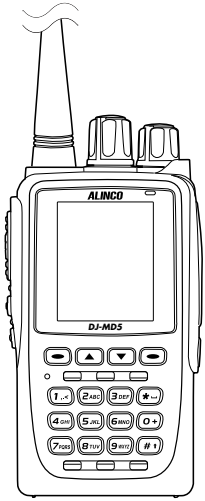
ALINCO

VHF/UHF DUAL BAND
DIGITAL TRANSCEIVER

DJ-MD5

User Manual



DMR

Thank you for purchasing your new Alinco transceiver. Please read this manual carefully before using the product to ensure full performance, and keep this manual for future reference as it contains information on after-sales service.
In case addendum or errata sheets are included with this product, please read those materials and keep them together with this instruction manual for future reference.

ALINCO, INC.

Notice

■ Introduction

Please be informed that this manual has been edited with consumer-use in mind. The product is delivered to consumers with a default factory setting status or after being programmed by dealers if your dealers have been programmed it. Some features are programmable using editor-software (PC software) only and they are not mentioned in this manual.

Please read this manual completely from the first page to the last, to learn basic functions the product offers. It is important to note that some of the operations may be explained in relation to information in other chapters. By reading just one part of the manual, you may risk not understanding the complete explanation of the function.

■ Utility software and instructions

The utility software and detailed instructions in PDF format are available at distributors' websites. Please consult with your dealer for for details.
A personal computer and an interface cable ERW-21 is required for programming.

■ Lightning

Any person is not safe outdoor during thunderstorm and lightning. This condition is getting worse if somebody keeps a hand-held radio; chances of being hit by lightning are doubled since lightning may hit a radio antenna as well. At this time, there is no hand-held radio having any kind of protection against lightning current (which is higher than10 kA.). Note also that no car provides adequate protection of its passengers or drivers against lightning as well. Therefore, Alinco will not take responsibility for any danger associated with using its hand-held radios outdoor or inside the car during lightning.

■ Covering ranges (without using repeaters)

You may expect a range of approx.4km/2.5 miles or more at high-power when located on a flat, noise-free place like on a beach. However, it may vary depending on how to wear and carry the radios, surrounding locations/conditions and static noise levels, etc. In urban areas with many buildings or inside a building, such covering range may become drastically short.

■ About ingress protections

We don't guarantee any IP grade of this product. Avoid contacts with dust and liquid, and wipe off immediately when wet or dusty.

■ Intergarated GPS Receiver

An internal GPS receiver is installed in TGP(FCC) and EGP(CE) models.

■ When using the GPS receiver

• A GPS receiver is installed under the top panel. When the GPS receiver is activated, do not cover the top part with anything that will block satellite signals.

• GPS signals can't pass through metal objects. When driving or navigating, you may risk not receiving GPS signals if covered by metal roof. External antenna can't be connected, so we recommend to operate near a window or on a deck.

• GPS signals can't reach to the receiver in places like:
- Tunnels or a shadow of tall buildings.
- Underground floors and parking lots
- Under a wide bridge
- In remote forested areas

Also in severe weather conditions, clouds, rain, snow etc may obstacles signals also.

• The Global Positioning System is operated by the U.S. Department of Defense. The Department is responsible for accuracy and maintenance of the system. Any changes by the Department may affect the accuracy and function of the GPS system.

■ Compliance Information Statement

FCC WARNING

This equipment generates or uses radio frequency energy.
Changes or modifications to this equipment may cause harmful interference unless the modifications are expressly approved in the instruction manual. The user could lose the authority to operate this equipment if an unauthorized change or modification is made.

INFORMATION TO THE DIGITAL DEVICE USER REQUIRED BY THE FCC

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 generate 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 the 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 to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer for technical assistance.

FOR CUSTOMERS IN CANADA : MODEL: 3070C-DJMD5

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de liccence.

L'EXPLOITATION EST AUTORISÉE AUX DEUX CONDITIONS SUIVANTES :

(1) l'appareil ne doit pas produire de brouillage, et
(2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

CE Hereby, ALINCO, INC. declares that the radio equipment type DJ-MD5 is in compliance with Directive 2014/53/EU.
The full text of the EU declaration of conformity is available at the following internet address: http://www.alinco.com/Ce/

■ RADIO FREQUENCY ENERGY SAFETY INFORMATION

This **Alinco** transceiver has been tested and complies with the standards listed below, in regards to Radio Frequency (RF) energy and electromagnetic energy (EME) generated by the transceiver.

- FCC RF exposure limits for *Occupational Use Only*. RF Exposure limits adopted by the FCC are generally based on recommendations from the National Council on Radiation Protection and Measurements, and the American National Standards Institute.
- FCC OET Bulletin 65 Edition 97-01 Supplement C
- American National Standards Institute (C95.1 - 1992)
- American National Standards Institute (C95.3 - 1992)

WARNING

This Alinco transceiver generates RF EME while transmitting. RF EME (Radio Frequency Electric and Magnetic Energy) has the potential to cause slight thermal, or heating effects to any part of your body less than the recommended distance from this radio transmitter's antenna. RF energy exposure is determined primarily by the distance to and the power of the transmitting device. In general, RF exposure is minimized when the lowest possible power is used or transmission time is kept to the minimum required for consistent communications, and the greatest distance possible from the antenna to the body is maintained. The transceiver has been designed for and is classified for Occupational Use Only. Occupational/ controlled exposure limits are applicable to situations in which persons are exposed to RF energy as a consequence of their employment, and such persons have been made aware of the potential for exposure and can exercise control over their exposure. This means you can use the transceiver only if you are aware of the potential hazards of operating a transceiver and are familiar in ways to minimize these hazards. This transceiver is not intended for use by the general public in uncontrolled environments. Uncontrolled environment exposure limits are applicable to situations in which the general public may be exposed to RF energy, or in which the persons who are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

The following list provides you with the information required to ensure that you are aware of RF exposure and of how to operate this transceiver so that the FCC RF exposure limitations are not exceeded.

- While transmitting (holding the PTT key or speaking with VOX enabled), always keep the antenna and the radio at least 3 cm (1.18 inches) from your body or face, as well as from any bystanders. A LED on the top of the radio shows red when the transmitter is operating in both PTT and VOX modes.
- Do not transmit for more than 50% of the total transceiver use time; transmitting over 50% of the total use time may exceed the limits in accordance to the FCC RF exposure requirements. Nominal transceiver operation is 5% transmission time, 5% reception time, and 90% stand-by time.
- Use only the specified antenna for this transceiver; this may be either the antenna provided with the transceiver or another antenna authorized by Alinco.

