



## 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](mailto: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

Menu 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: Select this Dive or Reset to retine, Track 1, Beep, Exit, Point, Copy to "Data" Sheet

Points

| Points | Sequence | Time | Total Time |
|--------|----------|------|------------|
| Pt1    |          |      |            |
| Pt2    |          |      |            |
| Pt3    |          |      |            |
| Pt4    |          |      |            |
| Pt5    |          |      |            |
| Pt6    |          |      |            |
| Pt7    |          |      |            |
| Pt8    |          |      |            |
| Pt9    |          |      |            |
| Pt10   |          |      |            |
| Pt11   |          |      |            |
| Pt12   |          |      |            |
| Pt13   |          |      |            |
| Pt14   |          |      |            |

General Information

Date: 12/05/07

Week #: 1

Exit Formation: 17

Time to 1st Key (s):

# Bust for this jump: 0

# Jumps that week: 20

Dive

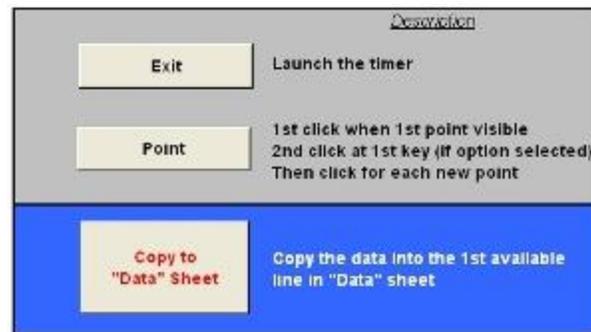
|         |    |
|---------|----|
| Form. 1 | 17 |
| Form. 2 | B  |
| Form. 3 | 3  |
| Form. 4 |    |
| Form. 5 |    |

Buttons: Select this Dive or Reset to retine, 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.

**Adding Jumps & Update Data**

Step 1

Step 2   Check Data

### 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 min | 11          | 1.00   | 1 exceeded         |                                    |           |      |      |
| Avg. Rankins (calc. 354)         | 1.47%                           | 1.00 min  | 41.1%       |        | -11%               |                                    |           |      |      |
| Avg. 1st point Black (calc. 354) | 1.15%                           | 2.00 min  | 0.05%       |        | 3%                 |                                    |           |      |      |
| Average Black (calc. 354)        | 3.57%                           | 3.50 min  | 0.01%       |        | 0%                 |                                    |           |      |      |
| Avg. 1st time 1st point          | 2.47%                           | 2.50 min  | 0.17%       |        | 6%                 |                                    |           |      |      |
| Average time for Key (calc)      | 3.44%                           | 3.50 min  | 0.14%       |        | 4%                 |                                    |           |      |      |
| * missing jumps as for           | N/A                             |           |             |        |                    |                                    |           |      |      |
| Formations                       | # Practiced this season         |           |             | Exits  |                    | Weekly Average (or last practiced) |           |      |      |
|                                  | # Draw                          | # Exit    | Last (week) | # Exit | 1st Point (over 2) | 1st Key (over 2)                   | Calc. 354 | Exit | 1st  |
| A. United                        | 27                              | 28        | 12          | 5      | 2.37               | 2.75                               | 1.7%      | 1.88 | 1.38 |
| B. Stairstep Diamond             | 32                              | 37        | 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. Yarn                          | 30                              | 41        | 11          | 4      | 1.33               | 2.99                               | 1.62      | 1.74 | 1.50 |
| E. Hawk                          | 28                              | 11.5      | 12          | 13     | 1.58               | 2.84                               | 1.81      | 1.53 | 1.84 |
| F. Open Accordion                | 24                              | 124       | 11          | 7      | 2.45               | 3.29                               | 1.37      | 1.95 | 1.32 |
| G. Catacomb                      | 16                              | 11.1      | 12          | 6      | 2.17               | 3.81                               | 1.23      | 1.86 | 1.22 |
| H. Bow                           | 26                              | 125       | 12          | 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       | 12          | 9      | 4.70               | 6.50                               | 1.70      | 1.95 | 1.63 |
| L. Adair                         | 18                              | 8         | 12          | 5      | 2.35               | 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



