Radius® GM300

Mobile Radios
Operating Instructions
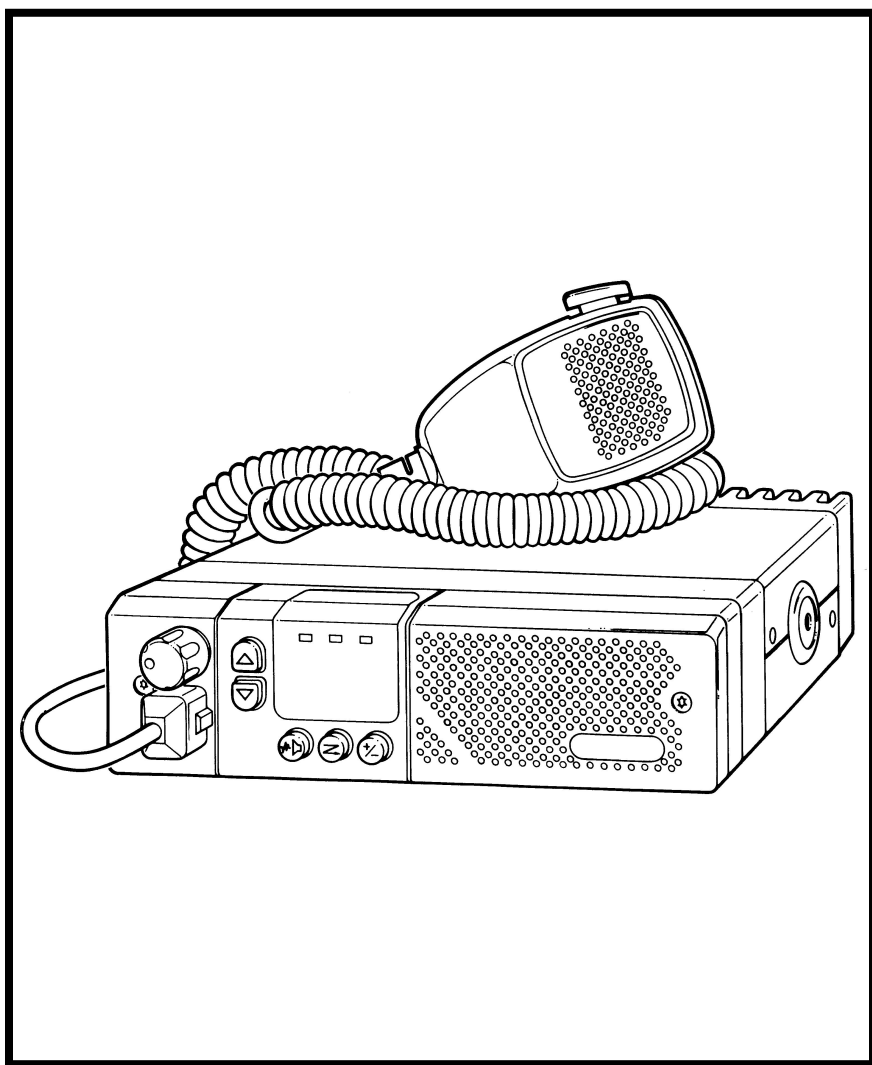
MOTOROLA

6880902Z09-B

Contents

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Introduction

Welcome to the Radius mobile family! Your choice of a Radius mobile means you have selected the highest of standards in design, quality, and performance. This manual is designed to acquaint you with all the features, care, and installation of the Radius mobile to better serve all your communication needs.

