

 **Radioddity**
**DB40-G Radio
Repeater Capable**



Radioddity DB40-G Radio Repeater Capable User Manual

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Radioddity DB40-G Radio Repeater Capable



Specifications

- **GMRS receiver and transmitter**, UHF receiver 400-480MHz
- **Large screen display** with rich content
- **Maximum programmable** 199 channels
- **Three power levels available**: HI M LO
- **Continuous tone-coded** squelch system (CTCSS 50) or digital code squelch (DCS 104)
- **Wide and narrowband** options
- **Frequency step options**: 5.0k/6.25k/12.5k/25k
- **Repeater** function
- **Call tone** optional
- **Busy channel** lockout function
- **VOX (Voice Operated Exchange)**

Product Usage Instructions

Unpacking and Device Check

Please handle the walkie-talkie with care as you remove it from the box. Before disposing of the packaging material, verify the presence of all items listed in the Accessory List.

Power On

- Connect the machine to the power supply and ensure no errors.
- Long-press the power/volume knob to power on the machine.
- The main interface will indicate successful power-on. In case of abnormal disconnection, the machine will automatically power on again.

Switching Channels

1. Use the rotary encoder to switch channels.
2. Use the hand-mic plus/minus keys to increment or decrement channels.

3. Use the hand-mic numeric keys to directly set the desired channel.

Frequency Mode and GMRS Channel Mode Switching

Press the Mode button on the panel or the Mode key on the hand-mic to switch between GMRS channel mode and VFO mode.

FAQ

Q: What should I do if any items are lost or damaged during handling?

A: If any items are lost or damaged during handling, promptly notify the delivery person and submit a claim.

Q: How do I return the radio to its initial state from various states?

A: Use the Cancel key, which is designed to return the radio to its initial state from various states.

Introduction

- Thank you for purchasing the GMRS radio. To ensure optimal performance, we kindly request that you thoroughly read this manual.
- The GMRS DB40-G is a compact and user-friendly car radio transmitter, designed to deliver excellent performance. Its straightforward panel layout and intuitive operating functions enable customers to quickly get started.

Unpacking and Device Check

- Please handle the walkie-talkie with care as you remove it from the box. Before disposing of the packaging material, we advise you to verify the presence of the following items in the box.

Accessory List

Item	Unit	Quantity
Radio	pc	1
Fixed base	pc	1
Microphone	pc	1
Microphone base	pc	1
User Manual	pc	1
DC lead	pc	1
Screw bag	pack	1
Programming Cable	pc	1

- If any items are lost or damaged during handling, we kindly request that you promptly notify the delivery person

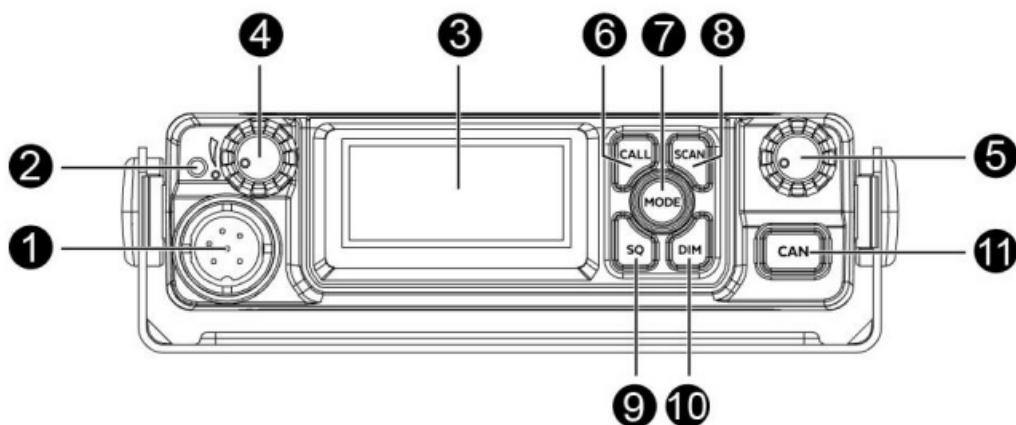
and submit a claim.