Use only Alinco authorized accessories (antennas, battery packs, belt clips, Speaker/ Mics or headsets etc.): When worn on the body, always place the radio in a Alinco recommended clip or carrying case meant for this product. The use of other than recommended or approved body- worn accessories may result in RF exposure levels which exceed the FCC's occupational/ controlled environment RF exposure limits.

CAUTION

To ensure that your exposure to RF EME is within the FCC limits for occupational use, you must observe and adhere to the above points.

■ Electromagnetic Interference Compatibility

Electronic devices are susceptible to electromagnetic interference (EMI) if they are not adequately shielded or designed for electromagnetic compatibility. Because this transceiver generates RF energy, it can cause interference to such equipment.

- Turn OFF your transceiver where signs are posted to do so. Hospitals and health care facilities use equipment that is sensitive to electromagnetic radiation.
- Turn OFF your transceiver while on board an aircraft when so instructed. Use of the transceiver must be in accordance with airline regulations and/or crew instructions.

WARNING

To prevent any hazard during operation of Alinco's radio product, in this manual and on the product you may find symbols shown below. Please read and understand the meanings of these symbols before starting to use the product.

Danger	This symbol is intended to alert the user to an immediate danger that may cause loss of life and property if the user disregards the warning.
Alert	This symbol is intended to alert the user to a possible hazard that may cause loss of life and property if the user disregards the warning.
Caution	This symbol is intended to alert the user a possible hazard that may cause loss of property or injure the user if the warning is disregarded.

	Alert symbol. An explanation is given.
	Warning symbol. An explanation is given.
	Instruction symbol. An explanation is given.

Alert

■ Environment and condition of use

Use of this product may be prohibited or illegal outside of your country. Be informed in advance when you travel.

It is recommended that you check local traffic regulations regarding the use of a radio equipment while driving. Some countries prohibit or apply restrictions for the operation of radios and mobile-phones while driving.

Do not use this product in close proximity to other electronic devices, especially medical ones. It may cause interference to those devices.

Keep the radio out of the reach of children.

In case a liquid leaks from the product, do not touch it. It may damage your skin. Rinse with plenty of cold water if the liquid contacted your skin.

Never operate this product in facilities where radio products are prohibited for use such as aboard aircraft, in airports, in ports, within or near the operating area of business wireless stations or their relay stations.

The manufacturer declines any responsibilities against loss of life and/or a property due to a failure of this product when used to perform important tasks like life-guarding, surveillance, and rescue.

Do not use multiple radios in very close proximity. It may cause interference and/or damage to the product(s).

Risk of explosion if battery is replaced with an incorrect type. Dispose of, or recycle used batteries according to your local regulations.

The manufacturer declines any responsibilities against loss of life and property due to a failure of this product when used with or as a part of a device made by third parties.

Use of third party accessory may result in damage to this product. It will void our warranty for repair.

■ Handling this product

Be sure to reduce the audio output level to minimum before using an earphone or a headset. Excessive audio may damage hearing.

Do not open the unit without permission or instruction from the manufacturer. Unauthorized modification or repair may result in electric shock, fire and/or malfunction and voids warranty.

Do not operate this product in a wet place such as in a shower room. It may result in electric shock, fire and/or malfunction.

Do not place the product in a container carrying conductive materials, such as water or metal in close proximity. A short-circuit to the product may result in electric shock, fire and/or malfunction.

■ About chargers

Do not use adaptor other than having the specified voltage. It may result in electric shock, fire and/or malfunction,Never turn on the radio while charging.

Do not plug multiple devices using an an adaptor into a single wall outlet. It may result in overheating and/or fire.

Do not handle adaptor with a wet hand. It may result in electric shock.

Securely plug the adaptor into the wall outlet. Insecure installation may result in short-circuit, electronic shock and/or fire.

Do not use the adaptor if the plug or socket contacts are dirty. Overheating and/or short-circuiting may result in fire, electric shock and/or damage to the product.

■ In case of emergency

In case of the following situation(s), please turn off the product, switch off the source of power, then remove or unplug the power-cord. Please contact your local dealer of this product for service and assistance. Do not use the product until the trouble is resolved. Do not try to troubleshoot the problem by yourself.

- **When a strange sound, smoke and/or strange odor comes out of the product.**
- **When the product is dropped or the case is broken or cracked.**
- **When a liquid penetrated inside.**
- **When a power cord (including DC cables, AC cables and adaptors) is damaged**

For your safety, turn off then remove all related AC lines to the product and its accessories from the wall outlet if a thunderstorm is likely.

■ Maintenance

Do not disassemble the unit and its accessories. Please consult with your local dealer of this product for service and assistance.

⚠ Caution

■ Environment and condition of use

Do not use the product in proximity to a TV or a radio. It may cause interference or receive interference.

Do not place in a humid, dusty or insufficiently ventilated place. It may result in electric shock, fire and/or malfunction.

Do not place in an unstable or vibrating position. It may result in electric shock, fire and/or malfunction when/if the product falls to the ground.

Do not place the product in proximity to a source of heat and humidity such as a heater or a stove. Avoid placing the unit in direct sunlight.

Be cautious of a dew formation. Please completely dry the product before use when it happens.

Electronis devices such as solar panels and LED light bulbs may generate hight levels of RF noise that may cause an interference. This is not a defect of receiver circuits of our product.

■ About transceiver

Be cautious of the whip antenna when carried in your shirt-pocket etc. It may make contact with your eye and cause injury.

Do not connect devices other than specified ones to the jacks and ports on the product. It may result in damage to the devices.

Turn off and remove the power source (AC cable, DC cable, battery, cigar cable, charger adaptor etc.) from the product when the product is not in use for extended period of time or in case of maintenance.

Never pull the cord alone when you unplug AC cable form the wall outlet.

Use a clean, dry cloth to wipe off dirt and condensation from the surface of the product. Never use thinner or benzene for cleaning.

Check with your local waste officials for details on recycling or proper disposal of the electronics product, battery-packs and accessories in your area.

RoHS

Contents

1 Accessories

1.1 Standard Accessories

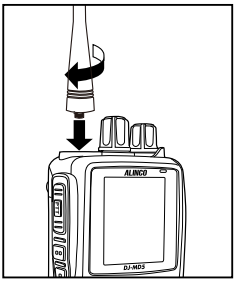
- EBP-88 : Li-ion Battery Pack (DC 7.4V 1700mAh)
- EDC-189A : Li-ion Battery Charger
- EDC-191T/E : AC Adaptor (depending on the version of purchase)
- EA-228 : Antenna
- EBC-34 : Belt Clip
- ERW-21 : PC interface cable
- Hand strap
- User manual

NOTE:
Accessories may differ depending on the version you have purchased. Please contact your local dealer for details of standard accessories and the warranty-policy.

