

# MOTOTRBO™ SL1600 PORTABLE RADIO

## PORTABILITY AND SIMPLICITY REDEFINED



The MOTOTRBO™ SL1600 provides reliable push-to-talk communication for the mobile, everyday user in an ultra-slim and rugged profile. Whether you're coordinating stewards at an event or managing workers in the field, the SL1600 is boldly designed to keep you efficiently connected.

The latest technology works to make operation of the SL1600 simple and straightforward. Ergonomic design allows one-handed radio operation, and a versatile accessory portfolio gives you the freedom to focus on the job at hand.

The SL1600 is compatible with the MOTOTRBO features you'll find are business-essential, for example a transmission can be interrupted to prioritize critical communications. Additionally, the SL1600 supports both digital and analogue radio technology to fit seamlessly into your existing communication system.

### ULTRA-SLIM PROFILE

At only 22mm thick, the SL1600 is ultra-portable. A stubby antenna, curved edges and rugged frame make the SL1600 the perfect work partner. It can be easily carried in pockets or bags without snagging or bulging.

### SIMPLE OPERATION

The SL1600 has been designed for easy, intuitive use. The side volume control, dedicated power button, prominent push-to-talk button, and top toggle channel switch have all been designed for quick one-hand access. Channel "fast toggle" allows users to scroll through 10 channels at a time.

### ADVANCED TECHNOLOGY

The SL1600 is outfitted with the latest technology for performance and ease of use. The shatterproof Active View display uses a matrix of LEDs behind the radio housing to communicate status information and shuts off when not in use to conserve battery life. The SL1600 also features Range Max technology: an advanced radio design and patented antenna which delivers enhanced range while maintaining a slim profile and long battery life.

### RUGGED AND RELIABLE

The SL1600 is built to last. IP54 rated for dust and water resistance, it can be used even in harsh environments. This radio can survive many drops and tumbles. It has also been proven tough in Motorola's grueling Accelerated Life Test, where the radio is tested against a simulated 5 years of hard service before it is accepted.

## MOTOTRBO SL1600 SERIES ACCESSORIES



### CARRY ACCESSORIES

Our versatile portfolio includes a flexible hand strap, rotating heavy duty belt clip, and swivel carry holster. A nylon wrist strap can also be attached at the top of the radio.

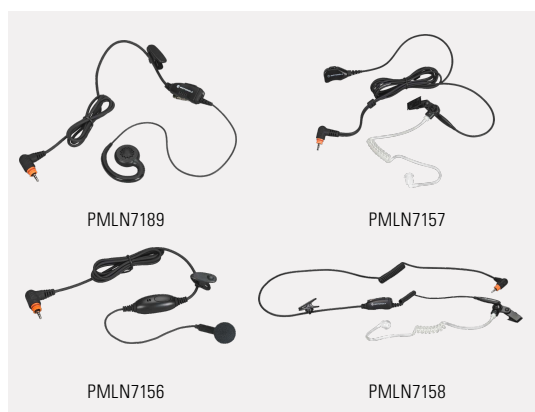
| PART #   | DESCRIPTION                                |
|----------|--------------------------------------------|
| PMLN6074 | Nylon Wrist Strap                          |
| PMLN7076 | Flexible Quick Release Hand Strap          |
| PMLN7128 | Heavy-Duty Swivel Belt Clip                |
| PMLN7190 | Carry Holder/Holster with Swivel Belt Clip |



### ANTENNAS

Outfit your SL1600 with high efficiency stubby antennas. Coloured antenna ID bands are available for easy customisation and identification.

| PART #      | DESCRIPTION                                         |
|-------------|-----------------------------------------------------|
| PMAE4093    | UHF Stubby Antenna for the 403-425MHz range (4.5cm) |
| PMAE4094    | UHF Stubby Antenna for the 420-445MHz range (4.5cm) |
| PMAE4095    | UHF Stubby Antenna for the 435-470MHz range (4.5cm) |
| PMAD4144    | VHF Stubby Antenna for the 136-144MHz range (5cm)   |
| PMAD4145    | VHF Stubby Antenna for the 144-156MHz range (5cm)   |
| PMAD4146    | VHF Stubby Antenna for the 156-174MHz range (5cm)   |
| 32012144001 | Antenna ID Band (Gray, Pack of 10)                  |
| 32012144002 | Antenna ID Band (Yellow, Pack of 10)                |
| 32012144003 | Antenna ID Band (Green, Pack of 10)                 |
| 32012144004 | Antenna ID Band (Blue, Pack of 10)                  |
| 32012144005 | Antenna ID Band (Purple, Pack of 10)                |



### AUDIO ACCESSORIES

MOTOTRBO audio accessories for SL1600 are designed for lasting comfort and improved device performance. In-line microphones and prominent push-to-talk features provide easy hands-free communication.

