

**LST-5B LIGHTWEIGHT
SATELLITE TERMINAL****DESCRIPTION**

Motorola's LST-5B Lightweight Satellite Terminal is the smallest, lightest tactical LOS/SATCOM transceiver in production. This technically innovative radio, with microprocessor control and EPROM storage, is designed for ease and reliability of operation. Relative received signal strength can be displayed on the easy-to-read, nighttime lighted LCD. Transmitter output power is adjustable in 2-watt steps. All modes of operation, frequencies, bands, and presets are selected through four push-buttons. In SEL-CALL (select-call) mode, the caller selects and keys any one of nine designated units through a digitally coded transmission; a visual and audible handshake is received and the caller initiates a message. A similar procedure establishes a conference call to all units. This AM/FM/PM radio and modem operates in 5 kHz narrow band mode at data rates of 1200 BPSK and 2400 shaped BPSK; it operates in wide band modes on AM or FM voice and cipher text.

FEATURES

- Small size – 209 cu. in.
- Lightweight – 7.8 lbs
- Microprocessor-controlled
- Nine presets
- Select-call/conference-call
- Scan, beacon, T/R, secure, and relay modes
- Remote control – all functions
- Self-contained modem
- Data rates: 1200, 2400 bps
- Shaped BPSK at 2400 bps
- 225 MHz to 400 MHz band operation
- MIL-STD-188C data interface
- Operates with ANDVT, Sunburst processor, KY-57/58
- Adjustable transmitter output power
- Received signal indicator

SPECIFICATIONS

GENERAL CHARACTERISTICS

| | |
|---|--|
| Frequency Range | 225-399.995 MHz |
| Channel Spacing | 5 kHz |
| Frequency Accuracy | 1 ppm |
| Modulation | AM and FM, voice, cipher and beacon |
| 1200 bps | BPSK |
| 1200 bps | differentially encoded BPSK |
| 2400 bps | shaped BPSK |
| Operating Modes | T/R - Receive and transmit on any 9 preset channels Scan - Any 2 of 9 preset channels SELL-CALL - 9 select and 1 conference Beacon - Swept tone Remote Control |
| Power Source | 1 each BA 5590, or 1 each BA 590 |
| Receive Sensitivity (10 dB $\frac{S+N}{N}$) | FM - 120 dBm AM - 112 dBm |

DEMODULATION PERFORMANCE

| | |
|---------------|-------|
| 10^{-3} BER | C/No |
| 1200 bps | 40 dB |
| 2400 bps | 43 dB |



DATA INTERFACE

| | |
|-------------|---------------------------------------|
| Frequency | ± 50 ppm |
| Levels | MIL-STD-188C |
| Modulator | Internal or external clock |
| Demodulator | Supplies data and edge coherent clock |

RECEIVER CHARACTERISTICS

| | |
|---|------------------------------|
| Receive Sensitivity (10 dB $\frac{S+N}{N}$) | FM - 120 dBm AM - 112 dBm |
| Noise Figure | 3 dB typical |
| Spurious Response | 80 dB |

TRANSMITTER CHARACTERISTICS

| | |
|--------------------|-------------------------------------|
| Power Output FM | 4 watts to 20 watts in 2 watt steps |
| AM, high | 5 watts |
| AM, low | 2 watts |
| Protection | Load and thermal |

PHYSICAL CHARACTERISTICS

| | |
|--|--|
| Dimensions Front of Operating Panel | 3.75 in. high \times 6 in. wide \times 9.3 in. deep |
| Battery Case | 2.8 in. high \times 5.3 in. wide \times 5.4 in. deep |
| Physical Weight | 7.8 lbs. |
| Volume | 209 cu. in. |

EQUIPMENT COMPATIBILITY

| | |
|--------------------|---------------|
| Sunburst Processor | DMDG AN/PSC-3 |
| ANDVT | KG-34 |
| KY-57/58 | KG-84 |
| AM-7175/URC | UYA-7 |
| PTPE-100 | UGC/129 |

ENVIRONMENTAL

| | |
|------------------|----------------|
| Operational Temp | -30°C to +55°C |
| Storage Temp | -55°C to +85°C |
| Humidity | 95% |
| Altitude | 15,000 feet |

ACCESSORIES

| |
|-----------------------------------|
| AC, 110/220 volt power source |
| Remote control unit |
| Vehicle and aircraft shock tray |
| Data and control equipment cables |
| Spare piece part and module kits |
| Training programs and equipments. |



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