1.2 Installations

1.2.1 Antenna

■ Attaching the Antenna



1. Hold the antenna by its base.
2. Align the grooves at the base of the antenna with the protrusions on the antenna connector.
3. Slide the antenna down and turn it clockwise until it stops.
4. Confirm that the antenna is securely connected. Check the connection from time to time.

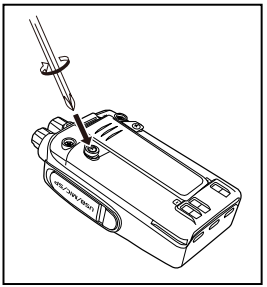
■ Removing the Antenna

Turn the antenna counter-clockwise to disconnect the antenna.

NOTE:
Do not use third-party antenna as it may radiate more RF that exceeds SAR limit guidances.

1.2.2 Belt Clip

■ Attaching the Belt Clip



1. Put the belt clip on the back of the unit, and turn the screw clockwise until it stops.
2. Confirm that the belt clip is securely attached.

* Tighten up the screw occasionally.

■ Removing the Belt Clip

Turn the screw counter-clockwise to remove the belt clip.

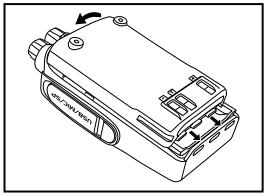
Caution: Use the screws of specified size only. Others may cause damage to the product. (screws size M 2.5mm x 3mm)

1.2.3 Battery Pack

■ Attaching the Battery Pack

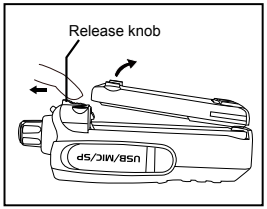
Match the projections of the battery to the bottom of the unit as shown with arrows below.

Push the upper part of the battery until it clicks to securely hold the battery.



■ Removing the Battery Pack

Pull the release knob toward upper side of the unit to loose the battery pack.

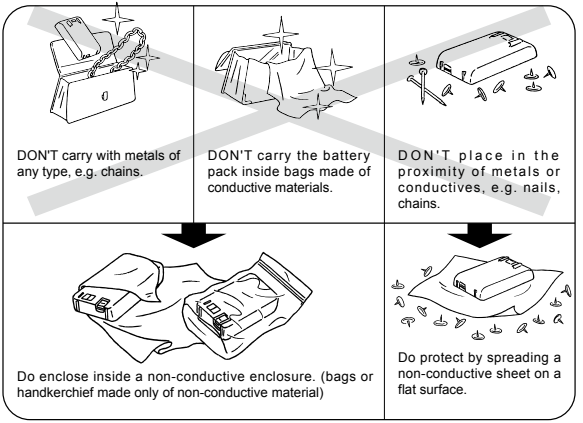


NOTE:

Be sure to remove the battery pack from the transceiver when not in use. Leaving it attached will discharge the battery faster resulting an over-discharge that cause deterioration of the battery pack.

1.2.4 Prevent Short Circuiting the Battery Pack

Be extra cautious when carrying the rechargeable battery pack; short circuiting will produce surge current possibly resulting in fire.



⚠ Caution

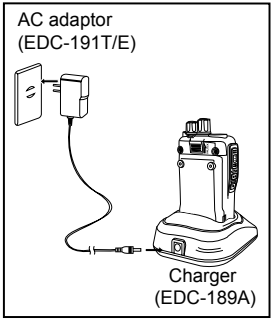
- The battery pack isn't fully charged when shipped. It must be charged before use.
- Charging should be conducted in a temperature range of 0ºC to +40ºC (+32ºF to +104ºF).
- Don't modify, dismantle, incinerate or immerse the battery pack in the water as this can be dangerous.
- Never short-circuit the battery pack terminals, as this can cause damage to the equipment or lead to heating of the battery which may cause burns.
- Unnecessary prolonged charging (overcharging) can deteriorate battery performance.
- The battery pack should be stored in a dry place where temperature is in -10ºC to +40ºC (14ºF to 104ºF) range. Temperatures outside this range can cause the battery liquid to leak. Exposure to prolonged high humidity can cause corrosion of metal components.
- Battery-packs are a consuming part. When its operating time becomes considerably short after a normal charge, please consider that the pack is exhausted and replace it with a new one.
- The battery pack is recyclable. Check with your local waste officials for details on recycling options or proper disposal in your area.

1.2.5 Using the Charger

1. Connect the AC adaptor plug to the DC-IN jack on the back of the charger.

*The design of the AC adaptor may vary depending on the models.

2. Connect the adaptor to an outlet.



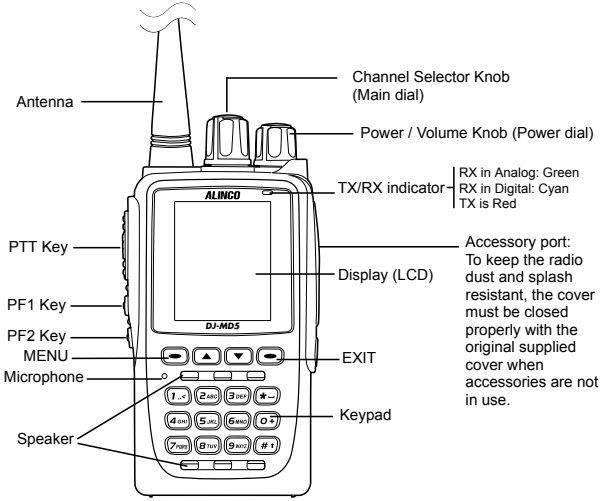
3. Turn off the unit. The battery pack can't be charged correctly when the unit is turned on. Insert the unit to the charger as shown above.

The red indicator on the desktop charger turns on while charging.
When charging is completed, the green indicator turns on.
It takes up to 3.5 hours to fully charge the battery.

NOTE:
You can't operate the unit with using a provided charger.
The charger is to charge the battery pack only.

2 Names and Operations of Parts

■Front



Name	Function
PTT key	Press to transmit, release to receive.
MENU key	Press to enter function menu set up. Press to select/confirm a selection.
EXIT key	Press to return to previous menus. Press to delete characters when texting message.
▲/▼ key	Press to select desired menus/parameters.
PF1 key	Press to activate pre-programmed functions.
PF2 key	

3 Basic Operation

3.1 Turning On the Power

Turn Power dial clockwise to power on.

Turn it counter-clockwise to power off.

NOTE:
- Please be patient, it takes about 8 seconds until it turns on.

3.2 Adjusting the Audio Output (Volume)

Turn Power dial clockwise to increase the audio level, counter-clockwise to decrease.

Never use earphone while adjusting audio level for your safety.

3.3 Selecting the Operating Channel

Turn Main dial clockwise to increase the channel number, counter-clockwise to decrease.

