jump.
- **Exit button:** This button or "s" starts the timer.
- **Point button:** After you click the "Exit" button, click on this or [SPACE] to add each point. If you select "Track the 1st Key", then the first click on this button is when the first point is visible, and the second click is when the first key happens. *There is no stop button.*
Tip: the time is recorded when you release the button. If you use a mouse, it means that the time is



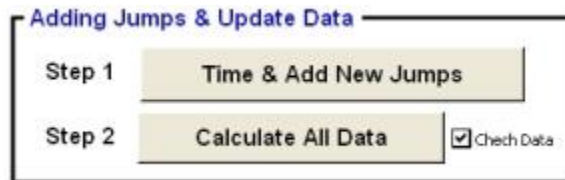


recorded when you release the mouse button. So if you click too soon, keep the button down and release only at the moment you want

- **Copy to "Data" Sheet:** Click on this button to add the data for this jump to the database. Nothing gets added until this is clicked, so if you made a mistake, click "Select the Dive" and try again.

Calculate

Once you have timed and validated all your jumps, return to the menu and click "Calculate All". Until you do this, nothing is updated with the jumps you just entered. If you check the "Check Data" box, the program will check for common data problems before calculating. If you didn't change anything directly in the "Data" or "Weekly Progress" sheets, you don't need this.



See the results

You can navigate from the Menu page or with the tabs at the bottom.

Dashboard: This page shows various statistics from last week and overall.

Menu	CSC Rhythm - TRAINING DASHBOARD				
State up to the latest week	Week #12	Targets	Met	Gap	Gap [%]
Average exits this week	11.50	14.00 exits	11	2.50	-17.9%
Avg. Rankings (exit, 354)	1.67%	1.00 min	41.1%		3%
Avg. 1st point Black (exit, 354)	1.15%	2.00 min	0.05%		0%
Average Black (exit, 354)	3.57%	3.50 min	0.01%		0%
Average time 1st point	2.67%	2.50 min	0.17%		6%
Average time for Key (exit)	3.66%	3.00 min	0.14%		4%
* missing jumps as for	N/A				

Formations	# Practiced this season			Exits			Weekly Average (or last practiced)		
	A Draw	B Exit	Last (week exit)	# Exit	1st Point (over 2)	1st Key (over 2)	Calc. 354	Hit	Hit
A United	27	28	22	5	2.37	2.25	1.7%	1.88	1.58
B Stairstep Diamond	32	127	11	15	1.74	2.60	1.61	1.94	1.52
C Murphy Hooks	18	17.5	12	6	3.97	3.58	1.53	2.01	1.91
D Team	30	141	11	4	1.33	2.99	1.62	1.74	1.50
E Hawk	28	110	12	10	1.58	2.84	1.68	1.53	1.64
F Open Accordion	24	124	11	7	2.45	3.29	1.37	1.95	1.32
G Catacomb	16	11.1	10	6	2.12	3.81	1.23	1.86	1.22
H Bow	26	125	11	6	2.32	3.27	2.49	2.77	2.41
J Boat	33	14.1	12	2	2.86	3.81	1.81	1.21	1.34
K Hook	26	117	11	9	4.70	6.50	1.70	1.95	1.63
L Adair	18	81	12	5	2.32	3.86	1.86	1.97	1.81

- **Exit times:** This is calculated with the last 2 exits even if they did not occur in the most recent week.
- **Weekly Average (or last practiced):** Columns J-L is a copy of the data you will find in the "Weekly Progress" page for the latest week. The times for each formation are for the latest week only or the last week practiced if



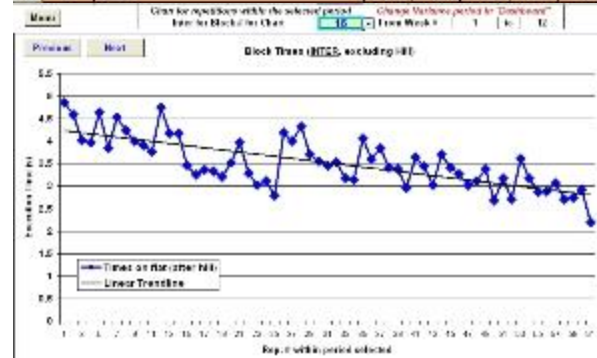
that formation was not practiced during the latest week.

- **Best of season:** Shows the best time and corresponding jump #.
- **Variance:** Shows the min, max and average for the period selected in cells Q9 and Q10. In future release, this may be replaced by another indicator to track consistency.

Weekly Progress: This page shows the stats for each week entered.

- **Times:** (Lines 5-8) Shows the overall weekly average for that week. If a formation wasn't practiced that week, the last week it was practiced is considered.
- **Estimated Overall Possible Score:** Shows an estimate for each week of your score considering your performance on ALL the blocks and randoms. It eliminates the artificial high or low actual scores resulting from your training focus in a given week. It's calculated considering the averages on the hill and flat for randoms, top of block and block execution with respectively 26.7%, 36.7% and 36.7% contribution to the score. Those % come from the split when considering all 16 randoms and 22 blocks (16 randoms, 22 top of block, 22 block execution => 60 points total)
- **Exits:** (Lines 9-10) Shows the average times at exit for the last 2 exits for each formation.
- **Times for each formation:** (Lines 14-76) Shows the details for each

