UHF FM Transceiver

DJ-A41

FCC ID:PH3DJ-A41
IC:3070C-DJA41
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.

DJ-A41

Conformity Symbols

CE 0700 ①   RoHS

Tested to comply MIL-STD-810G
-Shock: Method 514.6/I,IV   -Vibration: Method 516.6/I

DJ-A41: UHF FM transceiver   400.000 -470.000MHz
Use of this device is authorized in all EU and EFTA member states (CH/ICE/LI/NOR).
Operator's license is required.

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

There are many radio stations operating in the frequency ranges this product covers. Be careful not to cause interference when transmitting around such radio stations.

■ 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 litters per minute /Pressure: 80~100 kN/m²

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 at high-power 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 buildings or inside a building, such covering range will become drastically short even to several tens of meters.

Features

■ **Output power 5W**
■ **128 PC-programmable channels (16ch x 8groups)**
■ **Li-Ion battery pack and stand-charger as standard accessories**
■ **Voice Compander (Reduce Noise & enhance audio clarity)**
■ **Inversion Scramble(Analog encryption)**
■ **Sub-tone (CTCSS/DCS) Encode/Decode and DTMF**
■ **VOX built-in**

Conformity Symbols

$C\epsilon$ 0700 ① ⎯ RoHS

Tested to comply MIL-STD-810G
-Shock: Method 514.6/I,IV   -Vibration: Method 516.6/I

SAFETY TRAINING INFORMATION

Warning: Please Read Carefully

- DO NOT operate the transceiver without a proper antenna attached, as it may damage the transceiver and may also cause you to exceed FCC RF exposure limits. A proper antenna is the genuine antenna supplied with this transceiver by Alinco or ones specifically authorized by the antenna manufacturer for use with this transceiver.

- ALWAYS keep the antenna at least 2.5cm away from your body when transmitting and only use the original belt clips when attaching the transceiver to your body (Unauthorized attachment devices may help radiating more electromagnetic energy).

- Use only the genuine Alinco accessories listed in this instruction manual for RF safety. Third party accessories are not guaranteed for RF safety by Alinco.

- **Electromagnetic Interference/Compatibility**

During transmissions, a transceiver generates RF energy that can possibly cause interference with other devices and/or systems.

To avoid such interference, turn off the transceiver in areas where signs are posted to do so. NEVER operate transceivers in areas that are sensitive to electromagnetic radiation such as hospitals, blasting sites, aboard aircraft and similar advanced vehicles etc. Do not expose magnetic cards such as credit cards in a very close vicinity to a transceiver; it may erase the magnetic data. A person using medical devices such as a pacemaker MUST NOT use this transceiver, as interference may cause malfunction to such medical devices.

⚠ 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, 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.
- 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.

🚫 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.

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

■ 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 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.

■ PC PROGRAMMING

NOTE: The utility software may be available to distributors/dealers only. USB programming cable is required. The manufacturer will not release the software to unauthorized party so please contact your dealer for details.

○ **CONTENTS**

CONTENTS

((∙ Standard Accessories

Antenna	Li-ion Battery Pack	Charger	AC Adaptor

Belt Clip	Instruction Manual	Hand Strap

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.

○ BATTERY INFORMATION

(((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.The battery life is over when its operating time decreases even though it is fully and correctly charged and it must be replace to new one.

(((Battery Charger Type

Please use Alinco's designated charger, other models may cause explosion.After installing the battery pack, if the radio displays low battery with red flashing lamp or voice prompt, 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 while charging.Charging outside this range may not charge the battery.
▼ Always switch OFF the transceiver before charging.Otherwise, it may not charge correctly.
▼ 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 or damage the battery.
▼ Do not charge the battery or transceiver when wet. Dry it before charging to avoid danger.

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.

▼ The battery pack isn't fully charged when shipped. It must be charged before use.

▼ Charging should be conducted in a temperature range of +5ºC to +40ºC (+41ºF 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 +45ºC (-14ºF to +113ºF) 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.

▼ Use specified genuine chargers only to charge battery packs.Use of other chargers may cause damage to products, you and your property.

▼ Never carry battery packs together with conductive articles such as metals in a same bag to prevent from short-circuiting. Put the packs only in nylon bags to carry them safely.

○ **BATTERY INFORMATION**

▼ Even if you do not use the battery pack for a long time, charge it at least once every three months to prevent deterioration.

