TECH-X FLEX
RF VIDEO TEST MODULE

Spirent's RF video module for Tech-X Flex® offers a range of features to fully test and analyze both analog and digital RF-based video signals. The delivery of video using RF-based methods remains widespread and it is essential to test and verify its operation in a quick and timely manner.

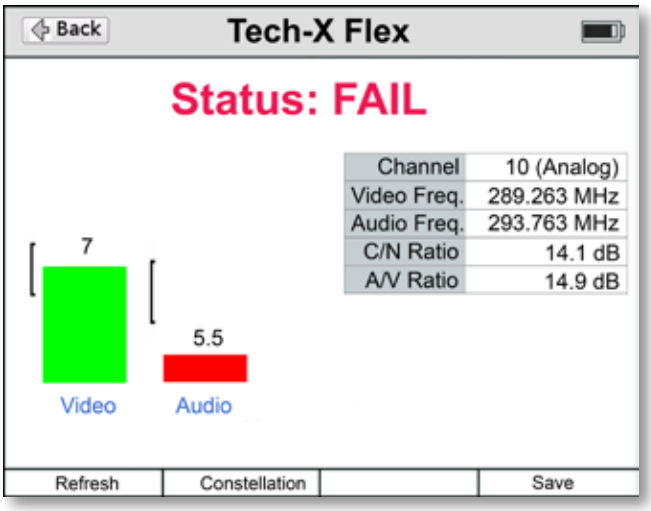
FEATURES AND BENEFITS

- The Digital and Analog Signal Level Measurement provides a single solution for both analog and digital channel lineups, reducing time and capital equipment costs
- The constellation measurement, quickly identifies digital impairments on 64QAM and 256QAM systems
- Imported channel guides reduce the time required to configure the test set to make a measurement
- Channel Sweep testing of up to 5 channels quickly verifies all digital and analog tests with the touch of one button
- Fully adjustable thresholds provide quick pass/fail indications on measurements to ensure service specific thresholds are met before closing the work order
- Full VGA color display aids in technician's problem identification and efficiency as pass and fail thresholds are presented in green and red, respectively

With the RF Video Test module, a base Tech-X Flex and other optional features such as WiFi, MoCA and more, it is the only field device needed to comprehensively install and maintain residential services. The Tech-X Flex enables the presentation of these results in a simple and intuitive manner which aids the technician's understanding and efficiency in both installation and troubleshooting type scenarios.

ANALOG CHANNEL MEASUREMENTS

Along with signal level measurements of both the video and audio carriers of analog channels, Tech-X Flex also provides the Carrier to Noise (C/N) ratio, Audio to Video (A/V) ratio and more. This ensures the analog channel lineup can be confidently delivered to the customer.

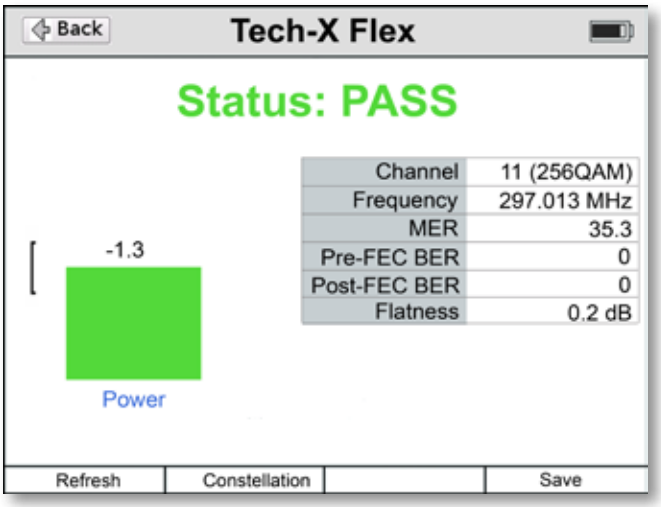


DIGITAL CHANNEL MEASUREMENTS

Digital signals differ from analog signals in that they may appear to be operating correctly but can in fact be close to failure. Measurements such as power level, BER, MER and flatness which are all presented on a single screen, allow the user to quickly verify the channel's performance and prevent subsequent problems in the future.

