

Working with Data Loggers



sensorswitch

An **Acuity** Brands Company

Data Logger Loaner Program

- In order to loan loggers from Sensor Switch, please visit www.sensorswitch.com/datalogger/ then fill out and submit the provided form.
- Depending on the demand at any given time, it may take anywhere from 1-4 weeks to receive your order (wait time increases with orders of multiple cases).
- A notification will be sent once cases are ready to be shipped. A tracking number is available upon request.

Opening Your Case

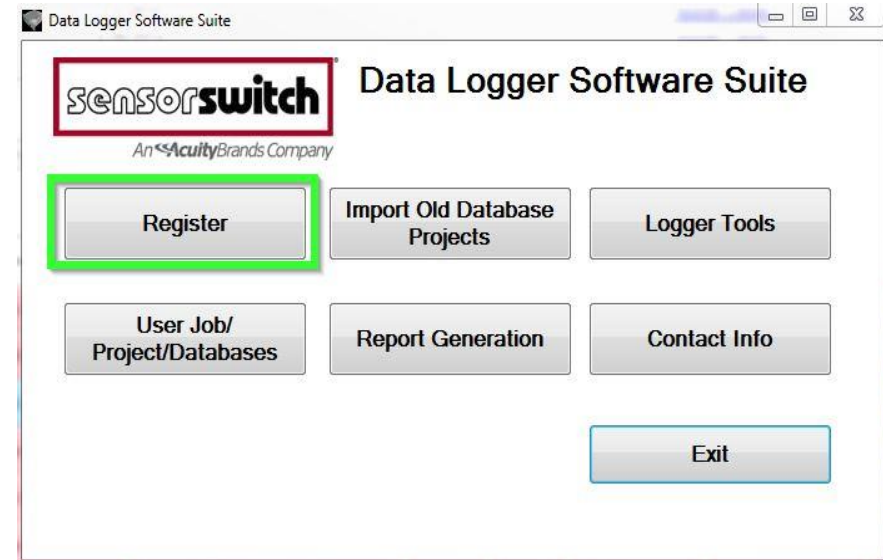
- Each case contains the following:
 - 45x loggers
 - 1x Standard B USB cable
 - 1x USB Flash Drive
- The flash drive will contain:
 - Software Suite Installer
 - Data Logger Monitoring Form
 - Data Logger Installation Guide
 - Comprehensive Software Suite Quick Start Guide

Installing The Software Suite

- Ensure the computer you wish to install the software on is running Windows, version XP or higher (currently no Mac OS support) and insert the flash drive into a USB port.
- Double-click installer and let it run... this will only take a matter of seconds to complete.

Registering Your Account

- In order to utilize our software suite, you'll need a Sensor Switch Data Logger account. Click the “**Register**” button from the main Data Logger Software Suite page.
- This brings you to a website. Fill the basic form out completely. Once registered, you can log in and utilize the software suite, which will come into play after your loggers collect data.



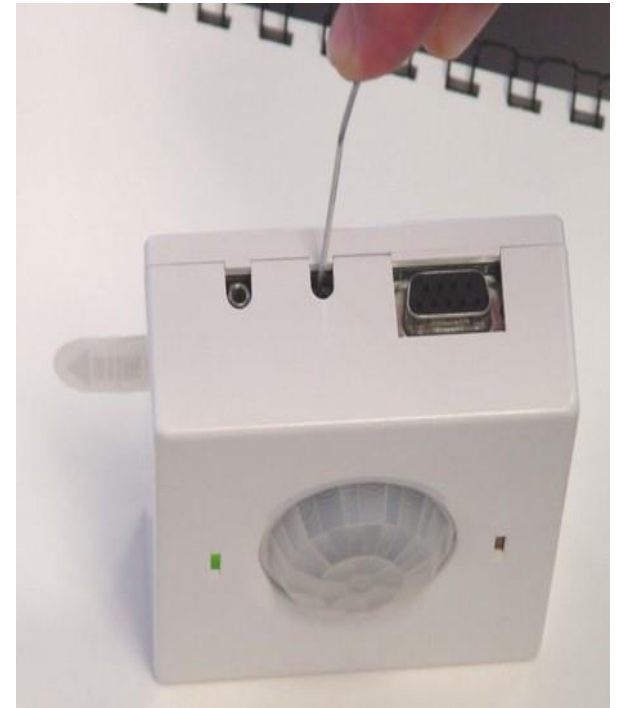
The Data Logger Device

- Electronically calibrates to electronic and magnetic fluorescent or incandescent lights
- Records lights-on events
- Records occupancy
- Small Motion 360° lens
- Provides ~12ft radial coverage when mounted to a standard 9 ft ceiling
- 8-15ft mounting heights provide 10-20 ft of radial coverage



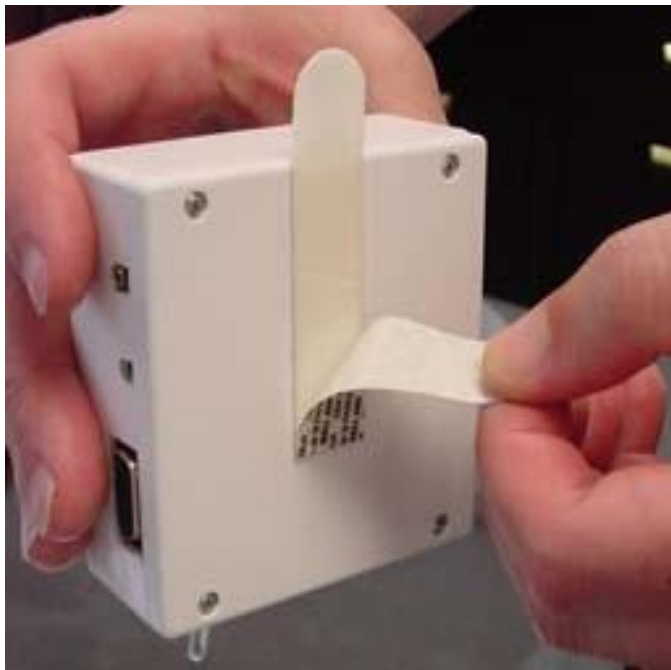
Data Logger Installation

1. Use a pin, or paperclip, to depress the recessed button on your logger for ~10 seconds, until the green LED flashes rapidly... this turns the logger ON.
2. Immediately after the LED flashes, press the same button three times in a row... this begins internal diagnostics \ calibration of the device, indicated by the alternating flashes of the orange and green LED lights. When calibrating, the Logger is “locking” on to a light source to track. This may take anywhere between 30-180 seconds.



Data Logger Installation

3. With your logger calibrating, peel the backing from the adhesive strip and stick the device to the ceiling in your desired location.



Data Logger Installation

4. Be sure to write down each logger's serial number AND location on the Data Logger Monitoring Form included on your USB flash drive. This ensures you have the necessary data to compile a report when you take the loggers down.

