



COMBILENT Group



ASL Signal Level Mapping

Diagnosing poor coverage can be a lengthy and complex process. One of the biggest problems is when system downlink or talk out performance does not meet coverage predictions. Sometimes signal levels are predicted to be more than sufficient but system performance in certain areas is poor. Interference is often to blame but there are other factors that can be in play. The TX RX Systems Inc Advanced Spectrum Logging system (ASL) can be used in a mobile configuration with a GPS receiver to record signal levels and location data for several different channels simultaneously. This data can then be evaluated in different ways to help determine the cause of the poor system performance.



Collecting Data:

The ASL software stores all the trace data in a custom SQL database. Each database can hold a maximum of 10 Gigabytes of data. Depending on the speed at which the traces are collected (determined by the Span, RBW, and VBW.), this will typically allow between 7 and 15 days of continuous data collection, more than enough for most situations. If more data storage is required, simply create a new database and continue collecting data.

A GPS receiver is utilized with the ASL, to collect the latitude, and longitude along with each spectrum analyzer trace.

Any number of frequencies can be monitored and a map export utility can provide map data for any 4 frequencies in the database. To map more frequencies, simply run the export utility again.

Analyzing Data:

During or after data collection, the user can playback the analyzer traces. The playback utility allows the user to do an "on the spot" evaluation of observed poor coverage. The stored traces can be played back without interrupting the data capture by opening a second instance of the ASL software and selecting "Playback only." By utilizing this feature, the user can playback the data as soon as it's collected without missing the next event. All the various trace features such as maximum Hold, Minimum Hold, Markers and even Waterfall modes are available during trace playback.

At the end of the data collection, the signal level information, along with the latitude, longitude and time stamp data can be output to an Excel spreadsheet for importing into many of the available mapping programs. The user can import the map data into their own preferred map program or the data can be forwarded to TX RX Systems Inc and we can prepare the maps. Simply run the provided processing utility and email us the spreadsheet.

"Standard" ASL reports detailing signal level activity vs. time can also be provided for any number of frequencies.

DUPLXERS • CAVITY FILTERS • MULTICOUPLER SYSTEMS • RF SYSTEM PRODUCTS • FIELD SERVICES

**TX RX SYSTEMS INC. 8625 INDUSTRIAL PARKWAY, ANGOLA, NY 14006-9696
TELEPHONE 716-549-4700 • EMAIL: FIELD SERVICES@TXRX.COM**

180928



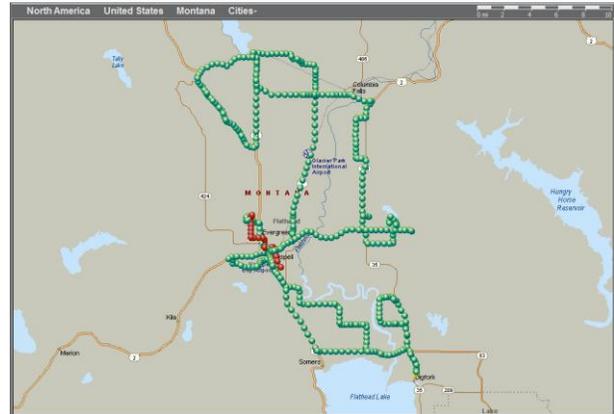
Available Maps:

Map Data

The signal level data along with the latitude, longitude and time stamps is output to an Excel spreadsheet. This data can then be further manipulated using standard Excel features to produce several different types of maps.

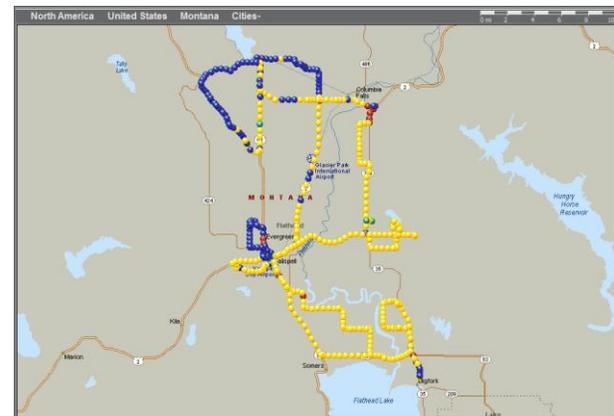
Basic Signal Level Map

The signal level, latitude and longitude data can be output to a map to provide a visual display of the signal level.



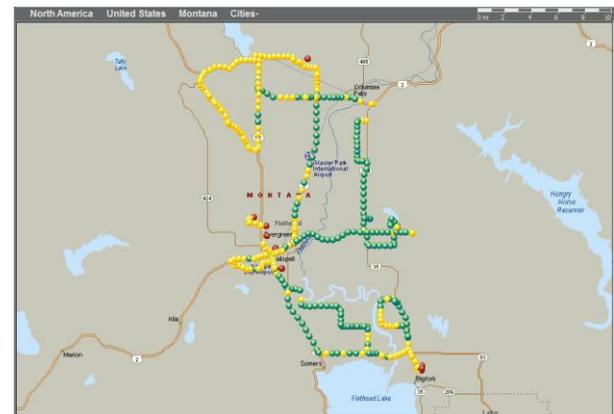
Environmental Noise Map

If a known vacant channel is monitored, a map of the environmental noise can also be produced.



Signal to Noise Map

The noise level data can also be compared with the signal level data at each location to produce a visual display of signal to noise ratio throughout the monitored area.



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

DUPLEXERS • CAVITY FILTERS • MULTICOUPLER SYSTEMS • RF SYSTEM PRODUCTS • FIELD SERVICES

**TX RX SYSTEMS INC. 8625 INDUSTRIAL PARKWAY, ANGOLA, NY 14006-9696
TELEPHONE 716-549-4700 • EMAIL: FIELD SERVICES@TXRX.COM**