3.5 Receiving

When a signal is received on the channel that you selected, S-meter is displayed on the LCD, then the received signal can be heard.
The indicator lights green while radio is receiving in analog channel or lights cyan if it is receiving in digital channel.

3.6 Transmitting

1. Press the PTT key. The red TX indicator turns on while transmitting.
2. While holding down the PTT key, speak into the unit at normal voice from the distance of 5cm (2").
3. Release the PTT key to receive.

NOTE:
- Speaking too loud, too close or too far from the unit may distort the audio.
- Do not close the microphone hole on the front panel with your finger. Be cautious specially when wearing gloves.

3.7 Keylock

Press and hold the * key to lock the keypad.

Press [Menu] key then * key to unlock.

4 Options

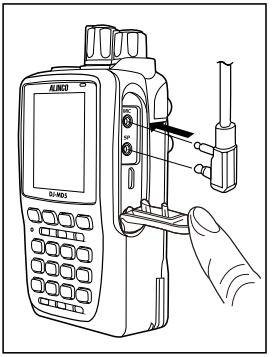
EME-56A Earphone Microphone
EMS-76 Speaker Microphone

Spares:

EA-228	Antenna
EBC-34	Belt Clip
EBP-87	Li-ion Battery Pack (DC 7.4V 1500mAh)
EBP-88	Li-ion Battery Pack (DC 7.4V 1700mAh)
EDC-189A	Li-ion Battery Charger
EDC-191E	AC Adaptor (220V)
EDC-191T	AC Adaptor (120V)
ERW-21	PC interface cable

4.1 Accessory port

Open the jack cover and insert the accessory plug into the jack as shown. When the accessory is not used, please be sure to close the cover securely.

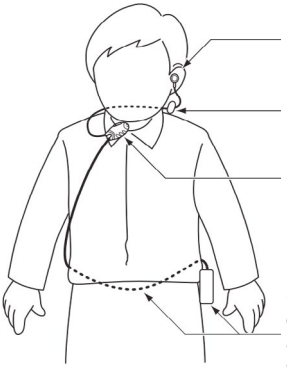


NOTE:

1.To keep the radio dust and splash resistant, the cover must be closed properly with the supplied cover.
2.The radio is not dust and splash resistant while using the optional accessory risking that the water may penetrate inside through the plug.

4.2 Earphone Microphone

Recommended installation of Earphone Microphone



5 Specifications

■GENERAL

Frequency Range	136-174MHz / 400-480MHz / 76-108MHz (FM radio RX only)
Number of Channels	4000ch
Zones per Radio	250 zone (MAX 250ch/zone)
Channel Spacing	Analog: 12.5/25kHz
	Digital: 12.5kHz
Operating Voltage	7.4V DC nominal
Operating Temperature Range	-20℃ to +55℃ (-4 ℉ to +131 ℉)
Frequency Stability	±2.5ppm
Antenna Impedance	50Ω
Dimensions (W x H x D Approx.) with EBP-88 Li-ion pack	59x118x40 mm (2.32x4.65x1.57 inches)
Weight (Approx.) with EBP-88 Li-ion pack	256g /9.03 ounces
Recording time	14 hours

■TRANSMITTER

RF Power Output	5W / 2.5W / 1W / 0.2W
Spurious Emission	Less than 1GHz: -36dBm
	More than 1GHz: -30dBm
FM Hum & Noise (Analog)	25kHz: 40dB
	12.5kHz: 36dB
Modulation	16K0F3E/11K0F3E/7K60FXD/7K60FXE

■RECEIVER

Sensitivity (Analog/12dB SINAD)	25kHz: 0.25uV
	12.5kHz: 0.35uV
Sensitivity (Digital/BER)	5%: 0.3uV
	1%: 0.7uV
FM Hum & Noise (Analog)	25kHz:45dB 12.5kHz:40dB
Audio Distortion	Less than 5%
Audio Output	1000mW /16Ω

A1-180731

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DJ-MD5
Operation Manual

Ver, 1.01

2018/09/21

Appendix.

OVERVIEW OPERATION

1. LED Indications

The top LED shows the current radio status.

LED Indication	Status
Flashes Red	Low battery voltage
Constant Red	Transmitting
Constant Green	Analog Receiving
Constant Cyan	Digital Receiving
Flashes Green	Scan

2. Programmed Key

There are two programmable keys ([PF1], [PF2]) at the right side of radio. it can be assigned functions by manually set in radio or set by PC software.

Manually set by radio: Press (MENU) key then move cursor to setting➔ Radio Set ➔ move to Menu set 33-36 select the [PF1] or [PF2] then assign functions, there are 2 definition of assigning a key, short press and long press.

Set by PC software: Open software, go to Public ➔Optional ➔Key function then select the desired functions. Assigned different functions are listed in the list below.

3. Default function

The table below shows the functions as default functions were assigned to programmable keys.

Key	Default Function
[PF1] Short Press	Main channel Switch
[PF1] Long Press	V/M
[PF2] Short Press	Monitor

4. Hot Key

In PC software ➔ Public ➔ Hot key, it is able to set different functions for hot key 1~6 and the combine (MENU)+ number key. For details please refer to the PC software.

Call	Analog	Should edit the analog quick call first, then choose analog in the hot key set. Press the key to transmit 2Tone/5Tone/DTMF to start the analog quick call.
	Digital	It allows to select a contact from the digital contact list, press the key to switch the channel to the contact temporary. It will switch back to the original contact after the group/personal call hold time.
Menu	SMS	Quick access to Messages in the menu
	New Msg	Quick access to New Msg in the Menu - Messages
	Quick Text	Quick access to Quick Text in the Menu - Messages
	Inbox	Quick access to Inbox in the Menu - Messages
	Outbox	Quick access to Out box in the Menu - Messages
	Contact list	Quick access to Contact list in the Menu - Contacts
	Manual dial	Quick access to Manual Dial in the Menu - Contacts
	Call Log	Quick access to Call Log in the Menu
	Sent Calls	Quick access to Dialed Calls in the Menu - Call Log
	Answered Calls	Quick access to Answered Calls in the Menu - Call Log
	Missed Calls	Quick access to Missed Calls in the Menu - Call Log
	Zone	Quick access to Zone in the Menu
	Radio set	Quick access to Radio Set in the Menu - Settings

Combine (MENU) + number key operation:

Press (MENU) key until the LCD display "Next Please Press Dial Key", press the number key, it will perform the programmed function.

5. Basic Operations

5.1 Power on the radio

Turn on the radio by turning the [Power/Volume] knob clockwise till a click is heard, LED lights green on and the LCD displays will show a start-up message, and you will hear a beep after 8 seconds.

5.2 Adjust Volume

Rotate the [Power/Volume] knob to adjust the volume. Turn clockwise to increase the volume and counterclockwise to decrease the volume. The LCD display will show volume status during an adjustment.

