

# AM/FM Synthesized Signal Generators



Models 3216/3215 (3216 shown)

- 100 kHz to 140 MHz Frequency Range
- AM/FM, INT/EXT Modulation
- RF Output Level in 0.1 dB Steps
- Storage and Recall of 100 Test Conditions
- GPIB Option
- 55 dB Stereo Separation (3216 only)

Frequency synthesis and microprocessor control give these generators wide versatility coupled with ease of use. User-friendly keypads provide control of frequency, modulation parameters and output levels. Operating setups can be stored and recalled for routine tests at up to 100 addresses and recalled setups can be modified temporarily without disturbing the programmed entries. Models are identical in specifications and features except the 3216 includes FM stereo operation. The 3216 front panel includes large,

bright LEDs for AM/FM/Pilot or total modulation, memory, RF frequency and RF output. The 19 kHz pilot deviation can be set from 0-10.0 kHz. FM stereo modes of operation include L, R, Main (L+R), Sub (L-R) and Pilot. Stereo modulation can be applied via the left and right external inputs. The GPIB listener option makes the generator ideal for AM/FM receiver production and QC applications where high throughput is necessary.

## KEY SPECIFICATIONS

### AM/FM FREQUENCY RANGE

Frequency Range  
100 kHz to 140 MHz  
Displayed Resolution  
6 digits, 100 Hz < 30 MHz ≥ 1 kHz

Accuracy  
± 50 ppm  
Drift  
± 50 ppm

### OUTPUT LEVEL

Range  
- 20.0 to + 126.0 dBμ  
(0 dBμ = 1 μV into open circuit)  
Reference Level Accuracy  
± 1 dB

Attenuator Accuracy  
± 1.5 dB > 0 dBμ  
± 2.0 dB < 0 dBμ

Spurious  
< - 30 dBc, harmonic  
< - 50 dBc, non-harmonic (in band)

### MODULATION

Internal Modulation Frequencies  
400 Hz, 1 kHz (accuracy < ± 5 %)

### FM MODULATION

Deviation Range  
0-99.9 kHz peak maximum  
(carrier > 1 MHz)  
1/10 of displayed value  
(carrier < 1 MHz)  
External Modulation  
20 Hz to 70 kHz ± 3 dB, ref 1 kHz

### AM MODULATION

Range  
0 - 60.0% ± 10% rdg  
External Modulation  
50 Hz - 10 kHz ± 1 dB, ref 1 kHz at 30%

### AM/FM EXTERNAL MODULATION

Frequency Range  
FM: 20 Hz - 100 kHz ± 1 dB  
AM: 20 Hz - 10 kHz ± 1 dB

### FM STEREO MODULATION (3216 ONLY)

Pilot Frequency  
19 kHz ± 2 Hz  
Pilot Deviation  
0 - 10.0 kHz  
Separation  
55 dB or more (1 kHz reference)

Modes  
L, R, Main (L+R), Sub (L-R)

### MEMORY

100 front panel settings and 4 commonly used Rf output levels

### POWER REQUIREMENTS

100, 120, 220, 240 V ac ± 10%  
50/60 Hz, approx 35 VA

### PHYSICAL

Size (W x H x D)  
16<sup>3</sup>/<sub>4</sub> x 3<sup>7</sup>/<sub>8</sub> x 11<sup>3</sup>/<sub>4</sub> in.  
426 x 100 x 300 mm  
Weight  
16.5 lbs., 7.5 kg

### SUPPLIED ACCESSORIES

BNC-BNC 50 Ω Cable  
Power Cord  
Spare Fuse

### AVAILABLE OPTIONS

Matching Pad 50:75 Ω (LIM-075)  
Dummy Antenna 50:300 Ω (LDA-1554-50)  
Test Loop Antenna (LPA-070)  
Rackmount Adapter (LR-2409)  
GPIB Listener Interface (-231)  
dBm 50 Ω Display (-247)  
Model 3216 only  
SCA Composite Input (-228)  
Composite MPX Output (-236)  
50 and 75 μs Pre-Emphasis (-238)  
dBf 75 Ω and 300 Ω Indication and  
75 μs Pre-Emphasis (-240)