(((**How to Charge**

1. Plug the AC adaptor into the AC outlet, and then plug the cable of the AC adaptor into the DC jack located on the back of the Charger. The Indicator lights orange (1s) and then goes out----waits to charge.

2. Plug the battery or transceiver into the charger. Make sure that the battery terminals are in contact with charging terminals well. The Indicator turns into twinkling red-----Pre-charging begins.

3. After pre-charging for about 5 minutes, the indicator will stop twinkling----charging begins.

4. It takes approximately 4 hours to fully charge the battery. When the lamp lights green, the charging is finished. Remove the battery or the transceiver equipped with battery from the stand.
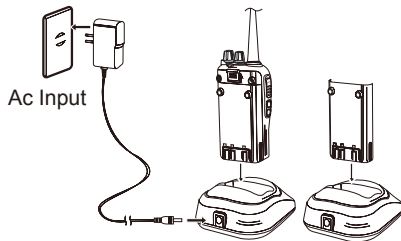
> **NOTE: when charging a power-on transceiver equipped with battery, the indicating lamp will not turn into green to show the fully charged status. Only when the transceiver is switched off, can the lamp indicate normally. The transceiver consumes energy when it is power-on, and the charger can not detect the voltage when the battery has been fully charged. So the charger will charge battery in constant voltage and fail to indicate correctly whether the battery has been charged fully.**

5. LED Indicator:

STATUS	Self-Examine When Power on	No Battery	Pre-charging	Charge Normally	Fully Charged	Trouble
LED	Orange (for 1 second)	None	Red Light Twinkles for 5 Minutes	Red	Green	Red twinkles for a long time

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.
▼ The max trickle pre-charging time is 30 minutes. In case the red indicator continues to blink longer, please stop charging and consult with 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 in a car or similar locations in hot seasons.

▼ 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.
▼ 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.
▼ Battery pack discharges faster when it is attached to the radio. Please always remove it from the radio when not in use.

(((How to Store the Battery

1. The 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.

(((Installing / Removing the Battery

1. Match the three grooves of the battery pack with the corresponding guides on the back of the transceiver, and then push it.
2. Press the battery pack 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 pack, slide up the release latch and remove the pack away from the transceiver.
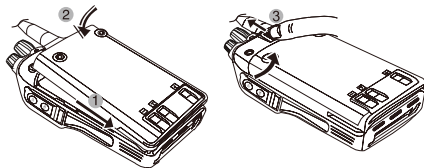
(((Installing / Removing the Antenna

Installing 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 and secure the connection from time to time.

Removing the Antenna:

Turn the antenna counter-clockwise to disconnect the antenna.
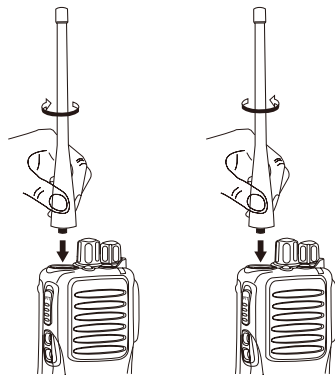
NOTE: Do not use third−party antenna as it may radiate more RF that exceeds SAR limit guidances.

(((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 Φ 2.5mm x 3mm)
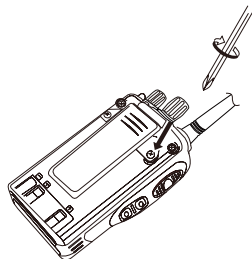
(((Accessories

Remove the jack cover and insert the accessory plug into the jack,as shown.

When the accessory is not used, please be sure to put on cover with 3x6mm screw securely.

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.
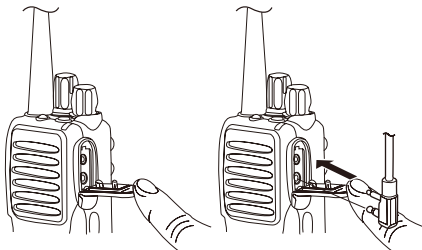
((ₑ Installing/ Removing the Hand Strap