Data Logger Monitoring Form



Company Name:	<input type="text"/>	Building Type:	<input type="text"/>
Date Installed:	<input type="text"/>	Date Removed:	<input type="text"/>
Project Name:	<input type="text"/>	Building SQ FT	<input type="text"/>
		Shifts	<input type="text"/>

THIS FORM IS TO BE FILLED OUT AS THE LOGGERS ARE BEING INSTALLED. AFTER INSTALLING THE LOGGERS THEN THIS INFORMATION MUST BE ENTERED INTO THE SOFTWARE ON THE THUMBDRIVE. If you do not enter this information your loggers will be erased and all data will be

Index #	Logger Serial #	Grp #	Building	Room Location	Area Type	FIX Qty	TOTAL ROOM Load (Watts)	Comments
	EXAMPLE		Admin	Managers Office	P	2	302	2 fixtures at 151 watts each
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
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Data Logger Removal

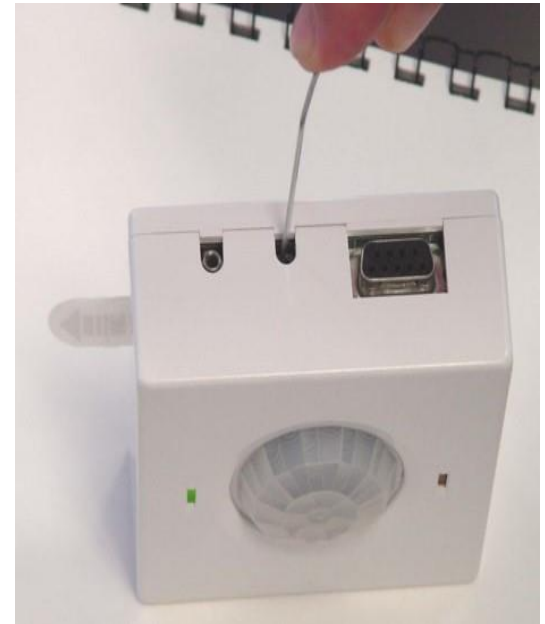
Once data collection is complete (Sensor Switch recommends at *least* 2 weeks of monitoring to collect a good data sample), you may remove the loggers from their locations by pulling the tape tab to dislodge it from the ceiling.



Data Logger Removal

To prevent the collecting of data after you've removed the Loggers from the ceiling, you need to turn them off as you are collecting them.

To turn the Logger off, depress the programming button for approximately ten seconds, until the orange LED light flashes rapidly then turns off.



Managing Your Data

- The data captured on your Loggers must now be pulled and compiled prior to generating your reports.
- Requires use of the class B USB cable included in your case.
- Requires use of a filled-in Logger monitoring form.

Managing Your Data

- Open the Data Logger software suite via the icon on your desktop
- Click “***User Job/Project Databases***”
- Login with the credentials selected when initially registering.



Managing Your Data

- In the Jobs Listing window, click “**Create New Job**” and fill in the appropriate information:

- Your company name
- Name of the project
- Logger installation and removal dates
- Building type\size
- # of shifts

- Once complete, click “**Save**”, and then “**Close**”.

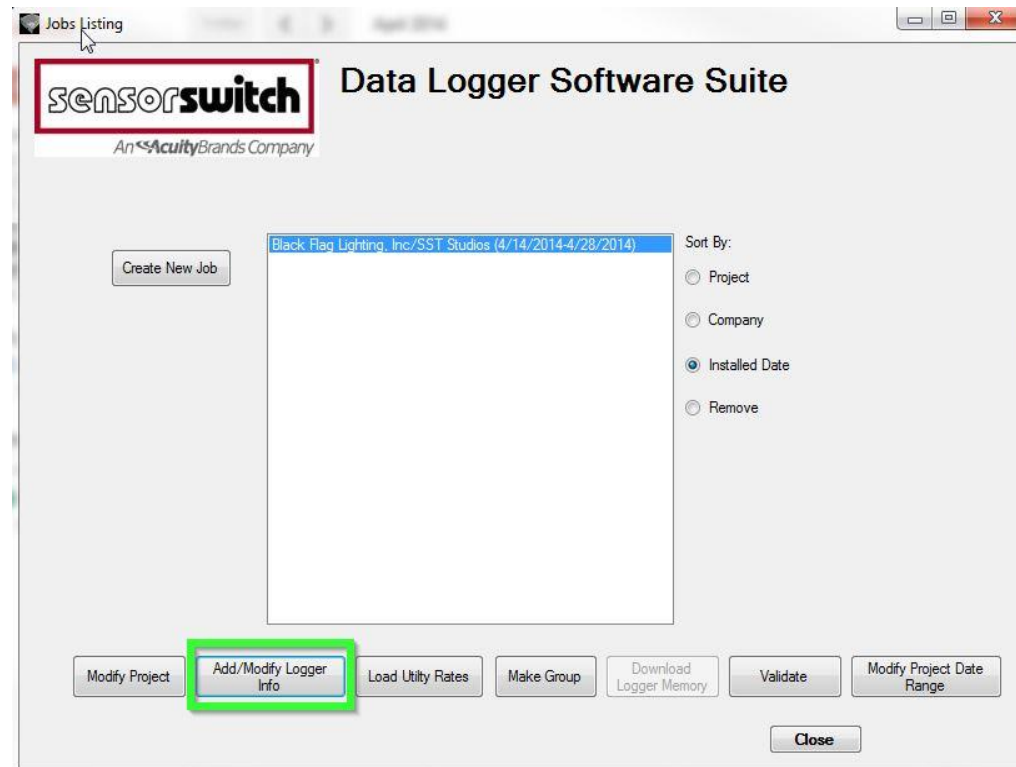
The screenshot displays the 'Jobs Listing' window of the 'Data Logger Software Suite'. The 'sensorswitch' logo is visible at the top left, with the tagline 'An AcuityBrands Company'. A green box highlights the 'Create New Job' button. A modal dialog box titled 'Job' is open, containing the following fields:

- Company Name: Black Flag Lighting, Inc (dropdown)
- Project Name: SST Studios (text input)
- Date Installed: 4/14/2014 (calendar icon)
- Date Removed: 4/28/2014 (calendar icon)
- Building Type: Office (dropdown)
- Building Size in sq. ft.: 1K sq ft - 100K sq ft (dropdown)
- Number of Shifts: 2 (dropdown)

At the bottom of the dialog are 'Save' and 'Close' buttons. The main window has a toolbar at the bottom with buttons: 'Modify Project', 'Add/Modify Logger Info', 'Load Utility Rates', 'Make Group', 'Download Logger Memory', 'Validate', 'Modify Project Date Range', and a 'Close' button.

