Workbook User's Guide

Paddling Year Training Plan & Log
Karvonen HR Range Calculator

Version 1.1.1

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Required Software and Compatibility

Excel™ version

In order to use the planning and training tools, you'll need a Macintosh or PC with software that allows you to open and work with Microsoft Excel™ .xlsx workbooks. It is assumed that you have a working knowledge of Excel™, in particular how to use workbooks.

The Microsoft Excel™ workbooks have been tested extensively by the author on various Macintosh platforms running O/S X, and versions of Microsoft Office™ compatible with that operating system. Since the Excel™ programming in the various files is fairly routine, and no Visual Basic routines are used, these workbooks should run on most versions of Excel™ with no problems.

Google Sheets version

The Google Sheets edition is for coaches who wish to iterate with their clients over the Internet, sharing training plan updates and tracking logged progress without having to exchange files as email attachments or set up shared file access means. In order to use these planning and training tools, you'll need a Google account. It is assumed that you have a working knowledge of Google Drive and Google Sheets, in particular how to use Sheets and manage permissions.

The user interface for the Google Sheets version closely matches the Excel™ version. Screenshots in this document are mostly from the Excel™ version.

Files

There are three workbook files:

- *PY Training Plan (blank)* – Blank training planner based on a 4-week cycle. Rename this file as appropriate

- *PY Training Log (blank)* – Logbook for your yearly training program. Rename this file as appropriate.

- *HR Range Calc* – For calculating Karvonen heart rate ranges.

In the follow sections you'll find summary information on how to use each of these workbooks.

The best way to learn about each workbook is to open it, take a look at the various sheets within each, then just enter data in the indicated cells and see what happens. Note that user entries are generally made in the yellow cells, except where noted.

PY Training Plan

This workbook is a training planner based on 4-week training cycles. To begin using it, you'll first need to know the number of hours you'll be training this season, as well as your training start date. Click on the "Event Schedule" tab to bring up the annual planning worksheet:

Next, enter your training season start date (in mm/dd/yy format, i.e. "1/04/21" for January the 4th, 2021, etc.) in the yellow cell. It is best if this start date is a Monday or a Sunday in order to make it align with the start of your training week.

Next, enter the races you plan on entering during the training year, along with their dates. Examples appear above. Note that the "Race Calendar by Cycle" grid will display orange cells with dates corresponding to races you enter in the race list. This will let you determine if you're packing a lot of races into consecutive weeks. If more than one race is entered for a week the first one in the list will have its date displayed in the grid. These dates will also be highlighted in your Weekly Plan sheet. If you happen to enter a race date that falls outside the training year its date will be flanked by red squares, and no corresponding entry will appear in the race grid. In the example above the Training Year starts on Monday, 4 January 2021, so a race on New Year's Day falls outside the training year.

Next click the "Periodization" tab and enter your year-hours to train, and an estimate of your average pace in either kilometers per hour (kmh) or miles per hour (mph). Average pace includes your pace during wam-ups and cool downs, during the recovery phases of interval

workouts, and your pace when performing "other" exercise such as running. This average pace is used to roughly estimate your yearly mileage, as we'll see.

	Start Date:	Hours to Train:	Average Pace		
	1/1/21	360	Paddle	5.60	mph
	Week starts on:	Units (km, miles):	Run	10:00	min/mile
	Mon	miles	Cross	12:00	min/mile

First, decide how many cycles you wish to include in each training phase – Foundation, Preparation, Specialization, and Transition. Then enter the name of the corresponding training phase in the "Phase" column. In the example shown below, the 16-week Foundation phase is divided into two 8-week segments (with two 4-week cycles each), a "foundation 1" piece and a "foundation 2" piece; the naming is merely a convenience in planning. The Preparation phase lasts 12 weeks, and includes three 4-week cycles, while the 16-week Specialization phase consists of four 4-week cycles. The Transition phase lasts 8 weeks, e.g. two 4-week cycles. Note that your training program may divide the year differently; this is just an example. The workbook permits you to have different training volumes, volume distributions, and work breakdowns for each cycle.

Distribution of Training Volume by Phase

Cycle	Weeks	Phase	Start Date	
1	4	foundation 1	1/1/21	ba
2	4	foundation 1	1/29/21	ba
3	4	foundation 2	2/26/21	ba
4	4	foundation 2	3/26/21	ba
5	4	preparation	4/23/21	v
6	4	preparation	5/21/21	v
7	4	specialization	6/18/21	ta
8	4	specialization	7/16/21	ra
9	4	specialization	8/13/21	ra
10	4	specialization	9/10/21	ra
11	4	specialization	10/8/21	ra
12	4	transition	11/5/21	re
13	4	transition	12/3/21	re

Given your start date the workbook returns the start and completion data for each cycle. Be sure to select which day starts the training week. The blank workbook has Monday, but you can choose another.

