

11. Technical Data Minirator

		MR2	MR-PRO
Outputs		Balanced XLR, unbalanced RCA phantom power resistant	
Inputs		DC power supply, USB	DC power supply, USB XLR for cable test
Signal Wave Forms		Sine, Polarity Test Signal, Delay Test Signal, White Noise (crest factor, PAR* = 3.05 (9.7 dB), 5 Hz - 22 kHz), Pink Noise (crest factor, PAR* = 4.5 (13.1 dB), 5 Hz - 22 kHz), Gated Pink Noise (1 - 9 seconds), Wave File playback (MR-PRO)	
Default wav-files			Fast Pink Noise 1s (PAR* = 12.5 dB) Fast Pink Noise 4s (PAR* = 13.1 dB) NTI Audio STIPA
Wave File Format	Sampling frequency: Resolution: Output level:		48 kHz 16 Bit, Mono / Stereo 0 dBFS = 18 dBu (sine) acc. to EBU R68
Frequency Setting	Range: Increment: Accuracy:	10 Hz to 20 kHz in 1 digit steps 0.01%	
Stepped Sweep Function	Frequency range: Increment: Sweep speed:	freely selectable 1/1, 1/3, 1/6, 1/12 octave selectable 0.5 to 5 seconds	
Continuous Sweep (Chirp) Function	Frequency range: Increment: Chirp speed:	freely selectable Linear / Logarithmic 1 to 99 seconds per cycle	
Level Setting	Units: Increment:	dBu, dBV, V in 1 digit steps	dBu, dBV, V, dBFS, % in 1 digit steps (e.g. 0.1 dBu)

* PAR = peak-to-average ratio

		MR2	MR-PRO
Output Level Ranges	Sine, Sweep, Chirp White Noise Pink Noise Polarity, Delay Test	-80 dBu to +8 dBu -80 dBu to +0 dBu -80 dBu to -2 dBu -80 dBu to +6 dBu	-80 dBu to +18 dBu -80 dBu to +10 dBu -80 dBu to +8 dBu -80 dBu to +16 dBu
Flatness	RL ≥ 600 Ohm	±0.5 dB	±0.2 dB @ 10 Hz to 12 kHz -0.1 dB / +0.3 dB @ 12 kHz to 20 kHz
Accuracy @ 1kHz		±0.5 dB	±0.2 dB
THD+N	22 Hz to 22 kHz, average, @ 1 kHz, typical	-90 dB (0.0032%) @ 8 dBu, Noise floor typ. 25 µV	-96 dB (0.0016%) @ 18 dBu, Noise floor typ. 15 µV
Output Impedance		200 Ohm (balanced)	12.5 Ohm balanced, I _{max} = 10 mA
Impedance Measurement	Method: Measurement range: Accuracy:		Absolute value Z 4 Ohm to 50 kOhm (pin 2-3) 2 Ohm to 25 kOhm (pin 1-2 or 1-3) @ f = 30 Hz to 10 kHz (Sine) @ Level from -20 to +18 dBu ±10% or ±2Ohm (whatever is higher)
Power Calculation	Reference voltage		25 V, 35 V, 50 V, 70.7 V, 100 V, 140 V, 200 V
Phantom Voltage	Measurement range: Accuracy:		0 to 54 V ±3 % or ±0.5 V
USB Functionality		Firmware update	Firmware update Mass Storage Device
Flash Memory			512 MByte for storing wave files and configurations
Signal Balance Accuracy @ XLR-Output		≥ 99% @ 1 kHz for output levels above -20 dBu	
Display		Graphical, with back light	
Auto-Power-Off		10, 30, 60 minutes or OFF	
Batteries		3 x AA Alkaline dry cells or rechargeable equivalents	

	MR2	MR-PRO
Battery Life	0 dBu, no load, typical 14 hours	8 hours
Temperature Range	0° to 45° C (32° to 113° F)	
Humidity	< 90% relative humidity, non-condensing	
Protection Rating	IP51	
ATEX	For applications in explosive atmospheres within zone 2 in accordance with IEC 60079; conforms to 2014/34/EU	
Dimensions (LxWxH)	147 x 74 x 41 mm	152 x 81 x 43 mm (incl. protective shock jacket)
Weight including Batteries	250 g (9 oz.)	310 g (11 oz.)