Attach the hand strap as shown.
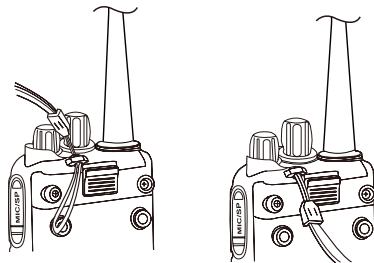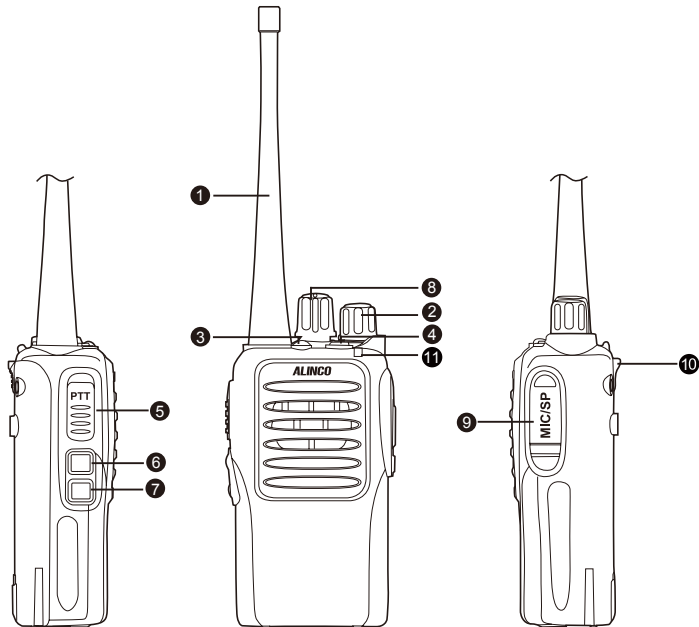
❶ Antenna

❷ POWER / VOLUME Switch: To turn on/off the power and adjust the audio level.

❸ Jacklight: White is lit when the alarm key is pressed.

❹ Emergency Alarm Key

(1)Under the standby conditions, press this key for 1 second to enable alarm function. Press this key again to exit the alarm status.This is optional and PC preprogramming is required.

(2)Under the standby conditions, press this key to start jacklight, press this key again to turn it off.

❺ PTT Key: Press and hold this key to transmit. Release the key to receive.

❻ PF1 Key: Function key 1

❼ PF2 Key: Function key 2

❽ Channel Selector Knob: Turn the selector knob to select desired channel.

❾ Optional accessory port

❿ Battery Lock

⓫ Indicator : Green is lit while receiving a signal, Red while transmitting.

(((◦ Indicator Status and Beep

Low battery voltage warning	Transceiver emits a low voltage beep at intervals of 60 seconds, and red light blinks.
TX/Reading data	Red is lit while transmitting or reading the data while programming.
RX/Writing data	Green is lit whilereceiving or writing the data while programming.
Scan	Green blinks every second while scanning.
DTMF Successfully Decoded	Green and red alternatively blinks.
Key Operation	A beep sounds when activating a function. Beeps twice when exiting from a function.

(((◦ [PF1] & [PF2] Key Default

Press [PF1]	Battery Capacity Enquiry
Press [PF2]	Squelch off
Press and hold [PF1]	Whisper
Press and hold [PF2]	TX Power Switch

(((**Switch on / off Transceiver**

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

(((**Adjusting Audio output level**

Press and release **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 loud enough to hurt your eardrums. You may feel a static shock when wearing an earphone in a dry atomosphere 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.

(((**Channels Selection**

Under the standby conditions, turn channel selector knob to choose the desired channel, and the transceiver will announce the selected channel number. Turn clockwise to increase the channel number, counterclockwise to decrease.

NOTE: The empty channel will be announced as blank.

○ **BASIC OPERATIONS**

(((**Group Selection**

By PC-preprogramming, 128 channels can be assigned in total which are divided into 8 groups with 16 channels in each group. If different groups are being programmed, press and hold **[PF2]** to turn on. Still holding **[PF2]** for another 2 seconds, it will announce the current group number. Turn the selector knob to choose the desired group. The voice announce will tell you the selected group number.

NOTE: You can enable or disable the group selection function by programming software.

(((**Receiving**

When the channel you are operating is called, LED GREEN lights, then you hear the voice from transmitting party.

NOTE: If your transceiver has set higher squelch level or being programmed with signaling features, it may fail to hear the calling.

