



GM950 Plus Key Accessories:

Hand Held Control Microphone

Enable convenient one-hand operation of the radio, while the radio is installed somewhere else like in the boot of the car. This overcomes space constraints and reduces the risk of the radio being stolen.



Remote Mount Kit

Allows the control head to be mounted on the dash-board without the radio chassis. This is extremely useful in an environment where space is a constraint.



Two-Year Warranty

Each Motorola radio is backed by a two-year warranty on radio parts and labour and a one-year warranty on the microphone, trunnion and power cable.

Motorola: Reliability & Quality



Accelerated Life Testing
Stringent Motorola's Accelerated Life Testing simulating five years of hard use in real life, EIA RS-316B in Shock, Vibration, Dust, Humidity, IP54 for Sealing.



MIL-STD 810 E
Stamp of approval from the U.S. Military for use in rough environments.



ISO 9001 Standard
Compliance with ISO 9001 Standard - an international quality system assurance on design, development, production, installation and servicing of a product.

GM950E, GM950i and GM950 Plus Common Accessories

Enhance your radio's capabilities.

DTMF Microphone

Enables users to have landline access with telephone interconnect capability and also compatible with SmarTrunk II™ system.

Handset

To provide greater privacy, whenever the handset is picked up, it disables the radio speaker, ensuring that only the handset user can hear the received message.

DIN Mounting bracket

Allows users to neatly install the mobile in a "DIN-B" sized space often provided in the vehicle.

Desktop Operation Kit

The mobile can be mounted in a free-standing tray and used together with the desktop operation kit, is ideal for dispatch operation.

SmarTrunk II Option Board *

Plug in modules for SmarTrunk operation to enhance productivity. (This module is only available from SmarTrunk distributors)

Transcrypt Scrambling Option Board

Facilitates completely private communication through Hopping Code Frequency Inversion Technique.

Expandable Interface Port

The GM950 series mobiles support optional plug-in modules for future expandability. The interface can support option boards from both Motorola and independent companies.

External Speaker

A low cost speaker provides enhanced volume in high ambient noise environment.

20 ms CCIR/Voting Signaling Board (GM950 Plus only)

Plug in modules for up to 10 groups of 10 channels voting capability, 20 ms CCIR signaling and DTMF decoding to enhance productivity.

* Smartrunk logic board is available from Smartrunk Distributors only.



Handset



Desktop Microphone



External Loudspeaker



Free-standing Tray



DTMF Microphone



Power Supply

GM950 Series Specifications

GENERAL	GM950E	GM950i	GM950 Plus
Frequency – Mid Band	–	–	66-88 MHz
Frequency – VHF	136-174 MHz	136-174 MHz	136-174 MHz
Frequency – UHF	403-470 MHz	403-470 MHz	403-470 MHz 465-520 MHz
Channel Capacity	4	64	128
Power Supply:	10.8 to 15.6V DC, negative earth		
DIMENSIONS: H x W x D	44 mm x 168 mm x 160 mm		
Weight	1030g		
Environmental Mechanical:	IP54 Dust and Water Protection, IEC 68/2/27 Vibration, IEC 28/2/6 Shock, MIL STD 810E Shock, Vibration and Crash Hazard*		
Electrical:	ETS 300-086, ETS 300-113, ETS 300-219, ETS 300-279 (EMC)		
Channel Spacing	12.5 to 20/25 kHz		
Frequency Stability	±3ppm (VHF), ±2ppm (UHF), ±3ppm (Midband)		
Operational Temperature	-25 °C to +55 °C		
Storage Temperature	-40 °C to +85 °C		
Antenna Connection	50 Ω BNC		
TRANSMITTER			
Channel spacing	12.5 or 20/25 kHz		
Output Power	5 to 25 W		
Modulation Limiting	<±2.5 kHz (12.5 kHz), <±4 kHz (20 kHz), <±5 kHz (25 kHz)		
FM Hum & Noise (CCITT)	>40 dB (12.5 kHz); >45dB (25 kHz) CCITT		
Conduct/Radiated Emission	<0.25 µW (0.1-1000 MHz); <1 µW (1-4 GHz)		
Adjacent Channel Power	<-60 dB (12.5 kHz); <-70 dB (25 kHz)		
Audio Response:(300 - 3000 Hz)	Flat or Pre-emphasis		
Audio Distortion:	<5% @ 1 kHz, 60% Deviation		
Transmit Turn On Time:	<35 msec		
RECEIVER			
Channel spacing	12.5 or 20/25 kHz		
Sensitivity	<0.35 µV (12dB SINAD)		
Intermodulation	>65 dB, >70 dB with Base option		
Adjacent Channel Selectivity	>60 dB (12.5 kHz), >70dB (20/25 kHz)		
Spurious Rejection	>70 dB		
Audio Distortion @ rated Audio	<5%		
Hum & Noise CCITT	>40 dB (12.5 kHz); >45dB (20/25 kHz), CCITT		
Audio Response: (300 - 3000 Hz)	Flat or Pre-emphasis		
Co-channel Rejection	>12 dB (12.5 kHz); >8 dB (20/25 kHz)		
Conducted/Radiated Emission	<2 nW (0.1-1000 MHz); <20 nW (1-4 GHz)		
Receive After Transmit Time	<35 msec		
Audio Output Power	4 W @ 16Ω (internal speaker); <13 W external		

