

SRT AT2500RQ3 Spectrum/QAM Analyzer Refurbished & Calibrated plus AT2500RQv Series Training Video

This unit has been completely tested and refurbished so that it meets all original manufacturers' specifications. The sale includes the spectrum/QAM analyzer, AC power supply, new internal sealed battery, new CMOS battery, Cat 5 crossover cable; and a CD with Users Manual(s) and Reveal Wincom software. This sale also includes a 2 ½ hour training video that covers all aspects of the unit; including history of development, various models, manual operation, programmed tests, automated testing, and software capabilities.

Please review all photos (after this text section) for a gamut of tests conducted on both QAM and analog signals, plus spectrum analysis of signals from off-air antenna.

The Sunrise Telecom AT2500RQ series analyzer is a 1.5 GHz portable, battery operated RF spectrum analyzer designed specific to CATV/broadband maintenance and testing applications. Functions include basic spectrum analysis, automated CATV/broadband tools for daily testing and preventative maintenance, complete QAM analysis (20+ separate tests), and video demodulation test and analysis for locating faults or troubleshooting. *It includes internal bandpass and bandstop filters that are automatically selected depending on user entry i.e., the frequency and span selected.* The analyzer includes Ethernet connectivity for channel & test programming plus file transfers, and complete FCC proof of performance capability including QAM testing to ANSI/SCTE 40 2016 specifications *except for color testing*. For complete detail regarding the capabilities of the AT2500RQ3 series analyzer, search on-line for the appropriate spec sheet download.

Product Description

The 1.5 GHz AT2500RQ has intelligent band select filters that can automatically filter the input signal to prevent overloading, allowing this high sensitivity analyzer to be used to measure low level signals in a fully loaded cable system.

All CATV tests, including complete in-service RF testing for Proof-of Performance, can be executed quickly and accurately and without customer service interruptions.

Analog Features

- Carrier Level
- Carrier Frequency
- Hum
- CCN (Carrier to Composite Noise)
- CSO (Composite Second Order)
- CTB (Composite Triple Beat) In-Service Measurement available
- ICR (In-Channel Response)
- DOM (Depth of Modulation)
- Digital Channel Power

Digital Features

- 16/64/256 QAM DIGITAL MEASUREMENTS
- ITU-T J.83 ANNEX A, B & C COMPLIANT (DVS, DVB, DOCSIS, EURODOCSIS)
- HIGH RESOLUTION CONSTELLATION DISPLAY WITH ZOOM
- DATA LOGGING MODE OVER 1-60 MINUTES
- ADAPTIVE EQUALIZER DISPLAY WITH IN CHANNEL FREQUENCY RESPONSE AND GROUP DELAY
- RETURN PATH TESTING AND QUALIFICATION FOR VoIP
- MODULATION ERROR RATIO (MER) MEASUREMENT

- PRE AND POST BIT ERROR RATE TESTING (BER), REAL TIME AND AVERAGE
- AUTO ATTENUATOR SEARCH TO INSURE OPTIMUM QAM MEASUREMENTS
- POLARITY AUTO SEARCH FOR IF OR UP CONVERTED CARRIER FREQUENCIES
- QAM IMPAIRMENT ANALYSIS MODE
- ASI MPEG TRANSPORT STREAM OUTPUT AVAILABLE BUT NOT ACTIVATED

All these tests are easily performed by using the icons shown on the main MENU.

Specifications

- Frequency range: 1 MHz–1,500 MHz
- Impedance at RF input: 75 ohm
- Input Return Loss: >20 dB typical (>5 dB attenuation)
- Frequency Span Range: Variable from Max Span 1500 MHz to 100 kHz & Zero Span
- Sweep Time Range: 2ms, 4ms, 10ms, 20ms, 50ms, 100ms, 200ms, 500ms, 1000ms, 2000ms, 5000ms
- Resolution Bandwidth Range: 1 MHz, 300 kHz, 30 kHz & 10 kHz

