

7. MAIN MENU FUNCTIONS

(23) 5Tone Enc

Set a 5Tone as the default call ID for the current channel.

Press the [PTT] key to transmit the selected 5Tone.

Edit the 5Tone in the PC programming software before it can be selected.

(24) 5Tone BOT

Set ON to send the 5Tone encode ID when press the [PTT] key.

(25) 5Tone EOT

Set ON to send the 5Tone encode ID when release the [PTT] key.

(26) Work Alone

Turn on or off work alone function.

(27) APRS Receive(optional with installed BT+APRS board)

Turn on this function to enable the radio receiving the analog APRS information in current channel. Make sure your channel setting Frequency, CTCSS/DCS match to the transmit radio's setting.

The radio will display the callsign, coordinates,direction,distance, digipeater paths, etc., when receive the analog APRS from the other radios.

Radio Menu-> APRS -> Ana APRS Info, allows to check the receive analog APRS logs.

CPS -> Public->APRS ->Analog APRS -> Receive Allow set to "On", and input the Callsign and SSID you want to receive. The radio will only receive and display the analog APRS information of the filter callsign, instead of display all analog APRS.

7.7.3 Device Info

Show the Radio ID, Radio name, serial number, model name, frequency range, firmware version, radio data version, latest program date, picture version, language version etc.



7. MAIN MENU FUNCTIONS

7.8 Record

The voice record is designed for security use purpose. Each call will be saved as a separated recording file with DMR ID and time details. The standard voice 10hours record allows in DMR mode only. The optional 500 hours voice record allow in both DMR or analog mode.

7.8.1 Turn On/ Off the Recording

a. Press  (Menu) enter main Menu, press  /  key to Record.

b. Select **Talk Record**, then

- Select **Record Switch**, select on or off to turn on or off the recording.

7.8.2 Play the Record

a. Press  (Menu) to enter main Menu, press  /  key to Record.

b. Select **Record List** to enter Record list, select a Record list to enter the Record file.

c. Select a Record to see the Detailed Information.

d. Press Select to choose the record option.

1) **Record Play**, it will play one record at a time, you can press  /  key to switch the recording without return to previous menu.

2) **Loop Playback**, it will play all records in circle.

7.8.3 Send the Record

a. Press  (Menu) to enter main Menu, press  /  key to Record.

b. Select Record List to enter Record list, select a Record list to enter the Record file.

c. Select a Record to see the detail information.

d. Select Record Send, and it will display the Contact list or Manual Dial.

e. Select Contact list to choose a contact, press select to send the Record.

f. Select Manual Dial, input the DMR ID, press  key to switch group ID or private ID, press select to send the Record.

7. MAIN MENU FUNCTIONS

7.8.4 Recording Manually

In the PC software, Public – Optional Setting – Key function, program a key as Record.

- a.** Press the programmed Record key, and the radio will start the recording, and speak into the microphone.
- b.** Select Record Play, and the radio will play the record.
- c.** Select Record Send, and the radio will display Contact list or Manual Dial.
- d.** Select Contact list to choose a contact, and press select to send the Record.
- e.** Select Manual Dial, input the DMR ID, press  key to switch group ID or private ID, press select to send the Record.



NOTE

» **The Recording function is only valid in digital channel.**

7.9 GPS Positioning Function(optional with installed GPS)

7.9.1 Turn on GPS

- a.** Press  (Menu) to enter the main Menu.
- b.** Select "GPS".
- c.** Select "GPS On".

7.9.2 GPS Info

Method 1: Check GPS info from Menu

Press  (Menu) key to enter Main Menu, select "GPS", then select "GPS Info".

Method 2: Check GPS info from programmed key

In the PC software, Public – Optional Setting – Key function, program a key as "GPS Info", then press the programmed key to check the GPS info.



NOTE

» **If the GPS is not positioning, it will display “No Fixed Position”, and the GPS icon shows a grey color. Move the radio to an open window or outdoors, and it will take a few minutes to connect to the GPS Satellites.**



7. MAIN MENU FUNCTIONS

7.9.3 Send GPS Information

- a. When the GPS is positioning successfully, the GPS icon shows a red color. Follow the above step to check the GPS info, press edit key to Text edit.
- b. Press Confirm, and it will display Send or Save. If you select Save, the GPS info will be saved as a draft message.
- c. Choose Send and it will display Contact list or Manual Dial.
- d. Select Contact list to choose a contact, press select to send the GPS info. or
- e. Select Manual Dial, input the DMR ID, press  key to switch group ID or private ID, press  to send the GPS info.

