



Application Note

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How to use the spectrum screen feature of the AI Turbo S2 satellite meter

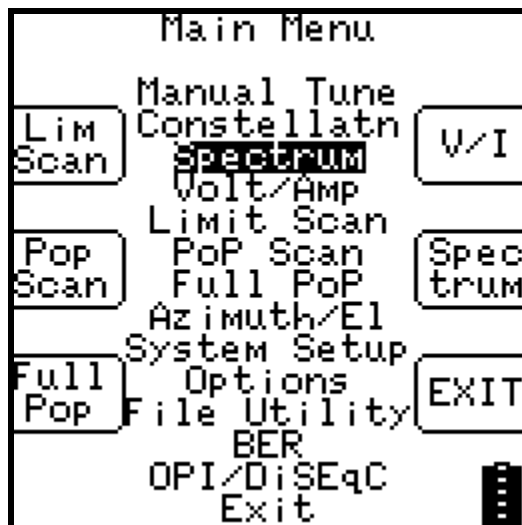
The spectrum screen may be used to:

- Look for the presence of carriers
- Look at a carrier with an incompatible modulation type or encryption
- Optimize your polarity adjustment (null out the opposite polarity)

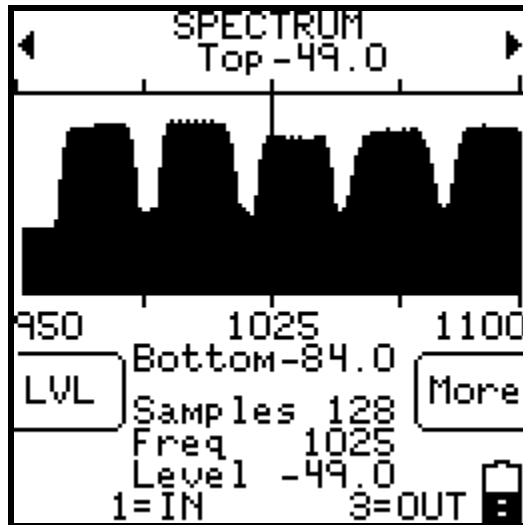
This feature imitates a spectrum analyzer screen although it has less resolution and a much slower sweep rate than an actual spectrum analyzer. This screen has the following features:

- Adjustable frequency span
- Automated level scaling
- Frequency and level cursors
- Adjustable sweep rate

To view the spectrum display, press the MENU soft-key in bottom right hand corner of main Run screen. Then use your up/down arrow keys to highlight "Spectrum" and press the Enter key.



The spectrum screen will start sweeping with the maximum frequency span and amplitude range.



Cursor Position

Press Up/Down arrow keys to move cursor vertically to different amplitude levels on the y-axis. The level (Level) at the cursor position is shown in the bottom center area of the screen. Note: Signal Level displayed will depend on whether you have selected dBm, dBmV, or dB μ V in the Options menu.

Press Left/Right arrow keys to move cursor horizontally to different frequencies on x-axis. The frequency (Freq) of the cursor position is also shown in the bottom center area of the screen.

Span

Press the 1 key on the numeric keypad to zoom in (less span). This will cut the displayed span in half around the cursor's frequency position. Minimum span is 50 MHz.

Press the 3 key on the numeric keypad to zoom out (more span). This doubles the displayed span around the cursor's frequency position. Full span is 1200 MHz (i.e. 950 to 2150 MHz).

Paging

Press the upper left soft-key to "page" to the left, changing the start and stop frequencies (when not at full span). Press upper right soft-key to "page" to the right.

Amplitude Range

The default amplitude range shown on the spectrum display is -70 to -20 dBm. To change the amplitude range, press the LVL soft-key in bottom left hand corner of LCD screen to turn auto scaling on or off. This will rescale the amplitude range to the min/max amplitude levels detected during the last sweep. When on, the level scaling will be adjusted to make the measured signal levels more obvious.

Resolution and Refresh Rate

Press +/- key on numeric keypad to change the sample rate (samples per sweep). You can choose between 32, 64, or 128. 32 samples results in lower resolution and less detail, but a faster sweep. 128 samples results in a higher resolution and more detail, but a slower sweep. By default, the meter measures 128 samples (1 pixel per sample) to create a picture of the power spectrum.

Press EXIT soft-key in bottom right hand corner of LCD screen to return to main Run screen.