

## UHF FM Transceiver

# DJ-G46

## Instruction Manual

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.

GMRS license is required to operate this device.

## Introduction

Thank you very much for purchasing this excellent Alinco transceiver. Our products are ranked among the finest in the world. This radio has been manufactured with state of the art technology and it has been tested carefully at our factory. It is designed to operate to your satisfaction for many years under normal use.

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

## Before transmitting

GMRS is a licensed personal radio service that allows users to communicate with other equivalent GMRS radios. Users must carefully select and use channels to reduce possibilities of interference. CH 9 –15 are shared among other Family radio service (FRS) channels. Users may communicate with any FRS radios on these 7 channels. CH23-30 are assigned to repeater operations. Users may be required for PAID subscription to use local repeaters within their area, please consult with your local GMRS dealer for more information. If transmitting on DJ-G46 GMRS radio, users must first obtain GMRS license before transmitting. Additional information can be found at <https://mygmrs.com> or FCC website's Universal Licensing System (ULS) to apply for GMRS license.

### ■ 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 than 10 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.

### ■ About IP54 rating / Dust and splash resistant

About IP54 rating

- 5: Dust protected /Ingress of dust is not entirely prevented, but it must not enter in sufficient quantity to interfere with the satisfactory operation of the equipment; complete protection against contact.
- 4: Splashing water / Water splashing against the enclosure from any direction shall have no harmful effect. Test duration: 5 minutes / Water volume: 10 liters per minute /Pressure: 80–100 kN/m<sup>2</sup>

The IP54 designation provides for limited dust and splash proofing of the radio per specified above. This compatibility is factory guaranteed for a period of one year provided all the jack covers are securely in place, any accessories connected must be specified genuine Alinco accessories and the radio has not been disassembled by the customer. The factory has tested and made the equipment compatible to IP54 certification during engineering. However, please understand that this equipment is NOT certified IP54 compliant but is designed to remain operational when used in hard conditions and is in no way stating that you should attempt to wash the radio for cleaning. Warranty will not cover radios that are water/dust damage due to negligence or misuse of the product.

The warranty period of dust and splash resistance is the same as the period of the product warranty.

### ■ Covering ranges

You may expect a range of approx. 3km/2 miles or more when located on a flat, noise-free place like on a beach. However, it may vary drastically depending on how to wear and carry the radios, surrounding locations/conditions and static noise levels (below or near power transmission lines), etc. In urban areas with many constructions such range will be shorter. Inside a building or in a closed places like a tunnel, the range will become drastically short due to the nature of UHF radio wave.

### ■ Safety Information for GMRS Radios

DJ-G46 generates radio frequency (RF) signals while PTT key is pressed. The device is authorized to operate at a duty factor of 50% or less. Federal Communications Commissions (FCC) adopted RF exposure guidelines with safety levels for handheld two-way radios.

## ■ FCC Warning Statement

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

This device complies with part 15 of the FCC Rules. Operation is subject to the following two 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.

Replacement or substitution of semiconductors or other parts of a unique nature, with parts other than those approved by the manufacturer may cause a violation of the technical regulations of 47 C.F.R, Part 95 Subpart E of the FCC rules, or violation of type acceptance requirements of part 2 of the rules. For this reason, please do not open the cases of this product, and always contact your dealer for technical supports in case of a trouble.

**Note:** 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.

SAR tests are conducted using standard operating positions accepted by the FCC/ISED with the device transmitting at its highest certified power level in all tested frequency bands, although the SAR is determined at the highest certified power level, the actual SAR level of the device while operating can be well below the maximum value. Before a new model is available for sale to the public, it must be tested and certified to the FCC/ISED that it does not exceed the exposure limit established by the FCC/ISED Tests for each product are performed in positions and locations as required by the FCC/ISED. Never allow children to operate the radio without adult supervision and the knowledge of the guidelines.

## ■ Handheld Operation

This device has been tested and meets the FCC/ISED RF exposure guidelines when used with an accessory designated for this product or when used with an accessory that contains no metal. To maintain compliance with the FCC/ISED's RF exposure guidelines, hold the transmitter and antenna at least 1 inch from your face and speak in a normal voice, with the antenna pointed up and away from the face.

This equipment complies with FCC/ISED radiation exposure limits set forth for an uncontrolled environment. To comply with the FCC/ISED RF exposure requirements, the antenna installation must comply with following:

- Users must be fully aware of the hazards of the exposure and able to exercise control over their RF exposure to qualify for the higher exposure limits.
- Use only the supplied or an approved antenna.

## ■ Body-worn Operation

This device was evaluated for body-worn operations with the supplied belt-clip. All necessary accessories are included in the package; any additional or optional accessories are not required for compliance with the guidelines. Third party accessories unless approved by the manufacturer, should be avoided as these might not comply with FCC RF exposure guidelines.

## ■ FCC License Information

General Mobile Radio Service feature is a PAID land-mobile service available for short-distance, two-way personal communications in the US territory, such as leisure, hobby, driving, traveling and other outdoor activities. Use of GMRS outside USA may be restricted or subject to fine and/or penalty, so be informed in advance before traveling across the borders. An FCC license is required to operate GMRS system. Any individual in the US who is at least 18 years of age and not a representative of a foreign government may apply for a GMRS license through the FCC's Universal Licensing System. No exam is required. A GMRS individual license extends to immediate family members and authorizes them to use the GMRS radio, but not for employees for business-use (except for pre-1987 licensees). GMRS license holders are allowed to communicate with FRS users on those channels that are shared between the two services. The license is issued for a 10-year term.

