ANG DTV2 Series Noise Generator with Integrated Signal Preamplifier for DTV/HDTV Field Tests

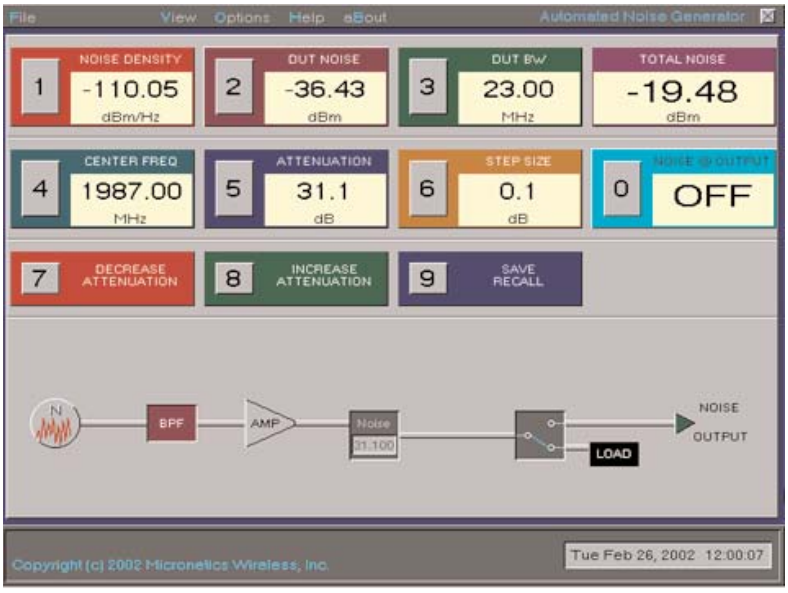
* **Color LCD Screen**
* **Intuitive GUI Interface**
* **Flexible Architecture**

ANG-DTV2 Series Output Characteristics

MODEL	FREQUENCY	FLATNESS dB P-P	SIGNAL GAIN	NOISE / 6MHz
ANG-DTV2	100Hz-1GHz	2.0 dB	-20 dBm per 6MHz Channel	-20 dBm

Standard Configuration:

- Input: BNC(f), Rear Panel
- Input Impedance: 50 Ohms
- Output 1,2,3,4: BNC(f), Rear Panel
- Output Impedance: 50 Ohms



Description:

In response to customer requests for an integrated rack mounted solution for their DTV field test requirements, Micronetics has developed the ANG-DTV2 - ***A fully integrated, fully automated test sub-assembly*** with RS232/GPIB control that takes the output from a mobile or stationary DTV antenna, provides the necessary signal amplification and attenuation and adds noise for accurate, calibrated SNR field testing.

- ***Ideal for integration into ATSC Field Test Set***
- ***Signal Input, Signal Amplifier***
- ***Signal Attenuator***
- ***4 Way Output to External (e.g.):***
  - ***Spectrum Analyzer***
  - ***NTSC Rx***
  - ***VSB Demodulator***
  - ***Vector Analyzer***

Specifications:

- Operating Temp: 0 to +70°C
- Supply Voltage: 90-240v, 50/60 Hz Auto Sensing
- Temp Stability: 0.025 dB/°C
- Output Impedance: 50 ohm,
- Crest Factor: 15 dB
- Attenuation: 0 to 110 dB, in 0.1 dB steps
- Save/Recall Registers: 31
- Dimensions: 12" x 19" x 5.25"
- Weight: 25 lbs. maximum
- CE Compliant to ISM 1-A

MICRONETICS
TEST SOLUTIONS

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Flexible Architecture - ANG Series Standard Options Include:

OPT001: 0.1 dB noise amplitude control resolution: This allows the user to set the noise amplitude to within 0.1 dB. Standard is 1.0 dB

OPT002: Carrier Signal input and built in combiner for S+N output. This is useful for interference tests that require adding noise to a carrier signal.

OPT002A: This is similar to OPT002, but utilizes a resistive combiner in order to preserve the low baseband frequency specification of those models which have a low frequency specification of 100 Hz. This combiner has more insertion loss than that of OPT002, so if frequencies below 10 MHz are not required, then OPT002 makes more sense.

OPT003: Signal Path Attenuator. This option allows the user to control the amplitude of the carrier signal. The range and resolution is 0 - 127 dB in 1.0 dB Steps.

How to order

Instrument ANG-DTV2 - X

Model:

Connector Type:
A=N (female)
B=BNC (female)
C=SMA (female)

Options ANG-DTV2-X - OPTXXX

Model:

Options: (reference option chart)

OPT003A: This option is as OPT003 but the step size is 0.1 dB instead of 1.0 dB

OPT003B: This option is similar to OPT003 but the signal amplitude is "make before break" meaning the carrier signal is perpetually transmitted through the attenuators even in the short transition from one attenuation state to the next. This allows the user to change the amplitude in the signal path without losing lock; especially useful in modem loop back testing where a break in the IF connection from the modulator to the demodulator requires the entire test to be reset.

OPT003C: Similar to OPT003B except step size is 0.1 dB.

OPT004: "Zero dB loss" signal Path: This option utilizes a high 3rd order intercept, low distortion amplifier in the signal though path to make up for the insertion loss. This loss is caused by a combination of the path components that includes the coupler which sends a portion of the signal to the power meter, the combiner which adds noise to the signal, the attenuator (if ordered) and the impedance transformer (if ordered). The magnitude of the loss is from 5 to 12 dB depending on the model and option package ordered. Generally, if the loss does not pose a problem, this option should probably not be ordered. Despite the high quality amplifier used, it is not generally recommended to have any unnecessary active devices in the test signal path.

OPT005: 75 Ohm Impedance instead of 50 Ohm. Typical loss is 1 to 2dB from base model

OPT005A: Switchable Impedance 75 Ohm/50 Ohm

OPT005B: 75 ohm Impedance using internal resistive impedance matching pad for low frequency models to preserve the low end frequency limit of 100 Hz. Loss is 6.0 dB from base model.

OPT005C: Switchable Impedance 50 Ohm/75 Ohm using resistance matching pad for 75 Ohm setting.

OPT006: RS/232 Interface This option allows the ANG to be operated remotely using an RS/232 serial connection in addition to the GPIB bus.

OPT007: Automatic C/N, Eb/No, C/No ratio mode: This option sets up a user specified Signal:Noise ratio automatically. The user connects a signal to the S input port of the ANG. The user needs to externally measure the signal power referenced to the S input port of the ANG. The user then enters the signal power and the desired signal to noise ratio, and the ANG automatically sets it up calibrated accurately to the S+N output port.

OPT007A: Similar to OPT007 but with the added feature that a power sensor for measuring the signal power can be connected directly to the PM port of the ANG unit. The user simply enters the power reading from the external power meter into the ANG along with the desired signal:noise ratio. The ANG automatically sets this ratio up accurately calibrated to the S+N output port. A directional coupler is employed to send coupled power from the signal input path to the PM port. This allows the signal power to be perpetually monitored without a break in the signal path with only small loss in the test signal through path. As with OPT007, this option can be combined with the noise and signal attenuator options OPT001 and OPT002/A for greater ratio range/resolution.

OPT007A1: This option is similar to OPT007A except it enables the ANG to remotely control the power meter via RS/232 port. With this option, the ANG automatically polls the power meter for signal power and uses the data to set up and maintain the user specified S/N ratio. Because the power readings perpetually available, useful features such as "Ratio Track" and "Signal Track" are available. The power meter must utilize SCPI commands. Not all power meter make/models are supported. Contact factory for details.