OFF	No Function
Voltage	Check the current battery capacity voltage
Power	Switch the power between super high, high, middle and low power
Repeater	Switch between talk around and repeater mode
Reverse	Turn on/off the frequency reverse function
Digital Encryption	Choose the encryption group to encrypt the call conversation
Call	In Analog mode, send the DTMF/5TONE/2TONE encode. This function is only valid for analog channel
VOX	Set up the VOX level
V/M	Switch between VFO mode and memory channel mode.
Sub PTT	Sub channel PTT, press to start the call on sub channel
Scan	Scan on/off
FM	FM radio on/off
Alarm	When select alarm, long press the key to start alarm, short press again to exit the alarm.

Record switch	Enable/disable the recording function when TX or RX a call conversation
Record	Start/stop recording as a recorder. When stop recording, the radio will remind repeat or send the record
SMS	In digital mode, press to enter into message box, only private call and group call can send and receive a message
Dial	Start the manually dial
GPS	Check the GPS position information
Monitor	Monitor the weak signal in analog mode or the signal with unmatched ID or color code in digital mode
Main channel switch	Choose channel A or channel B as the main channel
Hot key 1~6	Press the key to perform the programmed function in hot key setup
Work Alone	Turn on/off the work alone function
Nuisance Delete	During scanning, press the key to skip the unwanted channel
Digital Monitor	In DMR mode, press the key to turn on/off monitor a target radio
Sub CH Switch	Turn on/ off the sub channel
Priority Zone	Switch to Priority Zone
Programming Scan	Press the key to start the scan in VFO channel. The scan start and frequency end frequency shall be programmed in PC software.
MIC Sound Quality	In digital channel, switch the microphone tone to normal or enhanced mode
LastCall Reply	In digital channel, press the key to access the last call and press PTT to call back
Channel Type Switch	Switch the channel type(Analog, Digital, Ana+Dgi, Dgi+Ana)
Channel Ranging	Channel Ranging

5.3 Battery Voltage Test

Press the programmed key to check the current battery voltage, then press the key again to turn off.

5.4 Main band/Sub band switch

Press [PF1] key to switch the main channel and sub channel. Both channels are shown on the screen but channel with bigger size is identified as main channel.

5.5 VFO/Channel switch

Press and hold [PF1] key to switch between VFO and memory channel mode display. Be noted that VFO only can be switched when radio display mode is set as frequency.

5.6 Set up VFO frequency

Turn the radio to VFO mode, press the assigned key to switch and select main channel, the VFO frequency can only be set up when the channel is the main channel.

There are 2 operations to select a desired frequency.

Operation 1: Input the VFO frequency directly by the keyboard.

Operation 2: Turn the channel knob to adjust the VFO frequency steps. The frequency step size can be set in setting menu.

5.7 Select a Zone

A Zone is a group of channels grouped together. The radio has 250 zones, each zone can have the maximum of 160 analog and/or digital channels.

Select the zone only valid in memory channel mode and be sure there are more than 2 zones in zone list.

Operation 1: Press ▲ / ▼ directly to switch zones, LCD will display the selected zone number or zone name.

Operation 2: Press ⬅ (MENU) key then select zone, move the cursor to select the desired Zone.

Edit Zone Name: Press to select Edit Name, input zone name, then press confirm, select save to save edited zone name.

5.8 Select a Channel

Press assigned key to switch radio to memory channel mode.

Operation 1: Turn the channel knob to select a channel.

Operation 2: Input the channel numbers by the keyboard. For example, if you want switch to channel 99, input 0 0 9 9 a total of 4 digits, and it will switch to channel 99.

5.9 Receiving and Responding to a Radio Call

When the radio is in the digital mode, it can receive and respond to a call with the same frequency/color code/ slot.

1. If radio is programed with callers DMR ID number in digital contact list, when receiving a call, depend of the setting radio will ring.

2. LED lights green up (Analog channel mode), or LED lights cyan up (Digital channel mode).

3. Left top corner of LCD shows **RSSI** icon, radio also displays DMRID/ name/ city/ state/ country /call type and incoming icon base on setting.

4. When a call ends, radio displays "Call end" message.

Making a Call

There are 3 ways to select a target radio when making a call.

Operation 1: from the Channel knob.

Turn the channel knob to choose your desired channel then press PTT to make a call.

Operation 2: from contact list.

Press (EXIT) to enter the contact list then press / key a stored contact then press PTT to make a call.

Operation 3: from the keypad.

Press (MENU) key to enter the menu setting, select "Contacts" then select "Manual Dial ". Input the ID number by keypad, press key to switch group ID or Private DMR ID then press PTT to make a cal

Hold the radio vertical 2.5-5cm from your mouth is recomended, press the [PTT] key to start the call, the red LED lights up, the receiver ID/name/city/state/country/ call type and call out icon will be display on the LCD.

Release [PTT] key to receive the reply.

5.10 Monitor

Press and hold [PF2] key to enter the monitor function. Release to turn off.

In analog channel: you can hear background noise and monitor even an incoming weak signal. Release [PF2] key, squelch is mute.

In digital channel: it allows you to receive an incoming signal without matching color code or different talk group ID.

5.11 Digital Monitor

This function allows user monitor the incoming signal without matching color code or different talk group ID or even monitor both time slots by setting.

Press ⊖ (MENU) key to enter main menu, then select Digi Moni.

1. On/ Off

Off: Turn off Digital Monitor

Single Slot: Monitor the current using time slot of an incoming signal.

Double Slot: Monitor both time slot 1 and time slot 2 of an incoming signal.

2. DigiMoni cc

Any Cc: Allows to monitor any color code of an incoming signal.

Same Cc: Allows to monitor only the color code that match to current setting of radio channel.

3. Digi Id

Any Id: Allows to monitor any talk group ID of an incoming signal.

Same Id: Allows to monitor only the group talk ID, which same as current setting of radio channel.

4. Slot Hold

Off: Turn off the slot hold

On: Turn on the slot hold

A recommend to turn on slot hold function when monitoring both time slots. When an incoming signal disappears and your radio is monitoring a time slot, instead of switching to monitor the other time slot, radio will hold on some seconds and wait untill incoming signal dissapears.

5.12 Response and Save a call in Digital Monitor mode

Response:

During Digital Monitor is on, when radio receives an incoming call with unmatched ID, press * key, on the screen will display "Monitor Response Setup Successfully", press [PTT] key will reponse to the call.

Save the call:

During Digital Monitor is on, when radio receives an incoming call with unmatched ID , 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.

6. Advanced Features for Private Call

There are 2 ways to select a private call**.**

Operation 1: Access from Contact list.

