Maxiva™ ATSC Spectrum Restorer

Regenerative ATSC On-Channel SFN Repeater/Gap-Filler

GatesAir's new Maxiva™ ATSC Spectrum Restorer provides the capability to add an on-channel SFN gap-filler to an existing ATSC/8-VSB transmission system. The Equalized Digital On-Channel Repeater (EDOCR) technology coupled with a highly-effective echo-cancellation system provides unparalleled performance. This unique design from Gates Air incorporates extremely fast signal demodulation, error-correction and remodulation, to effectively maintain critical SFN timing, while providing top-quality SNR/MER performance.

The ATSC Spectrum Restorer assures maximum flexibility in network design, providing the highest signal quality at any target receive location, whether it is served by the main transmitter, or by the Spectrum Restorer.

The GatesAir ATSC Spectrum Restorer, provides an input sensitivity of -72dBm and an effective echo-cancellation of up to 40dB.

The ATSC Spectrum Restorer is an option that can be added (at the time of order) to any of our Maxiva 1 RU Ultra-Compact Translator systems (15W to 150W) and comprises a replacement Modulator, RF input module and software.

Product Features

- Compact 1 RU 19" rack chassis
- Power levels as per standard Maxiva™ Ultra-Compact series product range: 15W to 150W
- High adjacent channel rejection
- Low multi-hop noise/error accumulation provided by the Equalizer with Short Viterbi correction slicer
- Input sensitivity to -72dBm and Echo Cancellation of up to 12dB over the main Rf signal
- 4 µS pre-equalizer and 36 µS post-equalization for Multipath and ACI
- Equipment latency ~24 µS with Linear pre-correction and pre-equalization, otherwise ~16 µS
- Optional internal demodulator with equalizer for regenerative Translators
- Linear pre-correction Adaptive Direct Learning FIR with 96 taps
- Non-Linear Adaptive Pre-distortion module with "memory-effect" compensation for Doherty high-efficiency final PA stage
- Includes SNMP, Web Interface and Touch Screen LCD display

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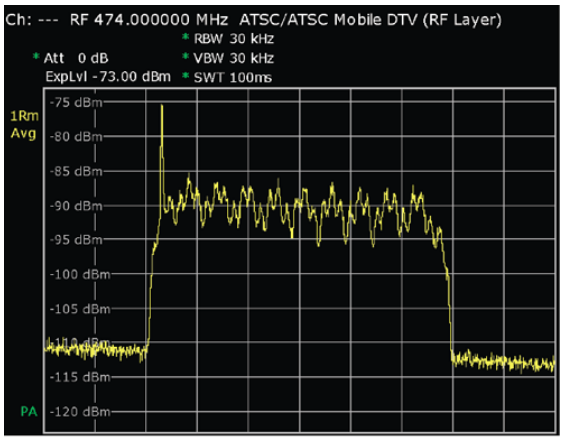
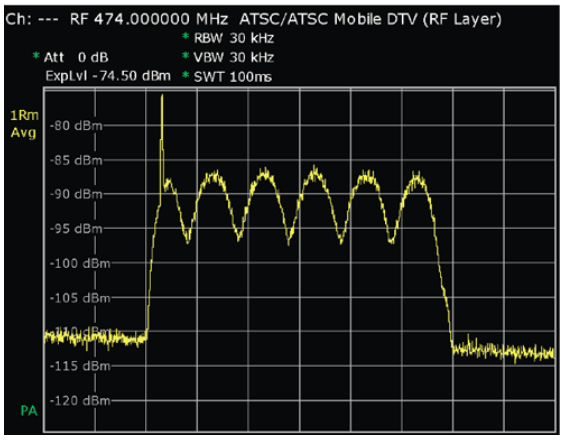
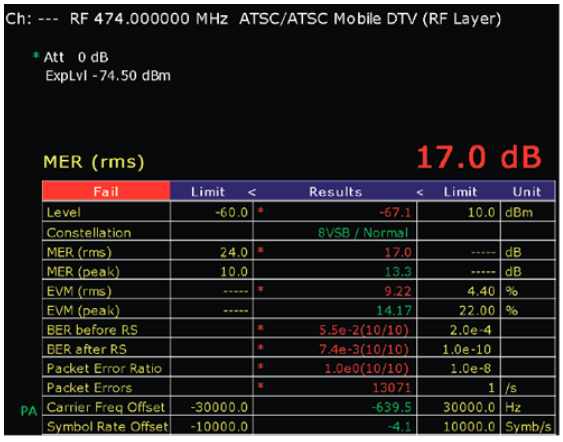
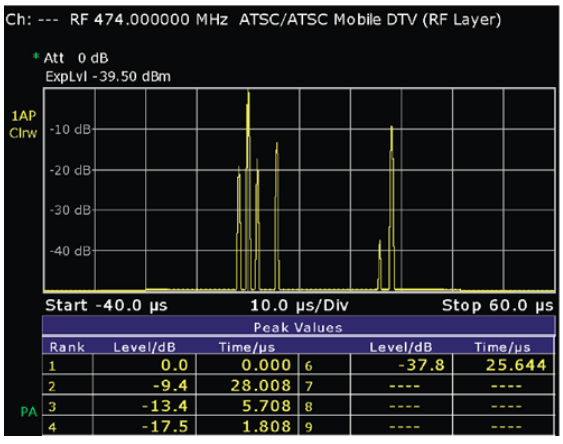
Input Signal









Output Signal