Please consult with your dealer for GMRS licensing application, or visit following FCC sites:

General info on GMRS:

<https://www.fcc.gov/wireless/bureau-divisions/mobility-division/general-mobile-radio-service-gmrs>

ULS System:

<https://www.fcc.gov/wireless/universal-licensing-system>

## Features

- Li-Ion battery pack and stand-charger as standard accessories
- FM broadcasting 76-108MHz receiver built-in
- Sub-tone (CTCSS/DCS) Encode/ Decode and DTMF/ANI

## Conformity Symbols














Tested to comply MIL-STD-810G

-Shock: Method 514.6/I,IV    -Vibration: Method 516.6/I





## 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.

-  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, This product is splash-proof but not a complete water-proof.
-  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 adapters 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 adapter into a single wall outlet. It may result in overheating and/or fire.
-  Do not handle adapter with a wet hand. It may result in electric shock.




-  Securely plug the adapter into the wall outlet. Insecure installation may result in short-circuit, electronic shock and/or fire.
-  Do not use the adapter 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. Li-ion battery pack is shock-sensitive.
- When a liquid penetrated inside.
- When a power cord (including DC cables, AC cables and adapters) 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 open the unit and its accessories. Please consult with your local dealer of this product for service and assistance







## Alert

### ■ 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 install in a humid, dusty or insufficiently ventilated place. It may result in electric shock, fire and/or malfunction.
-  Do not install in an unstable or vibrating position. It may result in electric shock, fire and/or malfunction when/if the product falls to the ground. Damaged Li-ion battery may result in fire after a while.
-  Do not install 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 regardless of seasons. Li-ion battery is sunlight-sensitive even in winter.
-  Be cautious of a dew formation. Please completely dry the product before use when it happens.
-  Electronics devices such as solar panels and LED light bulbs may generate high levels of RF noise that may cause an interference. This is not a defect of receiver circuits of our product.
-  Turn off the radio before entering any area with a potentially explosive atmosphere or blasting caps.
-  Do not operate the radio, disassemble or charge the battery in the potentially flammable and explosive atmosphere ( such as gas station, coal gas station, etc). This product is not anti-explosive.

### ■ 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 adapter 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 from 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. Battery pack recycle bins are available in major DIY and Home electronics stores nationwide.

## ■ PC Programming Required

DJ-G46 Utility software is required to use all the functions of this product and edit memory channels. An optional PC cable ERW-7 is necessary. Please read the instruction of software for programming. Please contact your dealer for details.

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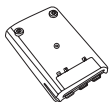
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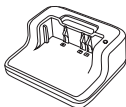
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## • STANDARD ACCESSORIES/OPTIONAL ACCESSORIES

### ((( Standard Accessories



Battery  
EBP-87



Battery Charger  
EDC-314



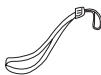
AC Adaptor  
EDC-191T



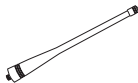
Belt Clip  
EBC-34



Instruction  
Manual



Hand Strap



Antenna  
EA-212

**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 before purchase.

### ((( Charging Operation

The battery is not charged at the factory, so please charge it before use. Charge the battery for the first time after purchase or extended storage (more than 2 months) may not bring the battery to its normal operating capacity. After repeating fully charge/ discharge cycle, the operating capacity will reach the best performance. Battery packs deteriorate even used correctly. With 3 years as a guideline, please replace to a new one within 5 years at the longest. Deteriorated batteries risk short-circuit causing explosion and fire.

### ((( Battery Charger Type

Please use Alinco's designated charger, other models may cause explosion and injury. After installing the battery, when the radio displays  low battery, please charge the battery.

### ((( Notice for Charging Battery

- ▼ Do not shortcircuit the charger. Never attempt to remove the casing from the battery, otherwise the warranty is void and you risk serious damage to yourself and properties.
- ▼ The ambient temperature should be between 5°C and 40°C in charging. Charging outside this range may not fully charge the battery.
- ▼ Always switch off the transceiver equipped with a battery before charging. Otherwise, it will interfere with correct charging.
- ▼ To avoid interfering the charging procedure, please do not cut off the power or take out the battery during charging.
- ▼ Do not recharge the battery if it is already fully charged. This may shorten the life of the battery.
- ▼ Do not charge the battery or transceiver when wet. Dry it before charging to avoid danger.



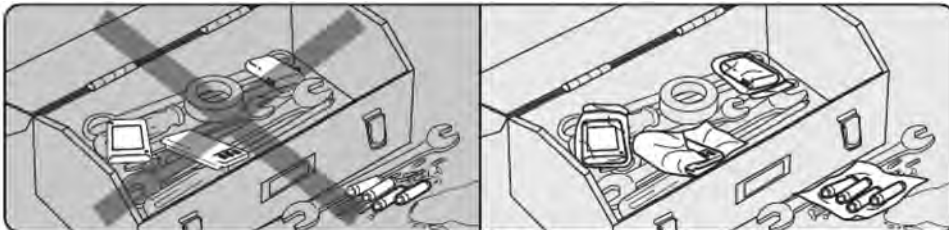
## • BATTERY INFORMATION

### Caution

- Risk of explosion, generation of heat or leak of chemicals inside if the battery is replaced by an incorrect type or reverse polarity. Use always the recommended types of batteries in this manual only.
- 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  $-10^{\circ}\text{C}$  to  $+45^{\circ}\text{C}$  ( $+14^{\circ}\text{F}$  to  $+113^{\circ}\text{F}$ ) range. Temperatures outside this range can cause the battery liquid to leak. Exposure to prolonged high humidity can cause corrosion of metal components.

■ Handling and storing information of batteries and battery packs.