| PART #   | DESCRIPTION                                                                 |
|----------|-----------------------------------------------------------------------------|
| PMLN7156 | Mag One Earbud with in-line microphone and push-to-talk                     |
| PMLN7159 | Adjustable D-style earpiece with in-line microphone and push-to-talk, black |
| PMLN7189 | Swivel Earpiece with in-line microphone and push-to-talk                    |
| PMLN7158 | 1-Wire Surveillance Kit with in-line microphone and push-to-talk, black     |
| PMLN7157 | 2-Wire Surveillance Kit with translucent tube, black                        |



### BATTERIES, CHARGERS AND CABLES

Keep your radios functioning at all times with these essentials. Charge your Lithium Ion batteries in MOTOTRBO single or multi-unit charging docks.

| PART #      | DESCRIPTION                                        |
|-------------|----------------------------------------------------|
| PMNN4468    | Li-Ion 2300 mAh battery                            |
| PMLN7074    | Replacement Battery Cover                          |
| PS000042A12 | Micro-USB Single-Unit Rapid Rate Charger (EU plug) |
| PS000042A13 | Micro-USB Single-Unit Rapid Rate Charger (UK plug) |
| PMLN7110    | Single-Unit Rapid Rate Charger (EU Plug)           |
| PMLN7163    | Single-Unit Rapid Rate Charger (UK Plug)           |
| PMLN7102    | Six-Pocket Multi-Unit Rapid Rate Charger (EU plug) |
| PMLN7162    | Six-Pocket Multi-Unit Rapid Rate Charger (UK plug) |
| CB000262A01 | Micro USB Programming Cable                        |

**DATA SHEET**  
SL1600 PORTABLE RADIO

## GENERAL SPECIFICATIONS

|                                                            | VHF                                         | UHF                        |
|------------------------------------------------------------|---------------------------------------------|----------------------------|
|                                                            | <b>DISPLAY</b>                              |                            |
| Channel Capacity                                           | 99                                          |                            |
| Typical RF Output<br>Low Power Output<br>High Power Output | 1W<br>2W<br>3W                              | -with Range Max technology |
| Frequency                                                  | 136-174 MHz                                 | 403-470 MHz                |
| Dimensions<br>(H x W x L)                                  | 126 X 55 X 22 mm<br>(4.95 X 2.17 x 0.87 in) |                            |
| Weight with Battery                                        | 169g (5.96 oz)                              | 166g (5.84 oz)             |
| Power Supply                                               | 3.7V (Nominal)                              |                            |
| Battery Life <sup>1</sup> [Li-Ion (2300mAh) Battery]       |                                             |                            |
| Analogue (hours)                                           | 11.8                                        |                            |
| Digital (hours)                                            | 14                                          |                            |
| FCC Description                                            | AZ489FT3835                                 | AZ489FT4922                |
| IC Description                                             | 109U-89FT3835                               | 109U-89FT4922              |

## RECEIVER

|                                                  | VHF                                     | UHF         |
|--------------------------------------------------|-----------------------------------------|-------------|
| Frequency                                        | 136-174 MHz                             | 403-470 MHz |
| Channel Spacing                                  | 12.5 kHz / 20 kHz / 25 kHz              |             |
| Frequency Stability<br>(-30°C, +60°C, +25°C Ref) | ± 1.5 ppm                               |             |
| Analogue Sensitivity<br>(12 dB SINAD)            | 0.3 uV<br>0.22 uV (typical)             |             |
| Digital Sensitivity<br>(5% BER)                  | 0.25 uV<br>0.19 uV (typical)            |             |
| Intermodulation                                  | 65dB                                    |             |
| Adjacent Channel Selectivity                     | 60 dB @ 12.5 kHz<br>70 dB @ 20/25 kHz   |             |
| Spurious Rejection                               | 70 dB                                   |             |
| Rated Audio                                      | 0.5 W (Internal)                        |             |
| Audio Distortion @ Rated Audio                   | 5% (3% typical)                         |             |
| Hum and Noise                                    | -40 dB @ 12.5 kHz<br>-45 dB @ 20/25 kHz |             |
| Audio Response                                   | TIA603D                                 |             |
| Conducted Spurious Emissions<br>(TIA603D)        | -57 dBm                                 |             |

## ENVIRONMENTAL SPECIFICATIONS

|                                    |                       |
|------------------------------------|-----------------------|
| Operating Temperature <sup>2</sup> | -30°C / +60°C         |
| Storage Temperature                | -40°C / +85°C         |
| Thermal Shock                      | Per MIL-STD           |
| Humidity                           | Per MIL-STD           |
| ESD                                | IEC 61000-4-2 Level 3 |
| Dust and Water Intrusion           | IEC60529 - IP54       |
| Packaging Test                     | MIL-STD 810D and E    |

<sup>1</sup> Average battery life at 5/5/90 duty cycle, transmitter in high power. Actual battery runtime observed may vary.

