

## SCG 10 : SCG 10

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The SCG 10 Subcarrier Generator is designed to operate in SCA service with a SCD 10 Subcarrier Demodulator, to form a subcarrier link on an STL system. The SCG 10 has several options available, allowing it to perform a wide range of functions. Audio processing options include selectable pre-emphasis of 0, 75, 150 or 225 microseconds. The SCG 10 also features an illuminated panel meter to aid in adjusting subcarrier input levels and audio out.



### GENERAL SPECIFICATIONS

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**Subcarrier Frequency:**

39 kHz, 41 kHz, 67 kHz, 92 kHz, 110 kHz, 152 kHz, or 185 kHz. Frequency test jack on front panel.

**Frequency Stability:**

+/- 0.18%, -10 degrees C to +50 degrees C.

**Subcarrier Purity:**

Less than 0.5% THD.

**Modulation:**

Direct FM

**FM Deviation:**

Factory set for +/- 7.5% of subcarrier frequency.

**Modulator Distortion:**

Less than 1% THD.

**Audio Processing: Pre-emphasis:**

0, 75, 150, 225 microseconds, user selectable.

**Audio Processing: Low-pass Filters:**

Audio cut-off frequencies of 3 kHz, 5 kHz or 7.5 kHz, are specified with original equipment order. The lowest possible cut-off frequency is recommended. Maximum cut-off is 12% of subcarrier frequency.

**Audio Processing: Companding:**

An optional compander decode board is available for installation in the SCG 10 when used in a subcarrier link having a SCD 10 subcarrier demodulator with a compander decode board. Companding will reduce noise and can mask certain types of main channel to subcarrier cross-talk.

**Frequency Response:**

+/-1.5 dB, 25 Hz to 95% of low-pass filter cut-off frequency.

**FM Noise:**

More than 68 dB below 5 kHz deviation (measured through SCD 10 demodulator directly connected to SCG 10 output, 225 microsecond pre-emphasis, without companding.) With companding -72 dB.

**Audio Input Impedance:**

600 ohms balanced (screw terminals or "D" connector pins.)

**Muting Level:**

Adjustable from 0 dB to 40 dB below 100% modulation. (soft mute).

**Muted Carrier Level:**

60dB below rated maximum output level.

**Subcarrier Output:**

Front panel adjustment, 0.3v to 7.0v P-P input 600 ohms. (BNC).

**Remote Control:**

Remote control by grounding pin 4 of accessory "D" connector.

**Metering:**

Illuminated, indicates peak modulation or subcarrier output level.

**Controls:**

Meter Switch, Subcarrier Control Switch, Modulation Level, Automatic Mute Delay, Mute Level, Subcarrier Output Level, Subcarrier Frequency, Subcarrier Frequency Test Jack (located on front panel).

**Connectors:**

BNC jack for subcarrier output, 9 pin "D" connector for balanced audio input, remote control, FSK input, ground, +18 to 20 volt input, +13.5 volt input, AC receptacle, 6-32 screw terminals for balanced 600 ohm audio input.

**RF Protection:**

All input/output circuits filtered for RF. Totally shielded and bonded aluminum enclosure.

**Operating Temperature Range:**

-10 degrees C to +50 degrees C.

**Power Requirements:**

120/220/240 VAC (voltage to be specified on original order), 50/60 Hz, 10 watts or 12-14 VDC at 50 ma negative ground or 24-28 VDC at 70 ma (28 volt operation require the APS-28/18 power supply).

**AC Fuse Rating:**

For 120 V, use 3/8 amp fuse.

**PHYSICAL SPECIFICATIONS**

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**Weight:**

4.5 pounds  
2.1 kilograms

**Dimensions:**

1-3/4 inches high x 19 inches wide x 12 inches deep.  
4.45 cm high x 48.26 cm wide x 30.48 cm deep

**Shipping Weight:**

9 pounds domestically.  
4.1 kilograms export.

**SPECIAL NOTES**

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Specifications subject to change without notice.