Managing Your Data

- If this is your first project, it will be the only one listed in the window. If you have multiple projects, select/highlight the one you wish to work with by clicking on it, and then clicking “**Add/Modify Logger Info**”.



Managing Your Data

- Fill in the logger serial number, the room location\name, and select the area type from the pull-down menu provided. Ensure the Start Using, and End Using dates match the project install\remove dates (the date of logger installation and date of removal).
- Everything else may be left as is, clicking “Save” after entering each logger’s information.

Room Data

Black Flag Lighting, Inc/SST Studios (4/14/2014-4/28/2014)

Enter Data Logger Data

Add

Serial Number: 00005949 [Find Devices](#) Room Location: Break Room Area Type: Common Area

Delay: 10 Existing Wattage: 100 Retrofit Wattage: 100 ☐ Exclude

Start Using: 4/14/2014 8:00 AM End Using: 4/28/2014 5:00 PM

Shift Date: ☒ Add to time ☐ Subtract from time

Day: 0 Hour: 0 Min: 0 **Calculate Shift**

Data Start: no data loaded Data End: no data loaded

Save Delete Download

Select a Serial Number to edit

Serial Number	Room Location	Area Type	Delay	Existing Wattage	Retrofit Wattage	Group	Data	Exclude
000020B4	Recording Room	Office	10	100	100		<input type="checkbox"/>	<input type="checkbox"/>
0000908E	Restroom	Restroom	10	100	100		<input type="checkbox"/>	<input type="checkbox"/>

First Previous 1 of 1 Next Last

Print Close

Managing Your Data

- Click “**Download**,” and in the following window, click the blue “**Find Devices**” link. This finds any loggers connected to your pc.
- Select the first logger listed and click “**View and Download**” at the bottom of the window, once available.

Download Data Logger Data

Black Flag Lighting, Inc SST Studios

Data Logger Info

Serial Number: 00005849, 0000908E, 000020B4

Found 3 Devices [Find Devices](#)

Data Logger Date/Time: 0000908E, 000020B4

System Date/Time: system date/time

Time Difference: logger-system

Room Location:

Area Type: Abandoned Area

Delay: 10

Existing Wattage:

Retrofit Wattage:

Date Installed: Logger not downloaded

Date Removed: Logger not downloaded

Start Using: 4/28/2014 11:27 AM

End Using: 4/28/2014 11:27 AM

Shift Date: ☐ Add to time ☐ Subtract from time

Day: Hour: Min:

[View and Download](#) [Close](#)

Area Type: Office

Retrofit Wattage: 100

☐ Exclude

Save Delete [Download](#)

Wattage	Retrofit Wattage	Group	Data	Excl
100				
100				
100				

Managing Your Data

- The “View Logger Memory” window will pop up, within which you will need to click “**Save**” and allow the memory to download. Then click “**Close**” and repeat for all loggers used in the project.
- Next, click “**Close**” within the Download Data Logger Window, as well as “**Close**” within the ‘Enter Data Logger’ Window.

00005949

Black Flag Lighting, Inc/SST Studios (4/14/2014-4/28/2014)

View Logger Memory

Serial 00005949

You have successfully saved 1098 records to the job database.

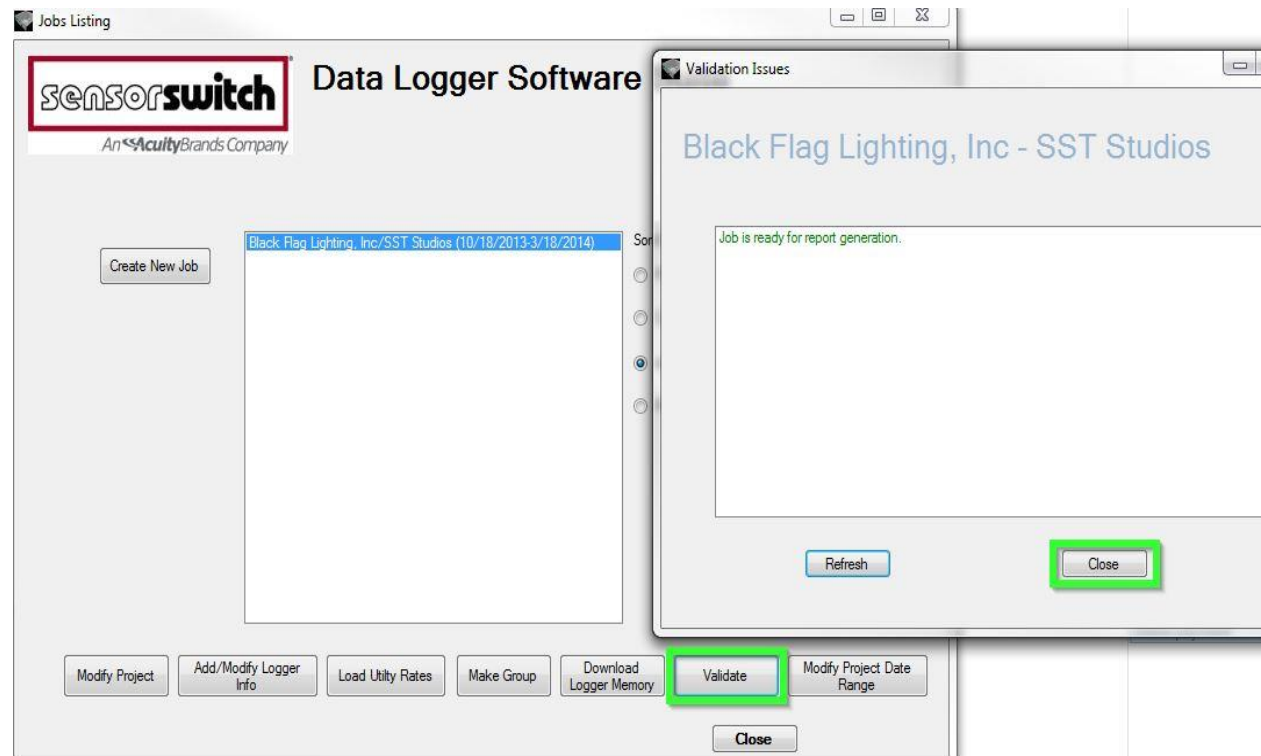
	Occupancy	Light	Date
▶	1	1	10/18/2013 11:55:00 PM
	0	1	10/19/2013 12:09:00 PM
	1	1	10/19/2013 12:13:00 PM
	0	0	10/19/2013 12:21:00 PM
	1	1	10/19/2013 1:11:00 AM
	0	0	10/19/2013 1:13:00 AM
	1	1	10/19/2013 1:25:00 AM
	0	0	10/19/2013 1:35:00 AM
	1	1	10/19/2013 1:45:00 AM
	0	1	10/19/2013 2:17:00 AM
	1	1	10/19/2013 3:23:00 AM
	0	0	10/19/2013 3:35:00 AM
	1	1	10/19/2013 6:15:00 AM
	0	1	10/19/2013 6:17:00 AM

