

# RECORD

SQM

7530-00-222-3525

SQM 5002 S/N 103  
OCS



### SQM Start-up Data

Below is an example of the information automatically output by the SQM-5002 when the AC power is applied. Also shown is the data returned if queried (i.e. "T" command). The first line apparently shows that the very first reading at power-up has the temperatures (last 4 values) in Kelvin and not Celsius.

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YANKEE ENVIRONMENTAL SYSTEMS

SQM-5002 SeaWiFS Quality Monitor

Firmware v3.0 05/19/2008

SN 000000

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SQM-5002 SeaWiFS Quality Monitor

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SN 000000

T0.000000 ,0.000268 ,10 ,0.000000 ,0.000000 ,10 ,3.761648E-36 ,1.540738E-32 ,0.000000 , -273.149994  
,-273.365509 , -273.555328 , -273.568389 ,

T0.000000 ,0.006006 ,10 ,0.000000 ,0.004527 ,10 ,0.003874 ,0.004465 ,0.046712 ,26.684234 ,23.976897  
,24.162658 ,24.111084 ,

T0.000000 ,0.005998 ,10 ,0.000000 ,0.004571 ,10 ,0.003873 ,0.004454 ,0.046718 ,26.684447 ,23.977233  
,24.162109 ,24.114105 ,

T0.000000 ,0.006007 ,10 ,0.000000 ,0.004574 ,10 ,0.003879 ,0.004456 ,0.046747 ,26.684508 ,23.977965  
,24.162842 ,24.114868 ,

T0.000000 ,0.006003 ,10 ,0.000000 ,0.004568 ,10 ,0.003860 ,0.004475 ,0.046629 ,26.686431 ,23.978484  
,24.163940 ,24.116180 ,

T0.000000 ,0.006001 ,10 ,0.000000 ,0.004584 ,10 ,0.003901 ,0.004460 ,0.046990 ,26.686797 ,23.978240  
,24.163269 ,24.116394 ,

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SQM Start-up Data.txt

Date	Filename	HI Lamps		LO Lamps		Lamp Setting	Location	Notes
		ON	OFF	ON	OFF			
7/8/15 7	N/A	20:23		20:23		HI	RSL	long ramp up/down times
	$\Delta t = 16 \text{ min}$					Med (Low off)		$\Delta t = 16 \text{ min}$
			20:36	20:36		LO (high off, Lo on)		w/ window & diffuser
			20:39	20:39		standby	RSL	check levels. w/ UV CAS
7/8/15	N/A	15:31	15:55	15:31	15:55	HI	RSL	no SQM-Manager to log hourkeeping data
	$\Delta t \approx 25 \text{ min}$							check window & diffuser transmittance.
7/14/15	N/A	14:05	15:00	14:05	15:00	HI	RSL	test T <sub>g</sub> cover glass
	$\Delta t = 55 \text{ min}$							
7/28/15	test_levels_20150728_0235	14:35	15:06	14:35 @ 14:58		HI → MED	RSL	XP EOS 07 w/ file m.B. sent 7/27/15
	"					MED = "HI"	RSL	
	"			15:06	15:23	LO on, HI off	RSL	note I could have started a new file name -
9/23/2015				15:23		Power OFF	RSL	Times are EDT Add 4
				15:37		Power OFF	RSL	LARASONI SQM v1.0 test
				15:50		Standby	RSL	" " " " " "
				16:35		Standby	RSL	" " " " " "
				17:18		OFF	RSL	" " " " " "
	SQM 2001 update test.txt SQM-Monitor v1.0 test.txt							SQM 2001 update - v1 - OK SQM Monitor v1.0 - OK
9/24/2015	SQM2001 XP Data 2015-09-24.txt					OFF	RSL	Test <del>sqm</del> SQM2001.vi
	Screen shot - ... doc (w/ RSL)							XP EOS 08 Test file save -
	SQM Monitor v1.0 off-standby 2015-09-24.txt							→ sqmmon.exe ∈ LabVIEW
	SQM Monitor v1.0 off-standby-ORF 2015-09-24.txt							Win7 EOS12 SQM Monitor v1.0
	SQM2001 update Data 2015-09-24.txt							Different USB → Serial adapter
	Notes: The sqm2001.vi does not work after upgrading to 2013.							For laptop EOS12 COM4 worked with 3 different USB ports to take data -
	SQM Monster v1.0 off-EOS11 USB test 2015-09-24.txt							Take data w/ update "vi. Doesn't look exactly like (LV2013) sqm2001 update - v1.
								Doesn't look like or save data exactly like sqmmon.exe.
SQM Monster v1.0 off-EOS11 USB test 2015-09-24.txt → shows 2 <sup>nd</sup> computer (EOS11-Win7) can use software - COM5. Had to install USB driver from CD-ROM. Both EOS 11 & 12 tested various USB ports and the USB Adapter stayed the same COM5 / 4 respectively - I.E. you can move the USB Adapter around and it stays the same for the same computer, but can vary from computer to computer. Check which COM port is assigned with Device Manager on Control Panel.								