Batteries contain flammable materials. Mishandling shall cause batteries to rupture producing extreme heat, fire, deteriorate or cause damages to you and your properties. Please care about the following information.

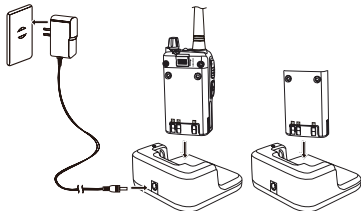


- Do not carry batteries in metal containers or in a bag containing objects such as metal tools, clips, screws, keys and jewelries.
- Do not carry batteries in wet conditions. Water is conductive and may cause short-circuit.
- The batteries must be packed in a dry nylon bag one by one when carried or stored to avoid short-circuit.
- Take batteries off of the transceiver before storing them for extended period of time. Store them in a dry, cool and dark place. Supplementary chargers is required from time to time and details are explained later in this manual.
- Please dispose of batteries according to your local regulations. When batteries are stored in a container for disposal, cover battery terminals with insulation tape to avoid short-circuit.

## • BATTERY INFORMATION

### ((( How to Charge the Battery Pack

1. Plug the AC adaptor into the AC outlet 120V, then plug the cable of AC adaptor into the DC jack, the indicator lights RED on for 1 second then turns to GREEN .
2. Slide the battery or transceiver with battery into the charger; make sure the battery terminals are in contact with the charging terminals. LED turns from GREEN to RED and starts charging.
3. It takes about 4 hours to fully charge the battery, and LED turns to GREEN when the charge is complete.



**Warning: Never charge while the radio is turned on. When turned on, the charger can't detect the charging voltage properly and LED fails to indicate charge status correctly.**

#### 5. LED Indicator:

STATUS	self-examine when power on	(No battery)	Charge normally	Fully Charged	Trouble
LED	Red (for 1 second)	Green	Red	Green	Red blinks alternatively

**NOTE:**

- ▲ Trouble means battery heating, short-circuit or charger malfunction. Remove the battery pack from the charger immediately and contact to your local dealer for services.
- ▲ It is known that Li-Ion battery packs heat up over 400°C by itself when kept in a temperature of over 80°C for extended period of time. Although the packs are protected against overheating with a protective circuit, never leave the battery packs under sunlight or hot place regardless of the season.
- ▲ Li-ion packs may deteriorate by over 30% regardless of conditions after 3 years. This is a nature of Li-ion pack and not a defect of the product. Please replace to a new one within 5 years at longest.
- ▲ The charger is to charge the battery pack only. It is not an AC adapter to operate the radio. Never attempt to transmit the radio with using the charger as it will cause the damage to the charger and a repair/replace may become necessary.
- ▲ The charge should be conducted in an ambient temperature with a minimum proper air-conditioning in an extremely hot or cold seasons.
- ▲ Try charging the battery pack only when having trouble charging with the radio. In case the radio may have troubles, the charge can't be conducted properly. If the battery pack can be charged alone, please take the radio to your local dealer for services.

## (((• How to Store the Battery

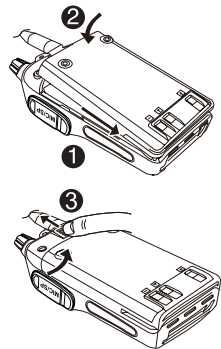
1. The Li-ion battery should be kept in the status of 50% discharge when storing.
2. Remove the battery pack from the radio and keep it in a cool, dry place.
3. Keep away from source of heat and direct sunlight.

**Note:** Incorrect storage will damage both the battery pack and the radio. Please always remove the battery pack from the radio when not in use to avoid over-discharge.

## • INSTALLATION & CONNECTION

### ((( Installing / Removing the Li-ion Battery

1. Match the three grooves of the battery pack with the corresponding guides on the back of the transceiver, then push it.
2. Press the battery and transceiver firmly together until the release latch on the top of the transceiver locks. After hearing a "click" sounds, the battery has been locked.
3. To remove the battery, slide up the release latch and remove the pack away from the transceiver.



### ((( Installing / Removing the Belt Clip

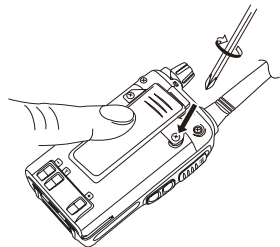
#### **Installing the Belt Clip:**

1. Put the belt clip on the back of the unit, and 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 PM  $\Phi$  2.5mm x 3mm)

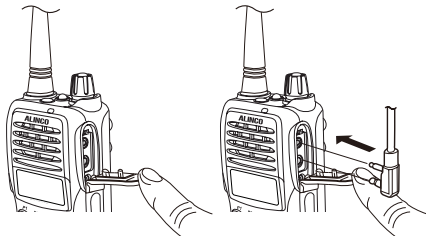


### ((( Accessories

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.

Incorrect operation may result in water penetration to destroy the circuit boards inside.



#### NOTE:

1. If you wear the earphones or earphone/microphone in a place where static electricity tends to accumulate or in your clothes, you may feel a static shock in your ears. It's the same shock you feel when you touch a doorknob, and it's not an abnormality such as a short circuit.
2. Don't stress the mic plug and cables to avoid disconnection inside.

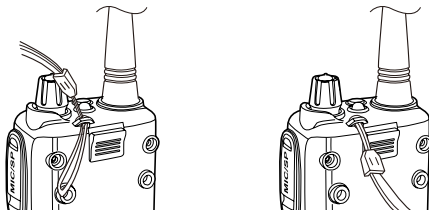
#### NOTE:

1. To keep the radio dust and splash resistant, the cover must be closed properly with the original 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.

