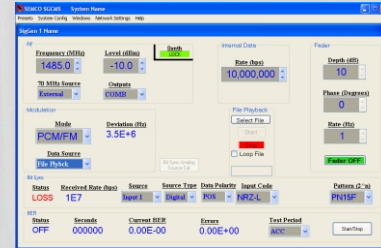
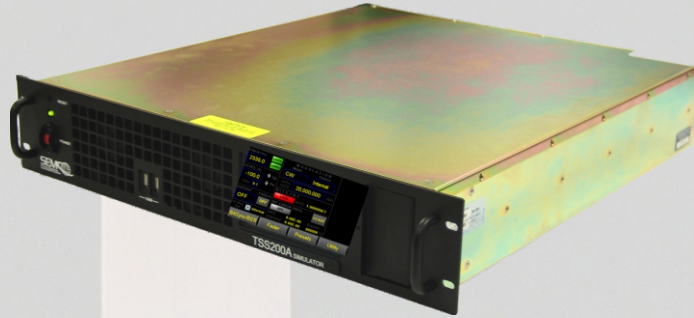


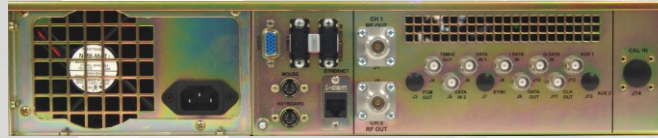
TSS200A Telemetry Signal Simulator

Features

- +10 to -100 dBm dual outputs
+20 dBm Optional
- Multi-Band Tuning (200 MHz to 5150 MHz)
- Internal Multi-Mode Modulation (FM, Legacy and IRIG 106-09 Tier I and II)
- Combiner Dynamic Test Feature
- Embedded Bit Sync/BERT
- External I/Q Modulation
- External Binary File Modulation



Software Control Panel



The TSS200A 2U Telemetry Signal Simulator is the ideal instrument for pre-mission receiving system checkout. The TSS200A's calibrated dual RF outputs are modulated with an internal user-selectable modulator (PCM/FM, IRIG 106-09 Tier I SOQPSK-TG, and Tier II Multi-h CPM; and legacy PM, BPSK and QPSK). With its embedded Bit Sync/BERT and dynamic combiner fade test capability, the TSS200A is used for BER loop testing either directly connected to a dual channel telemetry receiver combiner system or a single/dual channel receiver without a combiner. The TSS200A provides for complete system loop testing via an RF bore-sight antenna, and eliminates the requirement for costly instrumentation to perform ground station pre-mission calibration and check-out.

Standard Configuration

Calibrated Dual RF Outputs
 Embedded Bit Synchronizer and BERT
 1415-1585, 1650-1850, 2185- 2485 MHz Tuning
 Internal PCM/FM Modulation
 External I and Q Modulation Inputs
 Network Software
 Binary File (Tape) Modulation Input

Options

Precision RF Power Meter Calibration
 Multi-Band RF Tuning (1415-1585, 1650-1850, and 2185-2485 MHz)
 200-500 and 830-1130 MHz RF Tuning Option
 4400-5150 MHz RF Tuning Option
 Multi-Mode Demodulation:
 Legacy – PM, BPSK, and QPSK
 IRIG 106-11 Tier I SOQPSK-TG and Tier II Multi-h CPM
 Dynamic Combiner Test and Fade/Break Frequency Option
 +20 dBm High Output Power Level

Consult Factory for specific models and HW/SW configurations

Systems Engineering & Management Co.
 1430 Vantage Court
 Vista, CA 92081-8596



Technology & Innovation For A Safer World

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TSS200A System Specifications

RF Output Performance

Frequency Bands	200-500 and 830-1130, 1415-1585, 1650-1850, 2185-2485 & 4400-5150 MHZ
Frequency Resolution	100 kHz steps
RF Output Level	+ 10 to -100 dBm in 0.1 dBm steps; calibrated dual outputs; +20 dBm optional
Modulation Formats	FM, PCM/FM, Tier I - SOQPSK-TG, Tier I - Multi-h CPM; PM, BPSK and QPSK
External I/Q Modulation	TTL I & Q Inputs; DC-coupled External Binary File Modulation
In-Band Spurious Emissions	> 60 dBc per IRIG 106-11
Out-of-Band Spurious Emissions	> 36 dBc per IRIG 106-11

Combiner Dynamic Test

Fade Depth	1 to 30 dB in 1 dB steps
Fade Rate	1 Hz to 100 kHz in 1 Hz steps
Fade Phase	0 to 180 degrees in 1 degree steps
Fade Profile	Sinusoidal

Bit Synchronizer/BERT

PCM Codes	NRZ-L, M, S, and bi-phase L, M, and S
Data Rates	10 kbps to 20 Mbps PCM/FM; 100 kbps to 40 Mbps Tier I SOQPSK-TG and Multi-h CPM; 10 kbps to 20 Mbps PM/PSK; 10 kbps to 40 Mbps QPSK
BERT Transmitter Patterns	PN7F, PN11F, PN15F, PN23F
BER Sample Period	1, 2, 5, 10, 30, 60 seconds or accumulating

Communications Environment

Operating Environment	IBM PC (Windows XP)
Communications	RS-232
Remote Control	Network Software via Ethernet

Physical and Environmental

Input Power and Frequency	90-265 VAC, 50-60 Hz, auto-ranging
Dimensions	(2U) 16.875" (W) x 3.5" (H) x 20" (D)
Weight	25 lbs.
Operating Temperature	0° to +50° C
Storage Temperature	-20° to +70° C
Humidity	Up to 95% non-condensing
Altitude	Up to 30,000'
EMI	Designed to meet MIL-STD 461

Specifications are subject to change without notice. Please verify the latest specifications at time of order.