TRILITHIC **Application Note**

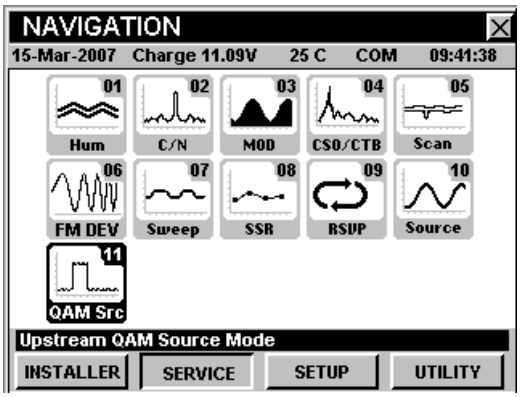
860 DSPi QAM Source

QAM Source

The QAM Source generates a QAM signal, typically at a remote test point on the network, and the signal quality is analyzed upstream (typically at a node, hub or headend). This is one means for verifying the transmission capability of a particular segment of the network for higher order QAM signals. Cable systems have stepped from QPSK to 16 QAM and now are moving to 64 QAM for upstream data transmission.

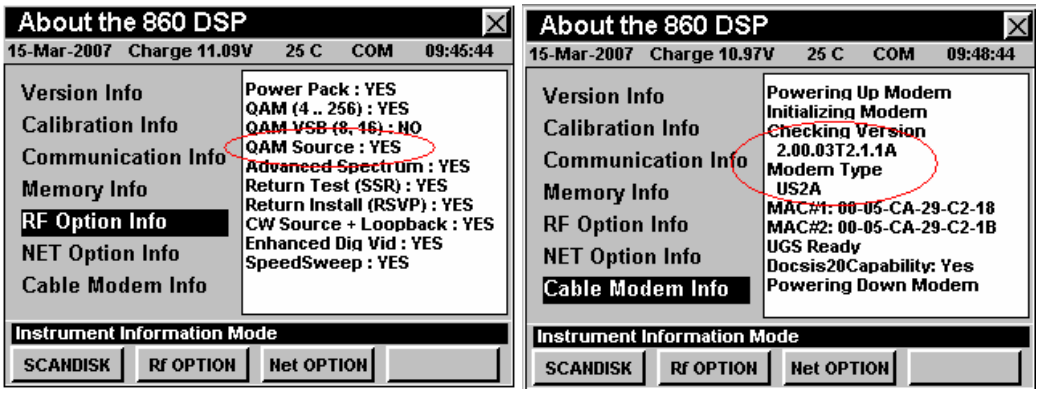
How Does My 860 DSPi Utilize QAM Source?

The 860 DSPi can transmit a QAM signal (using the center SLM port because this port connects to the internal cable modem) using the US DOCSIS upstream format. QAM Source is a standard 860 DSPi feature beginning in March 2007. Contact the factory for retrofit information. A new icon was created for this mode and since it utilizes the internal cable modem, this mode is not available on a standard 860 DSP but only on 860 DSPi's.



How Can I See if My 860 DSPi Supports QAM Source?

The easiest method to see if your 860 DSPi supports QAM Source is to go to the Information Menu on the Setup TAB. Examine the RF Option Information List and see if you have the option.



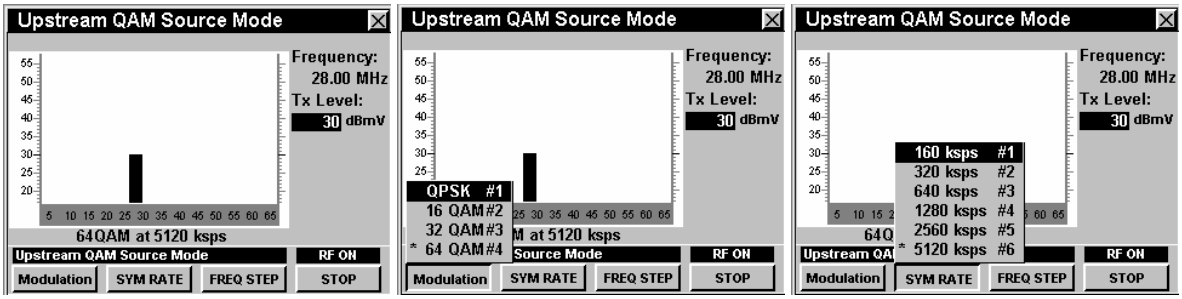
For Additional Help Contact
Trilithic Applications Engineering
1-800-344-2412 or 317-895-3600
support@trilithic.com or
www.trilithic.com

How Do I Use the QAM Source Menu?

The QAM Source menu works very similar to the regular Source menu. You can select the center frequency, power level, modulation type, and symbol rate.

> **Note:** Changing the Symbol Rate will change the bandwidth of your signal. The screen shows an approximation of this effect but the actual response may be slightly wider than shown. Be careful when changing the symbol rate if you placed your QAM Source signal close to active return band traffic.

> **Note:** Be careful when changing the power level if you placed your QAM Source signal close to active return band traffic. Perform a CM STAT test and set the power level based on the power level indicated in the test results.

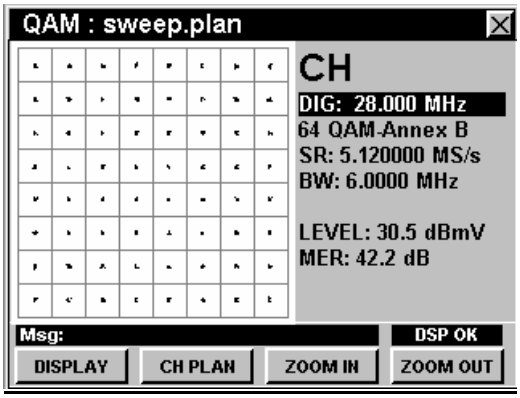


How Do I Analyze the QAM Source Signal on a Second Meter?

The QAM signal can be received using software QAM or hardware QAM (Enhanced Digital Video Board equipped meters) to read Level, Constellation, and MER as shown here.

> **Note:** The BER is not displayed because the QAM Menu works with downstream formats which are different from the upstream formats.

After entering the QAM measurement mode on the 860, tune to the center frequency of the upstream QAM test signal.



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