

Gator Class A Stimulus Transmitter

GENERAL SPECIFICATIONS:

Display	240 X 64 pixel graphic supertwist LCD (VF backlit) Stability less than 1.5 PPM for first year, \pm for 1 PPM for aging
Output Power	Continuous adjustable power output \pm 1.0 dB over > 32 dB range (below 1 GHz)
Power Adjustments	Continuously adjustable via rotary knob or direct keypad entry in 1 dBm increments over > 20 dB on models above 1 GHz
Spurious Output	> 55 dBc (decibels below carrier level)
Harmonic Output	> 55 dBc (decibels below carrier level)
Power	110-240 VAC 50-60 Hz, auto-switching, UL and CSA approved 10 and 20 watt models may also be powered from +12VDC
Remote Control	Via serial RS-232, internal modem or DTMF through telco
Output Power Monitoring	Forward and reverse power monitored via internal power meters. Output is regulated to < \pm 1.0 dB of setting at up to a 6:1 VSWR

MECHANICAL:

Case Size	18" x 15" x 6"
Weight	23 lbs

GSM GATOR:

Power Output	20 watts into 50 ohms (GSM cellular model)
PA Class	Linear, Class A amplifier
Output Adjustments	\pm 0.1 dB steps over 20 dB range to full output
Power Regulation	Internal forward and reverse power meters with built-in circulator
Internal Protection	Infinite VSWR (shuts off at > 6:1 SWR) and temperature protected
Tuning Range	935.2-959.8 MHz
Tuning Increments	\pm 50/200 kHz steps via keypad or rotary control
Stability	+ 2.0 PPM from 0 deg to 50 deg C
Type of Modulation	GMSK internal data modulator
Data Rate	270,833 symbols/second
Baseband Filter	Gauss, B x T=0.3
Remote Control	Three ways, modem, DTMF or RS-232-C via rear panel
Display	Graphic 240 x 64 EL backlighted
Power Input	110, 220 VAC, 50-60 Hz or 23-27 VDC at 6 Amps

RF PERFORMANCE:

Frequency Stability	\pm 2 ppm from 10 to 50 C
Frequency Steps	\pm 200 kHz
Frequently Range	Cellular or PCS models

DIGITAL SPECIFICATIONS:

Data Rate	effective rate 271 kbps (per GSM specs)
Modulation	0.3 GMSK (per GSM specs)
Frame Length	1250 bits

HOST PC SERIAL INTERFACE:

Serial Port	RS-232C
Format	8 data bits
Parity	none
Start/Stop Bits	one

MODULATION SCHEMES:

CW	Unmodulated CW signal. Note, GSM data modulation cannot be turned on from the main Gator screen.
External	Transmitter will modulate with user-supplied and filtered I and Q data from an external source. This is via BNC connectors located on the top panel of the Gator.
GSM RND	Gator outputs GSM modulation with internally-generated and random PN (pseudo-random) data.
GSM BUFF	GSM modulation with user-downloadable BCCH (base station control channel) stored data, downloaded by the user with PC loader software. This is via the RS-232C jack in rear. User must supply the base station data to be output, gator will repeat this transmission indefinitely.

- **Wi-MAX:** 10 Watt from 2.5 – 2.7 GHz

- **Cellular:** 45 Watt from 850 – 900 MHz