## • INSTALLATION & CONNECTION

### ((( Installing the Hand Strap

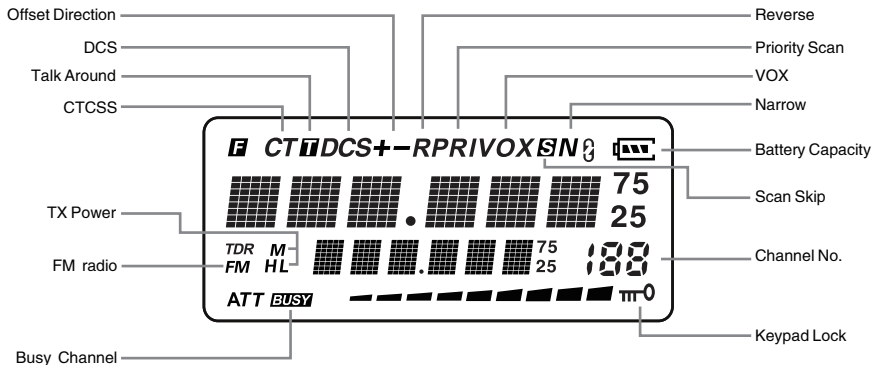
Attach the hand strap as shown.



## 📶 LCD Display

Following are the meaning of the icons and signs shown on the display.

Some icons may not appear while operating this product due to pre-programming status by your dealer.



**NOTE:**

Battery capacity indicator(full)

Battery capacity (less)

No power, replace battery pack or charge battery empty

Receiving signal strength / Output power Indicator

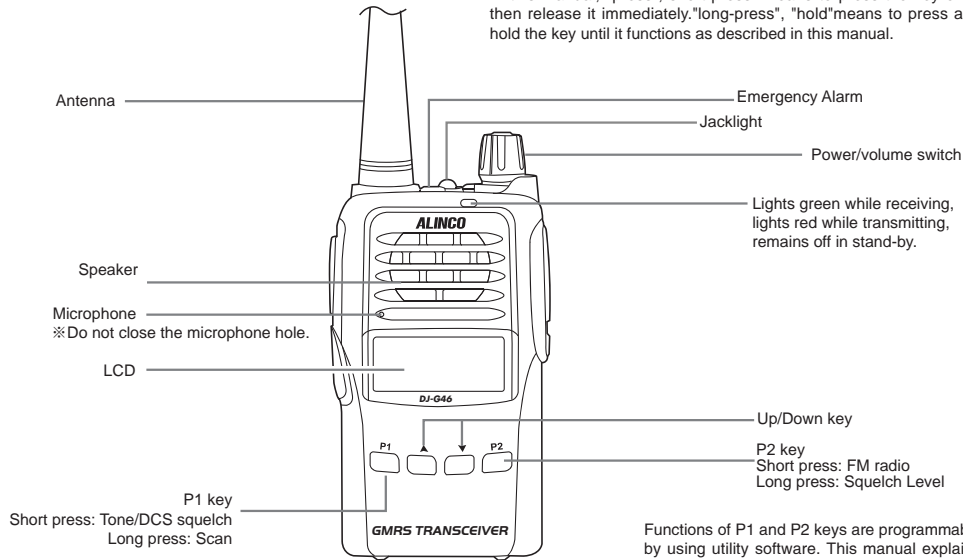


## • GETTING ACQUAINTED

### Front Panel

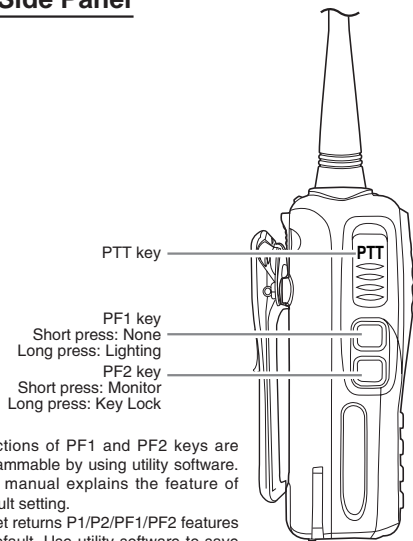
About "press" instruction

In this manual, "press", "short-press" means to press the key once then release it immediately. "long-press", "hold" means to press and hold the key until it functions as described in this manual.

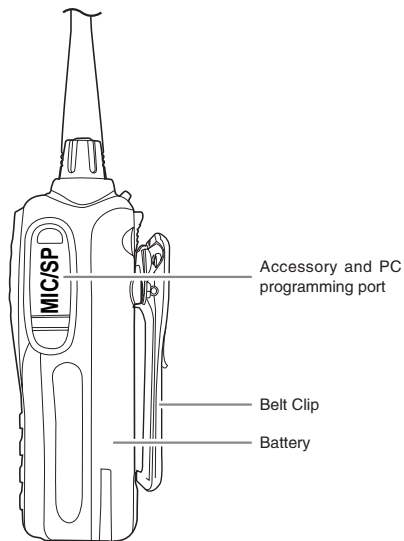


Functions of P1 and P2 keys are programmable by using utility software. This manual explains the feature of default setting.

Side Panel



Left Side

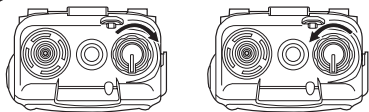


Right Side

Functions of PF1 and PF2 keys are programmable by using utility software. This manual explains the feature of default setting. Reset returns P1/P2/PF1/PF2 features to default. Use utility software to save the favorite parameters and recover them at once after resetting.

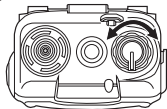
## • BASIC OPERATIONS

### ⌂ Power On and off



Turn **【POWER】** / **【VOLUME】** dial clockwise to power on.  
Turn it counterclockwise to power off.

