# *Log View-R™* Carrier to Interference (C/I) Display & Computation

Below is an example of two sweep records taken by the *Analyze-R™* and simultaneously shown for comparison of their respective energies by the *Log View-R™*. The upper sweep was taken at the receive site and shows the radio's 20 MHz-wide Carrier, centered at 5.735 GHz. The second sweep is the Interference recorded at the same location with the radio off.
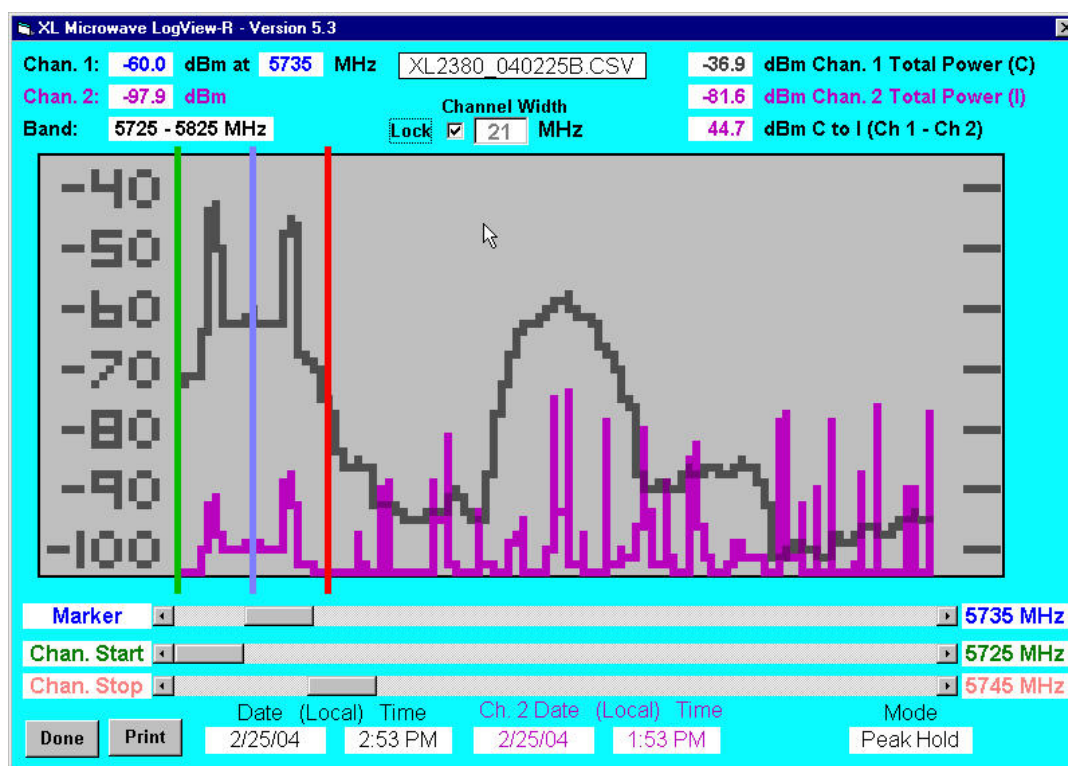
The display duplicates the display on the *Analyze-R™* at the moment the data was recorded. The adjustable blue **[Marker]** can be moved over the sweep to focus on a specific 1 MHz-wide data point and duplicates the Marker function on the instrument. The marker intercept of each sweep's frequency and power is displayed in the upper left of the page: -60.0 dBm for the top trace (Chan. 1); -97.9 dBm for the bottom trace (Chan. 2); both at 5735 MHz. The 100 MHz-wide display shown is identified below the marker information. The adjustable green marker **[Chan. Start]** sets the start point of the measurement channel. The adjustable red marker **[Chan. Stop]** sets the stop point. The Total Channel Power of each sweep, defined by the spectrum captured between the green and red markers, is constantly computed and displayed in the upper right of the page. The difference between the Total Channel Power of the two sweeps is displayed as C to I, in dBm (total Carrier Power to total Interference Power). This display shows the fade margin (C to I) of the link at a 20 MHz-wide bandwidth, centered at 5735 MHz. In this example the Channel width is set at 21 MHz and locked (upper center of screen) so one can move the locked channel width back and forth across the 100 MHz-wide band to look for the best fade margin location within the radio's 20 MHz-wide carrier bandwidth.

The *Log View-R™* makes real world Carrier and Interference Analyzation quick and accurate. The ability to automatically compute Total Channel Power across the radio's defined channel width, for both the radio's carrier and the interference the receiver sees, is a great time saver. In addition, being able to rapidly 'look' across the entire band, through the radio's channel bandwidth, quickly tells you where to set the radio's center frequency for the best fade margin location.
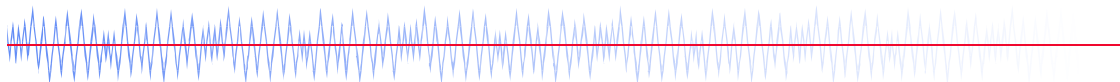
Unattended Data Recording for the *Analyze-R*™

This new feature is a major addition to the *Analyze-R*™ and *Log View-R*™ software. The *Analyze-R*™ can now be programmed to make unattended measurements at remote sites, allowing the instrument to operate on its own, recording and logging frequency spectrum and power data without the requirement of on-site personnel. Using the *Log View-R*™ software, you can set the 'Start Date/Time' and the 'Stop Date/Time' for data collection as well as the 'Recording Rate' (e.g.: make a record every 30 seconds; or every 5 minutes; or every 30 minutes, etc.). You can specify that the instrument observe a 'Single Frequency' or one of the 100 MHz-wide 'Bands' and capture the amplitude levels in either 'Peak Hold' or 'Average' mode. A minimum amplitude 'Threshold' may be set (from -40 dBm to -90 dBm, in 5 dBm steps) which tells the instrument not to make a record if signals do not exceed this specified power threshold. Up to 255 band sweeps or single frequency records can be saved to the instrument's non-volatile internal memory. The unattended programming setup can be downloaded to the instrument or saved as a file and sent to a remote location for downloading to a remote instrument at a later date.

Unique Capability. 'Unattended Data Recording' provides site analysis of interfering signals which may only show up at irregular times of the day or night. It is now practical to do site analysis over many hours or days, insuring a fuller understanding of the possible interfering signals present. This feature is both useful for surveying of potential new site locations as well as analyzing sources of problems with existing sites.

Above is a graphic example of what the 'Unattended Setup' page in the *Log View-R*™ software looks like. It is activated from a soft button on the main page of the software. The left hand section of the page (New Setup) is where you set the parameters for Unattended Recording. The center section tells you what, if any, information is currently stored in the instrument and how many records will be generated from the setup you programmed (Automatic Records). The right hand section is for loading, saving, downloading, printing, etc. your setups. The grayed-out windows and buttons indicate that these functions and windows are not active because the *Analyze-R*™ is not currently connected to the PC.