(((**Transmitting**

Press and release the **[PF2]** key to monitor for a while to confirm the channel desired is not busy.
Press and hold **[PTT]** key to speak into microphone (MIC). Keep the distance of about 2.5~5cm between your lips and MIC, and speak at normal voice level.

NOTE: Press [PTT] key, red is lit indicating it is transmitting. Release PTT to receive.

(((Emergency Alarm Function (PC pre-programming required)

Press the emergency alarm key for over 1 second to start the Emergency Alarm Function.Once activated, it will generate alarm sound, start transmitting to send alarm beeps. Turn off then turn on again or pressing Emergency Alarm key again to exit the function.

○ **ADVANCED OPERATIONS**

The **[PF1]** and **[PF2]** keys are programmable by dealer to assign following features by using programming software.

> **NOTE: When programming the following functions, you need to press the [PF1] / [PF2] key for one second till the transceiver beeps and then release the key to operate the programmed function.**

(((Call 1/Call 2 DTMF

Under the standby conditions, press the programmed key to transmit the prestored and selected DTMF signaling.

(((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.

(((Momentary Monitor

Under the standby conditions, pressing and holding 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.

(((Temporary Deletion of the Interfering Channel from scanning

This function can temporarily skip the interfering channel or occupied channel from scan list.
When scan stops on one channel, pressing the programmed key ; it beeps and temporarily deletes this channel from the scan list. If only one or two channels are in the scan list, this operation is not available. Restart the transceiver to restore the temporarily deleted channels into the list again.

(((Squelch Levels Enquiry

Under the standby conditions, pressing and holding the programmed key, it will announce current squelch level by voice.

(((Squelch Levels Setup

Under the standby conditions, pressing and holding the programmed key, it will set the squelch and announces the level by voice.

(((Scan

Scan function is to automatically search the busy channels.
Under the standby conditions, pressing and holding the programmed key, 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. Pressing the key again, it beeps twice, and stops scanning and returns to the channel pre-programmed as "return-channel".

(((Scramble Setup (Encryption)

This special audio process can offer a more confidential communications.
Under the standby conditions, pressing and holding the programmed key, it beeps and enables Scramble function. Repeat the same operation, it beeps twice and disables.

NOTE: This is a simple analog scrambling (inversion scrambling) and the security level is low.

(((Squelch off

Pressing the programmed 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.

(((Temporary Squelch off

Pressing and holding the programmed key, squelch opens and the background noise is heard. Release this key again, it beeps twice, and the squelch closes. By using this function you can monitor weaker signals.

(((Talk Around

Under the standby conditions, pressing and holding the programmed key, it beeps and activates 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. 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.**

(((**Frequency Reverse**

Under the standby conditions, pressing and holding the programmed key, it beeps and activates Frequency Reverse. In this condition, the current receiving frequnecy 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.

◦ ADVANCED OPERATIONS

(((Whisper

Under the standby conditions, pressing the programmed key, it beeps and activates whisper function. This feature is handy in quiet place, you can talk in lower voice than usual. Pressing this key again, it beeps twice and exits whisper function.

(((Voice Compander (Reduce Noise & Enhance Audio Clarity)

Under the standby conditions, pressing the programmed key, it beeps and activates the function. This feature reduces the back-ground noise and enhances audio clarity. Pressing this key again, it beeps twice and exits the function.

> Note: All users must have the compander–compatible radios to enjoy the feature. Use this function only to communicate with non–compander radios.

(((Battery Capacity Enquiry

Under the standby conditions, pressing the programmed key, it will announce the current battery level.

(((Current Channel Enquiry

Under the standby conditions, pressing the programmed key, it will announce the current channel number.

(((Channel Selector Knob Lockout

Under the standby conditions,pressing the programmed key, it will announce the current channel number.Enable this function to prevent normal communication failure caused by channel misadjustment.

Under the standby conditions, pressing the programmed key, it beeps and locks the channel selector knob. Press the key again, it beeps twice and unlocks the knob.

◦ PRESET OPERATIONS

Following features can be set by using dealer-programming software.

(((CTCSS / DCS Encode / Decode

It enables the CTCSS/DCS encode/decode setting.Pre-programming is necessary and usually not recommended for general users.

(((Optional Signaling

Users can enable or disable the Optional Signaling in every channel by programming software. This Signaling function is similar to CTCSS/DCS which embodies functions as Selective Call, Group Call, All Call, PTT ID, and Remotely stun and Waken.

