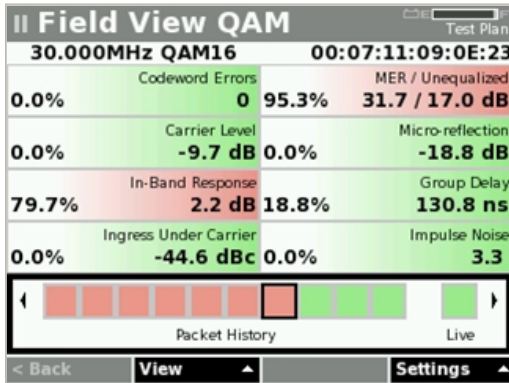


# Field View QAM™

## A Simple, Single-Technician Troubleshooting Tool used to Locate and Repair Hard-to-Find Impairments on the Return Path



Field View QAM on DSAM<sup>XT</sup>

### Key Benefits

- Protects revenue by lowering risk of customer churn due to repeat fault finding or repairs and increases subscriber satisfaction by proactively fixing the worst linear impairment issues
- Enables viewing upstream service impairments that spectrum analysis misses
- Enables one-person troubleshooting of both in-home and HFC service issues
- Lowers OpEx by reducing repeat truck rolls

### Applications

- Quickly segment faults from customer premises versus HFC
- Troubleshoot live modems (in-band and in-service)
- Detect codeword errors and extract MAC addresses
- Identify micro-reflections, in-band frequency response and group delay issues

The next-generation JDSU Digital Services Analysis Meter (DSAM) software brings a host of new capabilities to the already versatile DSAM<sup>XT</sup> family. DSAM Field View QAM makes troubleshooting modem issues a one-person job, reducing find and fix time and manpower overhead while improving and streamlining field operations.

Protect revenue by lowering risk of customer churn due to repeat fault finding or repairs and increase subscriber satisfaction by proactively fixing the worst linear impairment issues. Most managers and supervisors can access node health information from their Cable Modem Termination System (CMTS). Knowing the impact of impairments on subscriber service enables them to identify the top offenders on these reports, find the cable modem Media Access Control (MAC), and subscribers' street addresses. They can then dispatch technicians to identify and fix the most critical issues proactively with Field View QAM before complaints occur, which increases both overall node health and subscriber satisfaction.

See upstream impairments that are invisible to spectrum analyzers and sweep tools. Observing a clean spectrum with traditional spectrum analysis tools may indicate a pristine return path; however, the overall node health reported by the CMTS and other reporting tools show a low health score, even after teams of technicians have been working on the node cleaning up noise issues for weeks at a time. With Field View QAM, technicians can quickly identify micro-reflections, in-band frequency response, and group delay issues. Armed with the DSAM in conjunction with MACTrak™ technology in the PathTrak, technicians can easily verify the overall health of return path carriers.

# Field View QAM

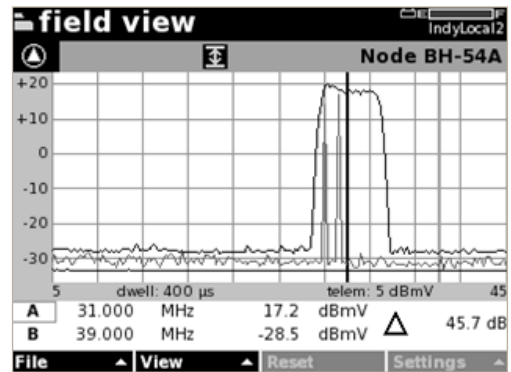
One-person troubleshooting of cable modem issues confirms in real time that service-impacting impairments have been fixed. A DSAM<sup>XT</sup> with Field View QAM can automatically/independently deliver the PathTrak MACTrak Impairment Dashboard to technicians in the field. A simplified impairment dashboard with key measurements displayed in green and red provides a quick Go/No-Go indicator to technicians, confirming whether issues causing codeword errors such as microreflections and impulse noise have been fixed.

Simplified troubleshooting of live modems (in-band and in-service) with codeword error detection and MAC address extraction. Filtering on specific MAC address (CPE, CM, or DSAM-only) enables MACTrak to identify and demodulate these specific packets. Data, such as unequalized modulation error rate (MER), micro-reflection, in-band response, and group delay, are transmitted back in real time to the DSAM. Packets are also shown in color on the DSAM<sup>XT</sup> in a time chart as the MACTrak demodulates them—green indicates a packet is clean and not affected by impairments and red indicates a packet with impairments. Field View QAM enables technicians to quickly locate damaged cable, bad and corroded connectors, and water-damaged components, which are common sources for linear impairments. Put the power of MACTrak to work in the field and find the linear impairment sources fast.

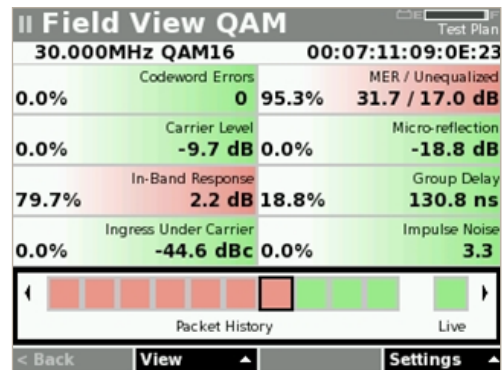
Eliminate having to carry a laptop while working in the field. Technicians work in bucket trucks, backyards, hard-to-get-to locations, basements, and crawl spaces to access amplifiers, splitters, and other components in the HFC network. It is difficult and impractical to carry both a DSAM and a laptop around to diagnose, locate, and fix the issues and then verify that it is fixed. Current solutions typically require technicians to return to their truck to see the WebView Impairment Dashboard. Having this dashboard on the DSAM provides significant time savings.

Field View QAM is fully interoperable with the PathTrak Return Path Monitoring System with RPM3000 or HCU200, based on the ground-breaking MACTrak technology from JDSU.

**Reduce mean time to repair (MTTR) and increase subscriber satisfaction (QoE) by fully utilizing your investment in the DSAM and PathTrak RPM3000/HCU-200 with MACTrak!**



Impairments invisible with spectrum analysis



Same impairments visible with Field View QAM



PathTrak Dashboard in WebView™



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