



RPTS108 Portable Hand-Held Telemetry Simulator

Features

- ❖ +5 to -100 dBm
- ❖ 1435.5 - 2394.5 MHz
- ❖ PCM/FM, Tier I SOQPSK-TG & Tier II Multi-h CPM
- ❖ External Analog and TTL I/Q Mod Input
- ❖ External Binary File Load via USB with File Memory and Playback



Options

- ❖ 4400 - 5250 MHz
- ❖ 200 - 1150 MHz
- ❖ PM, BPSK, QPSK, NTSC/PALS & FM Subcarrier
- ❖ Embedded Bit-Sync/Frame Sync/BERT
- ❖ User-Selectable PN Patterns

Physical/Power Features

- ❖ Small, Lightweight Handheld Device
- ❖ AC and 9 - 36 VDC Rechargeable Battery Power; Touch Screen monitoring via Blue Tooth
- ❖ Built-In 12" Touch Screen Control and Display
- ❖ Local and Remote (Network) Software
- ❖ Ruggedized Portable Carrying Case



Description

The RPTS108 is a small, lightweight, hand-held telemetry signal simulator that is the ideal instrument for conducting quick pre-mission ground station checkout. The calibrated RPTS108 RF output is modulated with an internal user-selectable modulator (PCM/FM, Tier I SOQPSK-TG and Tier II Multi-h CPM).

Options include ECIF and C-Band Frequency Bands, PM, BPSK, QPSK, NTSC/PALS or FM/FM + FM Subcarrier modulation, Bit Sync/Frame Sync/BERT user selectable PN patterns

The RPTS108 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.

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



(800) 995-0636, Ext.1125
FAX (760) 727-5200
www.semco.com

RPTS108 Portable Handheld Telemetry Simulator Specifications

PERFORMANCE

Frequency Bands (MHz)

1435.5 to 2394.5 MHz

Options

200-1150 MHz

4400-5250 MHz

Frequency Resolution

100 kHz steps

RF Output Level

+5 dBm to -100 dBm

Modulation Formats

PCM/FM, Tier I SOQPSK-TG and Tier II Multi-h CPM

Options

PM, BPSK, QPSK, FM/FM + FM Subcarrier and NTSC/PALS

Modulation Data Rates

PCM/FM - 100 Kbps to 23 Mbps PCM; SOQPSK-TG - 100 Kbps to 40 Mbps; Multi-h CPM - 100 Kbps to 40 Mbps

Options

PM/BPSK - 100 bps to 20 Mbps; QPSK - 100 bps to 40 Mbps; FM/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

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

10³ to 10⁹ or accumulating

OPERATING ENVIRONMENT

Embedded Processor

Linux

Communications

RS232

Touch Screen Display/Display Protocol

12" Touch Screen; USB protocol

Remote Network Software

Via Ethernet (RJ45)

PHYSICAL AND ENVIRONMENTAL

Input Power and Frequency

100-240 VAC, 50-60 Hz; Auto-ranging

Dimensions and Weight

9-36 VDC (14.8 VDC Rechargeable Snap-On Battery Pack with Bluetooth monitor feature)

13.5" W x 9.0" H x 4" D (Ruggedized Carrying Case); 12.5 lbs. without batteries; <15 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

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



(800) 995-0636 ext.1125

(760) 727-5200 (fax)

www.semco.com

Technology and Innovation for a Safer World