Main Features

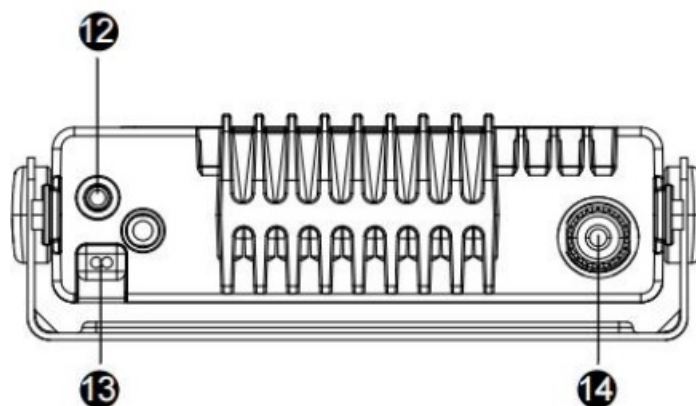
- GMRS receiver and transmitter, UHF receiver 400-480MHz
- Large screen display, the display content is rich, easy to understand
- Maximum programmable 199 channels
- Three power levels available HI M LO
- Continuous tone-coded squelch system CTCSS 50 or digital code squelch DCS 104 Reject excess calls from other stations.
- Wide and narrowband are optional
- Frequency step 5.0k/6.25k/12.5k/25k
- Repeater function
- Call tone optional
- Busy channel lockout function
- VOX

Structure and Function

Front View of Radio

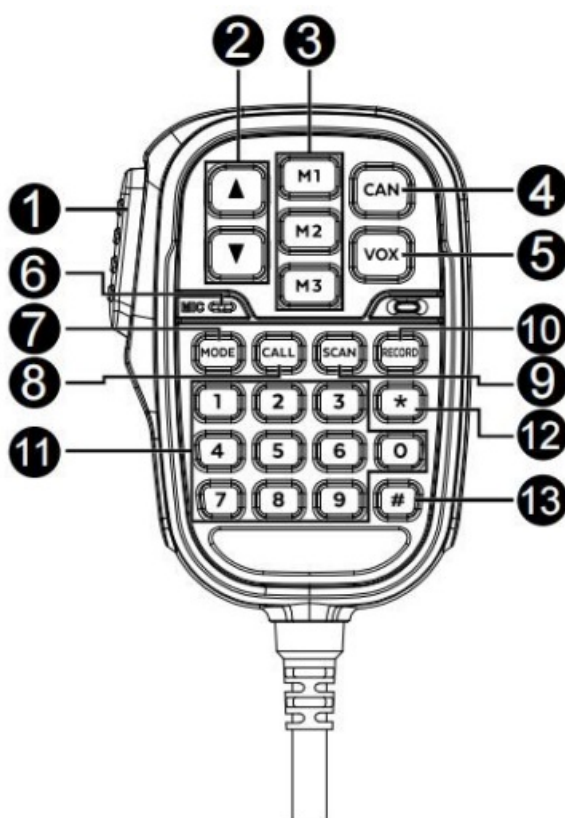


Rear View of Radio



No.	Name
1	Microphone Interface
2	Transmit/Receive Indicator
3	LCD Panel
4	Power/Volume Knob
5	Channel and Parameter Adjustment Knobs
6	Call Function Keys
7	Mode Function Keys
8	Scanning Function Keys
9	Squelch Level Function Keys
10	Brightness Adjustment Function Keys
11	Function Cancel Keys
12	External Speaker Interface
13	Power Connection Cable
14	Antenna Connector

Microphone Schematic



No.	Name
1	PTT
2	Up or Down / Add or Subtract
3	Shortcut Channel Switch / Save Key
4	Cancel Function
5	VOX Key
6	MIC
7	Mode Switch
8	CALL Function
9	Scan Function
10	Channel Name/Extend Channel Edit
11	Numbers 0-9 Function
12	Menu Function
13	Extended Channel Delete Key/ Keyboard Lock

- Under normal circumstances, pressing any key will result in a confirmation tone.
- When the radio successfully executes the command associated with the key, it responds with a “B” response.
- In case the radio fails to execute a key command, it responds with a “DU” response.
- The “Cancel” key is designed to return the radio to its initial state from various states.

Operation Description

Power On

- Connect the machine to the boat's power supply and ensure there are no errors.
- Long-press the power/volume knob to power on the machine, indicated by entry into the main interface.
- In case of abnormal power disconnection, the machine will automatically power on again.

Switching Channel

1. Use the rotary encoder to switch channels.
2. Use the hand-mic plus/minus keys to increment or decrement channels.
3. Use the hand-mic numeric keys to directly set the desired channel.

Frequency Mode and GMRS Channel Mode Switching

- Press the “Mode” button on the panel or the “Mode” key on the hand-mic to switch between GMRS channel mode and VFO mode.