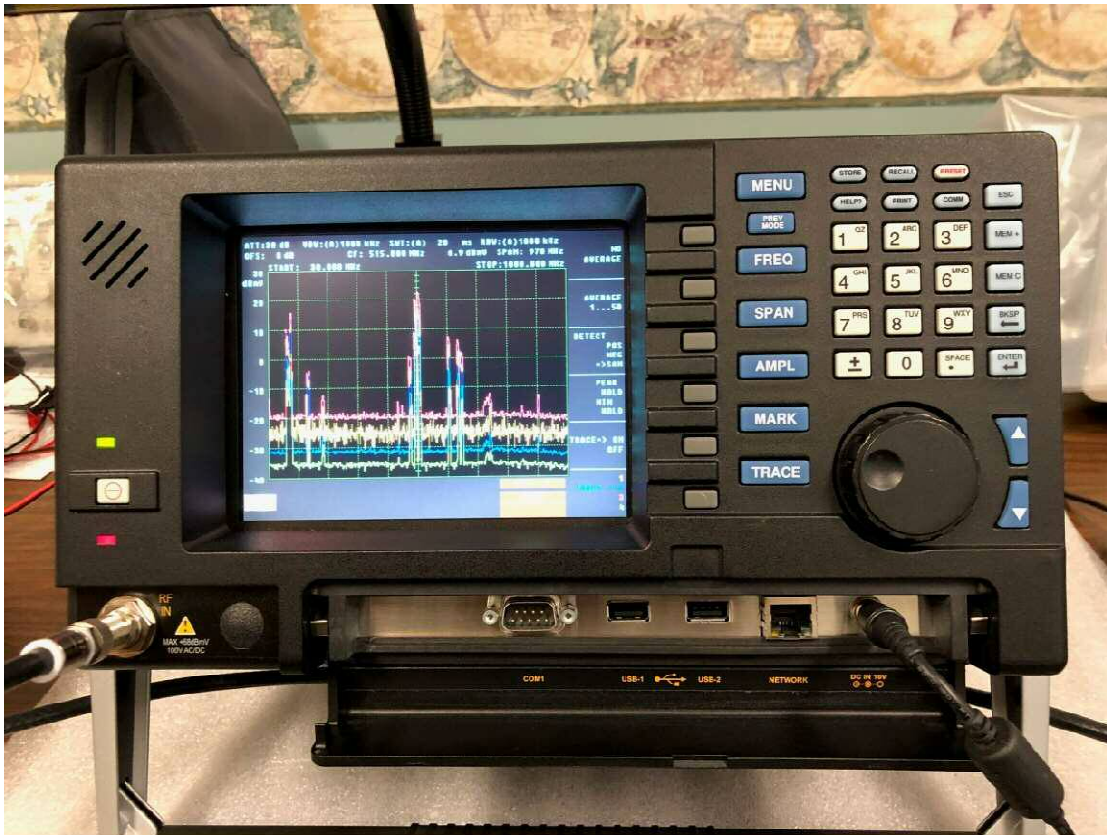
Specifics

- Unit guaranteed to be fully functional and to meet all original manufacturers' specs.
- The hardware and firmware in this unit do provide for *fully automated* analog and QAM testing *with activation of the AT-WEB option* in the firmware. This can be activated via keyboard entry, so the analyzer does not have to be returned to the factory when you purchase the option.
- Unit is in excellent condition, both electrically and cosmetically. There are a few scratches on the case as this unit was used in a headend and the case was lost. The front panel, keyboard, and screen are in excellent condition.
- When shipped, the unit will include a fresh calibration certificate and the calibration date (internal) will reflect the fresh calibration certificate.
- The unit has undergone multiple hardware and firmware tests. The unit will be shipped with the final 'stable' firmware version for v3 hardware (ver. 4.70.003).
- The automated bandpass/bandstop tracking filters are tested & fully functional.
- Includes an AC power supply, and a Ethernet cable for use with Reveal Wincom; for linking the unit with a PC for purposes of channel map programming and the transfer of files and waveforms.
- A new internal sealed battery has been installed that provides 2+ hours run-time. The battery installed exceeds the capacity of the original manufacturers' battery and has been 'load tested'.
- A CD will be provided with a User's Manual for v3 hardware, a User's Manual for the Reveal Wincom software, and the Reveal Wincom installation software. The software can be installed on multiple PC's and does not require registration.
- A DVD will be provide with 2 ½ hours of training on the analyzer including automated testing with the AT-WEB option.

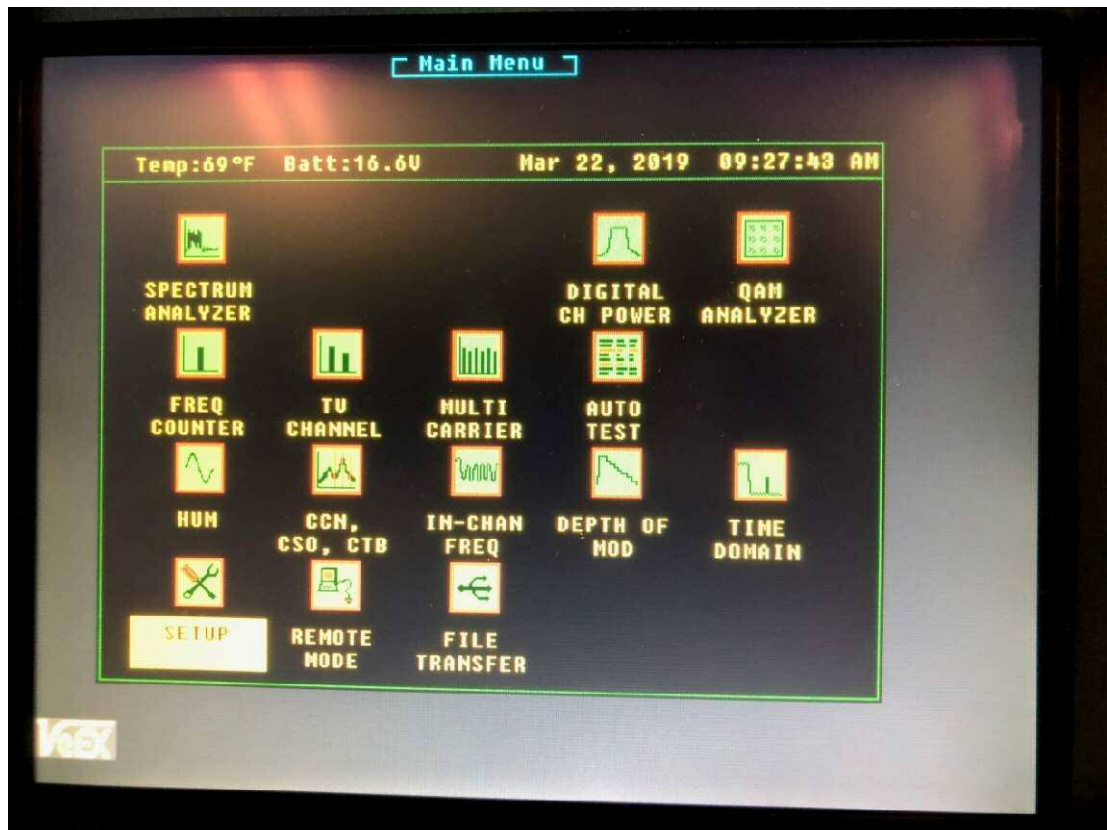
I provide repair and calibration support for version 1 thru version 3 hardware units, and this unit comes with a **60-day warranty** period. The warranty period begins the day the unit is delivered.

Shipping charges are based one buyer location and shipping weight using UPS Ground.

