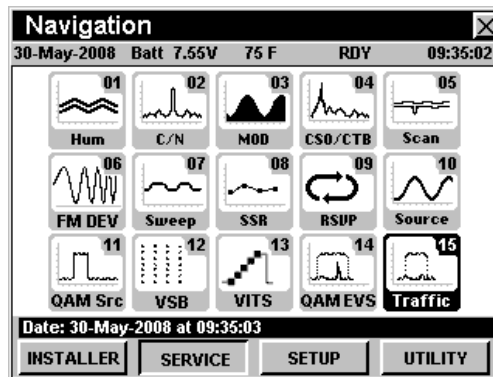


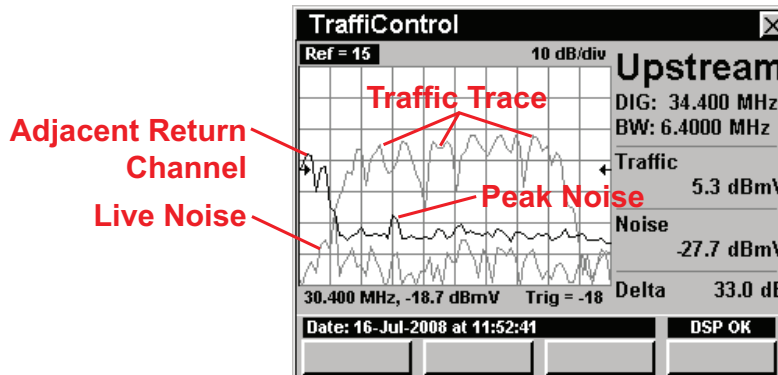


860 DSPi Upstream TrafficControl

As the upstream spectrum of cable systems becomes more and more crowded with newer and better services, it becomes more and more challenging to troubleshoot. Ingress and transient impulse noise commonly interfere with upstream signal transmission. Up to this point viewing this interference on an analyzer has been difficult at best, because the spectrum display shows the highest signal at any given frequency, and if things are working according to design, this will be the service signal. Some may suggest using a “min hold” feature to eliminate the time division multiplexed signal and reveal the spectrum below. The problem with this technique is the interference will be minimized as well, possibly even removing the transient interfering signal from the display by showing only the minimum measured levels at each point of scan resolution.



The 860 DSPi TrafficControl option (see Traffic icon on navigation menu) can be used to see the ingress that is present “underneath” an upstream cable modem channel, or any bursty signal.



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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The mode provides a fixed frequency span of 8 MHz. The user enters the center frequency of the upstream cable modem signal (DIG:), and the bandwidth (BW:). (DOCSIS and EuroDOCSIS upstream bandwidths are 200 kHz, 400 kHz, 800 kHz, 1600 kHz, 3200 kHz, or 6400 kHz).

The TrafficControl display shows three traces: a Traffic trace, a Live Noise trace, and a Peak Noise trace. The Traffic trace (gray) shows the last captured signal containing traffic. The Live Noise trace (gray) shows the last captured signal without traffic. And the Peak Noise trace (black) shows a persistent peak hold of the noise trace. This simple and comprehensive display enables a user to see what is currently happening, as well as capture peak interference levels of transient signals during the time that the measurement is being made.

The total power relative to the user entered bandwidth is displayed for “traffic” (the service signal) and “noise” (the spectrum beneath the signal). The “delta” measurement shows difference between the total power of traffic and the total power for noise in the last capture.

A “trigger level” is used to separate traffic from noise, and this level is entered by the user. The recommended setting for the trigger level is about 10 dB below the level of the traffic signal. If the Total Power within the upstream channel bandwidth (BW) is greater than the trigger level (Trig) then the channel was active and the Traffic trace is updated and the Traffic level shows the Total Power. If the Total Power within the upstream channel bandwidth (BW) is less than the Trigger Level then the channel was not active and the Live Noise trace is updated and the Noise level shows the Total Power.

Traffic Mode allows the user to control the RF front end attenuator by using the **Ref** field in the top left of the display. If the reference level is set too low, then the Overload message appears in the bottom right of the display. If the Overload message appears then the Reference Level needs to be increased until the Overload message no longer appears.

The TrafficControl option is now available, option P/N 0930081014. 860 owners with the latest firmware update (version 8.1.10.1) may activate the option in the field by purchasing a key code.

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