Frequency Mode Frequency Step Selection

- Press the numeric keys to set the frequency directly. Alternatively, press the “*” to enter the frequency step setting menu and choose from 5k, 6.25k, 12.5k, or 25k steps.

Memory Frequencies

- In the frequency mode, press the memory key to display the prompt “press MX to memorize the frequency.” Then, press M1/M2/M3 to record the current frequency.
- To quickly switch to the recorded frequency, you can short press M1/M2/M3.

Scanning

- In channel mode, press “SCAN” to perform channel scanning; In VFO mode, press “SCAN” to perform frequency scanning, and the scanning range can be set in the menu.
- Press “RECORD” to save the useful frequency points. Press up and down to switch between forward and reverse scanning or skip the useful channel (frequency point) to continue scanning.

Squelch Setting

- Short press the “SQ” key to set the squelch level. Use the Up/Down key to adjust the level, or directly input the desired level using the numeric keys. When the setting is complete, press the “CAN” or “SQ” button again to exit the setting.
- Press and hold the “SQ” key for 3 seconds to turn on forced monitoring.

Backlight Brightness Setting

- Short press the “Brightness” button to set the backlight brightness level. Adjust the level using the plus/minus key or directly input the desired level using the numeric keys.
- Press the “Cancel” or “Squelch” button again to exit the setting.

Call Function

- Press the Select Call key to make a call. Choose from 1-5 different call tones.

VOX Function

- Press the VOX button on the speaker to turn the VOX function on or off. To adjust the VOX level, press “*” on the microphone to enter the menu and use the Up or Down key to select the desired level.

Keyboard Lock

- Press and hold the “#” button for 3 seconds to lock or unlock the keypad. When the keypad is locked, only the PTT button can be used.

Menu Options

- In standby mode, press the encoder or the hand-mic “*” key to enter the menu.

The menu options include:

1. Transmit power (low/medium/high)
2. Dual frequency standby
3. Repeater switch (15-22 channels)
4. Bandwidth (wideband /narrowband)
5. Subsonic OFF/CTC/CDC
6. Transmit subsonic OFF/CTC/CDC
7. VOX level SET
8. BCLO (On/Off)
9. Key tone (on/off)
10. Call tone selection (0-5)
11. TOT 0-300S

Extended Channel Frequency Editor

Please note that channels 1-30 are reserved for the main channels and cannot be edited, only 031-199 can be freely set for extended channels.

To add the current frequency to an extended channel, follow these steps:

1. Switch to VFO mode.
2. Press the “RECORD” button on the hand to initiate the saving process.
3. Choose a desired channel to store the frequency.
 - Please note that if the selected channel (CH031-199) is already occupied, the saving process will fail. Ensure that the channel is empty before attempting to save the frequency.

Channel Name Editing (Length 8)

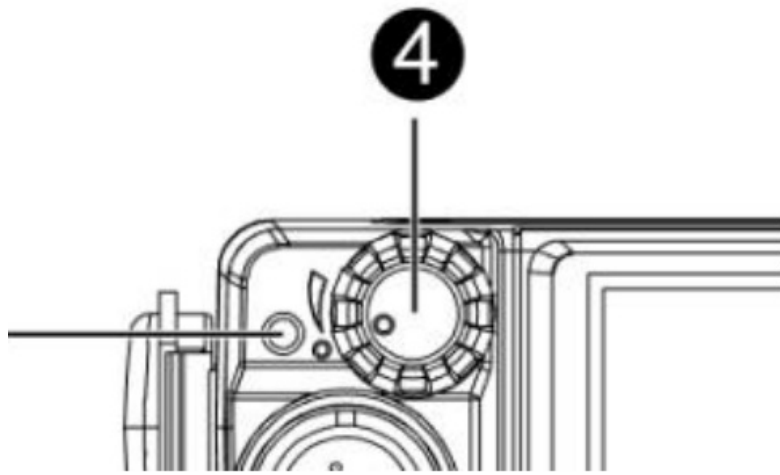
- Press “RECORD” to set the channel name. Use the knob (or hand-mic Up or Down) to modify the characters.
- Press ENCODER or MODE to switch to the next character, and press PTT to end the edit.

Dual Frequency Standby

- Under any channel, press the hand-mic to set the dual-frequency standby channel. Press and hold the SCAN button to enter the dual-frequency standby screen. The main channel can be switched between each other using the hand-mic “#” key.