7.10 APRS Location Reporting(Supported by GPS)

(1) Upload Type

None: No APRS.

Sel A Aprs: Select analog APRS.

Sel D Aprs: Select DMR APRS.

(2) Ana APRS

PTT Upload: Set the PTT transmit method.

- Off: Not transmit APRS.
- Tx Start: Transmit analog APRS when press the PTT.
- TX End: Transmit analog APRS when release the PTT.

Upload Power: Set the transmit power.

Upload frequency: Set the transmit frequency.

Upload text: Set the text to be shown on aprs.fi

(3) Ana APRS Info

The received analog APRS information will be saved in radio for look back use. Click on "Ana APRS Info" will show the received APRS information. Click on "Delete All" will clear the information.

(4) Digi APRS

PTT Upload: Set the PTT transmit method.

- Off: Not transmit APRS.
- On: Transmit DMR APRS when release the PTT.



7. MAIN MENU FUNCTIONS

Report Channel: Allow user to select a channel to transmit the DMR APRS, please set the 8 report channels in CPS-APRS-Digi page first.

Upload Slot: Allow user to select a slot to transmit the DMR APRS.

- Channel Slot: It uses the slot of current channel
- Slot 1: Use slot 1
- Slot 2: Use slot 2

(5) Digi APRS Info

The received APRS information will be saved in radio for look back use.

Click on "Digi APRS Info" will show the received APRS information.

Click on "Delete All" will clear the information.

(6) Intervals Set

This function allows you to set the analog APRS or DMR APRS auto transmit at fixed times.

(7) Upload Beacon

GPS Beacon: The APRS will transmit the GPS data, only if the GPS is set to on first, then GPS must also successfully lock on the satellites.

Fixed Beacon: The APRS will transmit the fixed beacon data. Someone can transmit the fixed beacon without setting the GPS on. The fixed beacon location information should be set in CPS firstly.

Note: More setup are available by PC software only. **CPS-Tools-Options-APRS**, you have to check on the APRS box first to get APRS menu add to the left Digital menu.

(APRS is a registered trademark of Bob Bruinga, WB4APR)

7.11 Digital Monitor

a. Press  (Menu) key to enter main menu, press  /  key to choose **Digi Moni** function.

b. Press Select to enter **Digi Moni** menu, press  /  key to choose a sub menu.

1) DigiMoni Switch

off: Turn off Digital Monitor

Single Slot: Monitor the current TS

Double Slot: Monitor TS1 and TS2

2) DigiMoni Cc

Any Cc: Monitor any color code

Same Cc: Monitor the same color code



7. MAIN MENU FUNCTIONS

3) DigiMoni Id

Any Id: Monitor any TG

Same Id: Monitor the same TG

4) Slot Hold

Off: Turn off the slot hold

On: Turn on the slot hold

Recommend to turn on slot hold when monitor double slot TS1 and TS2, when the signal is disappear in one slot, instead of switching to the other slot at once, the radio will hold on some seconds and wait for the audio drop.

c. Press Select to enter the sub menu and set up.

7.11.1 Response and Save a call in Digital Monitor Mode

During Digital Monitor, when receive a call with unmatched ID, press  key, the screen will display "Monitor Response Setup Successfully", press [PTT] key will reponse to the call.

Press  key, the radio will remind you choose a Zone, press  /  key to choose a Zone, press select key to save the new channel to the Zone.

7.12 Bluetooth function (Optional with installed Bluetooth)

1) BHT Switch

It will allow select "Bluetooth ON" or "Bluetooth OFF", select "Bluetooth ON" to turn on the bluetooth function.

2) BHT Match

It will allow select Enter Match or Exit Match select Enter Match to start the bluetooth pairing.

3) Device Name

It will show the bluetooth information and version.

4) MIC while BHT

When bluetooth function is on, the radio microphone is default off. This function will allow you turn on the radio microphone

5) Speaker while BHT

When bluetooth function is on the radio speaker is default off. This function will allow you turn on the radio speaker.

6) BHT MIC Gain c

This function will allow you select different MIC gain level for bluetooth headset.

