

MOTOTRBO™ DGM 8000e and DGM 5000e Series

Mobile two-way radios

The DGM™ 8000e and DGM 5000e Series is designed for the skilled professional who refuses to compromise. With high performance integrated voice and data, and advanced features for efficient operation, these mobile radios deliver complete connectivity to your teams.



Key features

- VHF, 300 MHz, UHF, 800/900 MHz
- Analogue and digital
- Voice and data
- Alphanumeric and numeric display models
- Canned text messaging
- Freeform text messaging¹ (requires keypad mic)
- Work order ticketing
- Integrated Wi-Fi
- GPS location tracking²
- Indoor location tracking
- Event-driven location updates²
- Bluetooth audio and data
- Voice announcement
- Text to speech
- Option board
- Home channel reminder
- Intelligent Audio
- IMPRES™ audio
- Background noise cancellation
- Acoustic feedback suppressor
- Microphone distortion control
- User-selectable audio profiles
- Trill enhancement
- Four programmable buttons
- Over-the-air software update
- Lone worker
- Basic privacy
- Enhanced privacy
- AES256 Encryption
- Transmit interrupt
- Digital emergency
- Emergency search tone
- Remote monitor
- Radio disable / enable
- Splashproof to IP54
- Rugged to MIL-STD 810
- Wide range of accessories

GENERAL SPECIFICATIONS

	ALPHANUMERIC MODEL					NUMERIC MODEL				
Model name	DGM 8500e, DGM 5500e			DGM 8500e		DGM 8500e, DGM 5500e			DGM 8500e	
Band	VHF	UHF band 1	UHF band 2	350 MHz	800/900 MHz	VHF	UHF band 1	UHF band 2	350 MHz	800/900 MHz
Frequency (MHz)	136-174	403-470	450-527	350-400	806-825 851-870 896-902 935-941	136-174	403-470	450-527	350-400	806-825 851-870 896-902 935-941
High Power Output	25-50 W	25-45 W	25-45 W	1-40 W	10-35 W(800) 10-30 W(900)	25-50 W	25-45 W	25-45 W	-	10-35 W(800) 10-30 W(900)
Low Power Output	1-25 W	1-25 W	-	1-25 W	-	1-25 W	1-25 W	-	1-25 W	-
Channel Spacing	12.5, 20³, 25 kHz									
Channel Capacity	1000					99				
Dimensions (H x W x D)	53 x 175 x 206 mm (2.1 x 6.9 x 8.1 in)									
Weight	1.8 kg (3.9 lb)									
Power Supply (Nominal)	13.8V +/-20%									
Max Current Drain, Standby	0.8 A									
Max Current Drain, Receive	2 A									
Transmit Current Draw, Low Power	11 A	11 A	-	11 A	-	11 A	11 A	-	11 A	-
Transmit Current Draw, High Power	14.5 A	14.5 A	12A	14.5 A	12A	14.5 A	14.5 A	12A	-	12A



TRANSMITTER SPECIFICATIONS

4FSK digital modulation	12.5 kHz Data: 7K60F1D and 7K60FXD 12.5 kHz Voice: 7K60F1E and 7K60FXE Combination of 12.5 kHz Voice and Data: 7K60F1W
Digital protocol	ETSI TS 102 361-1, -2, -3, -4 DMR Tier II and DMR Tier III
Conducted / radiated spurious emissions (TIA603D)	-36 dBm < 1 GHz, -30 dBm > 1 GHz
Adjacent channel power	60 dB (12.5 kHz channel) 70 dB (20, 25 kHz channel)
Frequency stability	±0.5 ppm

AUDIO SPECIFICATIONS

Digital vocoder type	AMBE+2™
Audio response	TIA603D
Rated audio	3 W (internal speaker) 7.5 W (external 8 ohm speaker) 13 W (external 4 ohm speaker)
Audio distortion at rated audio	3%
Hum and noise	-40 dB (12.5 kHz channel) -45 dB (20, 25 kHz channel)
Conducted spurious emissions (TIA603D)	-57 dBm

BLUETOOTH SPECIFICATIONS

Version	4.0
Range	Class 2, 10 m (33 ft)
Supported profiles	Bluetooth Headset Profile (HSP), Serial Port Profile (SPP), Motorola Solutions fast push-to-talk
Simultaneous connections	1 x audio accessory and 1 x data device
Permanent discoverable mode	Optional

RECEIVER SPECIFICATIONS

Analogue sensitivity (12dB SINAD)	0.18 µV
Digital sensitivity (5% BER)	0.16 µV
Intermodulation (TIA603D)	70 dB (VHF) 75 dB (UHF1, UHF2, 350, 800/900)
Adjacent channel Selectivity, (TIA603A)-1T	VHF: 65 dB (12.5 kHz channel) 80 dB (20/25 kHz channel) UHF1, UHF2, 350, 800: 65 dB (12.5 kHz channel) 75 dB (20³/25 kHz channel)
Adjacent channel Selectivity, (TIA603D)-2T	VHF: 50 dB (12.5 kHz channel) 80 dB (20/25 kHz channel) UHF1, UHF2, 350, 800/900: 50 dB (12.5 kHz channel) 75 dB (20³/25 kHz channel)
Spurious rejection (TIA603D)	80 dB (VHF) 75 dB (UHF1, UHF2, 350, 800/900)

GPS SPECIFICATION²

Constellation support	GPS
Time to first fix, cold start	<60 seconds
Time to first fix, hot start	<10 seconds
Horizontal accuracy	< 5 m (< 16.5 ft)