<sup>2</sup> Radio only. Operating temperature specification for a Li-Ion battery is -10 °C to +60 °C.



## TRANSMITTER

|                                                  | VHF                                                                                                                   | UHF         |
|--------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|-------------|
| Frequency                                        | 136-174 MHz                                                                                                           | 403-470 MHz |
| Channel Spacing                                  | 12.5 kHz / 20 kHz / 25 kHz                                                                                            |             |
| Frequency Stability<br>(-30°C, +60°C, +25°C Ref) | ± 1.5 ppm                                                                                                             |             |
| Low Power Output<br>High Power Output            | 1W<br>2W<br>3W                                                                                                        |             |
| Modulation Limiting                              | ± 2.5 kHz @ 12.5 kHz<br>± 4.0 kHz @ 20 kHz<br>± 5.0 kHz @ 25 kHz                                                      |             |
| FM Hum and Noise                                 | -40 dB @ 12.5 kHz<br>-45 dB @ 20/25 kHz                                                                               |             |
| Conducted / Radiated<br>Emission                 | -36 dBm < 1 GHz<br>-30 dBm > 1 GHz                                                                                    |             |
| Adjacent Channel Power                           | 60 dB @ 12.5 kHz<br>70 dB @ 20/25 kHz                                                                                 |             |
| Audio Response                                   | TIA603D                                                                                                               |             |
| Audio Distortion                                 | 3% (typical)                                                                                                          |             |
| 4FSK Digital Modulation                          | 12.5kHz Data: 7K60F1D & 7K60FXD<br>12.5kHz Voice: 7K60F1E & 7K60FXE<br>Combination of 12.5kHz Voice and Data: 7K60F1W |             |
| Digital Vocoder Type                             | AMBE +2™                                                                                                              |             |
| Digital Protocol                                 | ETSI TS 102 361-1, -2, -3                                                                                             |             |

|                    | 810C    |                 | 810D    |             | 810E    |             | 810F    |               | 810G    |                 |
|--------------------|---------|-----------------|---------|-------------|---------|-------------|---------|---------------|---------|-----------------|
| Applicable MIL-STD | Methods | Procedures      | Methods | Procedures  | Methods | Procedures  | Methods | Procedures    | Methods | Procedures      |
| Low Pressure       | 500.1   | I               | 500.2   | II          | 500.3   | II          | 500.4   | II            | 500.5   | II              |
| High Temperature   | 501.1   | I, II           | 501.2   | I/A1, II/A1 | 501.3   | I/A1, II/A1 | 501.4   | I/Hot, II/Hot | 501.5   | I/A1, II        |
| Low Temperature    | 502.1   | I               | 502.2   | I/C3, II/C1 | 502.3   | I/C3, II/C1 | 502.4   | I/C3, II/C1   | 502.5   | I/C3, II        |
| Temperature Shock  | 503.1   | -               | 503.2   | I/A1/C3     | 503.3   | I/A1/C3     | 503.4   | I             | 503.5   | I/C             |
| Solar Radiation    | 505.1   | II              | 505.2   | I           | 505.3   | I           | 505.4   | I             | 505.5   | I/A1            |
| Rain               | 506.1   | I, II           | 506.2   | I, II       | 506.3   | I, II       | 506.4   | I, III        | 506.5   | I, III          |
| Humidity           | 507.1   | II              | 507.2   | II          | 507.3   | II          | 507.4   | -             | 507.5   | II - Aggravated |
| Salt fog           | 509.1   | -               | 509.2   | -           | 509.3   | -           | 509.4   | -             | 509.5   | -               |
| Dust               | 510.1   | I               | 510.2   | I           | 510.3   | I           | 510.4   | I             | 510.5   | I               |
| Vibration          | 514.2   | VIII/F, Curve-W | 514.3   | I/10, II/3  | 514.4   | I/10, II/3  | 514.5   | I/24          | 514.6   | I/24, II/5      |
| Shock              | 516.2   | I, II           | 516.3   | I, IV       | 516.4   | I, IV       | 516.5   | I, IV         | 516.6   | I, IV, V, VI    |



For more information on how SL1600 can keep you efficiently connected, visit [www.motorolasolutions.com/mototrbo](http://www.motorolasolutions.com/mototrbo) or find your closest Motorola representative or authorised Partner at [www.motorolasolutions.com/contactus](http://www.motorolasolutions.com/contactus)

**MOTOTRBO™**  
DIGITAL REMASTERED.

Availability is subject to individual country law and regulations. All specifications shown are typical unless otherwise stated and are subject to change without notice.

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EMEA version 1 (11/2014)