7) BHT SPK Gain

This function will allow you select different speaker gain level for bluetooth headset.



8. RESET

- a.** Power off the radio firstly.
- b.** Then power it on while holding the [PTT] and the [PF1] button below the PTT at the same time.
- c.** The radio will start up with a note on the display – “Are you sure you want to initialize radio?”

Press Exit to exit the reset and power on the radio.

Press Confirm to proceed the reset, it will come with a screen display note – Initialize Radio.

- d.** After a re-start the radio will display the setting of time zone and the date and the time. Use the up-down key to set the current year. Move to the month by pushing the **P1** key. Set the month, and use the **P1** key to move forward each step. Once done, click the Confirm key to save the date and time.

Please remember set up the time zone to avoid the date/time error.

Make sure the codeplug is saved to PC before your do the update and reset.



9. TROUBLE SHOOTING GUIDE

Problems	Solutions
The radio cannot be switched on or no display after being switched on.	A. Battery pack may not be installed properly. Remove the battery pack and install it again. B. Battery power may be insufficient. Recharge or replace the battery pack.
The battery doesn't last very long after charging.	The battery is defective; please replace it with a new battery pack.
Cannot talk to or hear other members in your group.	1. Make sure the frequency and CTCSS are the same as other members. 2. Make sure you are within range, and not too far away from your member. 3. Make sure you are set in correct digital mode, and frequency. 4. In digital mode, make sure set correct code and encrypt group is used in current channel. 5. In digital mode, make sure set correct receiving contacts and receiving group is used.
Other voices from non-group members are heard on the channel.	Analog: Change the CTCSS/DCS Tone, and make sure to change the tone on all radios in your group.



10. PROGRAMMING GUIDE

Radioddity GD-AT10G radios ship from the manufacturer “Keypad” locked per FCC rules.

You can press the  (Menu) key and the  (star) key to unlock the keypad for the first time of use. You will need the programming cable to connect your radio to your computer for programming.

The programming software and codeplug programming guide are available for download from Radioddity website:

www.radioddity.com

When programming this radio for the first time, it is recommended you first READ the radio with the software and then save this file for future reference as it contains the default programming and settings. In addition, after you READ this radio with software, first make your programming and frequency changes, then send this edited file back to your radio.

Multiple Radio ID's

The GD-AT10G radio will allow multiple DMR Radio ID numbers to be used with the radio. This feature will allow one radio to be used for example as a Commercial Radio with its own DMR ID, and at the same time also be used as an Amateur radio with another DMR ID.

In PC software, Digital/ Radio ID List, you can enter your Department Unit Number or Amateur Radio callsign.

Amateur DMR-MARC

For the best Amateur DMR experience obtain a subscriber ID from one of many available Amateur Radio sources. A U.S. Amateur can obtain a DMR ID From:

<https://www.radioid.net/cgi-bin/trbo-database/register.cgi>

For DMR repeaters in your area please see: www.repeaterbook.com

World DMR repeater network map:

<https://www.repeaterbook.com/index.php/repeater-database>

World DMR repeater network with verified Talkgroups by activity:

<https://brandmeister.network/?page=lh>



10. PROGRAMMING GUIDE

Worldwide Amateur Contact Database

The GD-AT10G DMR radios contain a separate database memory for importing and displaying Amateur DMR individual IDs, call sign and user name in comma-delimited format (.csv)

Please reference in the programming guide for import and export database operations detailed.

User List Contact Database: <https://ham-digital.org/status/>



11. ON-LINE SERVICE AND SUPPORT

The Radioddity website provides additional information about obtaining service or support for the Radioddity line of two-way radios and accessories. Visit: www.radioddity.com

Warning Notes

Every effort has been made to ensure that the information in this document is complete, accurate, and up to-date. Radioddity Radio assumes no responsibility for the results of errors beyond its control. The manufacturer of this equipment also cannot guarantee that changes in the equipment made by non-authorized users will not affect the information in it.

FCC Licensing Information

This Radioddity radio operates on Commercial / Land Mobile frequencies which require a license from the Federal Communications Commission (FCC) for business, personal, education and recreational use. To obtain forms, call the FCC forms hotline at: 1-800-418-3676 or go to <http://www.fcc.gov>

For questions concerning commercial licensing, contact the FCC at 1-888-CALL-FCC (1-888-225-5322).