Volume Adjustment

- Rotate machine button 4 to adjust the sound volume of the radio



Channel Frequency Tables

Channel Number	GMRS Frequency MHz	Fixed Privacy	Band Width	TX Power
1	462.5625		Narrow or Wide	Low
2	462.5875		Narrow or Wide	Low
3	462.6125		Narrow or Wide	Low
4	462.6375		Narrow or Wide	Low
5	462.6625		Narrow or Wide	Low
6	462.6875		Narrow or Wide	Low
7	462.7125		Narrow or Wide	Low
8	467.5625		Narrow	RX
9	467.5875		Narrow	RX
10	467.6125		Narrow	RX
11	467.6375		Narrow	RX
12	467.6625		Narrow	RX
13	467.6875		Narrow	RX
14	467.7125		Narrow	RX
15	462.5500		Narrow or Wide	High/Low
16	462.5750		Narrow or Wide	High/Low
17	462.6000		Narrow or Wide	High/Low
18	462.6250		Narrow or Wide	High/Low
19	462.6500		Narrow or Wide	High/Low
20	462.6750		Narrow or Wide	High/Low
21	462.7000		Narrow or Wide	High/Low
22	462.7250		Narrow or Wide	High/Low
23	462.5625		Narrow or Wide	High/Low
24	462.6125		Narrow or Wide	High/Low
25	462.6625		Narrow or Wide	High/Low
26	462.7125		Narrow or Wide	High/Low
27	462.55		Narrow or Wide	High/Low
28	462.600		Narrow or Wide	High/Low
29	462.650		Narrow or Wide	High/Low
30	462.700		Narrow or Wide	High/Low

CTCSS Table

1	67.0	18	118.8	35	183.5
2	69.3	19	123.0	36	186.2
3	71.9	20	127.3	37	189.9
4	74.4	21	131.8	38	192.8
5	77.0	22	136.5	39	196.6
6	79.7	23	141.3	40	199.5
7	82.5	24	146.2	41	203.5
8	85.4	25	151.4	42	206.5
9	88.5	26	156.7	43	210.7
10	91.5	27	159.8	44	218.1
11	94.8	28	162.2	45	225.7
12	97.4	29	165.5	46	229.1
13	100.0	30	167.9	47	233.6
14	103.5	31	171.3	48	241.8
15	107.2	32	173.8	49	250.3
16	110.9	33	177.3	50	254.1
17	114.8	34	179.9		

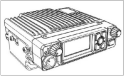
DCS Table

No	code	No	code	No	code	No	code	No	code	No	code
1	023	21	125	41	245	61	356	81	506	101	732
2	025	22	131	42	246	62	364	82	516	102	734
3	026	23	132	43	251	63	365	83	523	103	743
4	031	24	134	44	252	64	371	84	526	104	754
5	032	25	143	45	255	65	411	85	532		
6	036	26	145	46	261	66	412	86	546		
7	043	27	152	47	263	67	413	87	565		
8	047	28	155	48	265	68	423	88	606		
9	051	29	156	49	266	69	431	89	612		
10	053	30	162	50	271	70	432	90	624		
11	054	31	165	51	274	71	445	91	627		
12	065	32	172	52	306	72	446	92	631		
13	071	33	174	53	311	73	452	93	632		
14	072	34	205	54	315	74	454	94	654		
15	073	35	212	55	325	75	455	95	662		
16	074	36	223	56	331	76	462	96	664		
17	114	37	225	57	332	77	464	97	703		
18	115	38	226	58	343	78	465	98	712		
19	116	39	243	59	346	79	466	99	723		
20	122	40	244	60	351	80	503	100	731		

Main Parameters

Frequency range Receiver 400.000-480.000MHZ Transmitter: GMRS frequency Channel spacing 5KHz 6.25KHz 12.5KHz 25KHz Supply Voltage 13.8V±15%			
Transmitter		Receiver	
output power	HI≥40W M≈20W LO≈5W	Reference sensitivity	400-420≤0.30uV 420-470≤0.25uV
Carrier frequency tolerance	≤2.5PPM	Threshold squelch on sensitivity(ASQ2)	≤0.20uV
Modulation limiting	≤5Khz	Audio Harmonic Distortion	≤7%
Dissipation current	≤10A	Modulated Receive Bandwidth	≤3/5khz

Documents / Resources

<div>DB40-G User Manual</div> 	Radioddity DB40-G Radio Repeater Capable [pdf] User Manual DB40-G Radio Repeater Capable, DB40-G, Radio Repeater Capable, Repeater Capable, Capable
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References

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