1. **PTT ID:** If current channel is edited with PTT ID, the transceiver will send transmitting ID when pressing or releasing PTT key.
2. You can set group call wildcard for each group by programming software. (DTMF character A. B.C.D.*** or "#").

The caller can call different groups by sending different group call codes.When the receiving party receives a valid ID code, one or all of the characters would be replaced by wildcard characters and the receiving part can realize all call, group call or selective call. It is much easy and flexible to realize all call, group call and etc by using group call code.

For example:
Group code –"C"

	Radio A	Radio B	Radio C	Radio D
ID code of the receiving party is	123	223	235	355.

If the calling party uses "**C23**" to call, Radio A and Radio B will receive the call.
If the calling party uses"**CC5**" to call, Radio C and Radio D will receive the call.
If the calling party uses "**CCC**" to call, All Radios would receive the call..

3.This transceiver is set with 16 groups of DTMF code, users can program and use them flexibly.

(((Busy Channel Lockout

BCLO is to restrict transmitting while RX signal is received. When Busy Channel Lockout is set to on, transmission is possible only in the specific conditions (and isn't possible otherwise).The alarm beep sounds if the PTT key is pressed when transmission is prohibited.Busy Channel Lockout mode available by programming software are as follows.

- **1. BCL:** Enable BCL, carrier wave lockout, transmitting is prohibited when receives any carrier.
- **2. BTL:** Enable BTL, transmitting is prohibited when current channel receives a carrier signal that CTCSS/DCS tones are different from your group's.
- **3. OFF:** Busy channel lockout is disabled. Default is OFF.

◦ PRESET OPERATIONS

((•Signaling Relations Setup

Users can set relations between CTCSS/DCS signal and DTMF signal by programming software.
AND: Only when a matching CTCSS/DCS signal and a DTMF signal are received, can calling of other party be heard.
OR: As long as a matching CTCSS/DCS signal or a DTMF signal is received, calling of the other party can be heard.

((•Channel Scan Skip

Users can choose whether to set current channel as Scan Skip by programming software. Transceiver will skip current channel during scan when it is set as Scan Skip.

((•TX OFF

Once this function is enabled, **[PTT]** key becomes invalid and it works only as a receiver.

((•Battery Save Setup

This function prevents useless battery consumption by switching the power ON/OFF at a fixed ratio if there is no key operation or receiving signal for a continuous period of 5 seconds or more. Higher OFF time (1:4 setting) saves more amount of battery but may cause slight delay on receiving. The Battery Save function is temporarily suspended when a key is operated or a signal is received.

(((Time-out Timer

This function stops the transmission automatically when the continuous transmission time exceeds the set time and alerts it with a voice.

(((Time-Out Timer Pre-Alarm

This is the alarm that warns the user before TOT stops the transmission.

(((TOT Re-transmitting Time Setup

This is the penalty time before resuming the normal operation condition, once TOT stopped the transmission.

(((VOX Function

After enabling this function, you can directly start transmitting by voice instead of pressing **[PTT]** key. (An optional earphone-microphone is necessary)

(((Priority Scan Setup

This transceiver can be set with two priority channels at the same time.Users can set the desired priority scan by programming software. If transceiver set priority scan, under scanning and receiving no signal state, it will scan every channel and also test priority channel at a time. When the non-priority channel receives signal, it will test priority channel according to flyback time A and flyback time B setup by users.

(((Resume Factory Default

You can make all the settings of transceiver return to the factory default settings when it has troubles, can't work properly or simply you wish to change settings.
Press **[PTT]** and **[PF1]** key together while turning on. Keep holding the two keys for more than 1 second. It will resume Factory Default after announcing current channel number.

Note: This function may be prohibited by dealer programming.

RECOMMENDED INSTALLATION OF EARPHONE MICROPHONE

Earphone

Use a clip to fix with collar.

Clip the PTT unit closer to your mouth.

Carry the radio on the side or the back of your body,

and the cable should go around the back as shown.

