

ASL Map Data Export Utility

When the Advanced Spectrum Logging kit is utilized with a GPS receiver to collect signal strength data in the field, the data needs to be formatted and compiled on an Excel spreadsheet for further analysis and finally exported to a mapping program such as MapPoint.

Collecting Data:



The ASL software stores all the trace data in an SQL database. The frequency, signal power levels and location data are stored for every sweep of every frequency monitored. This can represent a tremendous amount of raw data. The data for the desired frequencies must be located, extracted and formatted for eventual use by the mapping software. The ASL Map Data Export Utility performs this task.

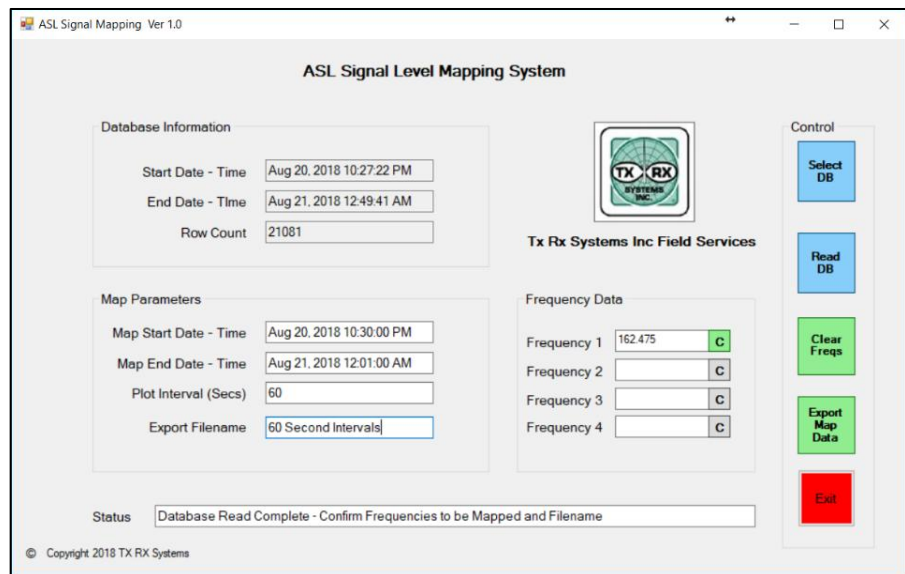
Processing the Data:

The program allows the operator to select the database to be processed, time span, frequencies and the time interval between plot points on the map.

The portion of the data to be mapped can be set by the user. The default is to process the entire database however, this is often not desirable. If only a portion of the data is to be mapped, the user can enter the start and stop times.

The speed at which the vehicle was moving when the data was collected will determine the physical distance between the data points. In many cases if every signal level measured were plotted, the data points would be too close together to create a useful map. To resolve this problem, the user can set the time interval between plot points and the program will compute the average signal level and average location for each set of data taken during the plot intervals. This will allow the user to produce a smooth map. The program can be adjusted and run as many times as necessary until the desired map is obtained.

Up to 4 frequencies can be mapped and the program will automatically load the first 4 frequencies found in the database. Clearing the frequency box will prevent the system from processing map data for that frequency.





Program Output:

Clicking on the “Export Map Data” button will cause the program to produce and save an Excel spreadsheet with the necessary map data. The name of the spreadsheet can be specified in the “Export Filename” box or the system will use the default name of “Export.xlsx”. The Excel file will be in the same folder as the SQL database, normally named “SignalHawkdB.mdf”.