### ⌂ Adjusting Audio output Level



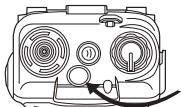
Press PF2 key to monitor white noise to refer to the current audio level.  
Turn **【POWER】** / **【VOLUME】** clockwise to increase the audio level,  
counterclockwise to decrease.

#### **CAUTION:**

**NEVER USE EARPHONE** while adjusting audio level. The max audio output is 1W, and it's loud enough to hurt your eardrums.

You may feel a static shock when wearing an earphone in a dry atmosphere but it's not a defect of product but a cause of nature. It is the same shock you feel typically when opening a door of a car in certain conditions.

### ((( Emergency Alarm Function



While Stand-by state, press this key for 3 seconds to enable the emergency alarm function. When activated the function, the radio will sound an alarm beep and start transmitting the alarm beep. Press the same key again to turn off the alarm.

### ((( Adjusting Channel

Press ▲ key/ ▼ key to choose the desired channel. Press ▼ key once to enter the downward channel while press ▲ key to enter the upward channel.

### ((( Side Key 【PF1】 (Jacklight Switch)

Long press this key to switch on or off the jacklight on the top of the radio.

### ((( Side Key 【PF2】 (Keypad lock)

Long press this key to start keypad lock function. Repeat to cancel the key lock function.

### ((( Squelch Off

Press the **【PF2】** key, squelch opens and the background noise is heard. Press this key again, it beeps twice, and the squelch closes. By using this function you can monitor weaker signals. Squelch level is adjustable and refer to P.18 for operation, P.23 for details.

## • BASIC OPERATIONS

### (((Receiving

Select the channel that you wish to operate by triangle keys.

When a signal is received on the channel that you selected, and S-meter is displayed on the LCD, then the received signal can be heard. The RX indicator also lights while receiving.

**NOTE: Please be aware of the squelch level and selective-calling settings such as CTCSS and DCS as you may risk not hearing the receiving signal.**

### (((Transmitting

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

Before transmitting, it is recommended to monitor the channel you are going to use to ensure it is not busy by pressing and holding **【PF2】** key.

### (((Resetting

When you reset the unit, all settings will return to the initial factory settings. The reset deletes the programmed memory channels also.

1. Turn on the unit with the **【PF1】** and **【P2】** keys pressed together.
2. All the icons appear on the display.
3. Release the keys.

**NOTE: THE RESET DELETES ALL THE MEMORIES.**

Use of the utility software is recommended to save the channel data and setting parameters.

Up to 8 of below functions can be assigned to P1/P2/PF1/PF2 keys' short-press and long press operation using the software. Please read following pages for details of functions.

NAME	FUNCTION
CALL	LCD displays DTMF data and group number (total 16 groups)of current group.
Emergency	Emergency alarm function.
Monitor	Under the standby conditions. pressing and releasing the programmed key. it beeps and enters the monitor state. While in Monitoritignores CTCSS/DCS decode and enables monitoring all incoming signals. Press this key again, it beeps twice and exits the monitor state.
Scan	Scan function is to automatically search the busy channels.
Adjust squelch level	Select squelch level.
Reverse	Frequency Reverse. In this condition, the current receiving frequency is switched to the transmitting channel's, and the CTCSS or DCS encode/decode setting will be interchanged.
Talk Around	In case of semi-duplex channels. it will transmit on receiving frequency and CTCSS/DCS encode/decode setting will be reversed. This ables the user to talk to other users without using the repeater.
Key Lock	If activate key lock, keypad is locked.
Power Select	Select TX power.
Instantaneously Squelch off	Squelch opens and the background noise is heard. Press this key again, it beeps twice, and the squelch closes. By using this function you can monitor weaker signals.

## • KEY ASSIGNMENT

NAME	FUNCTION
CTCSS/DCS SEL	Select CTCSS/DCS.
Comandar	This feature reduces the back-ground noise and enhances audio clarity.
VOX Sensitivity Level	When this function is on. the transmitting can be started by voice, no need to press [PTT] key.
VOX Delay time	If transceiver returns to receive mode instantly after VOX calling, it may cause calling voice missing. To avoid this problem, user can set a suitable delay time.
Battery power indicator	Under the standby conditions, pressing the programmed key, it will display the current battery level.
DIRECT CH1	Jump to CH1.
DIRECT CH2	Jump to CH2.
CALL List	Display cal list.
FM Radio	Activate FM radio.
Scan Add and Del	Users can choose whether to set current channel as Scan Stop/Skip.
Lighting	Lit LED light on the top of radio.
Backlight Setting	Select Backlight setting.
Langue Setting	Select language setting.
Color Setting	Select color setting.

To use features herein, preprogramming may be necessary.

### Call

Under the standby conditions, press the programmed key to transmit the prestored and selected DTMF signaling. Presetting DTMF CALL is also necessary.

### Emergency

Under the standby conditions press the programmed key to transmit the prestored emergency call.

### Monitor

Under the standby conditions, pressing and releasing the programmed key, it beeps and enters the monitor state. While in Monitor, it ignores CTCSS/DCS decode and enables monitoring all incoming signals. Press this key again, it beeps twice and exits the monitor state.

### Adjustment Squelch Level

Under the standby conditions, pressing the programmed key, it will set the squelch and displays the level.

### Reverse

Under the standby conditions, pressing the programmed key, it can select and activates Frequency Reverse. In this condition, the current receiving frequency is switched to the transmitting channel's, and the CTCSS or DCS encode/decode setting will be interchanged.

