

PMR - Portable MLS Receiver



IN-SNEC®

The Portable MLS Receiver is intended to be used by technical staff involved in the Microwave Landing System (MLS) station manufacturing and testing.

Its compact designs and rugged constructions make it ideal for transportable applications and severe environments.

Test and calibrate your MLS station

Main Functions

- Microwave Landing System station manufacturing and testing as specified by the AWOP
- Tuning and commissioning at factory premises
- MLS ground inspection
- MLS Flight inspection

Main Features

- Conforming to AWOP/13 -WP/619 recommendations
- ARINC 429 interface for remote control
- Manual axis selection azimuth, back azimuth, elevation
- Up to 23 records can be stored & recalled for printing (RS232)
- Automatic calibration with the Portable MLS Generator (PMG)

Main Benefits

- Excellent ergonomies
- Easy to use : only RF connection and channel selection after power on
- High accuracy
- High ruggedness for harsh environment (FAA-G-200e)
- Fully autonomous with internal battery
- Fully and automatically checked and calibrated with the IN-SNEC® Portable MLS Generator (PMG)

Options

- Antenna kit including deployable mast (4.5 m), tripod and RF cable
- 19" rack mount kit

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Technical specifications

MLS functions

| | | |
|-------------------|-----------|------------------|
| Elevation | rate | 39 Hz |
| | beamwidth | 0.5° to 3° |
| | angle | -1.5° to 29.5° |
| Approach azimuth | rate | 13 Hz |
| | beamwidth | 0.5° to 5° |
| | angle | -61.5° to +61.5° |
| High rate azimuth | rate | 39 Hz |
| | beamwidth | 0.5° to 5° |
| | angle | -41.5° to 41.5° |
| Back azimuth | rate | 6.5 Hz |
| | beamwidth | 0.5° to 5° |
| | angle | -41.5° to 41.5° |
| Basic Data Words | words | 1 to 6 |
| Auxiliary words | words | A1 to A5 |

Measurement

| | |
|---------------------|---------------------------------------|
| Angles | |
| resolution | 0.001° |
| MLS functions | azimuth back azimuth elevation |
| on display | 10 rd/s filtered PFE, CMN computed |
| Level resolution | 1 dB |
| MLS functions | azimuth, back azimuth elevation |
| signals / functions | preamble, OCIs, clearances, beam |

Accuracy

| | |
|---|-------------------------|
| Path following error (PFE) | < 0.003° |
| Control motion noise (CMN) | < 0.005° |
| Absolute level | ±1 dB after calibration |
| Beam relative level within a same function | ± 1 dB |

Dynamics

| | |
|-------------------------|-------------------|
| Sensibility | |
| for decoded rate = 86% | < - 100 dBm |
| for decoded rate = 100% | < - 94 dBm |
| Level measurements | - 105 to -13 dBm |
| Angle measurements | - 100 to - 13 dBm |

BF outputs

| | |
|---|---|
| Amplitude demodulation logarithmic law (5 dB/V) | |
| Synchronization | (TTL) choice among all simulated functions |
| Demodulated Data | (TTL) code NRZ-L, rate 15.625 kbit/s |

Remote control

Protocol ARINC 429

PMR

Portable MLS Receiver

MODEL REFERENCE

| | |
|-------------------|------------|
| PMR | SM50549201 |
| MLS antenna kit | SM50687801 |
| 19" rack mounting | SM52097501 |

Environmental conditions

| | |
|-----------------------------|--------------------------|
| Operating temperature range | -30°C to +50 °C |
| Relative humidity | 0% to 95% non condensing |

Primary power requirement

| | |
|--|--------------------|
| AC | |
| voltage | 115 V & 230 V ±10% |
| power consumption | 40 W |
| DC | |
| voltage | 10 -18 V |
| power consumption | 30 W |
| Internal battery with built-in charger | |
| charge indurance | 1.5 hours |
| charge time | 15 hours |

Mechanical characteristics

| | | |
|---------------------|-----------|--|
| Dimensions | W x H x D | 13.34x9.25x4.68" (339 x 235 x 373 mm) |
| Weight | | 33 lb (15kg) |
| Shocks | | 30 g rms |
| Vibrations (random) | | 3 g rms |
| Drops | | H = 7.87" (20cm) |

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