Save Close

saved: 00:00:00.0037922
saved: 00:00:00.0012985
saved: 00:00:00.0008844
saved: 00:00:00.0008883
saved: 00:00:00.0008865
saved: 00:00:00.0008599
saved: 00:00:00.0008593
saved: 00:00:00.0008545
saved: 00:00:00.0008590
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saved: 00:00:00.0008584
saved: 00:00:00.0008575
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saved: 00:00:00.0008575
saved: 00:00:00.0008596
saved: 00:00:00.0008536
saved: 00:00:00.0008581
saved: 00:00:00.0008521
saved: 00:00:00.0008542
saved: 00:00:00.0008596
saved: 00:00:00.0008536
saved: 00:00:00.0008494
saved: 00:00:00.0008557
saved: 00:00:00.0008575
saved: 00:00:00.0008494
saved: 00:00:00.0008503
saved: 00:00:00.0008545
saved: 00:00:00.0008578
saved: 00:00:00.0005608
saved: 00:00:00.0003583
saved: 00:00:00.0003583
saved: 00:00:00.0003764
saved: 00:00:00.0003694
saved: 00:00:00.0003661
saved: 00:00:00.0003685
saved: 00:00:00.0003664
saved: 00:00:00.0003706
saved: 00:00:00.0003685
saved: 00:00:00.0003664
saved: 00:00:00.0003878
saved: 00:00:00.0003758
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saved: 00:00:00.0003561
saved: 00:00:00.0003960

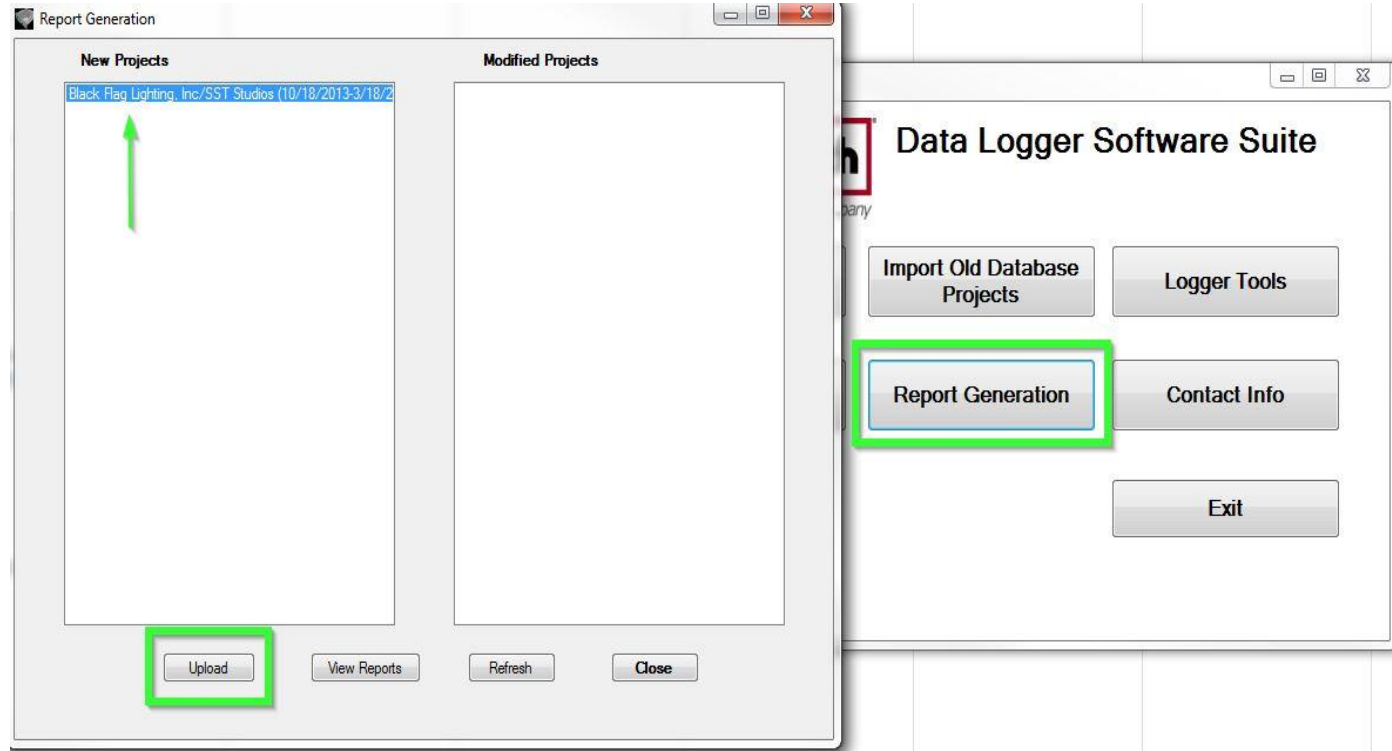
Managing Your Data

- In the 'Jobs Listing' window, ensure your job is highlighted. We will now validate the data from each logger before uploading for compiling into a full report.
- Click “**Validate**”; when prompted that your job is ready for generation, click “**Close**”.
- Close the 'Jobs Listing' window, as well.