Pressing this key again, it beeps twice and exits reverse function. This is to monitor other stations without using repeaters.



## • AVAILABLE FUNCTIONS

### Talk Around

Under the standby conditions, pressing the programmed key, it beeps and activates TalkAround. In case of semi-duplex channels, it will transmit on receiving frequency and CTCSS/DCS encode/decode setting will be reversed. This ables the user to talk to other users without using the repeater. Press the key again, it beeps twice and Talk-around is deactivated.

**Note:** Under the talk around state, the transceiver can not communicate with other transceivers through repeaters.

### Key Lock

Under the standby conditions, pressing the proarammed key, it beeps and enters the Key Lock state. While in key lock, it can use only PTT key. Press this key again, it beeps and exits the keylock state.

### Tx Power Select

Under the standby conditions, pressing the programmed key, it beeps and will change the output power setting of the selected channel.

### **VOX Sensitivity Level**

Under the standby conditions, pressing the programmed key, it beeps and enters the VOX sensitivity level select state.

### **VOX Delay Time**

Under the standby conditions, pressing the programmed key, it beeps and enters the vox delay time select state.

### **Battery Power Indicator**

Under the standby conditions, pressing the programmed key, battery capacity shows on display.

### **Direct CH1**

Under the standby conditions pressing the programmed key, move channel to Direct CH1.

### **Direct CH2**

Under the standby conditions, pressing the programmed key, move channel to Direct CH2.

### **Call List**

Under the standby conditions pressing the programmed key, it can show call list on display. Program the DTMF auto-dialer group in advance to activate this feature.

## • AVAILABLE FUNCTIONS

### ((( Scan Add and Del

Under the standby conditions, pressing the programmed key, it can select to add or delete from scan group.

### ((( Lighting

Under the standby conditions, pressing the programmed key, it lits jacklight.

### ((( Backlight Settiing

Under the standby conditions, pressing the programmed key, it beeps and enters the backlight setting state. While in backlight setting state, it can select backlight level.  
Press this key again, it beeps twice and exits the backlight settiing state.

### ((( Language Setting

Under the standby conditions, pressing the programmed key, it beeps and enters the language setting state. While in language setting state, it can select language.  
Press this key again, it beeps twice and exits the language settiing state.

### ((( Color Setting

Under the standby conditions, pressing the programmed key, it beeps and enters the color setting state. While in color setting state, it can select the color of display.  
Press this key again, it beeps twice and exits the color settiing state.

Following functions are assigned to P1 key as default.

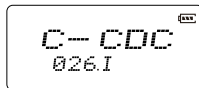
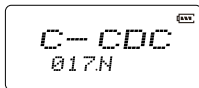
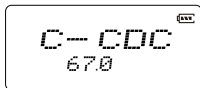
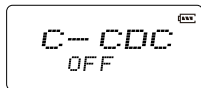
((( **Tone Squelch / DCS Squelch (Sub tone CTCSS / DCS)**  
**Encode/Decode Tones Synchronized Setup**

Short press **[P1]** key, **[▲]** and **[▼]** to choose the desired CTCSS / DCS encode tone.

Available CTCSS tones: 67Hz– 254.1Hz, 50 tones in total, Default is OFF.

**DCS:** 017N–765I, 232 codes, "N" stands for positive, "I" stands for inverse codes. Default is OFF.

Press **[PF2]** key to confirm and exit.



((( **Scan**

Long press **[P1]** key to start scan function.

A beep sounds and starts scanning. It scans channels in scan list one by one.

When one channel receives a matching signal, the transceiver will temporarily stay in this channel till the signal disappears. Long pressing the key again, it beeps twice, and stops scanning and returns to the channel pre-programmed as "return-channel".

## • P2 KEY OPERATIONS

Following functions are assigned to P2 key as default.

### (((• Turn On/ Off FM Radio Receiver

Short pressing **【P2】** key, FM Radio is enabled.

LCD displays 'FM' and starts receiving FM broadcasting frequency. Repeat the operations to turn off.

While listening to the FM broadcasting, press ▲ key or ▼ key to start scanning. When a signal is received, LCD displays current frequency and stops scanning.

### (((• Squelch Level

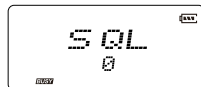
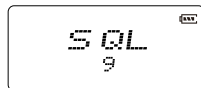
Squelch is a function that eliminates the noise when no signals are being received.

Setting the higher squelch level allows you to monitor only stronger signals.

Usually start from level zero (the squelch is open and hear the noise), increasing the level and when the noise is gone, set just 1 level higher than the current level. For example the noise is cut at level 3, set the level to 4 and exit.

Long press **【P2】** key then press ▲ key or ▼ key to choose the parameter, that is from 00 to 09 in 10 levels.

Press **【PF2】** key to confirm and exit.

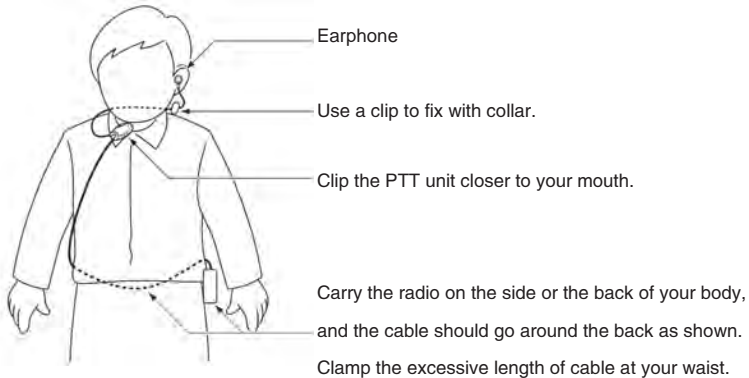


### (((• Tone Burst

Press and hold **【PTT】** key, then press **【PF1】** key to transmit selected tone burst frequency. The tone burst frequency can be set to 1000Hz / 1450Hz/1750Hz / 2100Hz by PC software.