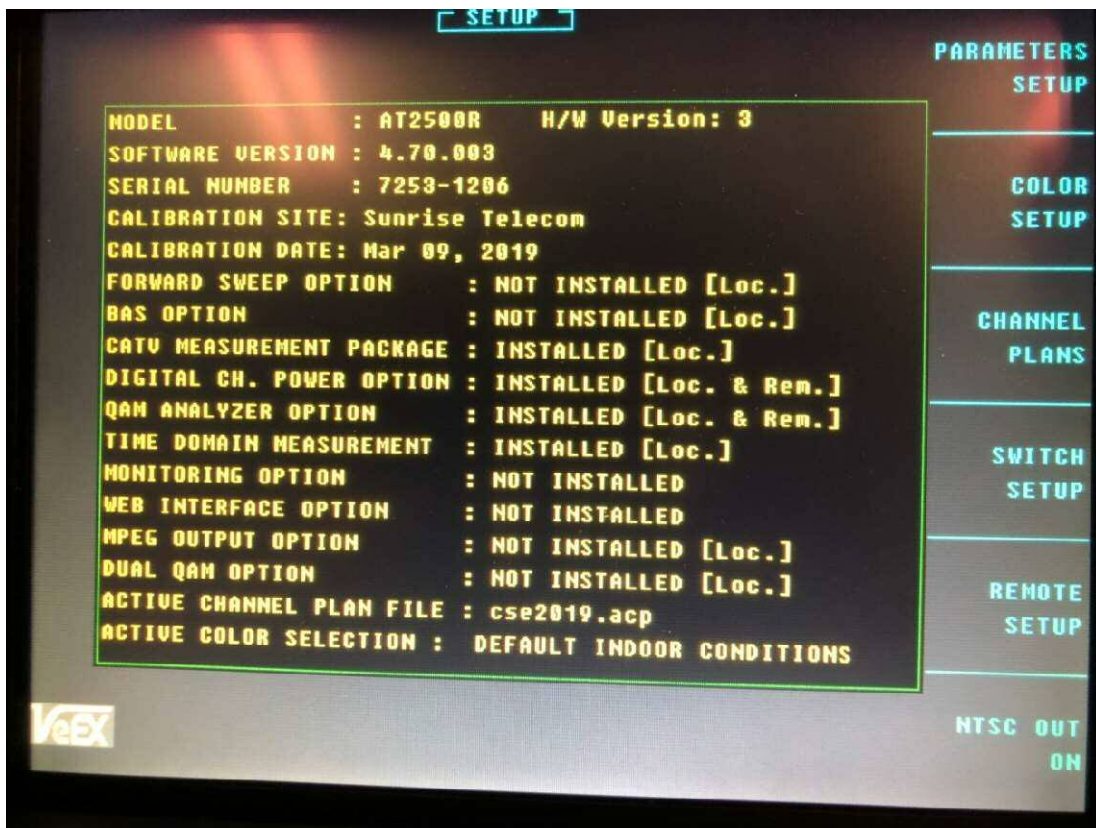
See photographs on the following pages for further information. Photos were taken of measurements on both analog and QAM carriers while running a variety of tests. This unit is capable of conducting all required analog and QAM FCC Proof of Performance tests *except the triennial color testing*.



Spectrum Analyzer Mode, 30 to 1000 MHz, all traces activated. Signals from off-air antenna



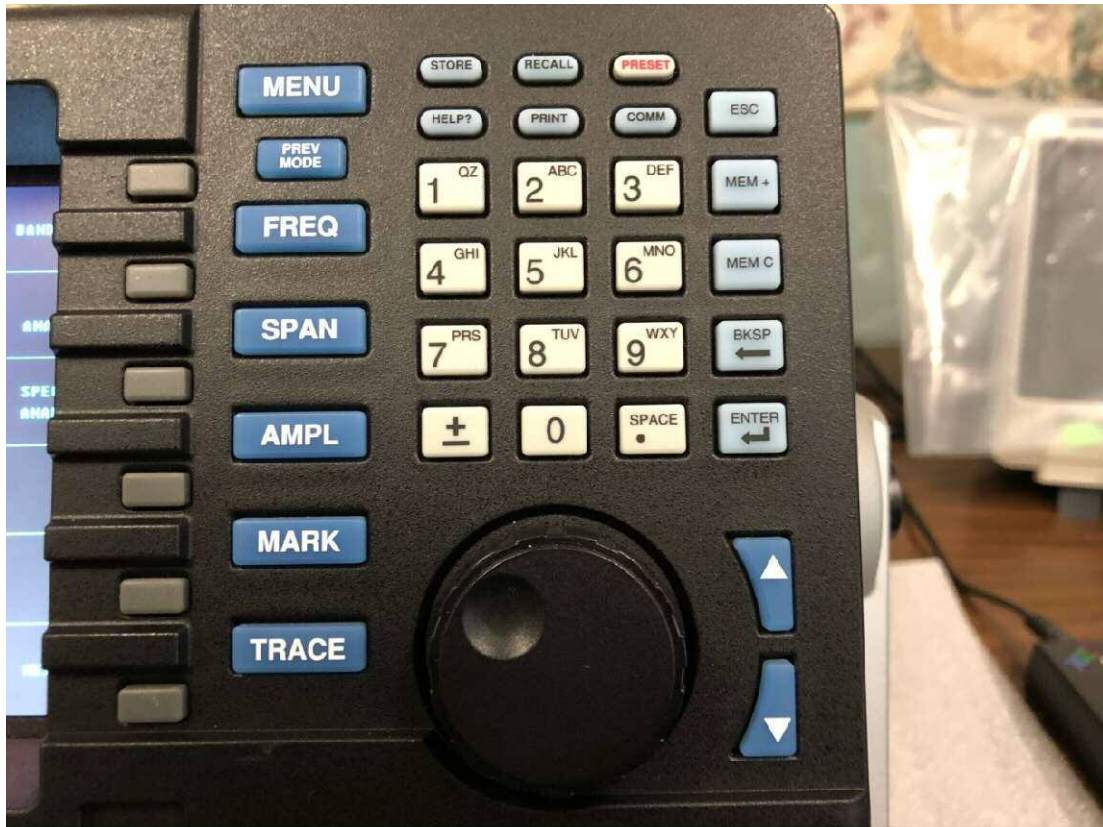
MENU screen. Color testing option not installed.