1. Press the (EXIT)key to enter the Contact list, press ▲ / ▼ key to a private call ID name.

2. Press Select to View Contact, press Select to see the contact information.

3. Press Edit to edit some advanced information then select Save to save the changes.

Operation 2: Access from Manual Dial

1. Press the (MENU) key to enter Contacts, press ▲ / ▼ key to Manual Dial.

2. Press Select to enter Manual Dial.

3. Input the Private ID, press Option to access the advanced features.

6.1 Advanced Features

Be noted that some advanced features can be set to show/not show on radio by PC software depends on user`s purposes. To use these functions you need select to enable each function by PC software.

Press the (MENU) key to enter Contacts then select a Private contact, press View then press (MENU) key to see the details below.

1. Call Alert

Select Call Alert, it will send out a call alert, the target radio will sound a beep when receiving the call alert, and it will show a message with success call or failed call on the LCD of transmitted radio.

2. Moni (Remote Monitor)

Select Remote Monitor, the Remote Monitor feature allows a remote user to activate a target radio's microphone and transmitter for a period of time. A call is silently set up on the target radio, and its PTT is controlled remotely without any indications given to the end user. The duration that the target radio transmits after receiving a Remote Monitor command is set in the target radio through the PC software. When receiving the Remote Monitor command, the target radio initiates a Private Call back to the originator of the Remote Monitor command.

3. Get GPS (Get GPS Information)

Go to private contact and enter to Get GPS, and it will send out a signal to the target radio, which will start the GPS positioning and send a message of its GPS position to the transmit radio.

4. Check

Select Check Radio, and it will send out a radio check to the target radio, which will send back a message if it is available or not available to the transmit radio. With this feature, you can determine if another radio is active and powered on.

5. Kill

Select Kill, and it will send out a kill signaling to the target radio which will be killed (No display, no operation) when receiving the signaling and it will send back a kill successful message to the transmit radio.

6. Wake

Select Wake, and it will send out a wake signaling to the killed radio and the target radio will return to standby when it receives this signaling and send back a Wake successful message to the transmit radio.

7.Turn on GPS

1. Press (MENU) to enter the main Menu, press / key to Settings.

2. Select Radio Set, press the / key to GPS Set

3. Select GPS Set, press / key to GPS On

4. Select GPS On.

7.1 Check the GPS Information

There are 2 ways to check GPS information:

Operation 1: Check GPS info from Menu

Press (MENU) key to enter main Menu, press / key to GPS, set GPS on then select GPS infor to check the GPS position.

Operation 2: Check GPS info from programmed key

In the PC software, Public Optional Setting Key function, program a key as GPS, press the programmed key to check the GPS position. 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 connects to the GPS Satellites.

7.2 Send GPS Information

1. 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.

2. Press Confirm, and it will display Send or Save. If you select Save, the GPS info will be saved as a draft message.

3. Choose Send and it will display Contact list or Manual Dial.

4. Select Contact list to choose a contact, press select to send the GPS info.

5. Select Manual Dial, input the DMR ID, press key to switch group ID or private ID, press select to send the GPS info.

8. Recording Feature

There are 2 recording features.

a. Record a Call Conversation

This feature will record the conversation during transmitting and receiving a signal automatically.

Press (MENU) to enter main Menu, press / key to Record. Select on or off to turn on or off the Record. When the function is on, the radio will automatically record the call conversation during transmitting and receiving.

b. Record as a recorder

This feature allows to record as a voice recorder, it will record sound in the vicinity of the radio.

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

Press the programmed Record key to activate the recording feature, the radio will start to record. Press the key again to stop record, then the radio will display Record Play or Record Send. Select Record Play to play the record or select Record send to send out.

The Recording feature is only valid in digital channel.

8.1 Play the Record

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

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

3. Select a Record to see the detail information.

4. Press Select to choose the record option.

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

4.2 Loop Playback, it will play all records in the record list.

8.2 Send the Record

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

2. Select Record List to enter Record list, select a Record list to enter the

Record file.

3. Select a Record to see the detail information.

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

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

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

9. Contacts

Contacts List: Will display the digital contact list which had been programmed in the PC software. This list is used as a look-up table to display the contact person information when receiving a call.

New Contact: Allows to create a new digital contact.

Manual Dial: Input the group ID or private ID to access a contact quickly.

9.1 Messages

New Msg: Create a new message and send to a contact.

InBox: Shows all the received messages, and allows forward or delete the message.

OutBox: Shows all the sent messages, and allows resend, forward or delete of the message.

Quick Text: Pre-saved messages, and allows to send, edit or delete the message.

Draft: Draft messages, and allows send, edit or deleting of the message.

9.2 Call Log

Sent: Shows all the dialed calls, and allow deleting the call record or saving the ID as a new contact.

Answered: Shows all the answered calls, and allows deleting the call record or saving the ID as a new contact.

Missed: Shows all the missed calls, and allows deleting the call record or saving the ID as a new contact.

9.3 Scan List

In the PC software ➔Public ➔ Scan list, it allows to save 250 scan lists, and to program the required scan lists and write it into radio.

Switch the radio to channel mode, as the scan list is only valid in the channel mode.

Select a Scan list as current scan list, then you can also reset the priority channel 1 and priority channel 2 in the scan list.

9.4 Settings

Radio Set

Press ⊖ (MENU) key to enter the main menu setting then select settings➔ Radio Set.

1. Beep

Beep On: The radio will beep when you press the keypad

Beep Off: No beep when you press the keypad

2. Back Light

LCD backlight intensity is adjustable in 5 steps

3. Light Time

Always: The backlight is always on.

5S-5Min adjustable.

Note: This function is valid when turn off the power save.

4. Ch. Name

When radio works in the memory channel mode. Normally there are 2 ways to shows a channel on the screen, shows as channel name and show as frequency.
CH (Channel name)**:** Select to display the channel name on screen.
FREG (Frequency): Select to display the frequency of channel on screen.

5. Key Lock

Manual: press and hold the *⌴ key to active the key lock, when key lock is on the ⊖ (MENU) key is locked. Press ⊖ (MENU) key, then press the *⌴ key to unlock the keypad.

Auto: Radio will auto lock the keypad when standby for a while. Press ⊖ (MENU) key, then press the *⌴ key to unlock the keypad.

6. Power Off

Allow to set power off automatically when not used for a period of time, selectable in 10 minutes, 30 minutes, 1 hour or 2 hours.

Off: Turn off the function.

7. TX Timer

Selectable 30S-240S: The TX will be limited the transmission in a set time period. When this set time is reached, the radio will automatically stop transmission.

OFF: Turn off the TX timer, there is no limit in transmission time.

8. Max Vol

Indoor: Very low volume, suitable for the indoor use.

Level 1-8: Set up the maximum volume level.

9. Ear Vol

Indoor: Very low volume, suitable for indoor use.

Level 1-8: Set up the maximum volume level for earphone. When the radio

connect with earphone, it will auto change to earphone maximum volume.