Next, enter the training emphasis you wish to train in each cycle in the "Emphasis" columns; shown in the example as "base, circuit training," etc. Again, these text entries are merely a convenience for planning to help you keep straight the goals in each cycle. Then, decide how you wish to divide your year hours over each 4-week cycle. Enter these as *percentages* in the "% Year Hours" column for each cycle. The workbook returns the number of year hours for each cycle. As an aid, you'll notice a running sum of the percentages you entered beneath the "% Year Hours" column – be sure the percentages you enter sum to 100% in the column!

e	Emphasis	% Hours	Hours
	base	8.00%	28.8
	base	9.00%	32.4
	base, interval 1 & 2	10.00%	36.0
	base, interval 1 & 2	11.00%	39.6
	volume, interval 1&2, tempo	12.00%	43.2
	volume, interval 1&2, tempo/racing	12.50%	45.0
	taper, interval 1, racing ME	9.50%	34.2
	racing, speed, maintenance, recovery	6.00%	21.6
	racing, speed, maintenance, recovery	6.00%	21.6
	racing, speed, maintenance, recovery	4.00%	14.4
	racing, speed, maintenance, recovery	4.00%	14.4
	recovery, compensation	4.00%	14.4
	recovery, compensation	4.00%	14.4
		100.0%	

| Training Volume: Percentage by Week				
1	2	3	4	
24%	26%	28%	22%	100%
24%	26%	28%	22%	100%
24%	26%	28%	22%	100%
24%	26%	28%	22%	100%
24%	26%	28%	22%	100%
24%	26%	28%	22%	100%
25%	27%	29%	19%	100%
24%	26%	28%	22%	100%
24%	26%	28%	22%	100%
24%	26%	28%	22%	100%
24%	26%	28%	22%	100%
25%	25%	25%	25%	100%
25%	25%	25%	25%	100%

Next, you'll enter the week-to-week training volume variation for each cycle. The example shown uses the same variations for both the foundation and the first 2 cycles of the preparation phase, but a different mix during the final week of the preparation phase: the 25%-27%-29%-19% variation represents a 2-week taper at the end of that cycle. Again, make sure each row sums to 100%; the percentage indicator to the right of the rows lets you check that you have done so. Also note the orange squares that appear to the left of the various cycles. These correspond to events you have scheduled in those cycles using the information entered in the Event Schedule tab.

Finally, you'll enter the work breakdown for each training cycle as a percentage of all training hours within that cycle; an example appears below. Each training emphasis – UT2, UT1, Intervals, etc. – has its own fractional contribution to each training phase's total training volume. The work breakdowns are entered as percentages. As an aid, you'll notice a running sum to the right of each row as you enter your percentages – again, be sure your percentages sum to 100% in each row.

Breakdown of Training Components by Cycle

Cycle	Weeks	Phase	% of Hours	Percentage per 4-week Cycle						
				UT2/R	UT1	Interval	Tempo/Race	Speed/Hills	Strength/Flx	
1	4	foundation 1	8.00%	63%	15%	0%	0%	0%	22%	100%
2	4	foundation 1	9.00%	58%	15%	6%	0%	0%	21%	100%
3	4	foundation 2	10.00%	57%	15%	7%	0%	0%	21%	100%
4	4	foundation 2	11.00%	55%	15%	7%	5%	0%	18%	100%
5	4	preparation	12.00%	53%	15%	7%	7%	0%	18%	100%
6	4	preparation	12.50%	51%	15%	7%	7%	2%	14%	96%
7	4	specialization	9.50%	51%	15%	10%	12%	2%	10%	100%
8	4	specialization	6.00%	43%	15%	10%	15%	5%	12%	100%
9	4	specialization	6.00%	43%	15%	10%	15%	5%	12%	100%
10	4	specialization	4.00%	43%	15%	10%	15%	5%	12%	100%
11	4	specialization	4.00%	43%	15%	10%	15%	5%	12%	100%
12	4	transition	4.00%	60%	10%	0%	10%	0%	20%	100%
13	4	transition	4.00%	70%	10%	0%	0%	0%	20%	100%

Congratulations! You'll outlined your entire training program.

You can check it for consistency on the "% Hours-Cycle" tab, which displays training volume by cycle as a percentage of your total training volume:

Proportion of Total Training Volume by Cycle
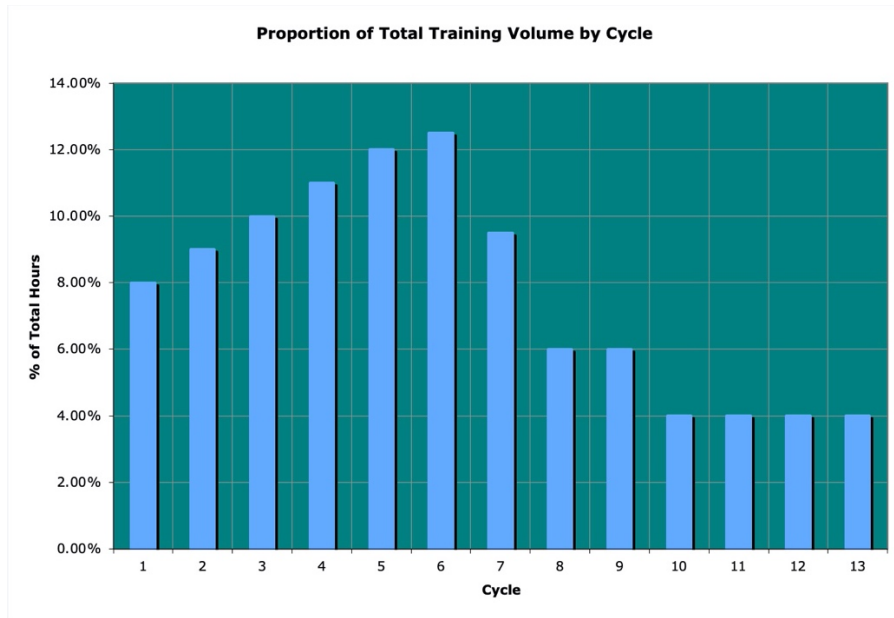
You can review your training work breakdown ('WB') on the WB-Total" tab, which displays training volume (in hours) by week based upon each category of training:

Overall Program Work Breakdown
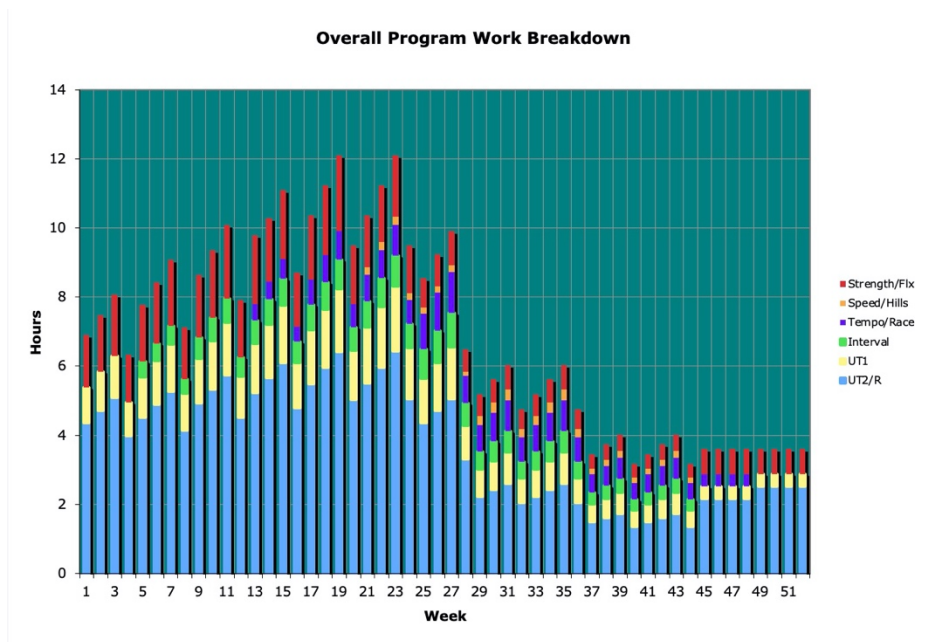
The next step in your planning is to lay out your training weeks. Click on the "Weekly Plan" tab to move to the weekly workout planner.

Each week is represented like a calendar, as follows:

Week -		25			8:33 Training volume					(0:00)	
Dates -	06/21/21	to	06/27/21								
	Plan	Δ		Mo	Tu	We	Th	Fr	Sa	Su	Totals
UT2/R	4:21	-4:21	P								0:00
			R								0:00
			C								0:00
UT1	1:16	-1:16	P								0:00
			R								0:00
			C								0:00
Interval	0:51	-0:51	P								0:00
			R								0:00
			C								0:00
Tempo/Race	1:01	-1:01	P								0:00
			R								0:00
			C								0:00
Speed/Hills	0:10	-0:10	P								0:00
			R								0:00
			C								0:00
Strength/Flx	0:51	-0:51									0:00
Training Notes:											

The number of the week is shown (in the example above, it's week 25), as well as the week start and end dates. There is a column listing the type of training (UT2 / Recovery, UT1, Interval, Speed, etc.). Next to this is a column labeled "Plan" that lists the total amount of time to devote to each type of training that week. These are calculated based on your total year hours, % of year hours per cycle, and work breakdown for each cycle. In the example above, during week 25 you're scheduled to train at UT2 intensity for 4 hours and 21 minutes; at UT1 intensity for 1 hour and 16 minutes minutes; interval training for 51 minutes; tempo training for an hour; etc. The total training volume appears to the right of the week number; for this week, it's 8 hours and 33 mintues.

While this workbook example shows one hour and 16 minutes of scheduled UT1 training, don't take this number too literally. It's the product of a calculation, which is precise but perhaps overly so. Round to the nearest 10 or 15 minute value when you plan your workouts.