WI-FI SPECIFICATIONS

Standards supported	IEEE 802.11b, 802.11g, 802.11n
Security protocol supported	WPA, WPA2, WEP
Maximum number of SSIDs	128 (64 for numeric models)

ENVIRONMENTAL SPECIFICATIONS

Operating temperature	-30 °C to 60 °C (-22 °F to 140 °F)
Storage temperature	-40 °C to 85 °C (-40 °F to 185 °F)
Electrostatic discharge	IEC 61000-4-2 level 4
Dust and water intrusion	IEC 60529 - IP54
Packaging test	MIL-STD 810C, D, E, F, G and H

MILITARY STANDARDS

	MIL-STD 810C		MIL-STD 810D		MIL-STD 810E		MIL-STD 810F		MIL-STD 810G		MIL-STD 810H	
	Method	Procedure/ category	Method	Procedure/ category	Method	Procedure/ category	Method	Procedure/ category	Method	Procedure/ category	Method	Procedure/ category
Low pressure	500.1	I	500.2	II	500.3	II	500.4	II	500.6	II	500.6	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	501.6	I/A1, II/A1	501.7	I/A1, II/A1
Low temperature	502.1	I	502.2	I/C3, II/C1	502.3	I/C3, II/C1	502.4	I/C3, II/C1	502.6	I/C3, II/C1	502.7	I/C3, II/C1
Temp shock	503.1	I	503.2	I/A1/C3	503.3	I/A1/C3	503.4	I	503.6	I-C	503.7	1-C
Solar radiation	505.1	II	505.2	I	505.3	I/A1	505.4	I/A1	505.6	I/A1	505.7	I/A1
Rain	506.1	I	506.2	I	506.3	I	506.4	I	506.6	I	506.6	I
Humidity	507.1	II	507.2	II	507.3	II	507.4	-	507.6	II/Aggravated	507.6	II/Aggravated
Salt fog	509.1	I	509.2	I	509.3	-	509.4	-	509.6	-	509.7	-
Blowing dust	510.1	I	510.2	I	510.3	I	510.4	I	510.6	I	510.7	I
Blowing sand	-	-	510.2	II	510.3	II	510.4	II	510.6	II	510.7	II
Vibration	514.2	VIII/CatF, XI	514.3	I/10, II/3	514.4	I/10, II/3	514.5	I/24, II/5	514.7	I/24, II/5	514.8	I/24, II/5
Shock	516.2	I, II, III, V	516.3	I, IV, V, VI	516.4	I, IV, V, VI	516.5	I, IV, V, VI	516.7	I, IV, V, VI	516.8	I, IV, V, VI



Features

	DGM 8000e	DGM 5000e	DGM 8500e	DGM 5500e
GENERAL				
Alphanumeric display	—	—	●	●
Numeric display	●	●	—	—
Analogue and digital	●	●	●	●
Voice and data	●	●	●	●
Canned text messaging	●	●	●	●
Freeform text messaging ¹	—	—	●	●
Text to speech	○	○	○	○
Work order ticketing	—	—	●	●
Integrated Wi-Fi	—	—	—	—
Indoor location tracking	—	—	○	○
Outdoor location tracking (GNSS)	●	—	●	—
Event-driven location updates	●	—	●	—
Bluetooth audio	●	●	●	●
Bluetooth data	●	○	●	○
Voice announcement	●	●	●	●
Home channel reminder	●	●	●	●
Late entry	●	●	●	●
Priority scan	●	●	●	●
IP54	●	●	●	●
Rugged to MIL-STD 810	●	●	●	●
AUDIO				
Intelligent Audio	●	●	●	●
IMPRES audio	●	●	●	●
Background noise cancellation	●	●	●	●
Acoustic feedback suppressor	○	○	○	○
User-selectable audio profile	●	●	●	●
Trill enhancement	●	●	●	●
Microphone distortion control	●	●	●	●
Received audio levelling	●	●	●	●
Voice operated transmit (VOX)	●	●	●	●

	DGM 8000e	DGM 5000e	DGM 8500e	DGM 5500e
MANAGEMENT				
CPS 2.0 and Radio Management	●	●	●	●
Over-the-air programming (via DMR)	●	●	●	●
Over-the-air software update (via Wi-Fi)	●	●	●	●
Preventive maintenance	○	○	○	○
Rental timer	●	●	●	●
SAFETY				
Emergency alert	●	●	●	●
Lone worker	●	●	●	●
Transmit Interrupt	●	○	●	○
Basic privacy	●	●	●	●
Enhanced privacy	●	○	●	●
AES256 encryption	○	○	○	○
Remote monitor	●	●	●	●
Digital emergency	●	●	●	●
Emergency search tone	●	●	●	●
Radio disable / enable	●	●	●	●
CUSTOMISATION				
Programmable buttons	4	4	4	4
Option board	●	-	●	-
SYSTEMS				
Dual Capacity Direct Mode	●	●	●	●
Conventional	●	●	●	●
IP Site Connect	●	○	●	○
Capacity Plus single site	○	○	○	○
Capacity Plus multi-site	○	○	○	○
Capacity Max	○	○	○	○

● Included ○ Optional — Not Included

¹ Alphanumeric models only. Requires keypad mic.

² Option board and GPS ready in DGM 8500e and DGM 8000e only.

³ 20 kHz channel not available for 350 MHz models.

To learn more, visit: www.motorolasolutions.com/mototrbo



These models available in Motorola Solutions Latin America and Caribbean region only. Availability varies and 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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