



# PRO3100™

Mobile Radio

## PRO3100 Mobile Radio: The Primary Radio

The PRO3100 radio offers a simple yet reliable business solution that delivers the basic features to keep fast-moving work teams in constant contact. This affordable model includes limited signaling capabilities, two customizable function buttons, the ability to send pages and make phone calls, as well as an optional telephone style handset for convenient private radio conversations. Motorola's X-Pand™ audio enhancement and a large front-projecting speaker ensure clear, crisp sound, even in noisy environments. With the PRO3100 mobile radio, efficient communication could not be easier.

### Single Priority Scan

Enables you to monitor communications on different channels without having to manually switch to each channel periodically. And, if there is a channel that is most important, you can monitor it more often than the rest.

### Adjustable Power Levels

Increase the power of your transmissions to reach farther by adjusting the power level of your radio. Any of the programmable buttons on the radio can be configured to temporarily switch between high and low power levels.

### Repeater / Talkaround Operation

Allows unit-to-unit communications when you are out of range or the repeater is not operating.

### Accessory Connector

Bring your communications closer to the ear by attaching an external speaker. In even the noisiest environments messages can be heard clearly.

### Switchable Channel Spacing

Each channel can be programmed with either 12.5 kHz or 25 kHz channel spacing which allows for a single investment that will retain its value during changing regulatory environments.

### X-Pand™ Audio Technology

Motorola's voice compression called X-Pand™ enables 12.5 kHz channels to have as crisp, clear and strong audio quality as 25 kHz channels.

contact

control



Professional Radio

# PRO3100 Mobile Two-Way Radio Specifications

## general

SPECIFICATION	LOW POWER	HIGH POWER
Dimensions Low Power High Power	Length x Width x Height 177 mm x 176 mm x 56 mm 189 mm x 176 mm x 56 mm	
Weight	1.43 kg	1.59 kg
Current Drain (typical) Standby Receive @ Rated Audio 3 W @ 22 Ω Internal Speaker @ Rated Audio 7.5 W @ 8 Ω External Speaker @ Rated Audio 13 W @ 3.2 Ω External Speaker Transmit	270 mA 600 mA 1.2 A 1.7 A 6 A @ 25 W / 9 A @ 45 W (VHF) / 40 W (UHF)	
Model Numbers	LAM25KHC9AA1_N LAM25RHC9AA1_N LAM25SHC9AA1_N	LAM25KCC9AA1_N LAM25RCC9AA1_N LAM25SKC9AA1_N
Channel Spacing	12.5 / 20 / 25 kHz	
Frequency Range	VHF 136 - 174 MHz UHF 403 - 470 MHz UHF 450 - 527 MHz	VHF 136 - 174 MHz UHF 403 - 470 MHz UHF 450 - 520 MHz
Frequency Stability (-30°C to +60°C, +25°Ref.)	±2.5 ppm	

## transmitter

SPECIFICATION	LOW POWER	HIGH POWER
Power Output	1 - 25 W	25 - 40 W (UHF) 25 - 45 W (VHF)
Modulation Limiting	±2.5 @ 12.5 kHz / ±4.0 @ 20 kHz / ±5.0 @ 25 kHz	
FM Hum & Noise (typical)	@12.5 kHz VHF -45 dB UHF -43 dB	@25 kHz VHF -50 dB UHF -48 dB
Conducted / Radiated Emissions	-36 dBm < 1 GHz / -30 dBm > 1 GHz	
Audio Response (0.3 - 3 kHz)	TIA 603	
Audio Distortion (typical)	2%	

## receiver

SPECIFICATION	@ 12.5 kHz	@ 25 kHz
Sensitivity (12 dB SINAD) EIA (typical)	0.22 μV	
Intermodulation TIA 603	VHF 75 dB / UHF 75 dB	VHF 78 dB / UHF 75 dB
Adjacent Channel Selectivity TIA 603	VHF 65 dB / UHF 65 dB	VHF 80 dB / UHF 75 dB
Spurious Rejection	VHF 70 dB / UHF 70 dB	VHF 80 dB / UHF 75 dB
Rated Audio Internal Speaker External Speaker	3 W @ 22 Ω 7.5 W @ 8 Ω / 13 W @ 3.2 Ω	
Audio Distortion @ Rated Audio (typical)	2%	
Hum & Noise	-45 dB @ 25 kHz / -40 dB @ 12.5 kHz	
Audio Response (0.3 - 3 kHz)	TIA 603	
Conducted Spurious Emission	-57 dBm < 1 GHz / -47 dBm > 1 GHz	

## military standards




Applicable MIL-STD	810C		810D		810E	
	Methods	Procedures	Methods	Procedures	Methods	Procedures
Low Pressure	500.1	1	500.2	2	500.3	2
High Temperature	501.1	1,2	501.2	1,2	501.3	1,2
Low Temperature	502.1	2	502.2	1,2	502.3	1,2
Temperature Shock	503.1	1	503.2	1	503.3	1
Solar Radiation	505.1	1	505.2	1	505.3	1
Rain	506.1	2	506.2	2	506.3	2
Humidity	507.1	2	507.2	2,3	507.3	3
Salt Fog	509.1	1	509.2	1	509.3	1
Dust	510.1	1	510.2	1	510.3	1
Vibration	514.2	8,10	514.3	1	514.4	1
Shock	516.2	1,5	516.3	1	516.4	1

Specifications subject to change without notice. All Electrical Specifications and methods refer to EIA/TIA 603 Standards.

## PRO3100 mobile radio features

- 4 Channels
- PTT-ID (encode)
- Selective Radio Inhibit (decode)
- Monitor
- Single Priority Scan
- Busy Channel Lockout
- Time-Out-Timer
- Nuisance Channel Delete
- Interchangeable Buttons
- CSQ / PL / DPL / Inv-DPL
- Option Board Port

### Quality / Reliability




-  Motorola Accelerated Life Test
-  Two year warranty on radio parts and labor. One year warranty on all accessories including antennas and microphones.
-  Military Standards MIL-STD 810 C, D, E

Contact your Motorola Representative now for more information.



# MOTOROLA

Visit our website at:  
[www.motorola.com/radiosolutions](http://www.motorola.com/radiosolutions)

   Motorola, Professional Radio, PRO Series, PRO3100, and X-Pand are trademarks of Motorola, Inc. © 1999 Motorola, Inc. All rights reserved.

LE-P310-PS