Menu		WEEKLY PROGRESS		Week #10	Week #11
1	Jumps	# training jumps that week		10	46
2		# training jumps so far		734	780
3		Build Time		Hill Flat c35s	Hill Flat
4	Times	Randoms		2.27 1.71	1.54 1.77 1.40
5		Top of Blocks		2.45 1.84	2.02 2.32 1.33
6		Blocks		4.73 3.48	3.64 4.70 3.33
7	Exits	Time to 1st jugable point (after exit)		2.89	2.71
8		Time to 1st Key (after exit)		3.83	3.70
9	# Pts	Average pts (35s) This week		13.67	14.07
10		Estimated Overall possible average		13.52	14.44
11	Formations			Week #10	Week #11
12				Hill Flat c35s	Hill Flat
13	A	Unipod		2.45s 1.82s	1.34s 1.58s 1.24s
14	B	Stairstep Diamond		6.09s 2.12s	1.95s 1.94s 1.58s
15	C	Murphy Flake		2.10s 1.61s	1.71s 2.11s 1.62s
16	D	Yuan		2.27s 1.78s	1.40s 1.74s 1.33s



Menu		Week #12			
Formation	Sort	Time (s)			
		Best	Flat	Flat/Best	Hill
9	>Cat+Accord	1.25	1.52	122%	2.57
17	>Murphy	1.30	1.68	146%	2.52
5	>Opal	1.97	2.67	135%	4.25
13	>Hammer	2.03	2.49	123%	3.62
7	>Sidebuddies	2.06	2.12	103%	2.89
16	>Box	2.20	2.63	119%	3.95
3	>Turf	2.48	2.66	115%	4.09
4	>Monopod	2.53	2.99	116%	3.74
1	>Offset	2.61	3.26	125%	6.18
21	>Marquis	2.63	3.14	119%	3.68

Clear		Simulation (Score for 35s)					Calculate
Dive	P1	P2	P3	P4	P5	Score	Actual
Rd1	A	4	7			14	
Rd2							
Rd3							
Rd4							
Rd5							
Rd6							
Rd7							
Rd8							
Rd9							
Rd10							

Average 6 Rounds	N/A
Average 10 Rounds	N/A



formation. Again if a particular formation was not practiced that week, it looks at the week before.

Charts: You can customize all your charts except two ("Individual Times" and "Times by Repetitions - Block").

Important comment for the charts: Don't delete any data series. This will mess up the page when you come back to it. The scales (X and Y axis) are set automatically when you activate the page.

Sorting: This page allows you to sort the formations by time. The data are from the latest week. You can also compare with top teams, though these numbers are estimates only. If you have better numbers for top teams, we will be happy to include them.

Prediction: This page allows you to simulate mock meets and predict your score based on your current performance. Simply input the dives (1 up to 10) and click the "Calculate" button. The way it is now is probably conservative so this might be updated later on as well.

Modify the data

Click on "Raw Data" from the menu. You can unlock the page and modify or delete any data after you added them. Just make sure you keep the format the way it is. This page is the most important page. The data for 1 jump takes 3 rows. So if you need to delete a jump, delete the 3 rows.

Menu		Data Present				Locked		Raw Data										Working		
Item	Alt	P	Time	Sec	Score	Start	End	Key	Pos	Pos	Pos	Pos	Pos	Pos	Pos	Pos	Pos	Pos	Pos	
000000	1		-8-7-	2	82	0	28	W	0	0	0	0	0	0	0	0	0	0	0	0
000000	1	2	-4-2-20-	2	81	0	46	J	0	0	0	0	0	0	0	0	0	0	0	0
000000	1	3	-D-E-15-	2	82	0	44	U	0	0	0	0	0	0	0	0	0	0	0	0
000000	1	4	22-21	2	8	0	215	22	0	0	0	0	0	0	0	0	0	0	0	0
000000	1	5	H 14 L	2	85	0	200	H	0	0	0	0	0	0	0	0	0	0	0	0
000000	1	6	M 13 15	2	81	0	52	M	0	0	0	0	0	0	0	0	0	0	0	0
000000	1	7	K 8 3	2	82	0	60	K	0	0	0	0	0	0	0	0	0	0	0	0
000000	1	8	12-4-8-	2	85	0	58	G	0	0	0	0	0	0	0	0	0	0	0	0



If you still have additional questions, please visit our [forum](#). If you don't find the answer, you can contact us. Contact Laurent if you have specific questions about what the code does and how to customize this file.

Advice for newer teams

We found that rather than focusing on doing things faster, a more effective way to use this tool is to find the places where we were least consistent and work on those.

Trying to go faster is rarely the answer to a better skydive. This tool will help you identify areas to work on most, then only practice will make those improvements happen

Trouble Shooting

1. **Startup Issues:** I get an error when I open the file (missing reference, compile error...)

This can happen if excel for some reasons cannot use properly the libraries where the functions used in the macros are defined. To solve this issue:

- Close all excel files, download and open [FixReferences.xls](#)
- Click on Allow Macro to run when prompted
- Ignore any errors that may come up at this point
- Access the References list: **ALT+F11>Tools>References**
- Uncheck anything that starts with "Missing"
- Close and restart excel - Open the tool

If it's still not working, contact Laurent. Chances are you either didn't do the procedure properly or your Office Installation is damaged. [\[Top\]](#)

2. **Data Transfer to a newer version:** How do I transfer data I already added to a newer tool version?
 - Unlock the sheet "data" of the newer version ("Raw Data" from the menu)
 - Copy the rows containing your data in the previous version
 - Select the cell "A4" in the sheet "Data" of the new version
 - Paste (Right click from mouse or Edit>Paste)



- Put the # of jumps for each week in the sheet "Weekly Progress" in the new version (Copy/Paste from the old file or input manually)
- Go back to the menu page and click "Calculate All". You can select "Check Data" just to make sure everything is OK in the new file