SAFETY

The Radioddity GD-AT10G DMR handheld transceiver has been carefully designed to provide you with years of safe, reliable operation. As with all electrical equipment, however, there are a few basic precautions you should take to avoid hurting yourself or damaging the radio:

- Read the instructions in this handbook carefully. Be sure to save it for future reference.
- Read and follow all warning and instruction labels on the radio and owner's manual.
- Do not carry the transceiver by the antenna. This may damage the antenna or antenna terminal. Grasp the handheld by its base (not the antenna) when you need to place or remove it.
- Do not keep the radio with the antenna very close to, or touching exposed parts of the body, while transmitting. Radioddity radios will perform best, if you speak 2-4 inches away from the microphone and the radio is vertical.
- Be sure the "PTT" key is not pressed when you do not need to transmit.
- Do not operate the radio near unshielded electrical blasting caps or in an explosive atmosphere.
- Do not transmit without the antenna fitted on the radio. Though it is provided with a protection, it may damage the TX output final stage.
- Respect the environment conditions. The radio is designed to be used in heavy environments, however avoid exposing it to extremely hot or cold temperature (out of the range between -20°C to $+55^{\circ}\text{C}$). Do not expose the transceiver to excessive vibrations as well as dusty or rainy locations.
- Never try to disassemble or service the radio by yourself (aside from the routine maintenance described in this handbook). It may cause damage to the radio transceiver and void your warranty requiring extensive repair work. Always contact your local dealer for assistance.
- Use only authorized accessories. Using non Radioddity radio brand accessories may seriously damage your handheld transceiver and void your warranty.
- Do not spill liquid of any kind into your radio. If the transceiver gets wet, immediately dry it by a soft and clean cloth.
- Switch the radio off before you clean it. Follow the directions described in the paragraph "Care and maintenance".



SAFETY

- Handle the battery properly. Never place the LI-ion battery in your pocket or purse with loose coins. This could result in short circuiting the battery.
- Be certain that your power source matches the rating listed for the supplied battery charger (AC adapter). If you are not sure, check with your authorized Radioddity dealer.
- Avoid damaging the power cable of the battery charger. Do not step on or place anything on it as this could result in a damaged charger power cord. This product complies with the requirements of the Council Directives 89/336/EEC and 73/23/EEC on the approximation of the laws of the member states relating to electromagnetic compatibility and low voltage.

WARNING

Your wireless hand-held portable transceiver contains a low power transmitter. When the Push-to-Talk (PTT) button is pressed it sends out radio frequency (RF) signals. The device is authorized to operate at a duty factor not to exceed 50% TX and 50% RX.

In August 1996, the Federal Communications Commission (FCC) adopted RF exposure guidelines with safety levels for hand-held wireless devices. To maintain compliance with the FCC's RF exposure guidelines, this transmitter and its antenna must maintain a separation distance of least 2 inches from your face. Speak in a normal voice, with the antenna pointed up and away from the face at the required separation distance. The belt clip is for storage purposes only.

AVOID TRANSMITTING ON HIGH POWER WHILE RADIO IS ATTACHED TO YOUR BELT. To transmit, hold the device away from your body and ensure the antenna is at least 2 inches from your body when transmitting.



12. TECHNICAL SPECIFICATIONS

General		
Frequency Range	UHF radio: 400-480MHz	
FCC ID	2AN62-GDAT10G	
Channel Capacity	4000 channels	
Channel Spacing	25KHz (Wide Band) , 12.5KHz (Narrow Band)	
Phase-locked Step	5KHz, 6.25KHz	
Operating Voltage	7.4V DC ±20% /(2100mAh)	
Frequency Stability	±2.5ppm	
Operating Temperature	-20℃~ +55℃	
Size	129×61×39mm (with battery pack)	
Weight	282g (with battery pack, antenna)	
Receiving Part		
	Wide band	Narrow band
Sensitivity(12dB SINAD)	≤0.25μV	≤0.35μV
Digital Sensitivity	0.3uV/-117.4dBm (BER 5%) 0.7uV/-110dBm (BER 1%)	
Adjacent Channel Selectivity	≥70dB	≥60dB
Spurious Emission	≤-57dB	≤-57dB
Spurious Rejection	≥70dB	≥70dB
Blocking	84db	
Hum & Noise	≥45dB	≥40dB
Audio Distortion	≤5%	
Audio Power Output	1000mW/16Ω	
Transmitting Part		
	Wide band	Narrow band
Power Output	UHF radio: 10/5/2.5/1W	
Modulation	±5.0KHz@25KHz	±2.5KHz@12.5KHz
Adjacent Channel Power	≥70dB	≥60dB
Hum & Noise	≥40dB	≥36dB
Spurious Emission	≤-36dBm	≤-36dBm
4FSK Digital Modulation	12.5KHz (data) 7K60FXD 12.5KHz (data+voice) 7K60FXE	
Audio Distortion	≤5%	
Error rate	≤3%	

