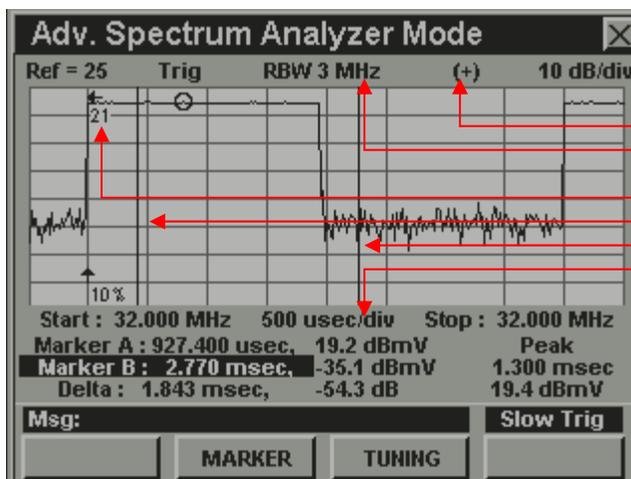




860 DSP Zero Span

Zero Span on a spectrum analyzer is a powerful tool for viewing and measuring transient signals or ingress. Place the 860 DSP in Zero Span by setting the start and stop frequencies to the same frequency. In Zero Span, the display changes from an amplitude versus frequency display to an amplitude versus time display at the specified center frequency. The Resolution Bandwidth chosen will limit the bandwidth around the center frequency of the signal displayed. For instance, when viewing a CW (continuous wave) carrier the signal has a very small bandwidth and should have constant power at the center frequency. On the 860 DSP in Zero Span, a resolution bandwidth as small as 10 kHz will show all the power contained in the CW signal and should show a flat line across the screen at the level of the carrier. An NTSC video signal, however, has a bandwidth of around 4.2 MHz, and to accurately see the horizontal sync pulses the Resolution Bandwidth would need to be set to at least 300 kHz.



- Trigger setting (+, -, or Auto)
- Resolution Bandwidth (RBW)
- Trigger Level
- Marker A
- Marker B
- Time/Div

The amplitude variations displayed can include cable modem bursts, intermittent ingress, and noise. Since the 860 DSP is always tuned to the center frequency, extremely fast transients can be viewed.

Using Zero Span, the user can measure the transmit level of cable modems. With triggering, modem off time can offer a chance to measure the noise floor as well as interfering signals. A trigger level set just below the maximum amplitude of the modem transmission will allow the 860 DSP to show the modem's transmitted burst at a fixed location on the screen. To view the noise floor and interfering signals, zoom out by increasing the time/division until the end of the modem burst is found. Signals seen while the modem is off, or a noise floor that's too high, could contribute to upstream bit errors and affect throughput.

For Additional Help Contact
 Trilithic Applications Engineering
 1-800-344-2412 or 317-895-3600
support@trilithic.com or
www.trilithic.com

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