For now, the "Δ" column in the example above shows the same time allocations as the "Plan" column; we'll address that in a moment. You'll also note a calendar indexed by day in the next seven columns. These day columns are color-coded, where 'P' (blue) rows correspond to paddling, 'R' (green) rows to running, and 'C' (orange-ish) rows to cross-training, e.g., everything else. The task now is to divide the times presented in the "Plan" column across the paddler's training week. You do this by entering workout durations (in "hh:mm" format, e.g. 1:20 means "one hour and 20 minutes," etc.) on the days that you wish to train each attribute. As you enter values in the daily plan the Δ value reflects the difference between planned hours and scheduled hours for each training emphasis.

When the week's training volume for each emphasis is fully allocated the "Δ" column goes to zero (it may show a negative zero time, which just reflects round-off error in converting numbers – this is not a problem, it's a "feature" of the spreadsheet's internal number representation). The "Δ" column reflects the *difference* between the scheduled number of hours and the hours the

paddler has allocated in the week's plan. A negative value means you've scheduled less than the planned amount for that week; a positive value means you've scheduled more.

An example completed Week 13 schedule example is shown below. On Sunday the paddler has a scheduled race, and so has moved that week's longer workout to Wednesday. The event from the Event Schedule sheet appears in the lower-left box. Notes for the week are entered in the blue "Training Notes" box. Note that the total scheduled hours (9:30) appears to the right of the total planned hours (9:47 Training volume). Note also differences between scheduled and planned volumes for each training emphasis.

Week -		**13**				9:47 Training volume			(	9:30	)	
Dates -	03/29/21	to	04/04/21									
	Plan	Δ		Mo	Tu	We	Th	Fr	Sa	Su	Totals
UT2/R	5:13	-0:03	P		1:00		2:30				3:30
			R			0:30				0:10	0:40
			C					1:00			1:00
UT1	1:25	-0:25	P		0:15		0:30				0:45
			R			0:15					0:15
			C								0:00
Interval	0:39	-0:09	P		0:30						0:30
			E								0:00
			C								0:00
Tempo/Race	0:28	0:21	P							0:50	0:50
			R								0:00
			C								0:00
Speed/Hills	0:00	0:00	P								0:00
			R								0:00
			C								0:00
Strength/Flx	1:59	0:00		0:20	0:20	0:20	0:20	0:20	0:20		2:00
Training Notes:											
Event -	Drive up for race on Friday.										
4/4											
St. George											

Once you've filled in the entries on the "Periodization" sheet, the workbook will generate a variety of plots to help your check and review your plan. Clicking on the "Hours-Cycle-Sport" tab shows a plot of your workout volume allocation by cycle for each sport (Paddle-Run-Cross). The "Hours-Week-Sport" shows this same data with finer granularity. The "WB-Paddle" shows the weekly breakdown of paddlesport training per week by training emphasis. The "WB-Run" shows the weekly breakdown of run training per week by training emphasis. The "WB-Cross" shows the weekly breakdown of cross-training per week by training emphasis. The "Distance Estimate" tab you'll see a plot of your estimated mileage by week per sport. This latter sheet is useful in truth testing your schedule to see if your highest mileage weeks are reasonable. And finally, the "Quality" tab is a beta test that weighs your scheduled plan based on the volume of each training emphasis. Racing and tempo workout rank highest and therefore have the greatest weight, intervals are next, and so on. Again, this is a beta test to see how your schedule groups Quality work over time.

Finally, note that these workbooks can be used to plan shorter training programs, such as a 3-month program, etc., without having to plan an entire year. Just use fewer cycles on the

Periodization sheet. For example, a 12-week program would use three 4-week cycles, or four 3-week cycles. Just be sure that your percentage distribution of training hours still sums to 100%.

PY Training Log

This is a logbook for documenting your training program. Using it, you can track your workout hours, paddling / running / cross-training distances and hours, types of workouts in.re. their training emphasis, track sleep and sleep quality and correlate it with training load and rest heart rate, create a training diary, etc.

To begin using the training log, first click on the "Workout Log" tab to bring up the daily/weekly log sheet. Then enter the date on which your training season starts (in mm/dd/yy format), the units you'll be using to record training distances (either "km" or "miles"), whether your training week starts on a Monday or a Sunday, and your preferred unit of weight (lb or kg):

Paddler's Training Log – Day/Week Summary	
© 2006 - 2020, Shawn Burke	Times are entered in hh:mm format
All rights reserved.	
	Calendar start date: 1/4/21 Distance units: miles
	(mm/dd/yy) (km, miles)
	Week Starts on: Mon Weight units: lb
	(Mon, Sun) (kg, lb)

As you complete each day's workout, enter your workout times in the appropriate cells, broken out by training emphasis, as shown below. Mileage by sport is also entered.

