



Enabling Australia's Field Technicians to build, troubleshoot and maintain better communications networks.



This reference material is provided by TMG Test Equipment, VIAVI's **only** Master Distributor for Contractors in Australia



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FREECALL 1800 680 680

MSQ-900 MicroStealth QAM

QAM Signal Level Meter



Key Features

- Complete 5-1000MHz analog and digital measurement solution
- MER, pre- and post-FEC BER, digiCheck™ digital power level
- Analog video level, V/A level, C/N
- AutoTest, fast automated testing to qualify multiple digital and analog channels with Pass/Fail indication
- AutoPlan™, industry-leading automatic channel plan builder with digital QAM detection
- Scan and Tilt measurements show frequency distortion problems

JDSU, home of Wavetek™ field meters, provides a new level of value and performance in a QAM signal level meter (SLM). The MicroStealth QAM SLM is an ideal tool for field technicians seeking a single tool to quickly ensure the quality of digital cable services.

The MSQ-900 is simple and compact, yet packs an impressive feature set with remarkable performance. It provides all the necessary tests for verifying digital and analog cable services up to 1GHz. The digital measurements include digiCheck digital signal level, modulation error ratio (MER), and pre- and post-FEC bit error ratio (BER). The MSQ-900 also possesses the features expected in a good SLM including analog channel video level, video-to-audio level, carrier-to-noise (C/N), full scan, and tilt.

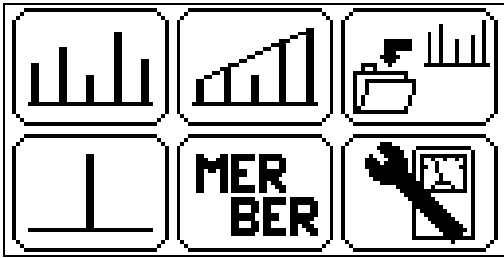
Applications

- Accelerate the digitization of cable services while ensuring quality of service
- Reduce the service call rate by properly testing digital services quickly at every install
- Troubleshoot analog and digital services faster by isolating problems quickly
- Increase the consistency of field technician performance
- Cost effectively deploy your QAM SLM to the field workforce with confidence in quality and performance

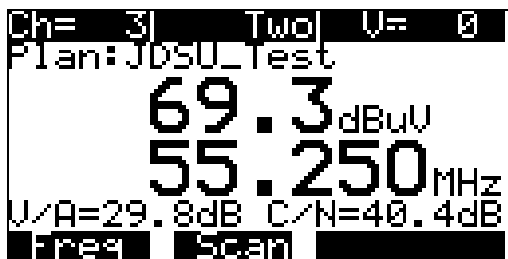
In addition to verifying digital and analog services, the MSQ-900 can also accomplish its tasks quickly and efficiently. Users can reach all tests with one button press from the main menu, making training an issue of the past. An automated test feature lets users execute a set of user-defined tests with Pass/Fail indication to ensure that tests are performed consistently at each installation without wasting time.

The MSQ-900 addresses the traditionally difficult task of configuring an instrument to perform digital measurements, including MER and BER. The new AutoPlan functionality automatically detects channel type (analog or digital), the QAM type (64, 128, or 256-QAM), symbol rate, and spectral inversion. Users only need to select the correct channel plan template and the MSQ will automatically build a channel plan based on the live signals it discovers.

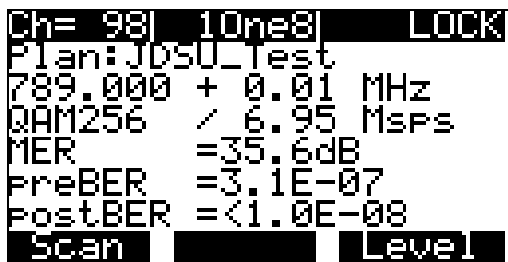
Don't let the compact form factor of the MSQ-900 fool you; inside it contains a performance measurement engine of the highest quality and accuracy. Achieving this level of performance in a highly portable instrument is a technical achievement that can only be achieved by a brand with an outstanding track record, heritage, and technical expertise.



The Main Menu of the MSQ-900 is narrowed down to the top 5 tests most commonly performed and icon based for ease of use and to simplify training



MSQ-900 performs signal level measurements on both analog and digital signals and displays the information on one screen



The MSQ-900 performs QAM testing on QAM64/128/256 providing results for MER and Pre/Post BER measurements



MSQ-900 can also perform full channel plan scans and Tilt measurements to easily identify problems in the network



Signal Level Measurements

The MSQ-900 can measure signal levels of both analog and digital carriers. For analog signals the meter will display the video carrier level, video frequency, carrier to noise (C/N), and video to audio delta. For digital channels the MSQ-900 measure the digital average power of the digital carrier. The center frequency is also displayed. To allow additional flexibility the user can choose to tune the MSQ-900 by either the programmed channels in the channel plan or by frequency.