10. Voice Fte (MIC Feature)

It will allow you set up the microphone audio pitch.

Normal: Low pitch.

Mic Enhance: High pitch.

Indoor: Very low volume, suitable for indoor use.

Outdoor: High volume, suitable for outdoor use.

11. Language

Select the language for radio, Currently version, radio supports only English.

12. Exit Time (Menu Exit Time)

5S-60S: Selectable.

When enter the menu, the radio will stay at menu in the set time period. When the time period is reached, the radio will auto exit the menu.

13. Intro Dis (Intro Display)

Picture: The radio will display an ALINCO picture when powered on.

Character: The radio will display the characters set up in PC software when powered on.

Customer`s: User able to change to desired picture.

14. Main Channel

Main channel is a channel with showing size is bigger and just main channel able to be transmitted when press hand hold PTT.

Channel A: The upper displayed channel will be set as main channel.

Channel B: The lower displayed channel will be set as the main channel.

15. Sub Channel

Sub Channel On: Turn on the sub channel, and the radio will display both main channel and sub channel on the display.

Sub Channel Off: Turn off the sub channel, only main channel is displayed on the display.

16. Msg Note

Different prompt options when receive a new message.

Off: No promt when a new message comes.

Ring: Radio will ring a sound when a new message comes.

17. Call Ring

Different prompt options when receive a new call.

Off: No promt when a call is coming

Ring: Radio will ring a sound when a call is coming

18. Freq Step

Selectable: 2.5K, 5K, 6.25K,10K,12.5K, 20K, 25K, 30K, 50K, a total of 9 frequency steps.

19. Ana SQ Level

Selectable 5 squelch levels to receive signal with different signal strength. This function is only valid for analog channel.

20. Power Save

Turn on to active the power save function, to prolong the battery life.

Save 1:1, work 30ms, dormant 30ms.

Save 2:1, work 60ms, dormant 30ms

When turn on the power save, it may not receive the message in time.

21. TBST Sel (Tone Burst)

Tone burst frequency is used to activate some dormant repeaters, 1000Hz, 1450Hz, 1750Hz, 2100Hz a total of 4 options are offered. Press PTT and PF1 key together to transmit the tone burst.

22. VOX

Enable the VOX, you can speak into the microphone to start transmitting instead of pressing the [PTT] key. A total of 3 levels of sensitive VOX are provided.

23. VOX Delay

When the VOX is enabled, set up the VOX delay to delay a period of time to avoid unwanted transmission so early. Selectable time period 0.5s-3s, a total of 26 levels are offered.

24. Scan Mod

This function is only valid for a VFO scan.

SCM TO: When an incoming signal is catched, radio stops scan and stays at the channel 5s before resuming the scan.

SCM CO: When an incoming signal is catched, radio stops scan and stays at the channel until the signal disappears, and resumes scan approx 2s later.

SCM SE: When an incoming signal is catched, radio terminates the scan.

25. Mic Level

There are 5 levels to selectable the Microphone gain, level 1 is the lowest, level and 5 is highest gain.

26. DTMF Speed

Offers DTMF encode speed selectable for receiver decode speed is more suitable, 50~500ms are the options.

27. Radio

Turn On/Off the FM radio.

28. FM Radio Monitoring

Mon On: During FM radio is On, radio still allows to receive or transmit signal on the channel.

Mon Off: During FM radio is Off, radio will not allow to receive and transmits signal on the channel.

29. Man Down Alarm

ON: Turn on the man-down function the radio will start alarm if the radio is falling to the ground or put the radio at the horizontal. Raise the radio to stop the alarm.

Off: Turn off man-down function

30. Start Pwd

On: Set up the password for start up. You need to input the password to power on the radio.

Note. In Case you forgot the password. Using the PC software to read data and it is able to check password on PC software interface.

Off: No password is required for the radio power on start up.

31. Auto Repeater A

Turn on the Auto Repeater function, the TX frequency in VFO mode will be increased or decreased frequency on the channel A base on the set up offset frequency.

Off: Turn off the function

Positive: TX frequency= RX frequency + Offset frequency.

Negative: TX frequency= RX frequency - Offset frequency.

32. Auto Repeater B

Turn on the Auto Repeater function, the TX frequency in VFO mode will be auto increased or decreased frequency on the channel B base on the set up offset frequency.

Off: Turn off the function

Positive: TX frequency= RX frequency + Offset frequency.

Negative: TX frequency= RX frequency - Offset frequency.

33-36. Programmable key PF1, PF2

You also can program these keys for different functions by set manually in radio.

Press (MENU) key, move cursor to Settings, then select Radio Set then choose programble key that you want to program. After selecting the key a list of functions are shown, select the function then press (MENU) key to confirm and exit.

37. SMS Form

There are 2 format types of a message. If the transmit radio is set as M-SMS/ H-SMS that require receiver radio must set as correspond M-SMS/H-SMS to receive message. (M-SMS is set as default setting)

M-SMS: Compatible to Motorola radio type.

H-SMS: Compatible to Hytera radio type.

38. Time Zone

Set up the time zone of your location.

39. Date Time

Time Check: Allows to set up the date and time manually. Use the / key to set the current year. Move to the month by pushing the [PF1] key. Set the month, and use the [PF1] key to move forward each step. Once done, click the Menu key to save the date and time.

GPS Check: When GPS is positioning successfully, enter this menu, select GPS check to calibrate date & time correction automatically.

9.5. Chan Set (Channel Setting)

The channel set menu will change accordingly to the channel types. When the channel type is digital, it will automatically hide the analog menus.

Press (MENU) key, move cursor to Settings then select Chan Set to enter chanel setting list.

※Chan Set (Digital Channel)

1. Store Chan

When select to store a channel it will store the current main channel displaying on the screen as a new channel in channel zone, the current channel will be overwritten if channel number is duplicated, input the desired channel number, then press select to enter next menu, input the channel name and then press ⊖ (MENU) key to save.

2. Delete Chan

Go to Delete channel, select delete when you want to delete the current main channel displaying on screen.

3. CH Type

A-Analog : Set up to analog channel

D- Digital : Set up to digital channel

A+D TX A: Mixed analog, allow receive analog and digital signal, TX is analog.

D+A TX D: Mixed digital, allow receive analog and digital signal, TX is digital.

4. TX Power

Set up the TX power for current channel. There are 4 selections.

Small: 0.2W

Low: 1W

Middle: 2.5W

High: 5W

5. Band Width

Only narrow band 12.5KHz for digital channel.

6. RX Freq

Input the desired RX frequency by keypad, Press ⊖ (MENU) key to save the change. Be noted that if auto repeater is set with a offset frequency, when changing RX frequency the TX frequency will be changed by offset. If auto repeater with offset frequency is set Off. RX and TX frequency are set independence.

