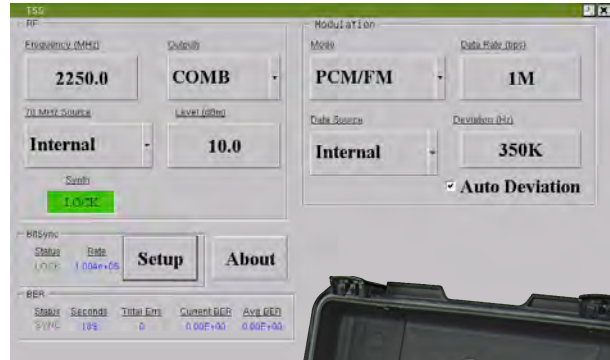




RPTS100 Portable Telemetry Simulator

Features

- ❖ +10 to -70 dBm
- ❖ +37 dBm High Power Option
- ❖ 1415 - 1585, 1650 - 1850 and 2185 - 2485 MHz
- ❖ Optional 4400 - 5250 MHz
- ❖ Optional 200 - 1150 MHz
- ❖ PCM/FM, Tier I SOQPSK-TG, Tier II
- ❖ Multi-h CPM, PM, BPSK and QPSK
- ❖ Optional NTSC/PALS & FM Subcarrier (up to 2)
- ❖ User-Selectable PN Patterns
- ❖ Optional Embedded Bit-Sync/BERT
- ❖ External Binary File Load via USB
- ❖ External Analog and TTL I/Q Mod Input
- ❖ File Memory and Playback
- ❖ AC and 9 - 36 VDC Rechargeable Battery Power
- ❖ Built-In Touch Screen Control and Display
- ❖ Local and Remote (Network) Software
- ❖ Ruggedized Portable Case



Description

The RPTS100 is a portable telemetry signal simulator that is the ideal instrument for conducting quick pre-mission ground station checkout. The calibrated RPTS100 RF output is modulated with an internal user-selectable modulator (PCM/FM, Tier I SOQPSK-TG, Tier II Multi-h CPM, PM, BPSK, QPSK, NTSC/PALS or FM/FM + FM Subcarrier). User selectable PN patterns are also provided.

The RPTS100 can accept external clock and data inputs and can also be externally modulated with pre-recorded binary files, including Telemetry Attributes Transfer Standard (TMATS) PCM formats per RCC 106-15 Chapter 9. The Binary File Storage and Playback feature provides the user with the ability to store and playback pre-recorded tapes. System BER testing can be performed using the optional embedded Bit-Sync/BERT feature.

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RPTS100 Portable Telemetry Simulator Specifications

PERFORMANCE

Frequency Bands (MHz)	2185 to 2485 MHz <u>Options</u> 200-1150 MHz 1415-1585, 1650-1850 and 2185-2485 MHz 4400-5250 MHz
Frequency Resolution	100 kHz steps
RF Output Level	+10 dBm to -70 dBm in user-selectable 0.1, 1, 5 or 10 dBm steps; +37 dBm high power option
Modulation Formats	PCM/FM <u>Options</u> PM, BPSK, QPSK, SOQPSK-TG and Multi-h CPM FM+ up to 2 FM Subcarriers NTSC/PALS
Modulation Data Rates	PCM/FM - 100 bps to 23 Mbps PCM; PM/BPSK - 100 bps to 20 Mbps; QPSK - 100 bps to 40 Mbps; SOQPSK-TG - 100 Kbps to 40 Mbps; Multi-h CPM - 100 Kbps to 40 Mbps; FM/FM Subcarrier -100 Hz to 10 MHz FM Main Carrier with up to 2 FM Sub-carriers from 10 kHz to 5 MHz
External I/Q Modulation	Analog; TTL I & Q Inputs; DC-coupled
File Playback	Binary File Playback via USB
In-Band Spurious Emissions	> -50 dBm per IRIG 106-15
Out-of-Band Spurious Emissions	> -25 dBm per IRIG 106-15
RF Antenna	Per Customer specifications

BIT SYNCHRONIZER/BERT OPTION

PCM Codes (In/Out)	NRZ-L, M and S; Bi-Phase L, M and S, DM-M and S, MDM-M and S
Data Rates	PCM/FM - 100 bps to 23 Mbps PCM; PM/BPSK - 100 bps to 20 Mbps; QPSK - 100 bps to 40 Mbps; SOQPSK-TG - 100 Kbps to 40 Mbps; Multi-h CPM - 100 Kbps to 40 Mbps; FM/FM Subcarrier -100 Hz to 10 MHz FM Main Carrier with up to 2 FM Sub-carriers from 10 kHz to 5 MHz
Descramble	Disabled, RNRZ15, RNRZ9, RNRZ11, RNRZ17, RNRZ23
Clock phase out	0, 90, 180 or 270°
BERT Transmitter Patterns	PN23 F, PN23 R, PN15 F, PN15 R, PN11 F (2047), PN11 R, PN9 F (511), PN9 R, PN7 F, PN7 R, PN6 F (63) and PN6 R
BERT Sample Period	10 ⁻³ to 10 ⁻⁹ or accumulating

OPERATING ENVIRONMENT

Embedded Processor	Linux
Communications	RS232
Touch Screen Display/Display Protocol	USB
Remote Network Software	Via Ethernet (RJ45)

PHYSICAL AND ENVIRONMENTAL

Input Power and Frequency	85-264 VAC, 47-63 Hz; Auto-ranging 9-36 VDC (internal 12 VDC Rechargeable battery Pack)
Dimensions and Weight	15.2" W x 9.0" H x 19.2" D (Ruggedized case); <35 lbs. with batteries installed
Operating Temperature	0 to 50 degrees C
Storage Temperature	-20 to +70 degrees C storage
Humidity	Up to 95% non-condensing
Altitude	Up to 30,000'

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

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