<b>EBC-34</b>	<b>Belt Clip</b>
<b>EBP-87</b>	<b>Li-ion Battery Pack (DC 7.4V 1500mAh)</b>
<b>EBP-88</b>	<b>Li-ion Battery Pack (DC 7.4V 1700mAh)</b>
<b>EDC-189</b>	<b>Li-ion Battery Charger</b>
<b>EDC-191T</b>	<b>AC Adapter (AC120V)</b>
<b>EME-56A</b>	<b>Earphone Microphone</b>
<b>EMS-76</b>	<b>Speaker microphone</b>
<b>ERW-7</b>	<b>PC connection cable for utility software operation</b>

## • Recommended Installation Of Earphone Microphone



Memory Channel	GMRS Channels
Voice Prompting	Close
Time-Out Timer	180 s
VOX Setup	OFF
VOX Delay	2.0 s
VOXBeep	OFF
Squelch level	5
Battery Save	1:2
LCD Backlight	Auto
LCD Backlight Color	Orange
Scan Dwell Time	3s
Display Mode	Channel Name/Frequency
Tone Pulse Frequency	1750Hz
DTMF Transmitting Time	100ms
Beep Volume	4
Priority Channel	OFF
FM Radio	OFF

Key Beep	ON
Offset Frequency Setup	OFF
Channel Scan Skip	NO
TX Power Selection	High
Reverse / Talk Around	OFF
DTMF Code	000
Keylock	OFF
CTCSS/DCS Decode/Encode	None
Offset Frequency	0.000
Channel Spacing	25K
Voice Compander	OFF
Busy Channel Lockout	OFF
Optional Signaling	OFF
Signaling Relation	AND
PTT ID	OFF
TX Off Function	OFF
Whisper	OFF



## • TECHNICAL SPECIFICATIONS

General	
Frequency Range	462.5620 - 467.7125MHz
Channel Capacity	128 channels
Operating Voltage	7.4V DC $\pm 20\%$
Battery Life	More than 12 Hours (1500mAh), by 5-5-90 work cycle
Frequency Stability	$\pm 2.5$ ppm
Temperature range	Operating: $-10 \sim +45^{\circ}\text{C}$ ( $+14 \sim 113^{\circ}\text{F}$ ) / Charging: $+5 \sim +40^{\circ}\text{C}$ ( $+41 \sim 104^{\circ}\text{F}$ )
Size	240x56x30mm (with battery pack, antenna)
Weight	240 g (with battery pack, antenna)

Receiving Part(ETSI EN 300 086 Standard Test)	
Sensitivity(12dB SINAD)	$\leq 0.35\mu\text{V}$
Adjacent Channel Selectivity	$\geq 60\text{dB}$
Intermodulation	$\geq 60\text{dB}$
Spurious Rejection	$\geq 70\text{dB}$

Audio Response	$+1 \sim -3\text{dB}$ (0.3~2.55KHz)
Hum & Noise	$\geq 45\text{dB}$
Audio Distortion	$\leq 5\%$
Audio Power Output	1000mW/10%

Transmitting Part(ETSI EN 300 086 Standard Test)	
Power Output	5W/2W/1W
Modulation	8K50F3E (FM)
Adjacent Channel Power	$\geq 65\text{dB}$
Hum & Noise	$\geq 36\text{dB}$
Spurious Emission	$\leq -36\text{dB}$
Audio Response	$+1 \sim -3\text{dB}$ (0.3~2.25KHz)
Audio Distortion	$\leq 5\%$

Problem	Corrective Action
No power or battery runs out quickly	A.The battery may be exhausting. Recharge or replace the battery. B.The battery may not be installed correctly. Remove the battery and install it again. C.The power switch is broken; send it to local dealers to repair. D.Battery life is end; contact to local dealers to replace. E.Check if the battery pack is securely attached.
Hear loud noise always	Adjust squelch level.
No sound when using earphone.	Earphone or the jack is broken. Please contact with local dealers for inspection.
Communication distance becomes short, and Low sensitivity	A.Check whether the antenna is in good conduction and the antenna base do not come adrift. B.Antenna may be broken. Consult your local dealer for services.
Cannot talk or hear other members in your group	A.Different channel, please change it. B.Different CTCSS / DCS /DTMF, please reset it. C.Out of communication range.

## • TROUBLE SHOOTING GUIDE

The receiving sound level is low or intermittent	Consult with local dealers for inspection.
Receiving signal is intermittent.	A.Out of communication range or obstruct by walls, buildings etc. Change position to transmit. B.Internal components may be in trouble, please contact with local dealers to repair.
Loudspeaker sounds lower or with dry noise after certain time of usage.(Speaker magnet attracts iron powders)	Check whether the loudspeaker is broken, Iron powder or dusts is in the loudspeaker. Please contact with local dealers to repair.
Receiving indicator with green light but no sound	A.Low volume, increase the audio level. B.Volume switch or loudspeaker is broken, please contact with local dealers to repair. C.Earphone jack is broken, please contact with local dealers to repair.