Date	Filename	HI Lamps		LO Lamps		Lamp Setting	Power ON/OFF Time	+4 to GMT EDT Location	Notes
		ON	OFF	ON	OFF				
9/25/2015	SQM Stby -Lo-Med-HI-Stby 2515-09-25.txt -001 Lamps not on					OFF	11:26	RSL	Monitor from Stby → HI's Stby → OFF to understand data
						Standby	11:36		No diffuser; no window
									At 12:50 checked on measurements and program had stopped for <del>auto</del> unknown reasons. Restarted @ 13:00, fan turned on for a short time, maybe for first time since it blew paper off the table. It appears that the detectors might be seeing me more in front of SQ
	SQM Stby → Stby 2015- <sup>09</sup> <del>09</del> -25-002.txt								
				EDT		Low			Confirmed that standing in front of SQ $\rightarrow$ see $\pm 5$ min @ 13:33 taking notes effects the PD signals. Also, PD not really seeing any signal w/o diffuser. Leaned diffuser against SQM front flange @ 13:33
				13:15	14:00				
				17:15:13	18:01:06				
				start ramp	ramp done				
				EDT		Med			
				14:00	15:03				
				18:00:09	19:06:09				
				14:30	15:03				
				18:30:16	19:04:06				
				start ramp	ramp down done				
				start ramp					
				15:03		Standby			Approx. 15:30 → Case temp returns to steady state
				15:45		OFF			All temp control off → stopped logging @ 16:00

Filename	Times & Dates use		UTC 120Vac		STANDBY		LO (1A)		MED (3A)		HI (1A+3A)		NOTES, PURPOSE, Instruments
	Date	Location	ON	OFF	YES	<del>OFF</del>	YES	<del>OFF</del>	YES	<del>NO</del>	YES	<del>NO</del>	
	12/2/2015	RSL											replaced Fan filter - it had disintegrated
SQM_20151203_001.txt	12/3/2015	RSL	19:12	22:15	19:46	21:16	20:23:26	on					start ramp up, No header info (old program)
Calculate Δt Burn ↑	12/16/2015	Installed new quartz diffuser						21:14:14	off				start ramp down finished, photograph diffusers.
		Lamp hours will be logged automatically from now on ↓											1Ah = 3.56194 3Ah = 3.15h
SQM_20160209_001.txt	2/9/2016	RSL	17:16		17:43		18:06	18:21					looking for light leaks etc. New program V2.0
									18:20	18:34 18:24			
-002.txt						18:46					18:34 18:24	18:46	
-003.txt					21:17	20:55	21:08						Restart program I hung it w/ comments
											20:57	21:08	Testing PD to understand isochron
SQM_20160211_001.txt	2/11/2016	RSL	15:30	20:47	20:57	22:13							run overnight to test program. Lamps off
			20:47	13:20									
				Feb 12, 2016									
SQM_20160217_001.txt	2/17/2016 (on web)	RSL	16:00:30		16:10:25	16:29							Test for feedback levels using CAS microphone
				17:52							16:19:10	16:29*	Mock-up & black cloth to cover light leaks.
SQM_20160404_001.txt	4/4/16	Dummy File - used simulated part of program											* start ramp down
No File open error made a dummy file	12/1/2016 ✓	RSL	19:59	22:15	20:25	20:48					20:31	20:48	ran sqm program incorrectly; no data saved
	12/1/2016	Cleaned white fiducial w/ ethyl alcohol then distilled water.											
SQM_20161202_001.txt	12/2/2016 ✓	RSL	14:56	15:18	15:02	15:18					15:02	15:18	testing levels for P setting in radiometer
" 002.txt	"	RSL	21:21	22:00	21:29	22:00					21:29	22:00	WF saturates all SQM MPD's, test was meant for seeing how long it takes to stabilize
SQM_20161205_001.txt	12/5/16 ✓	RSL	20:04	22:14	20:05	22:10			20:05	22:09			monitor cold start warmup w/ NET CAS
													First look w/ Thorlabs Radiance head.
SQM_20161206_001.txt	12/6/16	RSL	20:26	22:34	20:29	22:33					20:31	22:28	align MOSBY cas manually; got 42. kv
													then took signal, anal. w/ MOSBY cas @ 30 min in warmup

Filename	Date	Location	120Vac		STBY		LO(1A)		MEO(3A)		HI(Btn)		NOTES (purpose, instruments)
			ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	
SQM_20161208_001.txt	12/8/16	RSL	18:48	22:28	18:49	22:27					18:54	20:52	18:53 start cont. scans. MB4 cas logging every 5 min may have turned to LO or MED MD when going from OFF to STBY? 1.558, 1.692, RWB → 1.598
SQM_20161213_001.txt	12/13/16	RSL	14:20	20:14	14:27	20:09:36	14:29	15:55	15:55	20:03			red pd went to yellow @ 14:41 while " " " " @ 14:46 Blu " " " " @ 14:47
SQM_20161214_001.txt	12/14/16	RSL	13:43	21:57	13:47	21:50	20:00	20:43	20:43	21:58	21:48	21:58	see if starting from "warm start" matters. warm up
SQM_20161215_001.txt	12/15/16	RSL	14:57	21:06	15:00	21:04	19:49	20:28	20:28	20:59	20:46	20:59	repeat 12/14, except today stop when SUM MPD's are 0.1% over 4 min
SQM_20161216_001.txt	12/16/16	RSL	13:38	15:45	13:38:32	15:41	13:40	14:25	14:25	14:55	14:55	15:11	repeat 2/15, except from "cold start" take cas @ Fil 1 for LO as well as Nuv.
SQM_20161223_001.txt	12/23/16	RSL	17:22	19:35	17:32 19:00	19:33	17:32 19:03	18:16 19:29	18:16	19:01	18:37	18:52	repeat cold start, get some LO w/ MED, LO Filter = none & 1 on cas. Repeat