Week 11		01/25/10	to	1/31/10					Totals
		Mo	Tu	We	Th	Fr	Sa	Su	
UT2 / R	P		0:40		0:30		3:00		4:10
	R			0:38					0:38
	C	0:40				0:10			0:50
UT1	P				0:05				0:05
	R			0:05					0:05
	C								0:00
Intervals	P		0:40						0:40
	R								0:00
	C								0:00
Tempo / Race	P				0:25				0:25
	R								0:00
	C								0:00
Speed/Hills	P								0:00
	R								0:00
	C								0:00
Strength/Flex		0:20		0:30	0:35	0:40		0:40	2:45
								hours:	9:38
Paddle miles			7.20		6.37		18.75		32.32
Run miles				3.50					3.50
Cross miles		3.33				0.50			3.83
TOTAL miles		3.33	7.20	3.50	6.37	0.50	18.75	0.00	39.65
									Averages
feeling during workout (1-4)		3	3	3	3	2.5	2.5	3.5	2.9
morning HR (bpm)		54	55	59	56	57	55	55	55.9
morning weight (lb)		190	191	189	189	190	190	191	190.0
sleep hours		8	7	7	8	8	5.5	7.5	7.3
sleep quality (1-4)		2.5	2	2.5	1.5	3	1.5	2.5	2.2

In the example shown above, the paddler did an interval workout on Tuesday lasting 40 minutes, bracketed by warmup and cool down (UT2) time plus some extended overdistance time after the interval work phases. In the example he paddled 7.2 miles on Tuesday, 6.37 miles on Thursday, etc. On Wednesday he did a recovery workout, jogging 3.5 miles in 43 minutes including warming up and cooling down. In the "Totals" column you'll see running totals of workout times and distances for that week's workouts.

Next, enter hours for the previous night's sleep, a rating of sleep quality, morning weight, and morning rest heart rate that day. Finally, assign a number to how you felt during that day's workout, on a scale of 1 to 4; this same scale applied to sleep quality. This rating system can be assigned whatever qualitative metrics you wish, but a simple scale might be something like:

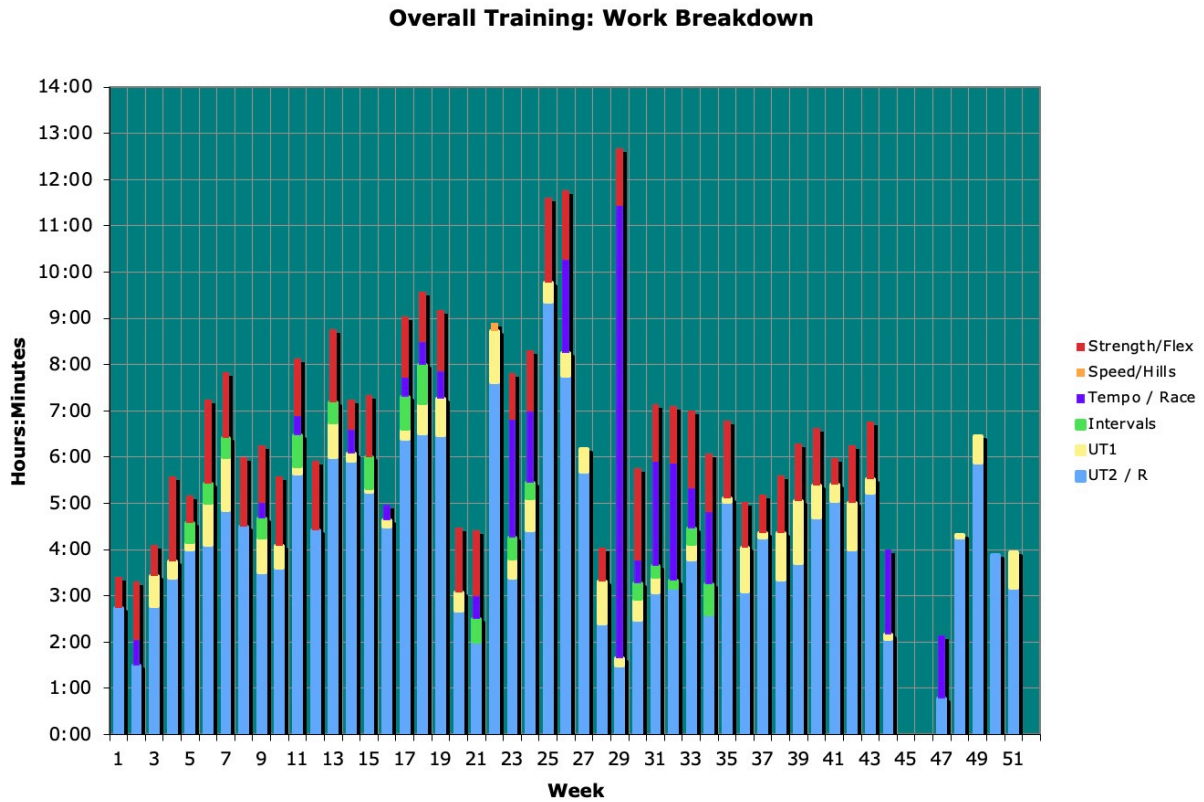1 = Poor
2 = Fair
3 = Good
4 = Excellent

You can use fractional values as well; just be sure these mean something that you can easily remember. The workbook will provide running averages of these entries over the week. The reason for recording this data is to permit tracking of rest heart rate and sleep over time, and correlating this with how you feel during workouts to track recovery, etc. You can review this data in the 'HR, etc. Plots" tab.