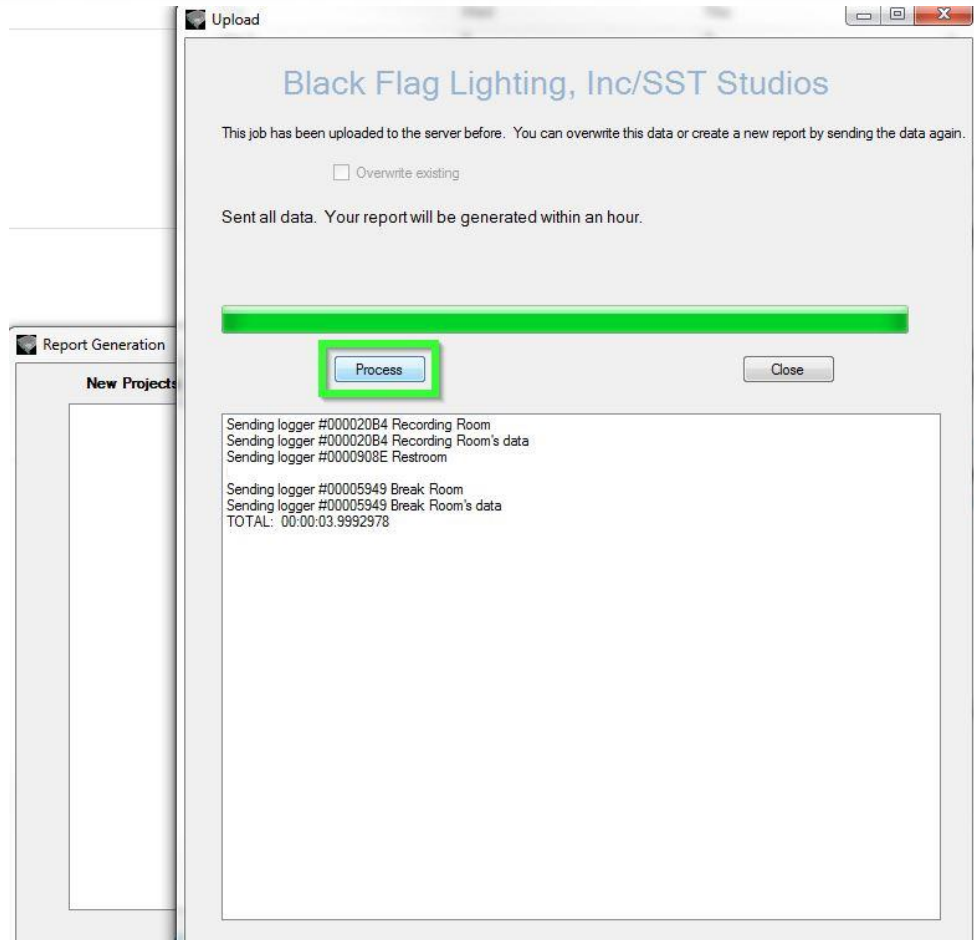
Managing Your Data

- From the main menu, select ***“Report Generation”***
- Highlight your project
- Click ***“Upload”***



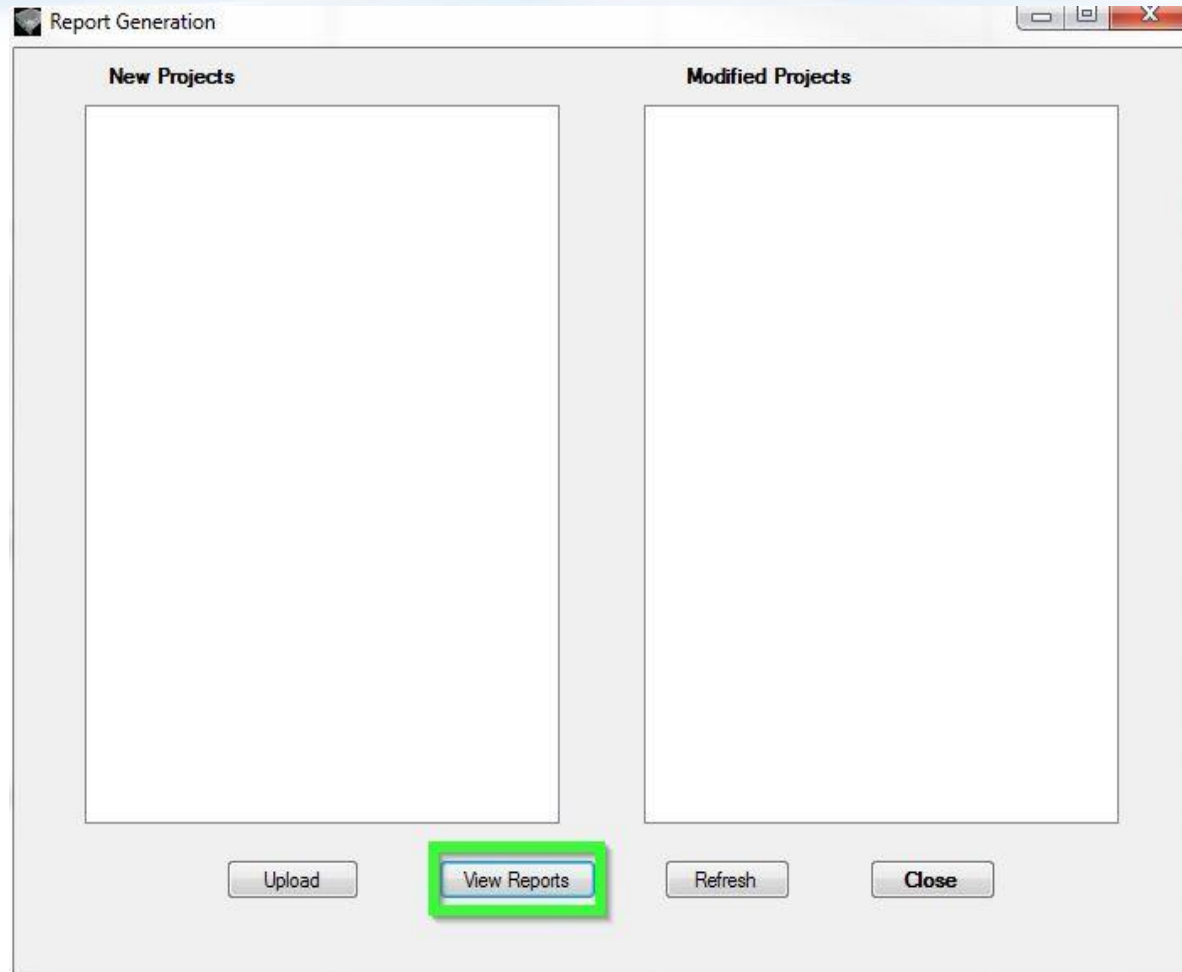
Managing Your Data

- Within the Upload window, click “**Process**” to have your project uploaded and compiled into a report.
- This process may take up to an hour to complete.
- Close this window when complete.



Managing Your Data

- Once a sufficient amount of time has passed, you may click the “**View Reports**” button within the Report Generation window.
- You will be taken to a webpage listing all of your projects, from which you may download your report in either PDF or spreadsheet formats.



Report Retrieval

- Simply click whichever report you wish to view, and it will download to your machine.

Job Reports

Click on the "Job Name" to download a report

Refresh

☒ PDF

☐ Excel

Report	Company	Job	Created	Size
C780J1389_40314_100007.pdf			3/14/2014 10:21:01 AM	605928
C780J1286_40131_172758.pdf			1/31/2014 5:51:00 PM	1178000
C780J1269_40129_151333.pdf			1/29/2014 3:51:01 PM	3091563
C780J1249_40121_164612.pdf			1/21/2014 5:06:00 PM	1489080
C780J1248_40121_162829.pdf			1/21/2014 4:51:00 PM	2113499
C780J1247_40121_101959.pdf			1/21/2014 11:26:00 AM	5152279
C780J1246_40121_101528.pdf			1/21/2014 10:41:00 AM	354776
C780J1245_40121_100010.pdf			1/21/2014 10:36:00 AM	1135921
C780J1244_40121_095227.pdf			1/21/2014 10:21:02 AM	1607962
C780J1198_31219_080949.pdf			12/19/2013 8:36:01 AM	1399065
C780J1180_31211_164224.pdf			12/11/2013 5:11:00 PM	2435209
C780J1154_31204_164749.pdf			12/4/2013 5:21:00 PM	627193
C780J1153_31204_164713.pdf			12/4/2013 5:11:00 PM	639298
C780J1152_31204_164437.pdf			12/4/2013 5:01:00 PM	293318
C780J1151_31204_164333.pdf			12/4/2013 4:56:00 PM	233292
C780J1150_31204_164016.pdf			12/4/2013 4:51:00 PM	579921
C780J1140_31204_092743.pdf			12/4/2013 9:41:00 AM	321121