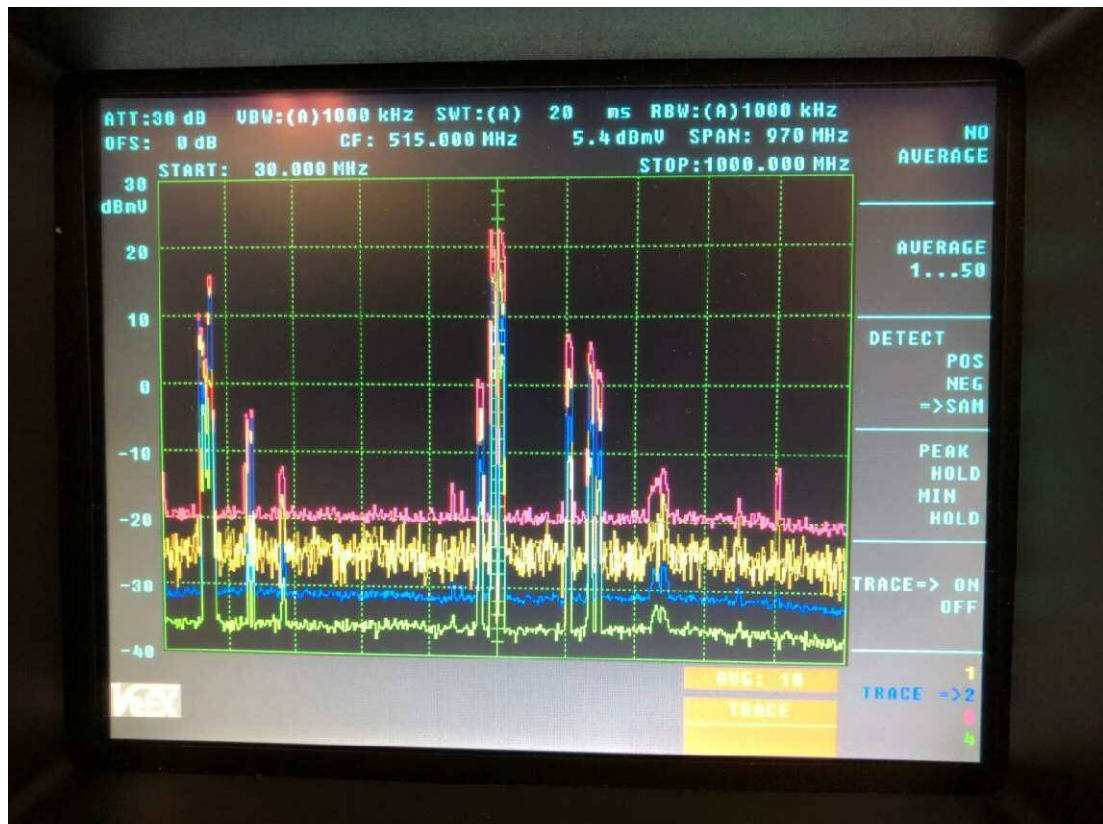
SETUP screen. Final stable firmware for version 3 hardware installed, Note recent calibration. Will receive final calibration before shipment.



