



# ActiLife Software



## PHYSICAL ACTIVITY MONITORING

### ActiLife Software

The ActiLife desktop analysis software program is compatible with the ActiGraph GT1M, GT3X and the Researcher version of the ActiTrainer. ActiLife allows the user to initialize the ActiGraph in a number of different operating modes and select epochs ranging from 30 times per second (raw mode) to 4 minutes.

The collected data is stored in ASCII format for simple access and compatibility with other analysis programs (e.g. SPSS & SAS). ActiLife contains several basic macros which use the ASCII data to generate a summary file, a caloric file, and a data table.

### ActiLife Features

- User-friendly USB interface
- Programmable start and stop times
- Adjustable epoch length
- Summary file with daily graphs
- Hourly and daily totals
- Kcals and minutes spent in activity levels
- Daily, peak and average counts
- Adjustable activity level cut-points
- Crouter 2-regression model
- Multi-axis data analysis option
- Sleep scoring using Sadeh algorithm

### Available Macros

ActiGraph LLC has developed a number of useful macros which can help with small amounts of data processing and are available upon request.

#### Minute by Minute kcals

This macro allows the user to view caloric energy expenditure on a minute-by-minute resolution.

#### Kcals from Heart Rate

This macro calculates caloric energy expenditure based on changes in heart rate (only available with the ActiTrainer product).

#### Marshall Macro

This macro looks for bouts of activity and the number and duration of bouts at different activity levels.

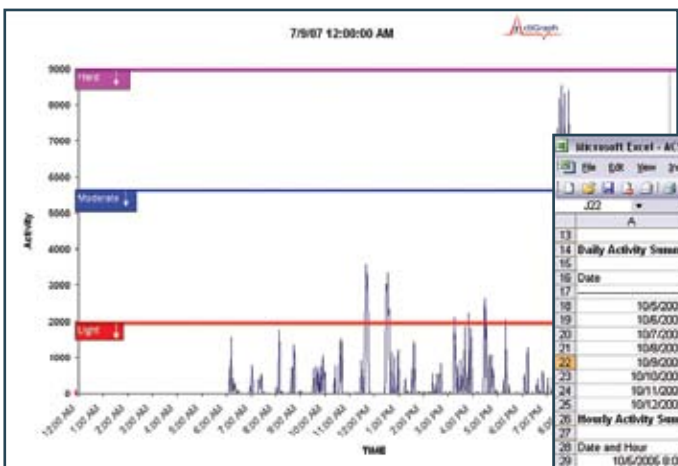
#### Raw-Macro2

This macro handles graphing and manipulation of excessively large raw data files in Excel® to be used for research analysis.

ASCII Formatted Data File

```
----- Data File Created By ActiGraph GT3X -----
Serial Number: 130180000005
Start Time 09:05:00
Rest Date 02/17/2007
Epoch Period (seconds) 00:01:00
Download Time 08:58:08
Download Date 02/24/2007
Current Memory Address: 20142
Current Battery Voltage: 3.483
Mode = 1
```

614	23	5775	16	34	2	8	1	141	11	47	3	24	3	0	0	27	1
89	2	666	8	97	3	0	0	60	2	158	3	0	0	32	2	38	1
1085	40	2861	76	301	3	2	0	32	3	9	0	89	6	24	1	3	0
1091	33	61	2	139	8	100	2	310	18	704	42	481	8	407	1	3	0
113	11	684	32	131	10	313	19	1613	33	744	44	738	12	770	24	489	13
139	2	92	5	147	8	100	6	2148	27	1344	10	432	15	844	7	2754	41
1205	13	1790	23	1079	18	1333	37	1401	43	0	0	0	0	0	0	6	0
1380	20	320	10	213	12	208	13	809	20	1241	40	924	54	2571	66	1827	41
148	5	1842	31	1307	22	1086	23	525	8	755	25	1917	22	2309	30	2023	53
1512	37	2317	58	1803	56	999	2	2497	37	2923	24	1375	34	4666	82	2588	71
577	11	49	3	31	0	33	2	124	5	38	3	13	0	517	8	170	5
0	0	118	4	13	1	114	3	80	3	32	2	14	1	2	0	9	1
149	4	124	8	301	5	155	8	705	24	697	33	156	7	1592	22	1114	16
1127	20	1197	23	419	7	4928	40	6243	23	1877	28	935	16	411	13	934	15
174	7	0	0	129	7	9	0	19	1	43	1	4	0	104	4	1313	82
20	1	39	2	8	1	151	4	0	0	239	12	93	3	249	8	981	28
1297	31	2903	47	1033	30	2925	45	2548	40	744	23	1822	41	1882	45	1992	41
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	1	2	87	2	1113	31	1549	34	191	4	22	1	238	8	712	39	8
83	8	732	12	943	12	643	30	180	4	1668	15	1273	14	217	6	210	1
130	13	851	15	845	41	542	24	242	14	1615	14	2798	6	583	5	35	2
109	12	1568	22	119	6	198	7	399	12	1568	22	119	6	198	7	399	12
24	9	387	15	417	16	285	17	24	85	1731	68	1211	40	193	10	10	0
458	23	1564	34	117	1	783	39	38	37	1760	40	2134	65	1883	29	4	0
72	21	2412	16	812	8	2100	14	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



Microsoft Excel - ACSATest.csv

Daily Activity Summary									
Date	Light	Moderate	Hard	Very Hard	Total Counts	Total Steps	Total Kcals		
10/5/2005	929	31	0	0	208004	5655	279.5638		
10/6/2005	1414	25	0	0	207511	5969	280.8948		
10/7/2005	1154	47	0	0	226542	5951	324.2814		
10/8/2005	0	0	0	0	0	0	0		
10/9/2005	0	0	0	0	0	0	0		
10/10/2005	0	0	0	0	0	0	0		
10/11/2005	0	0	0	0	0	0	0		
10/12/2005	0	0	0	0	0	0	0		
Hourly Activity Summary									
Date and Hour	Light	Moderate	Hard	Very Hard	Total Counts	Total Steps	Total Kcals		
10/5/2006 9:00	58	7	0	0	10604	283	96		
10/5/2006 9:00	57	3	0	0	16757	468	23		
10/5/2006 10:00	60	0	0	0	1276	61	2		
10/5/2006 11:00	60	0	0	0	5161	224	7		
10/5/2006 12:00	51	9	0	0	82495	1719	83		
10/5/2006 13:00	46	14	0	0	88837	2189	117		
10/5/2006 14:00	60	0	0	0	2102	42	3		
10/5/2006 15:00	91	0	0	0	1161	26	2		

Data Graphed and Charted in Excel