Radius Mobile Features

The following features are standard in all models:

- Synthesized, Wide-Band Operation
- Multiple Coded Squelch (Private-Line and Digital-Private Line) Capability
- Operator Selectable Channel Scan
- Field Programming Capability at Dealer
- Mil-Spec 810 C, D and E Performance
- Radius High Performance Compact Microphone with Hardware
- Non-Locking Trunnion with Hardware
- 10 Ft. Power Cable
- 12 V DC Negative Ground
- 3 Watt Internal Speaker
- Rotary Volume Control
- Time-Out Timer
- On-Hook Monitor Capability
- Mini-UHF Antenna Connector
- Operator's Card and Owner's Manual

Radio Self-Check

Every time the radio is turned on, it performs a functional self-check and if necessary, will sound a 5 second warning tone unlike the chirp tone normally heard at power-up. This is an indication that the radio is no longer operating at the exact parameters set in the factory or by a Motorola Radius dealer and should be serviced immediately.

Service

Because this unit contains a radio transmitter, most local governments prohibit anyone from making any internal adjustments to the transmitter unless specifically licensed to do so by government regulations. If your radio fails to operate or any operational difficulties should arise, contact your local Motorola Radius dealer.

Proper repair and maintenance procedures will assure efficient operation and long life for this radio.

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Dealer Programmable Features

Field Programming Capabilities

The Radius GM300 mobile uses non-volatile memory to store customer unique information. If a frequency, squelch code or channel-slaved scan list needs to be changed, it can be done at a service location with Radio Service Software (RSS). The time-out timer can be disabled or changed without having to open the radio for reprogramming.

Scanning radios can also be programmed to enable Talkback Scan or the Priority Sample Rate can be changed. Finally, 16 channel radios are provided with RapidCall Signalling and Expanded Accessory Connector and can be programmed to include a wide variety of features and accessories.

RapidCall Signalling

16 Channel GM300 mobiles are available with RapidCall, a selective signalling package. Radios can be programmed with an impressive variety of features to improve your efficiency as radio users. These features include: Push-to-Talk Identification (PTT-ID), Emergency, Call Alert, Horn/Lights, Voice Selective Call, and Radio Check.

RapidCall mobiles can be made capable of sending a unit ID or Emergency Alert to a control unit or receiving a Call Alert, Horn/Lights, Voice Selective Call or Radio Check from a control unit.

Mobile radios can also be made capable of the control unit functions: receiving and displaying the incoming ID or Emergency and sending a Call Alert, Horn/Lights, Voice Selective Call or Radio Check.

In addition, RapidCall mobiles have an expanded accessory connector, providing greater flexibility in adding external hardware such as Public Address. Ask your Radius Representative for more information.

Time-Out-Timer

All models have a Time-Out Timer (TOT) that will terminate your transmission if you hold the PTT button down for 60 seconds (default setting). To warn the user, an alert tone will sound from the speaker about 4 seconds before the transmission is cut. The Time-Out Timer can be disabled or changed in duration from 1-255 seconds. See your local Motorola Radius dealer for more details.

Accessories

Radius offers several accessories to increase communications efficiency. Many of the accessories available are listed below, but for a complete list, consult your Radius dealer.

Antennas:
HAD4006_R	VHF 136-144 MHz, 1/4 wave roof mount
HAD4007_R	VHF 146-150.8 MHz, 1/4 wave roof mount
HAD4008_R	VHF 150.8-162 MHz, 1/4 wave roof mount
HAD4009_R	VHF 162-174 MHz, 1/4 wave roof mount
HAD4014_R	VHF 146-172 MHz, 3dB gain roof mount
HAE4003_R	UHF 450-470 MHz, 1/4 wave roof mount
HAE4004_R	UHF 470-512 MHz, 1/4 wave roof mount
HAE4002_R	UHF 403-430 MHz, 1/4 wave roof mount
HAE4010_R	UHF 406-420 MHz, 3.5dB gain roof mount
HAE4011_R	UHF 450-470 MHz, 3.5 dB gain roof mount
HAE4012_R	UHF 470-512 MHz, 3.5dB gain roof mount
HAE4013_R	UHF 494-512MHz, 3.5dB gain roof mount
HAE4019_R	UHF 450-470 MHz, 3.5 dB gain roof mount