7. TX Freq

Input the desired TX frequency by keypad, Press ⊖ (MENU) key to save the change.

8. Talk Around

As normal a radio communicates to a target radio through a repeater (TX and RX frequency are set as different values). This option allows 2 radios communicate to each others but you don't want to change frequency settings when repeater is out of range or when the repeater is down. It works in both digital and analog channel. When talk around set the transmitting radio`s TX and RX frequency are interchanged. Turn off Talk Around when you want to communicate through repeater as normal.

Note: In analog channel the RX CTCSS/DCS decode is TX CTCSS/DCS encode and vice versa.

9. Name

Allow edit the channel name via input character by keypad. This function is only valid in memory channel mode.

10. TX Allow

Always: Always allow to transmit.

Channel Free: Allow to transmit when the channel is free.

Different CC: Allow to transmit when radio receives a matching carrier signal but different color code.

Same CC: Allow to transmit when radio receives a matching carrier signal and it has same color code.

11. TX Prohibit

TX ON: Will allow to transmit on the current channel.

TX OFF: Will not allow to transmit on the current channel.

12. Radio ID

In Digital channel: it will show the DMR ID which must be programmed in the PC software ➔Digital ➔ Radio ID list ➔ Radio ID.

It allows to edit and select an ID for the channel, each channel is allowed to select one ID.

13. Color Code

The digital channel should have the same color code for communication as defined by the repeater to be used. which can be programmed in the PC software or defined in the Menu setting.

If 2 radios are using the same frequency but different color code it could not communicate to each others.

14. Time Slot

Set up time Slot 1 or time Slot 2 for the current channel. The separated time slots often to be used with a repeater for 2 real time slots of 2 radios but must set them have the same color code.

15. Digi Encrypt

In Analog channel: it will show the radio self ID which is programmed in PC software ➔ Analog ➔Analog Address Book ➔Number.

With the digital encryption, the communication will be secured and safe. Only the radios have set same encryption code can communicate to each other. A total of 32 digital encryptions is offered, and it can be programmed in the PC software or defined in the Menu setting.

16. Encrypt Type

There are 2 types of encryption. A normal encryption type and an enhanced encryption type whith more secure.

17.RX Group List

It will allow edit the RX Group List and assign a new RX Group List to the channel.

Select: Select the current RX Group List.

Add Group: Add a talk group to the current RX Group List.

Remove : Remove a talk group from the current RX Group List.

18.Work Alone

In the PC software ➔Public ➔ Alarm settings ➔ Work Alone, you have to set up the response time, warning time and response method initially.

Turn on the work alone function for the current channel. When radio`s

predetermined time has been reached, the radio will beep a sound. At the time user has to confirm by pushing the programmed work alone key to confirm continuing work alone, otherwise, the radio will start alarm when reaching its preset response time.

19.CH Measure

Select On or Off.

This function is used to measure the distance to the target radio on current digital channel. Before using this function turn GPS on, wait until radio catchs GPS signal sucessfully then select CH measure on. Radio will automatically send and receive signal to the target radio and then radio shows the distance on screen. When turn on the function it is availabe only

on the current channel, if you turn to other channel you may need to turn on CH measure with corresponding channel.

20.DMR Mode

Select Simplex or Repeater or Double Slot:

21.Slot Suit

Select On or Off.

Turn on Slot suit, the radio will receive the call from both time slots, after the call press PTT the radio will call back by received call time slot. One you selected slot suit is On, before receiving a call you can go to slot time to select slot , which you want to use, if the user does not set the time slot , press PTT to transmit radio will work on the default time slot 1.

※Chan Set (Analog Channel)

When the channel type is analog, it will auto hide the digital menus, instead, the channel set will show the analog menus.

The below listed menus are for analog channel only, other not listed menus are same as the digital channel.

4.TCDT

Set up the CTCSS/DCS code for the TX.

5.RCDT

Set up the CTCSS/DCS code for the RX.

6.RTCDT

Set up the CTCSS/DCS code for both TX and RX CTCSS code: 62.5Hz~254.1Hz, a total of 51 groups DCS code: 000N~7771, a total of 1024 groups.

7.Optional Signal

Allows the set up of DTMF/5TONE/2TONE encode and decode for the analog channels.

9.Squelch mode

When the analog channel is set up for both CTCSS/DCS decoding and optional signaling, you can set up the RX condition in this menu.

SQ: You can hear the call when the channel receives a matched carrier.

CDT: You can hear the call when the channel receives a matched CTCSS/ DCS signal

TONE: You can hear the call when the channel receives a matched signaling.

C&T: You can hear the call when the channel receives a matched CTCSS/ DCS and matched tone signaling.

C|T: You can hear the call when the channel receives a matched CTCSS/ DCS or matched signaling

10.Band Width

Choose wide band or narrow band for the analog channel.

11.Reverse

When this function is enabled, the RX frequency, TX frequency and CTCSS/DCS encode/decode will be reversed.

16.Busy Lock

Always: Always allows transmissions

Repeater: Will not allow transmit when receiving matched carrier but unmatched CTCSS/DCS.

Busy: Will not allow transmit when receiving matched carrier.

17. TX Prohibit

Off: Allow transmit in current channel.

On: Prohibit transmit in current channel.

18. OWN ID

When the analog channel set up with optional signal, you can check the radio ID number in this menu. The ID number should be set up in PC software ➔ Analog ➔ Analog Address Book.

19. DTMF Enc

Set a DTMF ID as the default call ID for the current channel.

Press the PTT key to transmit the selected DTMF ID.

Edit the DTMF ID in Menu or with the PC programing software.

20. 2Tone Enc

Set 2Tone is an optional sigal for the current channel by using PC software. Set “call” is a function of a programmed key.

Press the programed key to transmit the selected 2Tone. When squelch is opened at the receiver side press [PTT] to talk

21. 2Tone Dec

Set the 2Tone Decode to decode the tone.

22. 5Tone Enc

Set 5Tone is an Optional Signal for the current analog channel by using PC software. Set "call" is a function of a programmed key.

Press the programed key to transmit the selected 5Tone. When squelch is opened at the receiver side press [PTT] to talk.

9.6. Device Infor

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

9.7 Reset

One you select to reset all the data of memory channels, setting menus and all saved data such as recording data, messages will be clear and reset to the manufactory default setting.

Step 1. Power off the radio firstly.

Step 2. Press and hold [PTT] and the [PF1] button then turn power knob to power on at the same time to enter the reset mode.

Step 3. The radio will start up with a note on the display "Are you sure you want to intialize radio.?"

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

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

Step 4. 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 pressing the PF1 key. Set the month, and use the PF1 key to move forward each step. Once done, click ⬭ (MENU) 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.