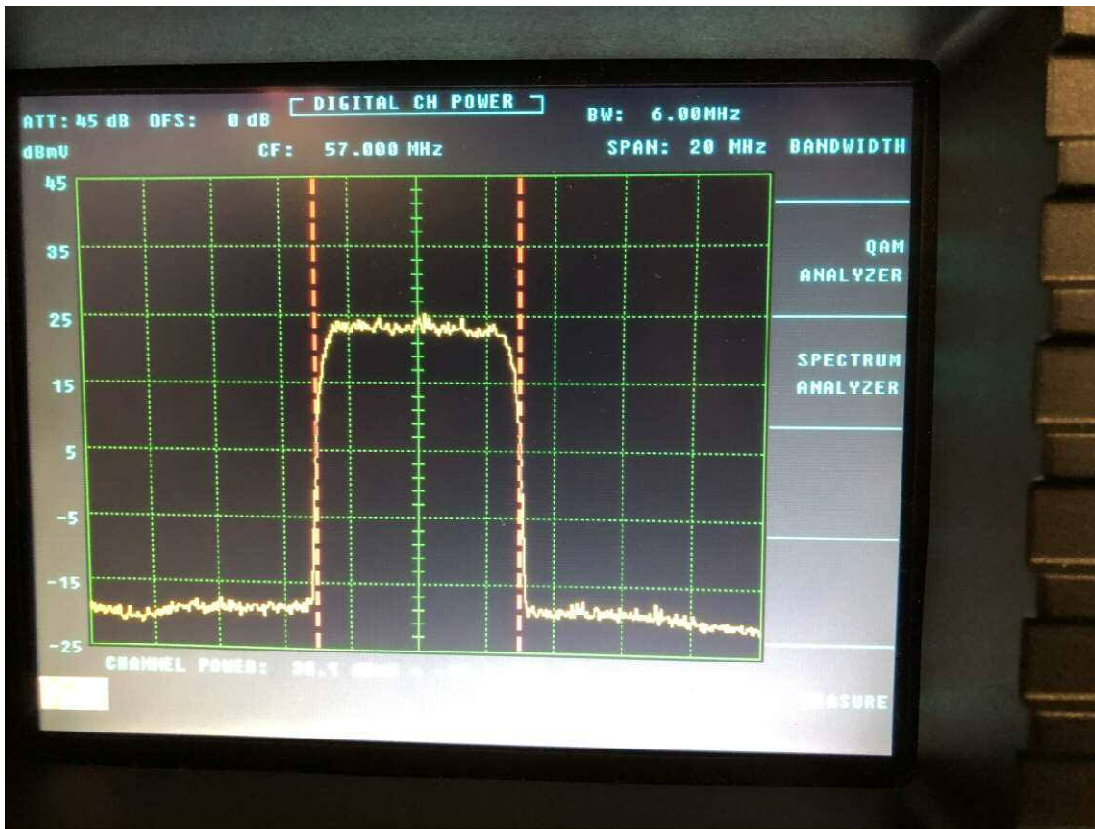
I/O Ports with door open



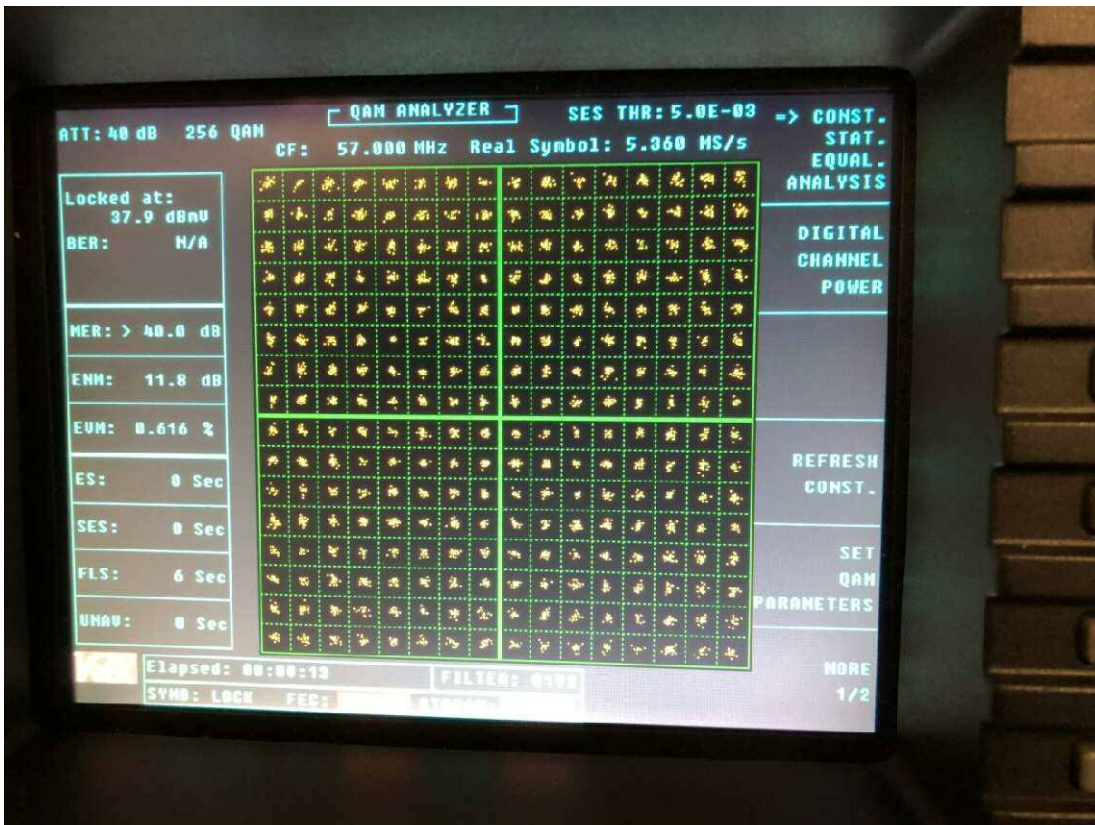
Keypad area is in excellent condition



Screen closeup, all traces activated, 30 MHz to 1,000 MHz



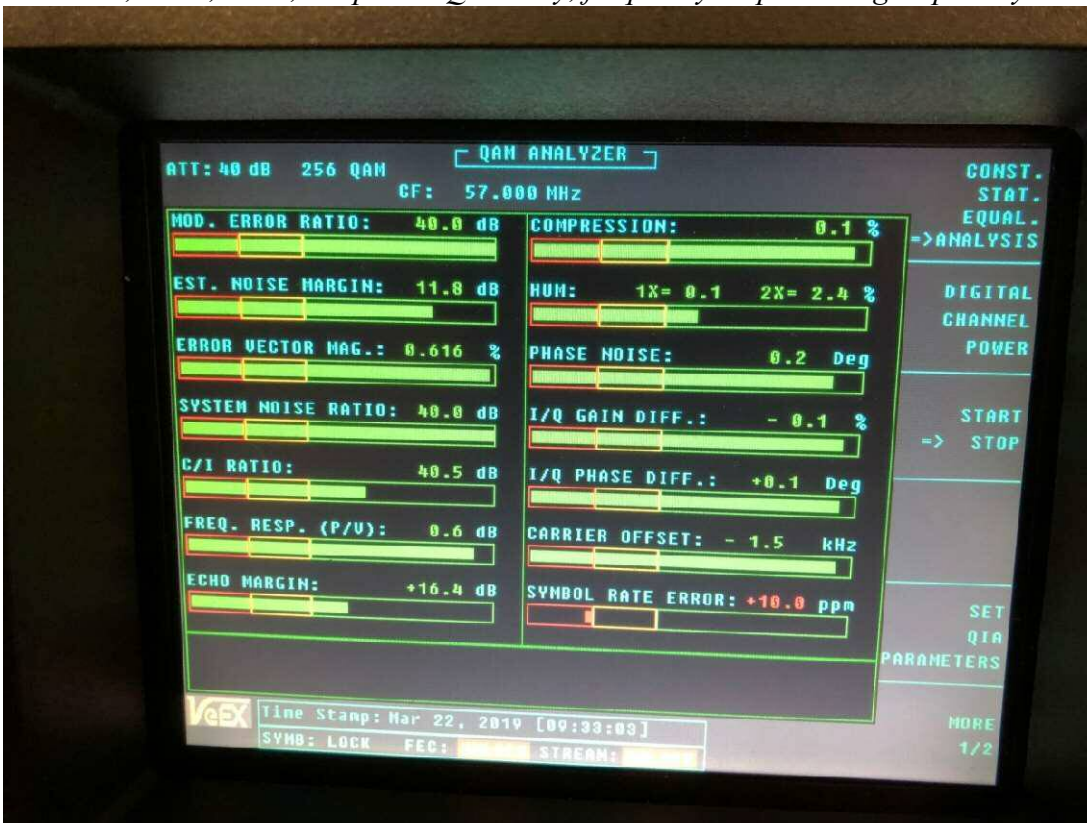
QAM average power measurement on Ch61 in lab.



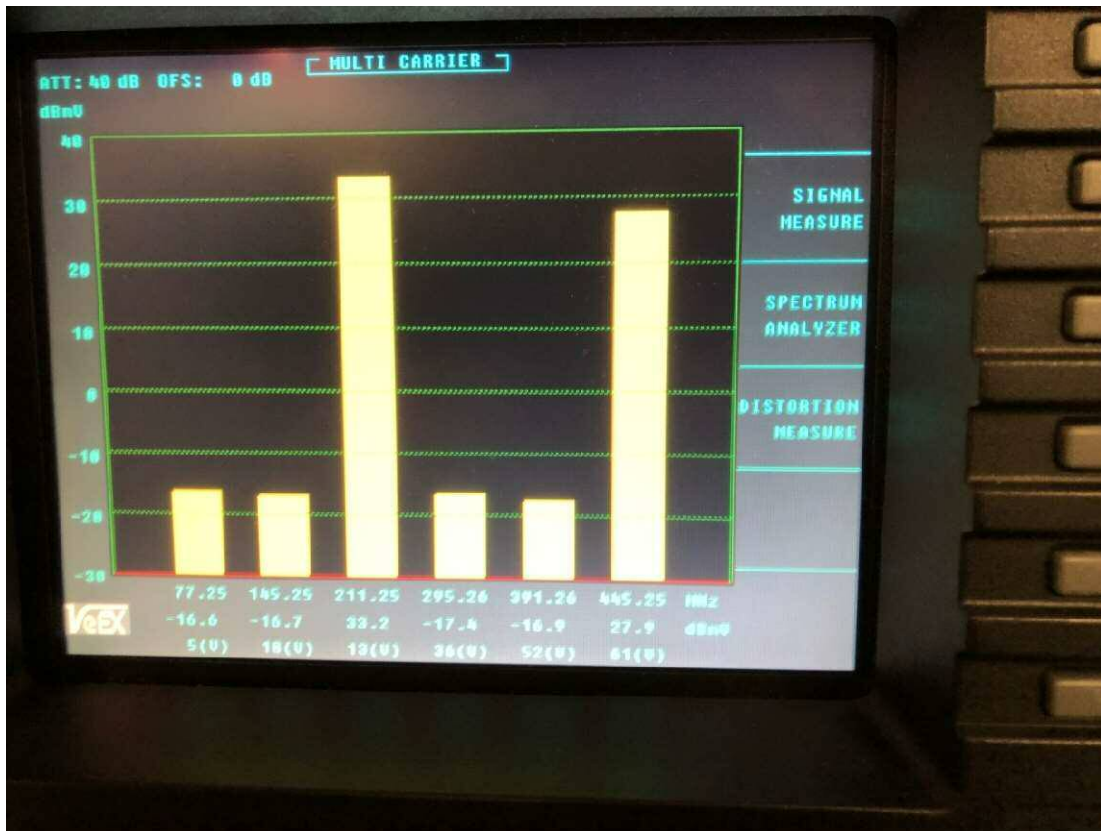
QAM measurements on Ch61 in lab. MER/ENM/EVM plus constellation pattern.