Next, click on the "Journal" tab. With each day's workout you can record a brief description of the day's training, noting (for example) where you trained, the water and weather conditions, any aches or pains, technique problems or breakthroughs, gear issues, hydration/nutrition notes, etc. You can also enter the time of the workout. Finally, it can be helpful to enter a few phrases about the week's Goals in the indicated box to help provide context for the daily entries when you review them at a later date. An example of a week's journal entries is shown below. You can also enter workout weather conditions and a summary log of meals.
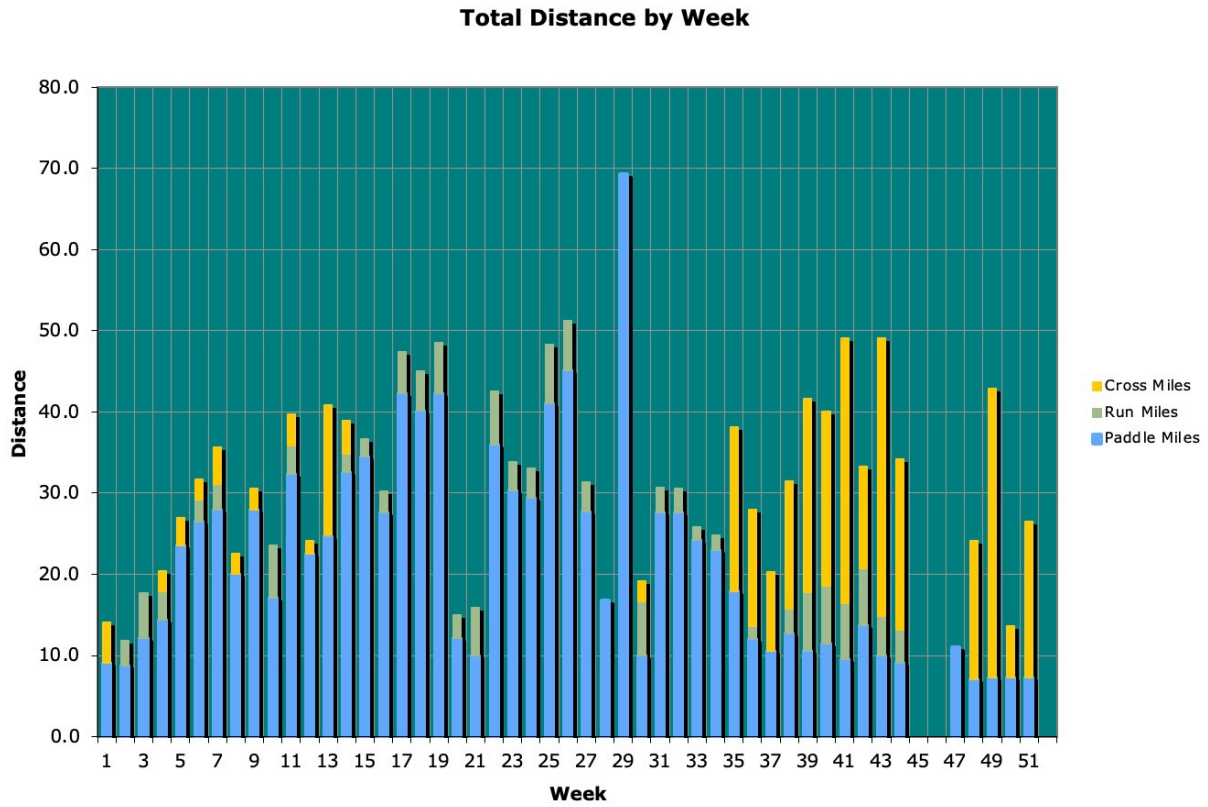
Week 1	Goals:	Long intensive intervals. Max Strength @ 90% 1RM. Focus on symmetry in the boat.
Mo	date 01/01/07 time:	NOTES: Long intensive intervals on local lake. Sunny, cool, wind from SW that grew during workout. Felt v. good. Slight ache in R forearm after session; be sure to ice and evaluate tomorrow.
Tu	date 01/02/07 time:	NOTES: UT2 trail run/recovery workout, town woods. R forearm felt fine this morning. Felt OK -- yesterday's workout did me in. Sun and clouds, breezy, temp. 68F.
We	date 01/03/07 time:	NOTES: Max strength lifting session plus core training. Narrow grip lat pulldown really improving; 1RM has gone up. Used wraps on both forearms. No aches or pains. Fragmented sleep last night.
Th	date 01/04/07 time:	NOTES: Took day off.
Fr	date 01/05/07 time:	NOTES: Combined UT1/UT1 workout, Lottawatta River. Practiced portaging for the first time. Excellent workout -- felt great. River higher after yesterday's rain. Overcast, a bit humid, temp 70F. Spent more time on on-land warmup and flexibility prior to workout. Remember to fix chip in paddle.
Sa	date 01/06/07 time:	NOTES: Aerobic intervals, Lottawatta River. Straightforward workout. Focused on making faster switch -- still quicker R-L than L-R, but getting better. Played with trim, working the seat more over shallow section below bridge. Felt v. good. Sunny, breezeless, temp 77F.
Su	date 01/07/07 time:	NOTES: Max strength lifting plus core work. A bit sore, but no acute pains. Spent a lot of time stretching, and using foam roller after workout. Felt good.