**NOTE: Alinco guarantees the supply of minimum–necessary spare parts such as battery–packs, components and mechanical parts for at least 5 years after the production of this product is terminated except in case of accidents beyond control.**

**Channel Frequency Chart**

NO.	RX Frequency	TX Frequency	Channel Name	NO.	RX Frequency	TX Frequency	Channel Name
1	462.56250	462.56250	CH 001	17	462.60000	462.60000	CH 017
2	462.58750	462.58750	CH 002	18	462.62500	462.62500	CH 018
3	462.61250	462.61250	CH 003	19	462.65000	462.65000	CH 019
4	462.63750	462.63750	CH 004	20	462.67500	462.67500	CH 020
5	462.66250	462.66250	CH 005	21	462.70000	462.70000	CH 021
6	462.68750	462.68750	CH 006	22	462.72500	462.72500	CH 022
7	462.71250	462.71250	CH 007	23	462.55000	467.55000	RP 015
8	467.56250	467.56250	CH 008	24	462.57500	467.57500	RP 016
9	467.58750	467.58750	CH 009	25	462.60000	467.60000	RP 017
10	467.61250	467.61250	CH 010	26	462.62500	467.62500	RP 018
11	467.63750	467.63750	CH 011	27	462.65000	467.65000	RP 019
12	467.66250	467.66250	CH 012	28	462.67500	467.67500	RP 020
13	467.68750	467.68750	CH 013	29	462.70000	467.70000	RP 021
14	467.71250	467.71250	CH 014	30	462.72500	467.72500	RP 022
15	462.55000	462.55000	CH 015				
16	462.57500	462.57500	CH 016				

- ATTACHED CHART

### CTCSS Frequency Chart

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

((( **1024 groups DCS Frequency Chart**

000	001	002	003	004	005	006	007
010	011	012	013	014	015	016	017
020	021	022	023	024	025	026	027
030	031	032	033	034	035	036	037
040	041	042	043	044	045	046	047
050	051	052	053	054	055	056	057
060	061	062	063	064	065	066	067
070	071	072	073	074	075	076	077
100	101	102	103	104	105	106	107
110	111	112	113	114	115	116	117
120	121	122	123	124	125	126	127
130	131	132	133	134	135	136	137
140	141	142	143	144	145	146	147
150	151	152	153	154	155	156	157
160	161	162	163	164	165	166	167
170	171	172	173	174	175	176	177
200	201	202	203	204	205	206	207
210	211	212	213	214	215	216	217
220	221	222	223	224	225	226	227
230	231	232	233	234	235	236	237
240	241	242	243	244	245	246	247
250	251	252	253	254	255	256	257

## • ATTACHED CHART

260	261	262	263	264	265	266	267
270	271	272	273	274	275	276	277
300	301	302	303	304	305	306	307
310	311	312	313	314	315	316	317
320	321	322	323	324	325	326	327
330	331	332	333	334	335	336	337
340	341	342	343	344	345	346	347
350	351	352	353	354	355	356	357
360	361	362	363	364	365	366	367
370	371	372	373	374	375	376	377
400	401	402	403	404	405	406	407
410	411	412	413	414	415	416	417
420	421	422	423	424	425	426	427
430	431	432	433	434	435	436	437
440	441	442	443	444	445	446	447
450	451	452	453	454	455	456	457
460	461	462	463	464	465	466	467
470	471	472	473	474	475	476	477
500	501	502	503	504	505	506	507
510	511	512	513	514	515	516	517
520	521	522	523	524	525	526	527
530	531	532	533	534	535	536	537

540	541	542	543	544	545	546	547
550	551	552	553	554	555	556	557
560	561	562	563	564	565	566	567
570	571	572	573	574	575	576	577
600	601	602	603	604	605	606	607
610	611	612	613	614	615	616	617
620	621	622	623	624	625	626	627
630	631	632	633	634	635	636	637
640	641	642	643	644	645	646	347
650	651	652	653	654	655	656	657
660	661	662	663	664	665	666	667
670	671	672	673	674	675	676	677
700	701	702	703	704	705	706	707
710	711	712	713	714	715	716	717
720	721	722	723	724	725	726	727
730	731	732	733	734	735	736	737
740	741	742	743	744	745	746	747
750	751	752	753	754	755	756	757
760	761	762	763	764	765	766	767
770	771	772	773	774	775	776	777



## • PC PROGRAMMING

### ■ PC Programming

"DJ-G46T Programming Software" requires an optional ERW-7/ERW-15 Data cable necessary to programming the radio. Install programming utility into your Windows 10/11 PC. Typically, Windows OS would recognize the cable without any additional drivers.

Check Windows Device Manager [Ports (COM & LPT)] to ensure "USB Serial Port (COM\*)" is added successfully. Take note of the assigned COM number. Turn off the radio, and connect the Stereo miniplug of ERW-7/ERW-15 to the "SP" port at right side of the radio. Turn on the radio.

Open the DJ-G46 programming software. From Top Menu, select "Set" and click on "Set COM" and select the Communication Port# the USB data cable is assigned to.

From the Top Menu, select "Programming" and click on "Read data from transceiver", click OK to continue. If a progress-bar appears and shows the reading status, this ensures data cable between the Radio and PC is operating correctly.

In case of failure, re-confirm the COM port number, and plug connection to the radio (not MIC port).

If USB serial port is not listed under PORTS (COM & LPT) in Device manager, a data cable driver may not have been successfully installed withing Windows. You may want to search for [FTDI VCP Drivers]on the internet or contact the dealers for additional support.

To write edited data to the radio, select "Programming" from the Top menu and click "Write data to transceiver" to send updated data to the Radio. Please make sure to save and edited or revised Data to your PC as a backup in the event of future editing or recovery of the settings if needed.

DJ-G46T can also be used as a commercial two-way land mobile transceiver. If not very familiar with these functions, it is strongly recommended users consult with your local GMRS dealer or Authorized Alinco Distributor in your market.

[MEMO]



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