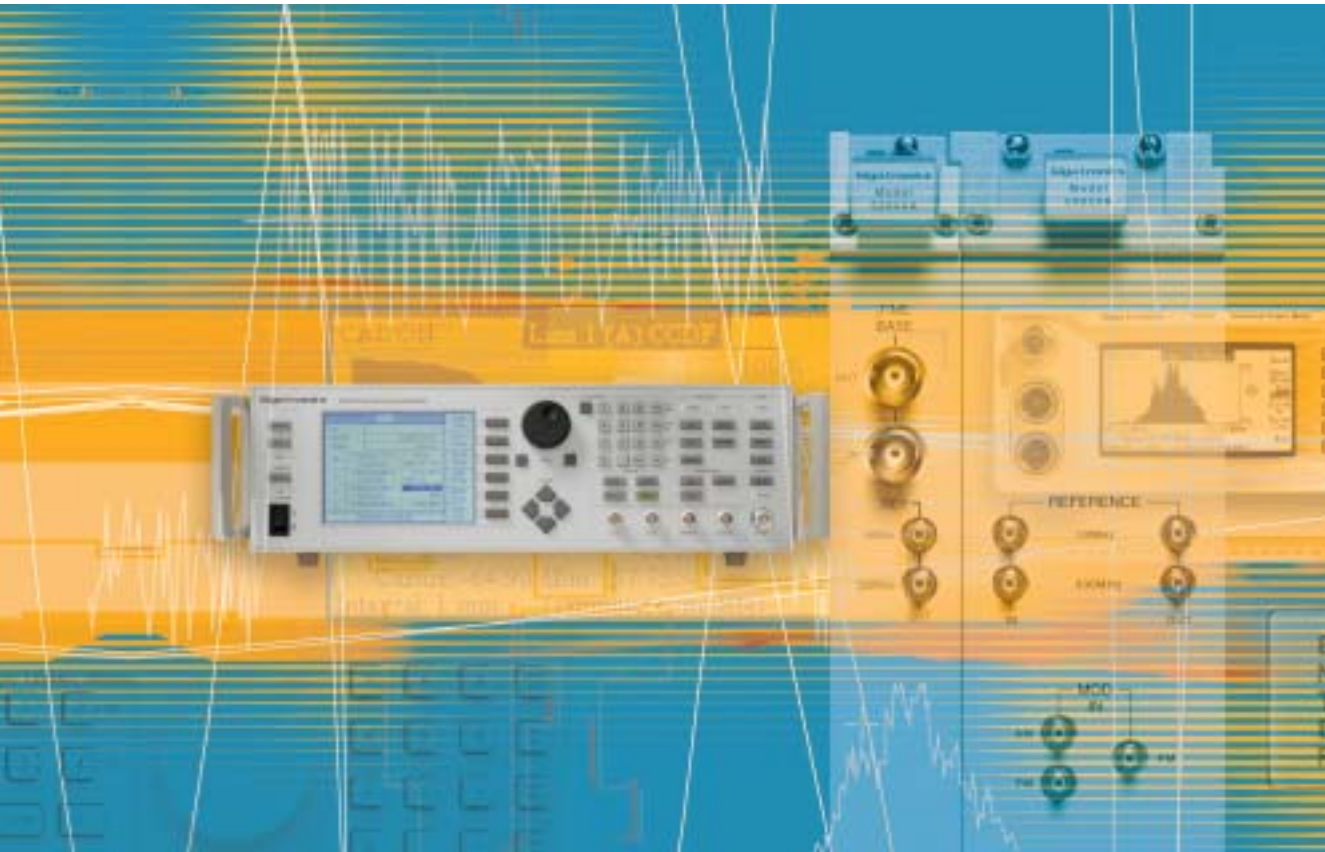


***Giga-tronics***



**Microwave Synthesizers  
Power Meters  
VXI Instruments  
Scalar Analyzer**

## 12000A SERIES MICROWAVE SYNTHESIZER

Highest performance for the lowest price

Eight frequency ranges from .01 or 2 GHz to 8, 20, 26.5 or 40 GHz  
Twenty-four models—choose the exact performance you need  
Under 500  $\mu$ s frequency switching speed  
Three-year warranty standard



With frequency switching speeds typically at 500  $\mu$ s and output power of +15 dBm from 0.01 to 20 GHz, the 12000A outperforms the competition for a fraction of the price. The 12000A features a unique frequency ramp sweep, combining analog speed with digital accuracy for faster, more accurate signal generation while exhibiting high output power and excellent frequency linearity. Coverage at 20, 26.5 and 40 GHz and fast frequency switching make the 12000A ideal for testing satellite communication, radar, fixed wireless and point-to-multipoint broadband systems. For wireless local loop, the 8 GHz version gives complete coverage without requiring you to pay for the full microwave spectrum.

Three different models provide the exact performance you need:

**12400A is a CW and step sweep generator with no modulation**

**12500A is a fully modulated signal generator with CW and step sweep**

**12700A is a fully modulated signal generator with CW, step and analog sweep**

- Eight frequency ranges are available, from .01 or 2 GHz to 8, 20, 26.5 or 40 GHz
- Frequency switching speed is typically less than 500  $\mu$ s for any frequency step size
- Linearity errors of ramp sweep are virtually unmeasurable because the phase-locked loop and 12-bit DAC continuously control the frequency
- No potentiometers—all analog circuits are digitally controlled to automatically self center
- Three-year warranty is standard and two-year calibration cycle is recommended
- Phase noise at 6 GHz is  $-85$  dBc/Hz at 10 kHz offset
- Output power is +15 dBm or greater from 0.01 to 20 GHz with 0.01 dB resolution
- High output power option provides +20 dBm to 20 GHz
- Output power at 40 GHz is at least +9 dBm
- Harmonics are less than  $-55$  dBc from 2 to 20 GHz, and better than  $-40$  dBc from 25 to 40 GHz
- Pulse modulation (PM) has on/off ratios greater than 80 dB and rise/fall time less than 10 ns
- Frequency modulation (FM) operates at rates of DC to 8 MHz
- Amplitude modulation (AM) depth is 0 to 90% at rates of DC to 150 kHz
- Scan modulation option (log AM) operates over a 60 dB range