Once you've entered a few weeks worth of data you can marvel at your progress, track training volume, search for trends, etc., by clicking the relevant tab:

- The plots in the "WB" tab shows your training program's work breakdown in a stacked bar chart indexed by week. This is a great plot for getting a quick, big picture view of your logged training, as illustrated below. (The "Paddle WB," "Run WB," and "Cross WB" tabs break down each sport in this way.)

Overall Training: Work Breakdown

Legend: Strength/Flex, Speed/Hills, Tempo / Race, Intervals, UT1, UT2 / R

Y-axis: Hours:Minutes

X-axis: Week

- The "Distance Plot" tab plots cumulative distances by sport and week, as illustrated below.
-

Total Distance by Week

- The "Summary" tab contains a tabular listing of each week's overall workout statistics. Total time, distance, and other statistics are computed, as well as various percentage breakdowns of workout emphasis over the training program, as illustrated below. (The "Paddle Summ," "Run Summ," and "Cross Summ" tabs tabulate data in this way specific to each sport.)

Week	Start Date	End Date	UT2 / R	UT1	Intervals	Tempo / Race	Speed/Hills	Strength/Flex	Week	Paddle Miles	Run Miles	Cross Miles	TOTAL Miles	TOTAL Hours	A/naero Hours
										1074.7	148.4	334.4	1557.5	317.21	266.38
			65.1%	6.6%	2.5%	9.8%	0.1%	16.0%		69.0%	9.5%	21.5%			
1	11/16/09	11/22/09	2:44	0:00	0:00	0:00	0:00	0:40	1	9.1	0.0	5.0	14.1	3:24	
2	11/23/09	11/29/09	1:30	0:00	0:00	0:33	0:00	1:15	2	8.7	3.1	0.0	11.8	3:18	
3	11/30/09	12/06/09	2:46	0:40	0:00	0:00	0:00	0:40	3	12.2	5.5	0.0	17.6	4:06	
4	12/07/09	12/13/09	3:23	0:22	0:00	0:00	0:00	1:50	4	14.5	3.5	2.5	20.4	5:35	
5	12/14/09	12/20/09	4:00	0:10	0:25	0:00	0:00	0:35	5	23.6	0.0	3.3	26.9	5:10	
6	12/21/09	12/27/09	4:06	0:54	0:25	0:00	0:00	1:50	6	26.5	2.7	2.5	31.7	7:15	
7	12/28/09	01/03/10	4:51	1:09	0:25	0:00	0:00	1:25	7	27.9	3.2	4.5	35.6	7:50	
8	01/04/10	01/10/10	4:30	0:00	0:00	0:00	0:00	1:30	8	20.0	0.0	2.5	22.5	6:00	
9	01/11/10	01/17/10	3:30	0:45	0:25	0:20	0:00	1:15	9	28.0	0.0	2.5	30.5	6:15	
10	01/18/10	01/24/10	3:36	0:29	0:00	0:00	0:00	1:30	10	17.1	6.4	0.0	23.5	5:35	
11	01/25/10	01/31/10	5:38	0:10	0:40	0:25	0:00	1:15	11	32.3	3.5	3.8	39.7	8:08	
12	02/01/10	02/07/10	4:25	0:00	0:00	0:00	0:00	1:30	12	22.6	0.0	1.5	24.1	5:55	
13	02/08/10	02/14/10	6:00	0:45	0:26	0:00	0:00	1:35	13	24.7	0.2	16.0	40.9	8:46	
14	02/15/10	02/21/10	5:55	0:10	0:00	0:30	0:00	0:40	14	32.6	2.3	4.0	38.9	7:15	
15	02/22/10	02/28/10	5:15	0:05	0:40	0:00	0:00	1:20	15	34.5	2.2	0.0	36.7	7:20	
16	03/01/10	03/07/10	4:30	0:08	0:00	0:20	0:00	0:00	16	27.6	2.7	0.0	30.3	4:58	
17	03/08/10	03/14/10	6:24	0:13	0:41	0:25	0:00	1:20	17	42.3	5.1	0.0	47.4	9:03	
18	03/15/10	03/21/10	6:31	0:39	0:49	0:30	0:00	1:05	18	40.1	4.9	0.0	45.1	9:34	
19	03/22/10	03/28/10	6:28	0:48	0:00	0:35	0:00	1:20	19	42.4	6.2	0.0	48.5	9:11	
20	03/29/10	04/04/10	2:41	0:23	0:00	0:00	0:00	1:25	20	12.2	2.8	0.0	14.9	4:29	
21	04/05/10	04/11/10	2:00	0:00	0:30	0:30	0:00	1:25	21	10.0	5.9	0.0	15.9	4:25	
22	04/12/10	04/18/10	7:37	1:07	0:00	0:00	0:10	0:00	22	35.9	6.6	0.0	42.5	8:54	
23	04/19/10	04/25/10	3:23	0:25	0:28	2:33	0:00	1:00	23	30.4	3.5	0.0	33.9	7:49	
24	04/26/10	05/02/10	4:25	0:42	0:20	1:32	0:00	1:20	24	29.4	3.7	0.0	33.0	8:19	
25	05/03/10	05/09/10	9:21	0:25	0:00	0:00	0:00	1:50	25	41.0	7.3	0.0	48.3	11:36	
26	05/10/10	05/16/10	7:45	0:30	0:00	2:01	0:00	1:30	26	45.1	6.1	0.0	51.2	11:46	
27	05/17/10	05/23/10	5:41	0:30	0:00	0:00	0:00	0:00	27	27.8	3.6	0.0	31.3	6:11	
28	05/24/10	05/30/10	2:24	0:54	0:00	0:00	0:00	0:45	28	16.7	0.0	0.0	16.7	4:03	
29	05/31/10	06/06/10	1:30	0:09	0:00	9:47	0:00	1:15	29	69.3	0.0	0.0	69.3	12:41	
30	06/07/10	06/13/10	2:29	0:27	0:20	0:30	0:00	2:00	30	10.0	6.7	2.5	19.2	5:46	
31	06/14/10	06/20/10	3:04	0:20	0:15	2:15	0:00	1:15	31	27.6	3.1	0.0	30.7	7:09	
32	06/21/10	06/27/10	3:10	0:00	0:10	2:31	0:00	1:15	32	27.7	2.9	0.0	30.6	7:06	
33	06/28/10	07/04/10	3:47	0:20	0:20	0:53	0:00	1:40	33	24.2	1.6	0.0	25.8	7:00	
34	07/05/10	07/11/10	2:36	0:00	0:39	1:34	0:00	1:15	34	23.0	1.9	0.0	24.9	6:04	
35	07/12/10	07/18/10	5:02	0:05	0:00	0:00	0:00	1:40	35	17.9	0.0	20.2	38.1	6:47	
36	07/19/10	07/25/10	3:05	0:57	0:00	0:00	0:00	1:00	36	12.1	1.6	14.3	27.9	5:02	