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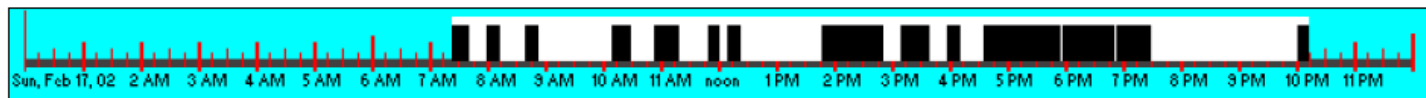
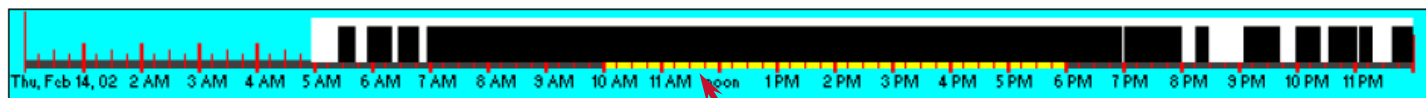
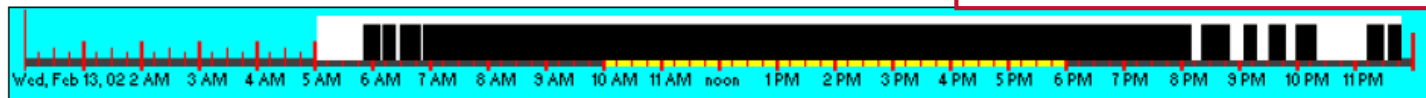
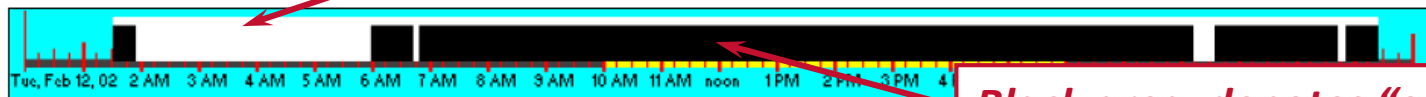
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Easy to Read Time Line Reports

Open Area – 1st Floor

Area Type: Open Space. Group: 2. Time Delay: 10 minutes

Sample, Project 10



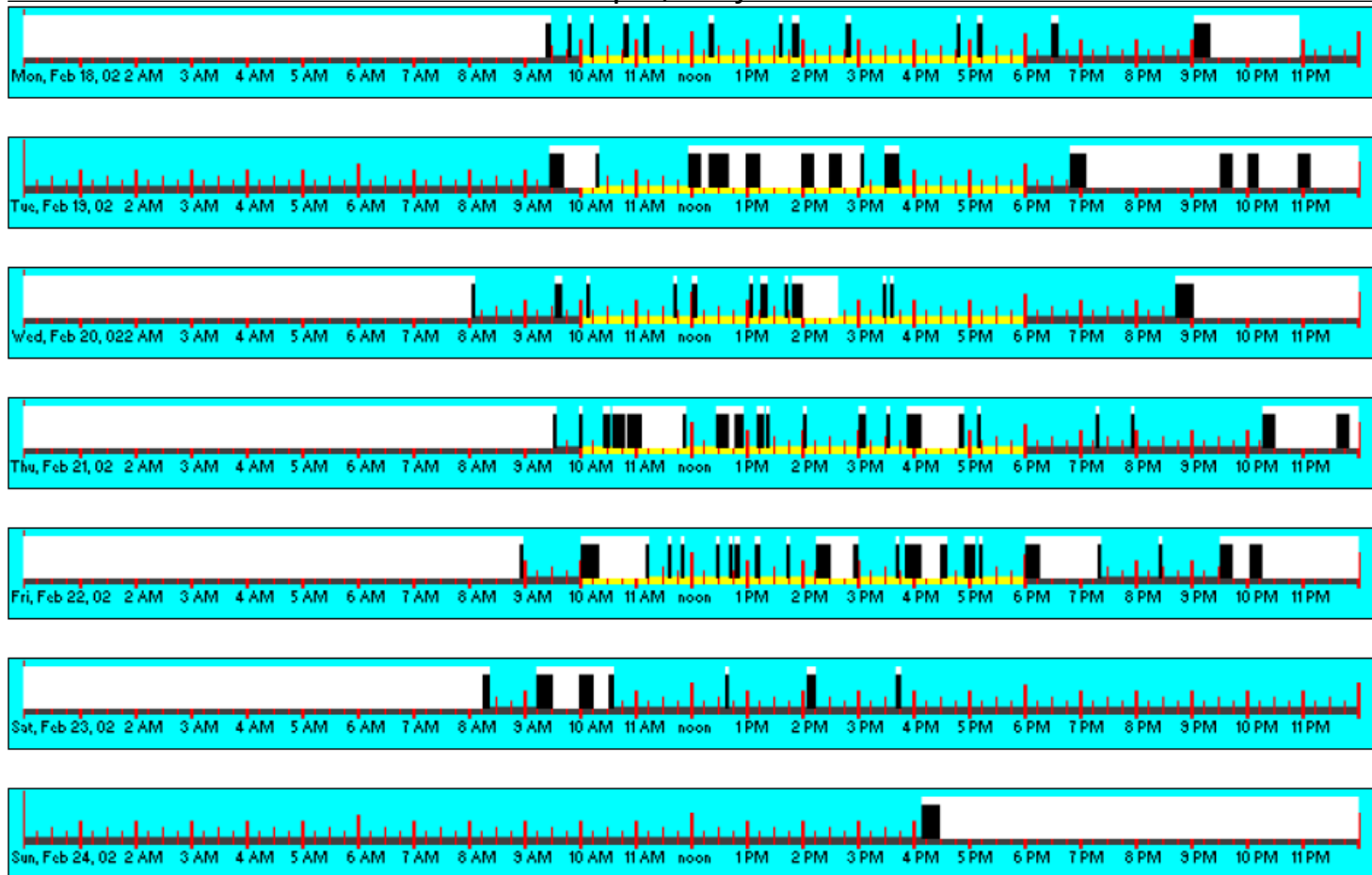
Yellow line denotes "on-peak hours"