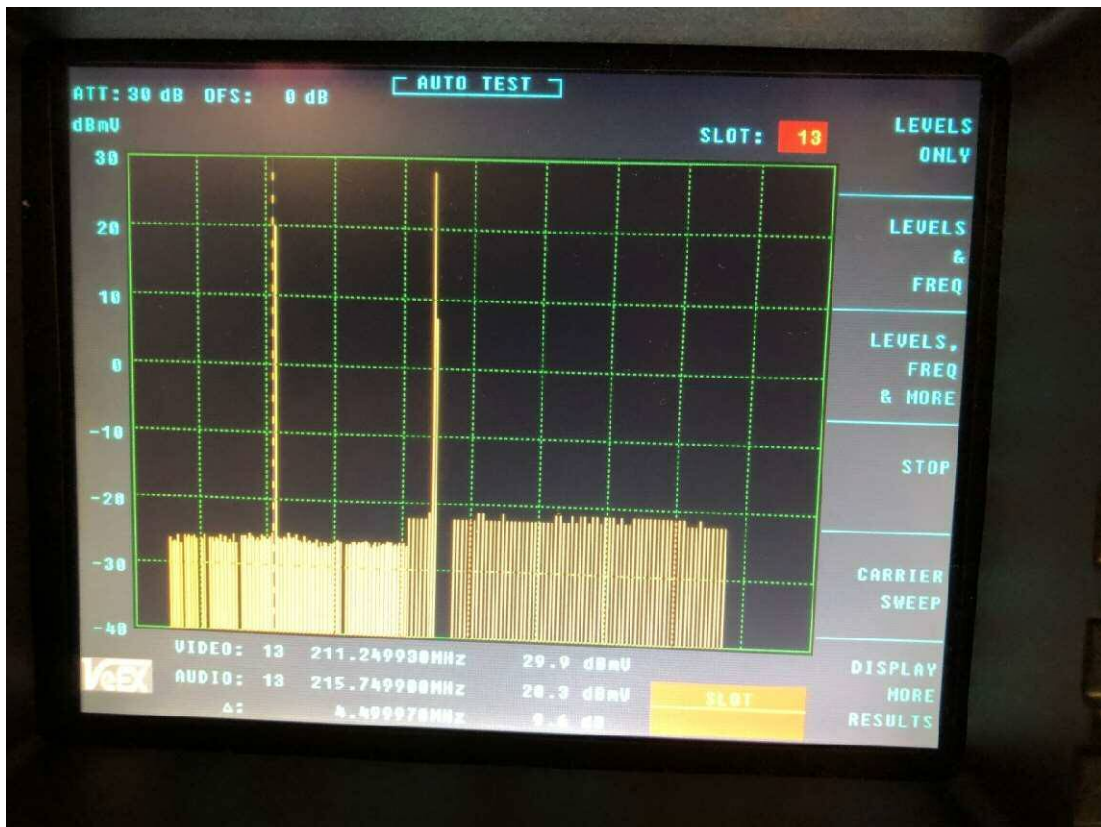
QAM measurements on Ch61 in lab. Many test results are shown including MER, ENM, EVM, adaptive EQ activity, frequency response & group delay.



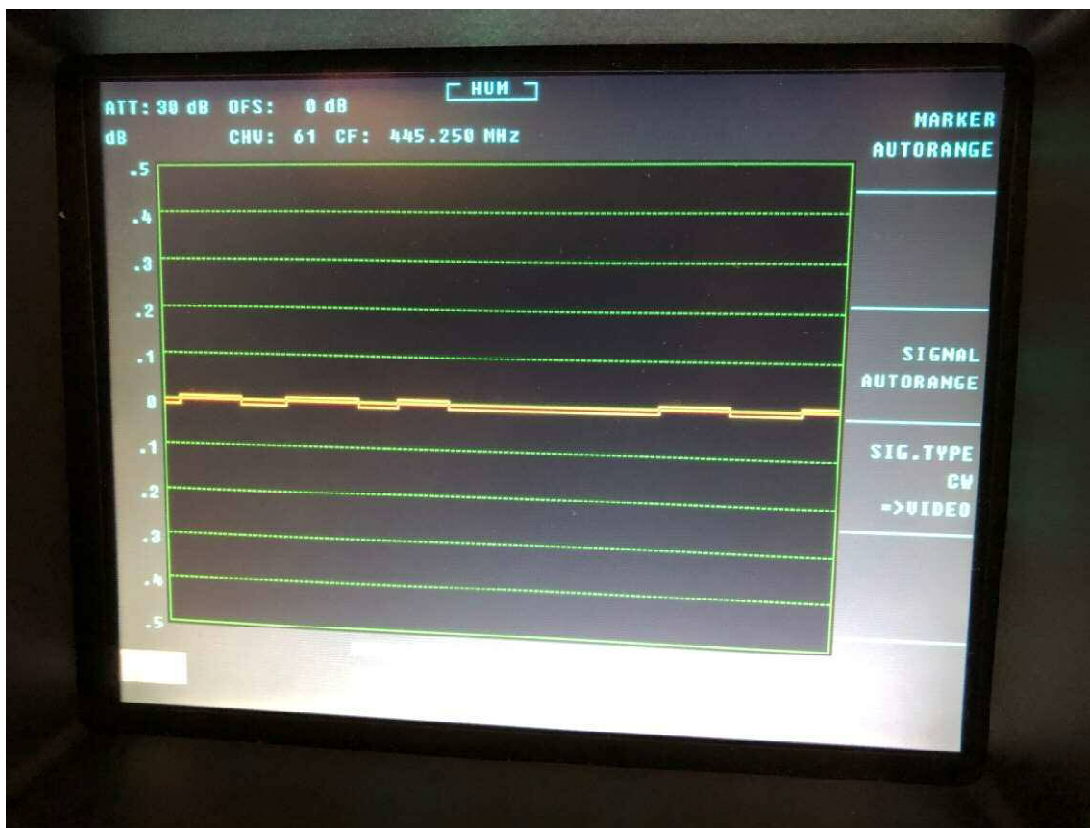
QAM Quality Analysis measurement on Ch61 in lab. Symbol Rate Error failure is 'firmware bug' that was not fixed until version 4 hardware.