- The "Quality" tab, like its analog in the Planning workbook, is a beta test for considering the distribution over time of workout quality based on type of workouts performed.

- The "Time Trail Log" and "Race Log" tabs are pretty self-explanatory.

Karvonen HR Range Calc

This workbook calculates your Karvonen heart rate ranges. To use it, enter your heart rate (in bpm) and resting heart rate (in bpm) in the cells as indicated. In the example shown the paddler has a max heart rate of 180 BPM, and a resting heart rate of 55 BPM.

Heart Rate Range Calculator

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NOTE: User inputs go in the [   ] cells

Max HR: 180
Resting HR: 55

The results will look like the following (values will vary depending on your own HRmax and HRrest):

Karvonen %	%HRmax	HR (bpm)	Zone	RPE
100%	100%	180	Threshold	Maximum
95%	97%	174	Threshold	Extremely Hard
91%	94%	169	Threshold	Extremely Hard
90%	93%	168	Interval 1	Deep and forceful breathing, uncomfortable, don't want to talk
85%	90%	161	Interval 1	Deep and forceful breathing, uncomfortable, don't want to talk
81%	87%	156	Interval 1	Deep and forceful breathing, uncomfortable, don't want to talk
80%	86%	155	Interval 2	Deep and forceful breathing, uncomfortable, don't want to talk
76%	83%	150	Interval 2	Deep and forceful breathing, uncomfortable, don't want to talk
75%	83%	149	UT1	Starting to breathe hard, becoming uncomfortable, conversation becomes more difficult
71%	80%	144	UT1	Starting to breathe hard, becoming uncomfortable, conversation becomes more difficult
70%	79%	143	UT2	Starting to breathe hard, becoming uncomfortable, conversation becomes more difficult
65%	76%	136	UT2	Starting to breathe hard, becoming uncomfortable, conversation becomes more difficult
61%	73%	131	UT2	Starting to breathe hard, becoming uncomfortable, conversation becomes more difficult
60%	72%	130	UT2 / Recovery	Harder breathing, but still comfortable. Conversation possible.
55%	69%	124	UT2 / Recovery	Harder breathing, but still comfortable. Conversation possible.
50%	65%	118	UT2 / Recovery	Harder breathing, but still comfortable. Conversation possible.
45%	62%	111	UT2 / Recovery	Harder breathing, but still comfortable. Conversation possible.
40%	58%	105	UT2 / Recovery	Very light

The data will help you track workout intensity when using a heart rate monitor during training or racing. The chart also includes a Rating of Perceived Effort ("RPE") column for paddlers who aren't using heart rate monitors.

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