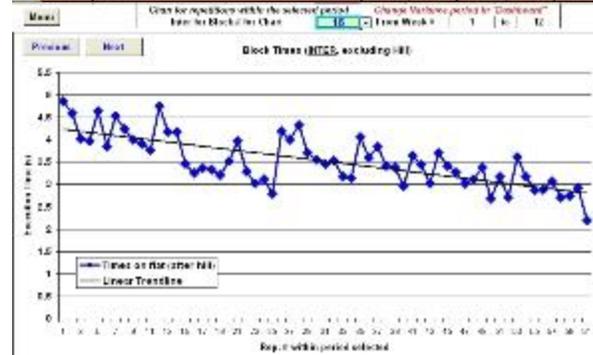
that formation was not practiced during the latest week.

- **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          | 2                   | 3 training jumps that week             |       | 10       | 46       |       |      |
| 3          | 4                   | 3 training jumps so far                |       | 734      | 780      |       |      |
| 5          | Build Time          |                                        | Hill  | Flat     | c35s     | Hill  | Flat |
| 6          | Times               | Randoms                                | 2.27  | 1.71     | 1.54     | 1.77  | 1.40 |
| 7          |                     | Top of Blocks                          | 2.45  | 1.84     | 2.02     | 2.32  | 1.33 |
| 8          |                     | Blocks                                 | 4.73  | 3.48     | 3.64     | 4.70  | 3.33 |
| 9          | Exits               | Time to 1st jugable point (after exit) | 2.89  |          | 2.71     |       |      |
| 10         |                     | Time to 1st Key (after exit)           | 3.83  |          | 3.70     |       |      |
| 11         | # Pts               | Average pts (35s) This week            | 13.67 |          | 14.07    |       |      |
| 12         |                     | Estimated Overall possible average     | 13.52 |          | 14.44    |       |      |
| Formations |                     | Week #10                               |       | Week #11 |          |       |      |
|            |                     | Hill                                   | Flat  | c35s     | Hill     | Flat  |      |
| 17         | A Unipod            | 2.45s                                  | 1.82s | 1.34s    | 1.58s    | 1.24s |      |
| 18         | B Stairstep Diamond | 6.09s                                  | 2.12s | 1.95s    | 1.94s    | 1.58s |      |
| 19         | C Murphy Flake      | 2.10s                                  | 1.61s | 1.71s    | 2.11s    | 1.62s |      |
| 20         | 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 | Info     | 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    | 0    | 0    | 0    | 0    |
|        |     |              |          |     |       |        |     |     |     | 0.00     | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 000000 | 1   | 2            | -4-2-20- | 2   | 81    | 0      |     | 40  | J   | 0        | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0         | 0    | 0    | 0    | 0    | 0    |
|        |     |              |          |     |       |        |     |     |     | 0.00     | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 000000 | 1   | 3            | -D-E-15- | 2   | 82    | 0      |     | 44  | U   | 0        | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0         | 0    | 0    | 0    | 0    | 0    |
|        |     |              |          |     |       |        |     |     |     | 0.00     | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 000000 | 1   | 4            | 22-21    | 2   | 8     | 0      |     | 215 | 22  | 0        | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0         | 0    | 0    | 0    | 0    | 0    |
|        |     |              |          |     |       |        |     |     |     | 0.00     | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 000000 | 1   | 5            | H 14 L   | 2   | 85    | 0      |     | 200 | H   | 0        | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0         | 0    | 0    | 0    | 0    | 0    |
|        |     |              |          |     |       |        |     |     |     | 0.00     | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 000000 | 1   | 6            | M 13 15  | 2   | 88    | 0      |     | 52  | M   | 0        | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0         | 0    | 0    | 0    | 0    | 0    |
|        |     |              |          |     |       |        |     |     |     | 0.00     | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 000000 | 1   | 7            | K 8 3    | 2   | 82    | 0      |     | 60  | K   | 0        | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0         | 0    | 0    | 0    | 0    | 0    |
|        |     |              |          |     |       |        |     |     |     | 0.00     | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 000000 | 1   | 8            | 12-4-8-  | 2   | 85    | 0      |     | 58  | G   | 0        | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0         | 0    | 0    | 0    | 0    | 0    |
|        |     |              |          |     |       |        |     |     |     | 0.00     | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |



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