Microphones:
HMN3596_R	Compact Palm Microphone with 7 foot cord
HMN1035_R	Heavy Duty Palm Microphone with 10.5 ft. cord
HMN1037_R	Touch-code Microphone with Hang-up Clip
HMN3141_R	Handset with Hang-up Cup
HLN9559_R	7 ft. Coil Cord for Compact and Heavy Duty Microphones
HLN9560_R	10.5 ft. Extended Coil Cord for Compact and Heavy Duty Microphones
HLN9073_R	Microphone Hang-up Clip (all microphones)

Installation Accessories:
HKN4137_R	VHF/UHF/800 MHz Low Power Cable
HKN9557_R	PL259/Mini-U Antenna Adapter - 8 inch cable
HLN5282_R	Mini-U Connector (all bands)
HLN8027_R	Mini - UHF to BNC Antenna Adapter
HLN9100_R	Three Point Mounting Bracket (for use with HLN9450)
HLN9027_R	In-dash Bezel Mounting Kit
HLN9284_R	Key Lock Mount
HLN5189_R	Non-locking Bracket
HLN5226_R	Extra Stability Mount (use with HLN5189)
HLN9450_R	45 - 60 Degree Floor Mount Wedge (requires HLN9404)
HLN9404_R	Sleeve Mounting Bracket
HLN8097_R	Removable Slide Mount Tray Package
HLN8098_R	Radio Slide Mount Tray
HLN8099_R	Vehicle Slide Mount Tray
HLN3007_R	Remote Mount Kit (18 ft. length) (with 20 ft. power cable)
HLN8144_R	Remote Mount Kit (8 ft. length) (used with radio supplied power cable)
HLN8413_R	Slide Mount Tray Bracket

Control Station Accessories:

HKN9088_R	Mini-U Antenna Adapter with 8 ft. cable (WSAPD)
HLN5292_R	Base Tray for Control Station
HMN1038_R	Desk Microphone (beige)
HMN3000_R	Desk Microphone (black)
HKN4139_R	Low Power Control Station Power Cable (1-10 W/10-25 W models)
HKN9455_R	High Power Control Station Power Cable (25-45 W models)
HPN4001_R	Power Supply and Cable (25-40 W models)
HPN4002_R	Power Supply and Cable (1-10 W/10-25 W models)

Accessories / Kits Interfacing with the 16 Pin Connector:

HKN9327_R	Ignition Switch Cable
HSN8145_R	7.5 Watt External Speaker (for receiver audio)
HKN9969_R	Accessory for Repeater Interface Communications Kit (additional 3 foot, 16 conductor cable for connection to other accessories)
HLN3333_R	Repeater Interface Communications Kit (includes interface box, mounting bracket, and two 16 conductor cables) (8 & 16 channel limited capability)
HLN9457_R	Hardware Kit (includes 16 conn. pins, (9) 8" wires with pins & extra housing)
TDN8300	DC Remote Adapter and Service Manual - 16 Channel only - 2 channel operation (order desktop controller separately)
TDN8301	Tone Remote Adapter and Service Manual - 16 Channel only - 2 channel operation (order desktop controller separately)

Public Address Accessories: 8 & 16 Channel Models:

HLN3145_R	Public Address Kit (requires HSN1000 accessory) (includes 2 cables for mobile connection to Public Address box to speaker cables)
HSN1000_R	6 W Amplified External Speaker - for Public Address (minimum 1 required)
HKN9324_R	15 ft. Public Address/Speaker Cable (one required for each HSN1000)

Manuals:

6880902Z26	Operator's card - 8 channel radios
6880902Z32	Service manual
6880902Z41	Operator's card - 16 channel radios
6880902Z43	DTMF Operator's card
TDN8198	i50X Radio-Telephone interconnect service manual
TDN8448	DC Remote adapter manual
TDN8449	Tone remote adapter manual