Both pre-FEC and post-FEC BER can be measured which enable the technician to understand how much forward error correction is being carried out by the system in order to eliminate errors in the path.

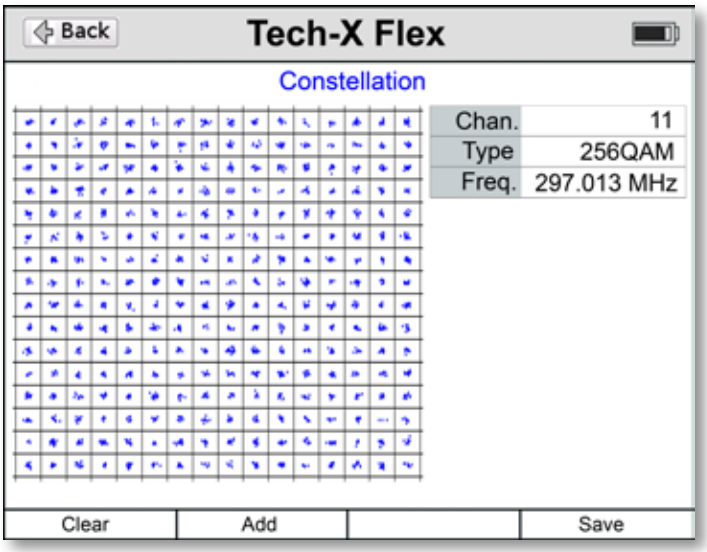
MER (Modulation Error Ratio) measurements are similar to signal-to-noise measurements carried out on analog signals. They provide the user with an appreciation of how much overhead the channel has before it could run into problems. It is great for providing early indications that there could be a problem with a channel resulting from non-transient noise issues such as ingress and laser clipping.



CONSTELLATION

The Constellation display is an invaluable tool for the technician when trying to measure the quality of the QAM modulated signals. By visually inspecting the size and shape of the dots within the constellation matrix, the technician can easily identify the nature of the problem such as noise, interference, phase noise, gain issues and hum.

Tech-X Flex can measure both 64QAM and 256QAM modulated systems as standard ensuring multiple transmission systems can be maintained.



TECHNICAL SPECIFICATIONS

GENERAL SPECIFICATIONS

75Ohm Coaxial Interface

F-81 Connector Type (Field Repiacable)

ANALOG MEASUREMENTS	
Tune Range	54 – 860 MHz
Signal Level Range	-30 to +30 dBmV
Video Signal Level Accuracy	± 1.5 dB
Audio Signal Level Accuracy	± 1.5 dB
Carrier to Noise Ratio	N/A
Audio to Noise Ratio	N/A
Channel Set	STD-EIA: North America
DIGITAL MEASUREMENTS	
Power Level Range Post-FEC BER	-30 to +30 dBmV
Multiplex Power Level	± 2.0 dB accuracy
MER Range	
-64 QAM	15 to 40 dB
-256 QAM	21 to 40 dB
MER Accuracy	± 2.0 dB accuracy
Pre-FEC BER	10-4 to 10-9
Post-FEC BER	10-4 to 10-9
Peak to Valley or Flatness	N/A
Constellation	64QAM or 256QAM

ORDERING INFORMATION	
Tech-X Flex	With 10/100 Ethernet interface for IP Ping, TraceRoute, DHCP/Static Addressing
RF Video Module	Analog and Digital Signal Level Measurements including pre-FFC and post-FFC BER, MER, Constellation for both 64QAM 256QAM systems

SPIRENT SERVICES

Spirent Global Services provides a variety of professional services, support services and education services—all focused on helping customers meet their complex testing and service assurance requirements. For more information, visit the Global Services Web site at www.spirent.com/gs or contact your Spirent sales representative.

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