



Advanced Testing Services, Inc.

# Advanced Testing MR20

500 kHz to 400 MHz RF Signal Generator  
20 Fixed frequency outputs per control chip

**Price: \$863 each (0dBm output power)  
\$963 each (+20dBm output power)**

The MR20 from Advanced Testing is an ultra-lightweight and compact RF signal generator capable of outputting 20 independent frequencies from 500 kHz to 400 MHz with 10 Hz frequency resolution. It provides excellent frequency stability and phase noise in a convenient battery or AC powered, hand-held unit that is ideal for field and lab testing of RF systems. The MR20 uses a frequency control chip that is pre-set at the factory for up to 20 customer specified frequencies. Additional frequency control chips may be purchased from Advanced Testing for increased frequency selection. Output frequencies can be selected individually or in pre-set pairs\* and output power is controlled with three user selectable attenuation levels of 0dB, 25dB, and 50dB.

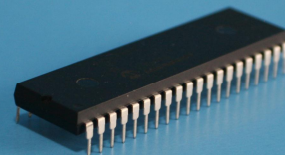


## Key Features

- Easy to use 3 button interface
- 20 Preset Frequencies per Control Chip
- 2 Operating Modes (single or dual frequency)
- 3 Attenuation Levels (0dB, 25dB, 50dB)
- Uses 4AA batteries or AC wall adapter (included)
- 8 hour battery life (0dBm out)
- Button lockout switch
- Non-Volatile memory retains current setting on power down/up
- Single board construction for easy conversion to OEM applications
- Frequency stability +/-1ppm
- 100MHz phase noise, -107 dBc/Hz @ 1KHz
- 0dBm +/-1.5 dB output power over frequency range (20dBm output available with OPT10)
- Attenuation accuracy +/-0.25dB



Carry case included



Replaceable frequency control chip with 20 preset frequencies

Specifications: Single Frequency Mode, 100MHz, 0dBm Output power, 0dB Attenuation

Parameter	Value	Unit
Frequency range	0.500 - 400	MHz
Frequency resolution	10	Hz
Frequency Calibration @ 25°C	+/- 1.0	ppm
Frequency Stability (0°-70°C)	+/- 1.0	ppm
Aging	+/- 1.0	ppm/year
SSB Phase Noise		
@1kHz from carrier	-107	dBc/Hz
@10kHz from carrier	-114	dBc/Hz
@100kHz from carrier	-122	dBc/Hz
Wideband noise	<-130	dBc/Hz
Output harmonics		
Sub-harmonics	-75	dBc
Non-harmonic spurious		
30kHz < offset < 380 kHz	-53 max	dBc
380kHz < offset < 1MHz	-47 max	dBc
1MHz < offset < 2.5MHz	-60 max	dBc
Wideband	-70 max	dBc
Output power (500kHz - 400MHz)		
Output Power (with OPT10)	0 +/- 1.5dB	dBm
Output Power (with OPT10)	20 +/- 1.5	dBm
Output impedance	50	Ohms
Attenuation Accuracy (500kHz - 400MHz)	+/- 0.25	dB
DC input Voltage		
DC input Current	9-15	V
	300	mA

\*Average output power in dual frequency mode is 6dB down from single frequency mode.  
Frequency accuracy in dual frequency mode is +/-50kHz.

MR20            Size: 3.6" x 7.9" x 1.3"      Weight: 7.5 oz (no batteries)  
Carry Case    Size: 11" x 11.5" x 3.2"      Weight: 2.6 lbs (with MR20 and AC adapter)