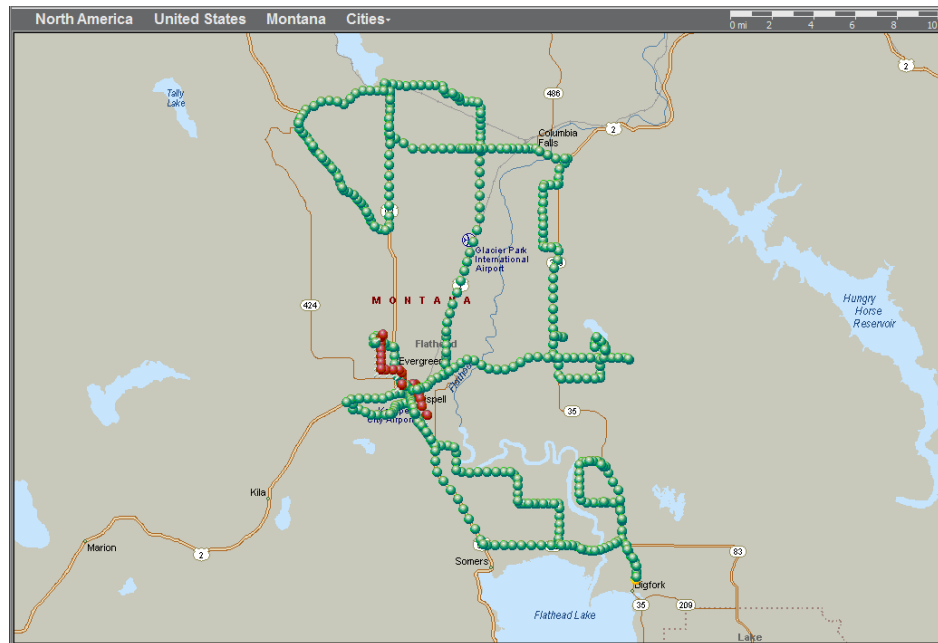
For each point to be plotted on the map the spreadsheet will show the average date, time latitude, longitude and channel power level.

Up to 4 frequencies can be monitored and plotted on separate maps.

Date	Time	Latitude	Longitude	162.475	Blank	Blank	Blank
Aug 20, 2018	10:30:30 PM	41.55428	-74.08155	-80.03			
Aug 20, 2018	10:31:29 PM	41.55430	-74.08155	-80.10			
Aug 20, 2018	10:32:29 PM	41.55429	-74.08153	-80.12			
Aug 20, 2018	10:33:30 PM	41.55427	-74.08150	-80.03			
Aug 20, 2018	10:34:30 PM	41.55431	-74.08155	-80.13			
Aug 20, 2018	10:35:30 PM	41.55434	-74.08160	-80.07			
Aug 20, 2018	10:36:30 PM	41.55434	-74.08159	-80.06			
Aug 20, 2018	10:37:29 PM	41.55435	-74.08161	-80.09			
Aug 20, 2018	10:38:29 PM	41.55428	-74.08154	-80.06			
Aug 20, 2018	10:39:29 PM	41.55429	-74.08153	-80.08			
Aug 20, 2018	10:40:29 PM	41.55427	-74.08148	-80.06			
Aug 20, 2018	10:41:29 PM	41.55425	-74.08135	-80.07			
Aug 20, 2018	10:42:29 PM	41.55426	-74.08142	-80.09			
Aug 20, 2018	10:43:30 PM	41.55428	-74.08153	-80.11			
Aug 20, 2018	10:44:28 PM	41.55426	-74.08151	-80.02			
Aug 20, 2018	10:45:29 PM	41.55428	-74.08150	-80.12			
Aug 20, 2018	10:46:29 PM	41.55424	-74.08143	-80.10			
Aug 20, 2018	10:47:29 PM	41.55421	-74.08131	-80.06			
Aug 20, 2018	10:48:29 PM	41.55424	-74.08140	-80.04			
Aug 20, 2018	10:49:29 PM	41.55426	-74.08148	-80.12			
Aug 20, 2018	10:50:30 PM	41.55426	-74.08152	-80.12			

This data can then be exported to a mapping program such as MapPoint to create a signal level map like the one shown here.

Maps showing signal level, noise level or signal to noise can be plotted as well as specialty maps for to evaluate scenarios such as simulcast overlap or site to site handoff levels.



For more information, contact TX RX Systems Inc – Field Services Department

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