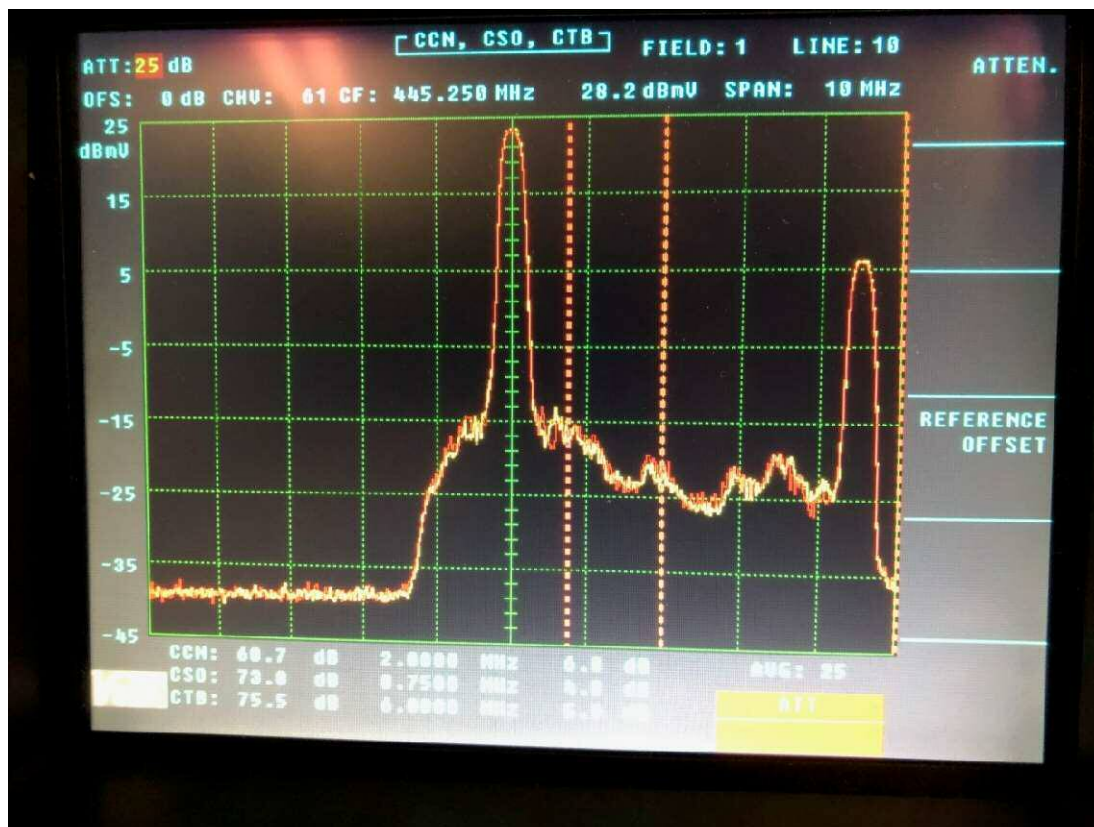
Multi-Carrier measurement on in lab



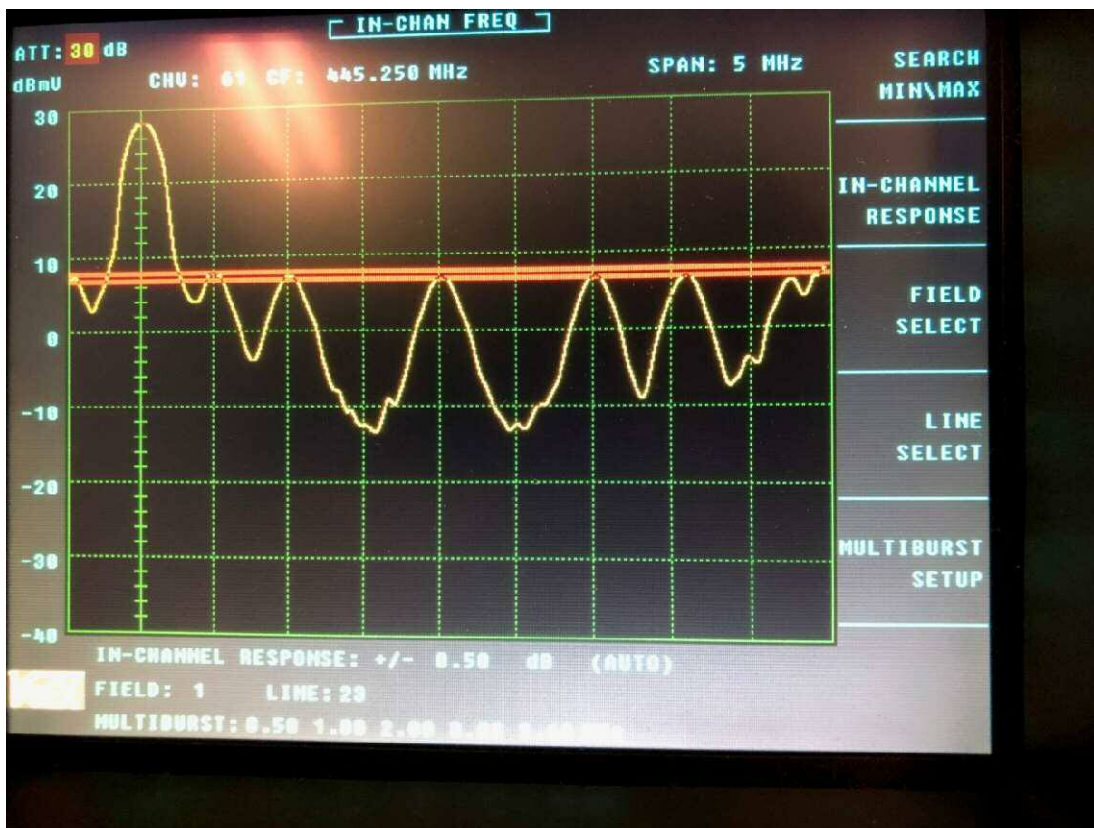
Auto Scan measurement in lab. Ch13 & Ch61 are the only 2 activated channels.