Example Time Lines

Women's Room – 1st Floor

Area Type: Restroom. Logger: 49044. Time Delay: 10 minutes

Sample, Project 10

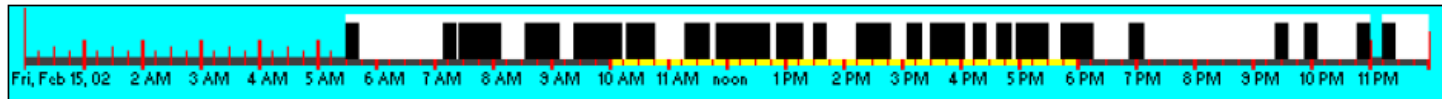
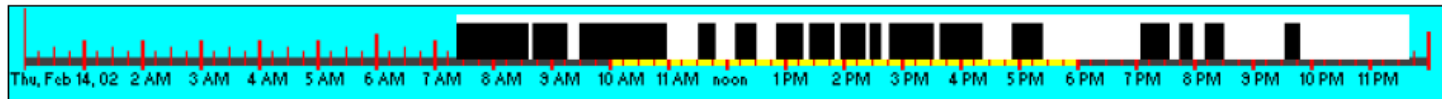
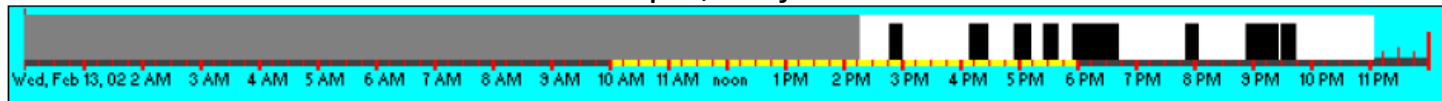


Example Time Lines

Men's Room – 1st Floor

Area Type: Restroom. Logger: 49232. Time Delay: 10 minutes

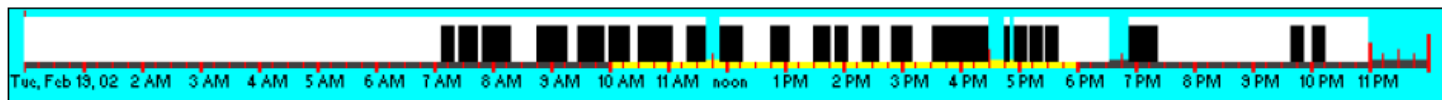
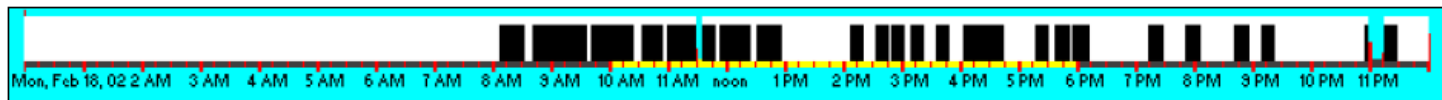
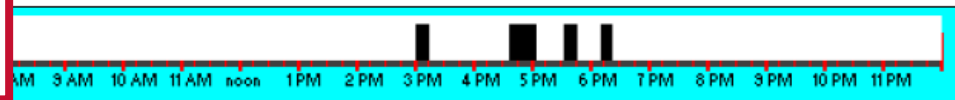
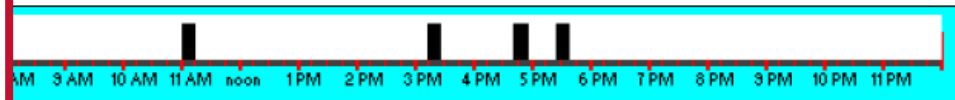
Sample, Project 10



Light's On: 131.937 hrs

Occupied: 43.464 hrs

% Savings: 67.1%

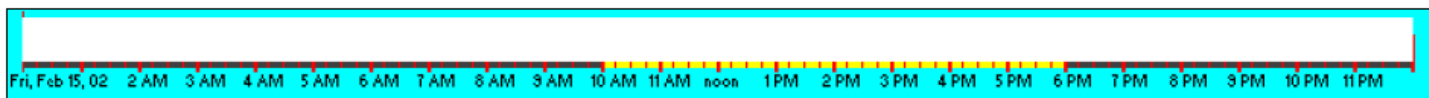
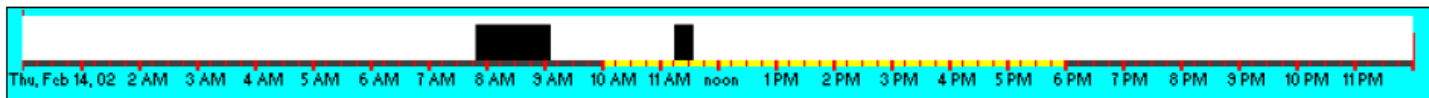
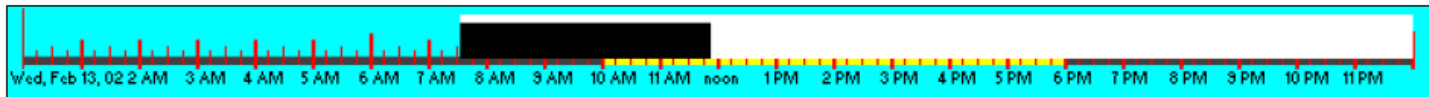
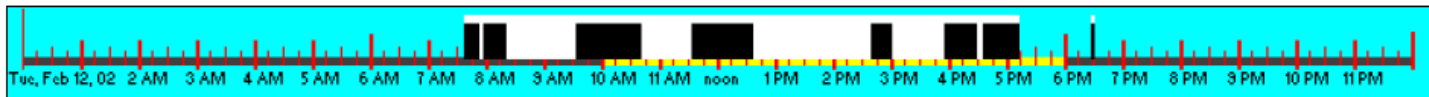
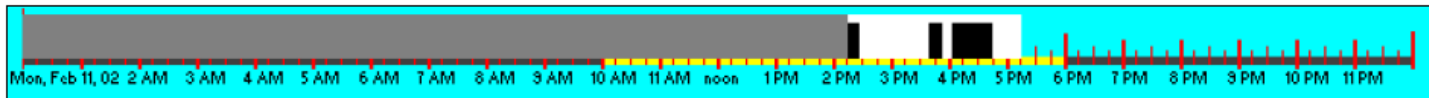


Example Time Lines

Conf Room - UNH

Area Type: Meeting Rooms. Logger: 49204. Time Delay: 10 minutes

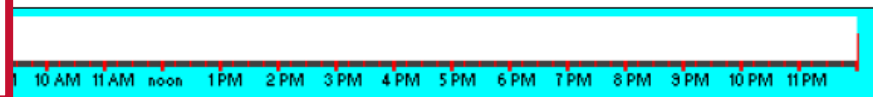
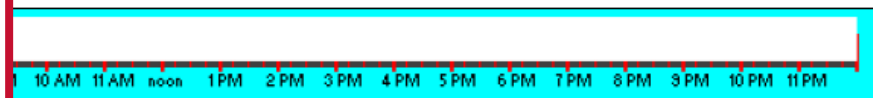
Sample, Project 10