Conforms to EC directive 89/336/EEC CE

* MIL-STD 810E Methods and Procedures:

Vibration: 514.4 proc. 1, Cat. 10-random and sine

Shock: 516.4 proc. 1

Crash: 516.4 proc. 5, Fig. 51604-4

All specifications/features subject to change without notice and issued for guidance purposes only



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Commercial, Government and
Industrial Solutions Sector

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GM950 Series Features Comparison

Features	GM950E	GM950i	GM950 Plus
Channels	4	64	128
LCD display	–	3 digit icons	3 digit icons
Numeric Channel Alias	–	Yes	Yes
PL or DPL TX/RX codes	per ch.	per ch.	per ch.
Transmit inhibit with busy channel	Yes	Yes	Yes
Power level per Channel (2 level)	Yes	Yes	Yes
Ignition Sense Power Up	Yes	Yes	Yes
Time-Out-Timer (1-255s)	Yes	Yes	Yes
Time-Out-Time Pre-Alert (On/Off)	Yes	Yes	Yes
Time-Out-Timer Re-key Timer (1-15s)	Yes	Yes	Yes
Busy Channel lockout	Yes	Yes	Yes
Reversible Control Head	Yes	Yes	Yes
Repeater Talkaround	Yes	Yes	Yes
Handset operation	Yes	Yes	Yes
External speaker connection	Yes	Yes	Yes
SmarTrunk II Module capable	Yes	Yes	Yes
Transcrypt Scrambling Module capable	Yes	Yes	Yes
Scan list	–	2	2
Priority Scan	–	Yes	Yes
Nuisance Delete for Scan	–	Yes	Yes
Programmable I/O port	–	Yes	Yes
Data "Mode" with fast switching	–	Yes	Yes
MDC 1200 signaling	–	–	Yes
Select V Signaling	–	–	Yes
Hand Held Control Mic. Operation	–	–	Yes
20ms CCIR Signalin & Voting	–	–	Yes
Module support			



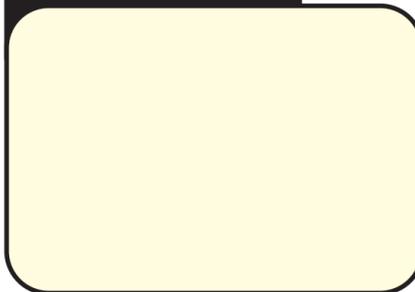
TWO-WAY RADIOS

GM950E

GM950i
GM Series Mobile Radios
GM950 Plus



For more information, please contact:



Cat. No. ADS-91-007

Flexible Mobile Solutions

Motorola GM950 Mobile Radios Series

Affordable, Efficient, Easy Customisation

In today's dynamic environment, instant communication and flexible customised mobile communication solutions are critical to the success of your business. Be it to improve operational productivity, or to increase personal security, Motorola GM950 mobile radio series provides the flexible solution to cater to your every day communication needs. This range of mobile radios is also easy to install, rugged and robustly designed to withstand any harsh environment.

The Motorola GM950 series is suitable for a wide range of business users - from the simple dispatch operator who wants a basic and easy to use radio, to a growing organisation requiring flexibility and customised mobile solution. The Motorola GM950 series is available in 3 models – the 4 channel non-display GM950E, the 64 channel display GM950i and the 128 channel display GM950 Plus. Regardless of the size of your business, there is a model that is just right for you.

