TSG-17

RF Signal Generator

100KHz to 150MHz

Instruction Manual

LIU & DB ENTERPRISES, INC.

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GENERAL DESCRIPTION

The frequency range of the TSG-17 is from100KHz to 150MHz. The upper bands are rich with third harmonics extending the output to 450MHz.
The TSG-17 incorporates an audio generator as well, with a frequency range from 150Hz to 1.5 KHz. This audio generator can be used to amplitude modulate the RF frequency as well as outputted to the front panel. This unit also provides an external modulation input.
This signal generator is built on a simple LC design providing a reliable wide range of frequencies for the hobbyist or for instructional use at a low cost.

FEATURES

Wide frequency range from100KHz to150MHz.
Adjustable **A**mplitude **M**odulation: 0 to approx. 30% @ 150Hz to1.5KHz.
Low distortation AF oscillator: < 0.1% @ 150Hz to1.5KHz
AF oscillator outputted to front panel
Simple design for reliability and low cost.

SPECIFICATIONS:

TAG17 Signal Generator

Frequency Range	A: 100KHz~300KHz B: 300KHz~1MHz C: 1MHz~3.2MHz D: 3MHz~10MHz E: 10MHz~35MHz F: 32MHz~150MHz (3 rd harmonic up to 450MHz)
Frequency Accuracy	±5%
RF output Amplitude:	(Adjustable) 100mVrms (at 35 MHz) (no load) 100mVrms (at 100 MHz) (no load)
Modulation:	Amplitude Modulation Approx 30% (Adjustable) INT. 150Hz to 1.5KHz EXT.50Hz~20KHz (at <1Vrms input)
Audio Output:	Adjustable 150Hz to 1.5KHz Min. 2 Vrms Fixed < 0.2% distortation @ 1KHZ
Output Impedance:	Audio frequency Approx 3KΩ RF frequency 50Ω

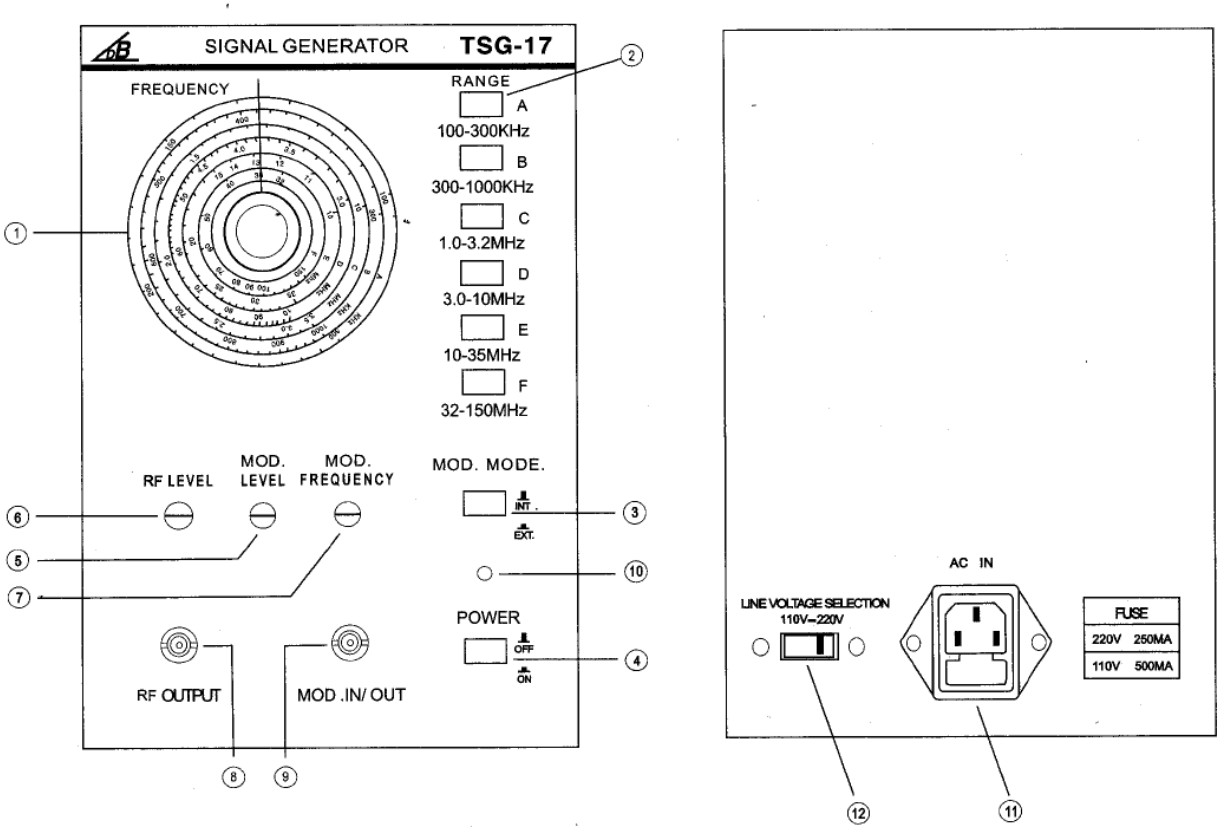
Operating Temperature: 32 to 100 degrees Fahrenheit

Power Requirements:	120VAC and or 240VAC 50/60Hz @ approx. 6 watts
Accessories:	Power Cord……..…(1) Test leads……(1) Instruction Manual….(1)

Note: Specifications are subject to change without notice.

Description of Front and Rear Panel ……

1. Frequency control
2. Frequency range selection. Bands A to F
3. Internal/External modulation selector switch
4. AC power on/off switch
5. Modulation level control
6. RF output level control
7. Modulation frequency control
8. RF output connector (BNC)
9. AF input/output connector (BNC)
10. AC power indicator
11. AC power input connector with fuse holder (rear panel)
12. AC input voltage selector switch (rear panel)



Operation

It is important to select the proper input voltage before the unit is connected to a power source. See (11 and 12 rear panel)

Depress the power switch (4) to apply power to the unit. Power indicator will light (10)

Select frequency band A thru F (2) see page 4

Adjust frequency (1). Note a frequency counter is needed to determine exact frequency.

Adjust output level (6) for desired output at front panel BNC connector (8)

Select modulation mode (3) for internal or external

Adjust the internal oscillator adjust level and/or frequency of modulation (5 & 7)

For modulation from external source or AF oscillator output use input/output connection on front panel (9)

Troubleshooting

Check voltage input selector to match source to be used, dual voltage models only.

No RF output

1. Check AC power button (4) and unit is connected to power source
2. Check RF output level control (6)
3. Select a RF frequency band A to F (2)

No AF output

1. Check Mod Mode button (3)