Scan Mode

The MSQ-900 allows users to see all the channel levels in one screen. This allows users to quickly verify if certain channels are missing or if the network has other issues such as roll-offs or suck-outs. An adjustable marker is available to identify specific channels and to troubleshoot issues. Users are also able to view the upstream band by using the return scan to look for ingress signals present in the customer premise.



Tilt Mode

The MSQ-900 can show if the network being tested has a positive or negative tilt over channel frequencies. The user can quickly adjust which tilt channels are measured to help identify proper tilt settings.



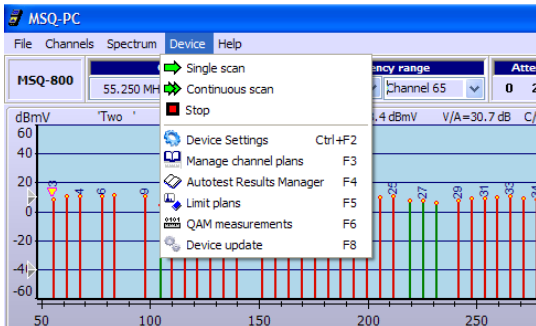
MER/BER Mode

In MER/BER mode digital QAM Annex A, B, or C channels can be tested for digital quality measurements and their MER and Pre and Post BER is displayed. Also the digital carrier's modulation information is also displayed (QAM64/128/256 & Msps).

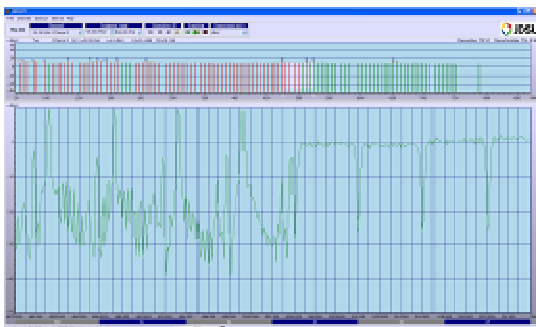


Autotest Mode

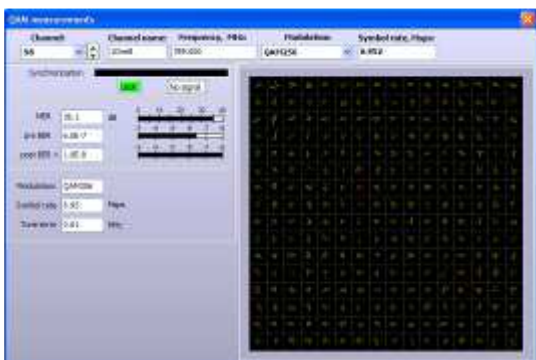
Automated testing can be performed with the MSQ-900. Using Autotest mode technicians can perform Pass/Fail tests and upload results via MSQ-PC software application for record keeping. It simplifies verification testing and maintains consistent testing parameters.



With the MSQ-900 connected to the MSQ-PC users can access meter settings, channel plans, limit plans, and Autotest results.



The MSQ-PC main screen shows the active channel plan's Fullscan levels and individual channel measurements. On the lower panel the MSQ-PC allows users to view the spectrum of live RF signals



MSQ-PC also allows users to have access to more QAM measurements such as the QAM signal's constellation diagram which is not visible on the MSQ-900 meter itself

MSQ-PC

MSQ-PC is the computer software application, included with the MSQ-900, is used to quickly and efficiently configure the MSQ-900. The MSQ-PC connected via USB to the MSQ-900 helps the user configure settings, channel plans, limit plans, and update the MSQ-900. It is also used to extract Autotest results for record keeping and archiving and performing live measurements when connected to RF signals.

Channel Plans

Channel Plans can be created either by using the AutoPlan™ method on the MSQ-900 device, on the MSQ-PC from scratch, or using the MSQ-900 in combination with the MSQ-PC to make final edits and modifications. With the ability to transfer channel plans between MSQ-PC and the MSQ device modifications can be made quickly as channel plans evolve.

Autotests

Results from Autotests are easily uploaded from the MSQ-900 to MSQ-PC for printing or record keeping. As technicians finish jobs they can connect test results to their jobs by using MSQ-PC to print up Autotest files or electronically attach them to other files.

Channel Scan

When the MSQ-900 is both connected to MSQ-PC and a RF signal live measurements from cable plant are taken. One such live measurement is a Fullscan of the active Channel Plan. Graphical representations of video levels are shown in the top window. Information on individual channels can be seen by simply clicking on the desired channel.

Spectrum

Another live measurement of the MSQ-900 connected to the MSQ-PC software is a live view of the active spectrum. The user can specify the frequency span desired by clicking and dragging a start and stop marker in to the desired frequencies.

QAM Measurements

Using the MSQ-900 connected to the MSQ-PC users can also view QAM measurements such as MER, Pre-BER, Post-BER, and constellation diagram of a specific QAM64, QAM128, or QAM256 channel.