Light's On: 121.058 hrs

Occupied: 11.529 hrs

% Savings: 90.5%

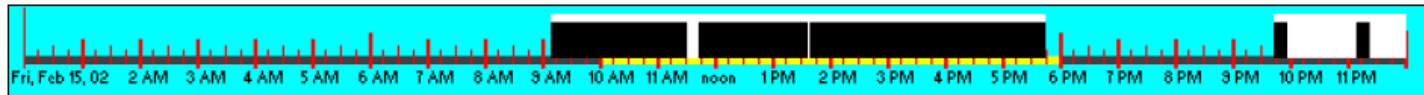
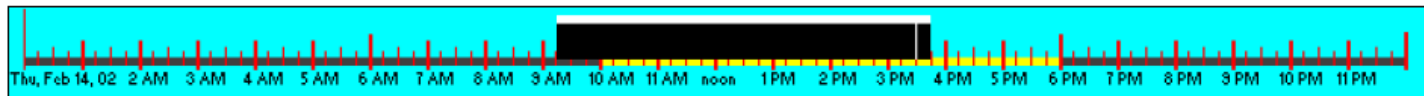
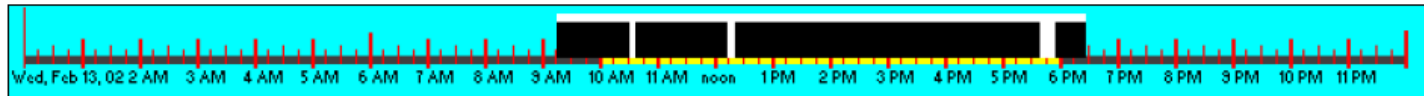
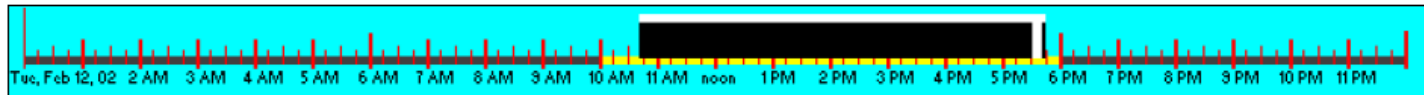
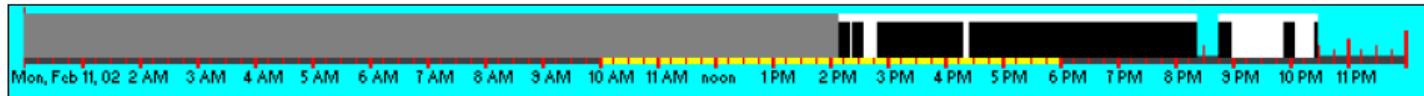


Example Time Lines

C Tiezzi Office

Area Type: Private Office. Logger: 49196. Time Delay: 10 minutes

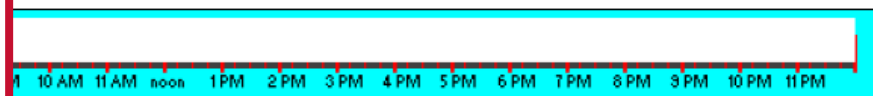
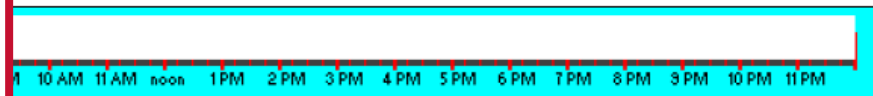
Sample, Project 10



Light's On: 70.496 hrs

Occupied: 36.931 hrs

% Savings: 47.6%

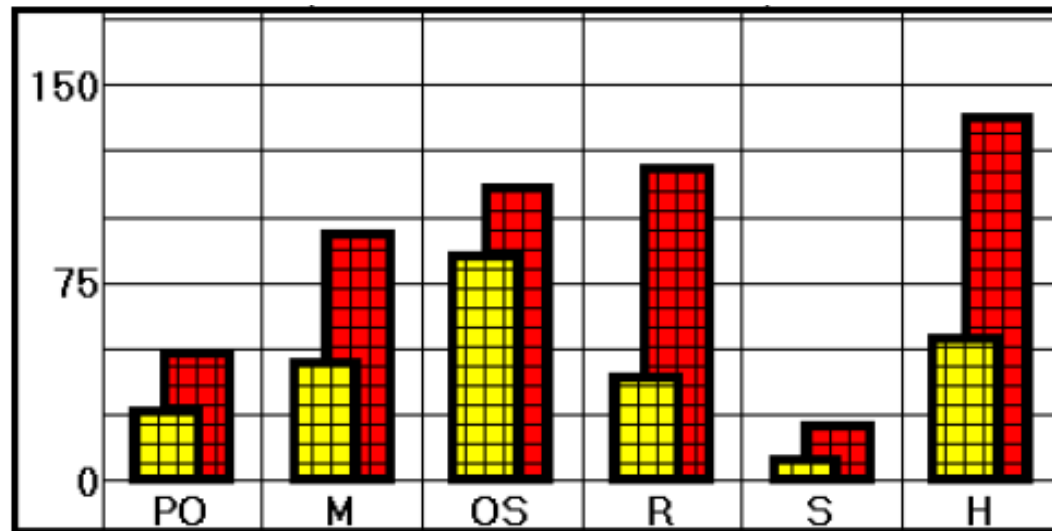


Summary Charts and Graphs

Area Type Averages

Sample, Project 10

Area Type Averages				Normalized Weekly Lights On					Normalized Weekly Occupied					
Area Type		Qty	Watts	Peak	Off	Shldr 1	Shldr 2	Total	Peak	Off	Shldr 1	Shldr 2	Total	% sav
Private Office	PO	2	320	26.88	20.87	0.00	0.00	47.76	22.76	3.61	0.00	0.00	26.37	44.79%
Meeting Rooms	M	3	1387	33.75	59.12	0.00	0.00	92.88	21.95	22.14	0.00	0.00	44.09	52.53%
Open Space	OS	2	10600	39.99	70.45	0.00	0.00	110.44	39.96	45.12	0.00	0.00	85.08	22.96%
Restroom	R	3	213	30.62	87.56	0.00	0.00	118.18	20.90	17.65	0.00	0.00	38.55	67.38%
Storage	S	2	240	5.33	15.52	0.00	0.00	20.85	0.78	7.27	0.00	0.00	8.04	61.44%
Hallway	H	2	880	39.62	98.08	0.00	0.00	137.70	26.32	27.66	0.00	0.00	53.98	60.80%
Building Average		28880		37.99	68.87		0.00	106.86	35.08	38.59		0.00	73.67	31.06%



Hours per Week for each Area Type

*% Savings Calculated
by Area Type*

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