► GM950E



► GM950i



► GM950 Plus



Common features for the GM950E, GM950i and GM950 Plus

Variable TX RF Power

Two pre-programmed levels per channel allows user to program the TX power between 5 to 25 W per channel at the press of the button. Reducing radio interference to others especially in a congested radio environment, when transmitting at a lower power and maximizing talk range when transmitting at a higher power.

Memory Channel Button

Up to 2 function buttons can be programmed as "memory channel". Users can program any channel just like an FM radio. Instant access to critical channel such as designated emergency channel is now available at a push of a button.

Ignition Sense

Without users having to remember to turn on the radio, the GM950 series mobile is instantly powered up when the vehicle ignition is on. Together with the "designated power up channel" function, you can be sure that the radio will be on the correct channel. Critical messages can be sent instantly, definitely ideal for emergency services such as Airport Fire service where instant communication is critical.

Busy Channel Lockout

The busy channel lockout function seeks to prevent different groups from transmitting over each other, reducing user annoyance and improving communication efficiency.

Reversible Control Head

The "reversed" control head provides users the flexibility to install at different orientation to ensure user readability.



GM950E – Affordable and Easy to Use

For the organisation needing a basic and easy to use communication tool to stay in touch with one another on the road.

Key Features

4 Channels

Allow users the flexibility to program each channel for different power output, private line (PL)/Digital private line (DPL) for privacy call, memory channel and busy channel lock out to improve communication efficiency.

2 programmable function buttons

Easy to use, users can program their most basic and critical operation needs to these 2 dedicated function buttons.

GM950i – Smart & Efficient Radio

The GM950i is a smart choice for an organisation, if you need some extra features to expand your communication needs and gain some fleet management operational efficiency. Building on the basic features of the GM950E, the GM950i has the following additional features.

Key Features

64 Channels

The multiple channel capacity allows operators to program each channel individually for different power output, private line (PL)/Digital private lines (DPL) for privacy call, memory channel and busy channel lock out to enhance communication efficiency and improve fleet management.

6 programmable function buttons

The additional programmable buttons in the GM950i model gives you the flexibility to assign your most useful operation to these specific function buttons. For example, users can program the function button to repeater talkaround operation. In situation, when a repeater is out of range, talkaround function turns the radio into a simplex radio ensuring continued communications at the touch of a single button.

Scan

The GM950i radio supports up to 2 scan lists, where each scan list can be assigned to any of the function buttons. The two scan lists can include one priority channel where users can monitor the activity even if the radio is receiving on another channel. "Nuisance channel delete" function button also allows users to temporarily delete irrelevant channels from a scan list so as to minimise unwanted calls.

Added on scrambling option board

The GM950i option module interface supports the voice scrambler option board. Providing secured communication and expandability to the radio.

GM950 Plus – Flexible and easy to customise solution

The GM950 Plus is most ideally suited for an organization that needs flexibility to manage the task force and ability to cater to future fleet expansion. It provides a higher level of communication by offering several enhanced signaling features such as MDC1200 signaling and Select V signaling and a range of accessories such as Hand Held Control Microphone and Remote Mount Kit is also available for added flexibility to the radio's performance.

Key Features

128 channels

The 128 channel GM950 Plus, provides greater and complex communication solutions for your business. Operators enjoy greater flexibility to program each channel individually for different power output, private line (PL)/Digital private lines (DPL) for privacy call, memory channel and busy channel lock out to enable customer's customisation and enhanced communication efficiency.

GM950 Plus Enhanced Signaling Features

I) MDC1200 Signaling Protocol

PTT ID

Enable the transmission of caller ID and decoding the sender's ID.

Call Alert

Confirmation to radio sender that the page has been received.

Voice Selective Call

The radio sends and receives unique individual voice message for privacy or group voice message for improved productivity.

Emergency Alarm

Ease-of-Use emergency button with remote capabilities such as Emergency Mic sources and Emergency Mic gain adjustment to ensure caller's safety.

Radio Check

Auto user friendly check on radio if it is operating or within range.

Selective Radio Inhibit

In situation when the radios are stolen or missing, selective radio inhibit can remotely disable the radios for greater security.

II) Select V Signaling Protocol:

Emergency Operation

Provides instant help at the press of button.

Stun/Unstun

Unauthorised radio users can be disabled over the air.

Status

Simple-to-use and time saving coded status operation without voice contact.

ID Decode

With the caller ID display, users can decide which calls to answer.

Multicall 1000

Users can select the individual(s) that they wish to talk with or reply without distributing other users.