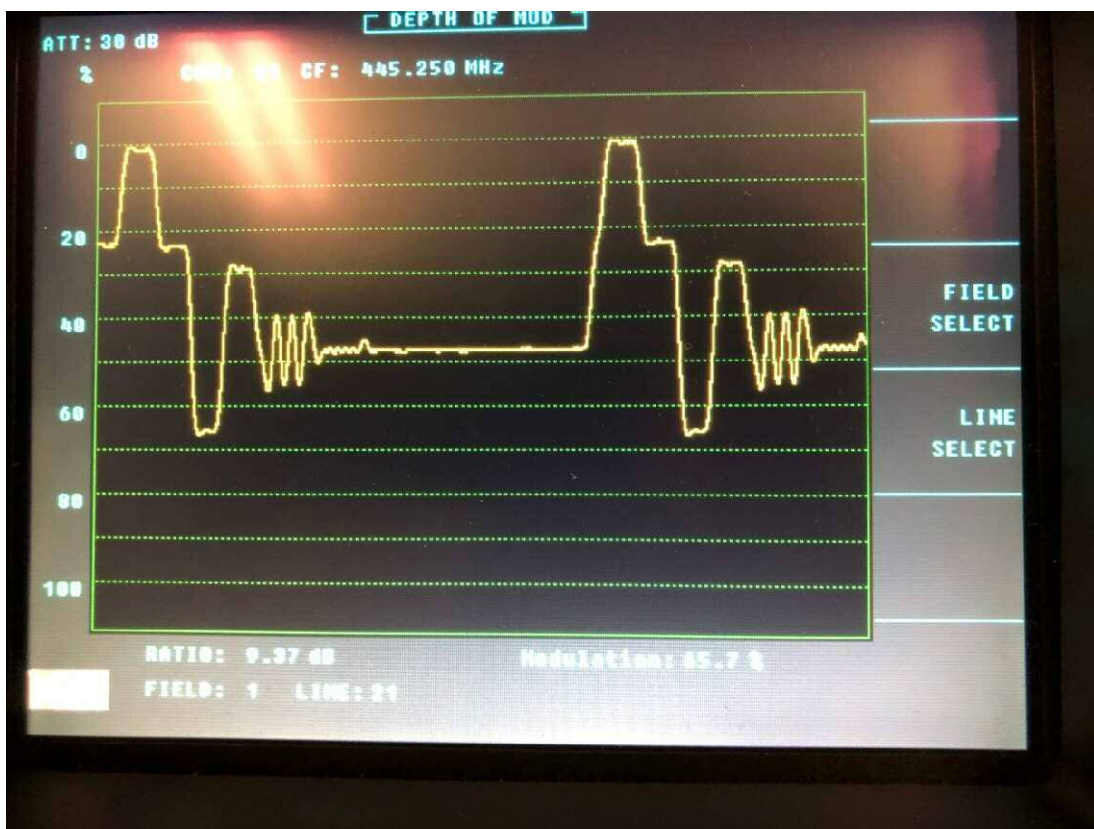
LFI/HUM measurement on Ch61 in lab



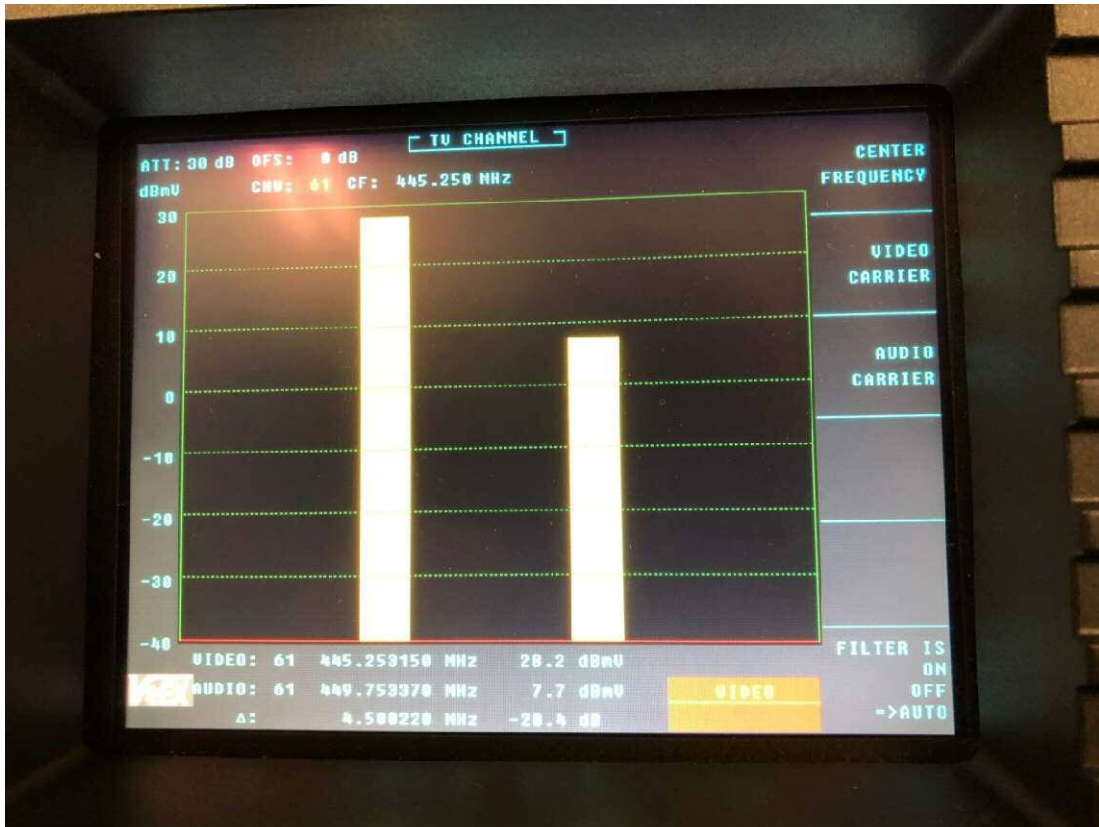
CCN/CSO/CTB measurements on Ch61 in lab



In-channel response measurement on Ch61 in lab



Depth of modulation (AM) measurement on Ch61 in lab



Frequency and level measurements on Ch61 in lab



Training video and collected manuals/software programs included with sale.