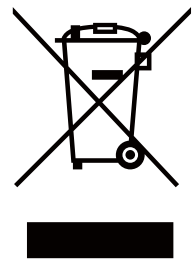


European Users should note that operation of this unit in Transmit mode requires the operator to have a valid Amateur Radio Licence from their respective Countries Amateur Radio Licencing Authority for the Frequencies and Transmitter Power levels that this Radio transmits on. Failure to comply may be unlawful and liable for prosecution. *At this subject, refer to the “EU” specification guide 2014/53/EU.*

Disposal of your Electronic and Electric Equipment

Products with the symbol (crossed-out wheeled bin) cannot be disposed as household waste. Electronic and Electric Equipment should be recycled at a facility capable of handling these items and their waste by products.

In EU countries, please contact your local equipment supplier representative or service center for information about the waste collection system in your country.



FCC Statement

This device complies with part 15 of the FCC Rules. Operation is subject to the following two (2) conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.



This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.



Any changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

WARNING: MODIFICATION OF THIS DEVICE TO RECEIVE CELLULAR RADIOTELEPHONE SERVICE SIGNALS IS PROHIBITED UNDER FCC RULES AND FEDERAL LAW.



ATTENTION: conditions of use!

The band of frequencies on which this device operates is administrated by limitations and/or permissions for their usage. Consequently, in the EU countries mentioned in the sheet, operators must consult the entrusted authorities. In particular, they must possess a license or a frequency assigned to them by their respective competent authority.

ACHTUNG: informativ zur Benutzung!

Das Frequenzband, auf dem dieses Gerät arbeitet, wird durch Einschränkungen und/oder Berechtigungen für deren Verwendung verwaltet. Folglich müssen die Betreiber in den in der Tabelle aufgeführten EU-Ländern die zuständigen Behörden konsultieren. Insbesondere müssen sie über eine Lizenz verfügen, oder eine Frequenz besitzen, die ihnen von ihrer jeweiligen zuständigen Behörde zugewiesen wurde.

ATTENTION : conditions d'utilisation!

Certaines bandes de fréquence sur lesquelles cet appareil fonctionne sont régies par des limitations et/ou il faut des autorisations pour les utiliser. Par conséquent, dans les pays de l'UE indiqués dans le tableau, les opérateurs doivent d'abord consulter les autorités appropriées. Les opérateurs utilisant cet appareil doivent donc posséder une licence ou une fréquence qui leur est attribuée par les autorités compétentes.

ATENCIÓN: información sobre el uso!

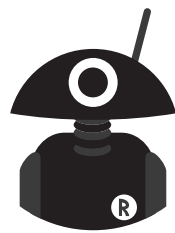
La banda de frecuencias en la que opera este aparato está gestionada por limitaciones y/o permisos para su uso. Por lo tanto, en los países de la UE que se muestran en la tabla, los operadores deben consultar a las autoridades correspondientes. En particular, deben poseer una licencia o una frecuencia asignada por su respectiva autoridad competente.

ATTENZIONE: informativa all'uso!

La banda delle frequenze sulle quali opera questo apparato è amministrata da limitazioni e/o permessi al loro uso. Quindi, nei paesi UE riportati nella tabella, gli operatori devono consultare le autorità preposte. Segnatamente, devono possedere una licenza oppure una frequenza assegnata a loro dalla rispettiva autorità competente.

					
AT	BE	BG	CY	CZ	DE
DK	ES	EE	FI	FR	UK
GR	HR	HU	IE	IT	LT
LU	LV	MT	NL	PL	PT
RO	SK	SI	SE	CH	IS
LI	NO	-	-	-	-





Radioddity

SAIN3 LLC

www.radioddity.com

Address: 36 Berkley Drive Newark Delaware United States 19702