Clamp the excessive length of cable at your waist.
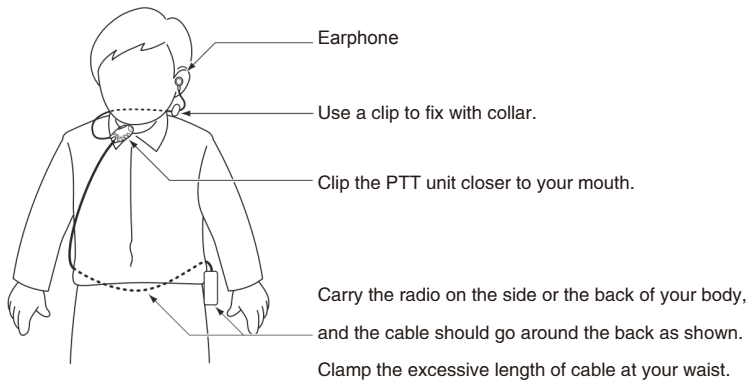
(((DJ-A41 TECHNICAL SPECIFICATIONS

General	
Frequency Range	UHF: 400-470MHz
Channel Capacity	128 channels
Channel Spacing	12.5KHz
Phase-locked Step	5KHvvz, 6.25KHz
Operating Voltage	7.4V DC ±20%
Battery Life	More than 14 Hours (1500mAh), by 5-5-90 work cycle
Frequency Stability	±2.5ppm
Operating Temperature	-20℃~ +55℃
Size	260×60×35mm (with battery pack, antenna)
Weight	208 g (with battery pack, antenna)

Receiving Part(ETSI EN 300 086 Standard Test)	
Sensitivity(12dB SINAD)	≤0.35μV

Adjacent Channel Selectivity	≥60dB
Intermodulation	≥60dB
Spurious Rejection	≥70dB
Audio Response	+1~-3dB (0.3~2.55KHz)
Hum & Noise	≥36dB
Audio Distortion	≤5%
Audio Power Output	1000mW/10%
Transmitting Part(ETSI EN 300 086 Standard Test)	
Power Output	5W
Modulation	11KΦF3E
Adjacent Channel Power	≥65B
Hum & Noise	≥36dB
Spurious Emission	≤-36dB
Audio Response	+1~-3dB (0.3~2.25KHz)
Audio Distortion	≤5%

° **TROUBLE SHOOTING GUIDE**

Problem	Corrective Action
No power	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.
Battery power dies shortly after charging.	The battery is exhausted. Replace the battery pack with a new one.
Transceiver cannot scan	Squelch is open. Adjust the level.
All band is noisy	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 frequency or channel, please change it. B.Different CTCSS / DCS /DTMF, please reset it. C.Out of communication range.
Can not power on or frequent power off	Check if the battery pack is securely attached.

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.4Internal 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.
Receive voice from the other parties and can not transmit	Interference is being received. BCLO activated.
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.

(((CTCSS Frequency Chart

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

DCS Chart

1	017	18	073	35	165	52	261	69	356	86	464	103	632
2	023	19	074	36	172	53	263	70	364	87	465	104	645
3	025	20	114	37	174	54	265	71	365	88	466	105	654
4	026	21	115	38	205	55	266	72	371	89	503	106	662
5	031	22	116	39	212	56	271	73	411	90	506	107	664
6	032	23	122	40	**217**	57	274	74	412	91	516	108	703
7	036	24	125	41	223	58	**305**	75	413	92	523	109	712
8	043	25	131	42	225	59	306	76	423	93	526	110	723
9	047	26	132	43	226	60	311	77	**425**	94	532	111	731
10	050	27	134	44	243	61	315	78	431	95	**534**	112	732
11	051	28	**135**	45	244	62	325	79	432	96	546	113	734
12	053	29	143	46	245	63	331	80	445	97	565	114	743
13	054	30	145	47	246	64	332	81	446	98	606	115	754
14	**055**	31	152	48	251	65	343	82	452	99	612	116	**765**
15	065	32	155	49	252	66	**345**	83	454	100	624		
16	071	33	156	50	**254**	67	346	84	455	101	627		
17	072	34	162	51	255	68	351	85	462	102	631		

SAFETYTRAININGINFORMATION

Your Alinco, Incorporated; Electronics Division radio generators RF electromagnetic energy during transmit mode.This radio is designed for and classified as"Occupational Use Only",meaning it must be used only during the course of employment by individuals aware of the hazards,and the ways To Minimize Such hazards. This radio is NOT intended for use by the"General Population" in an uncontrolled environment. This radio has been tested and complies with the FCC RF exposure limits for"Occupational Use Only".Inaddition, your Alinco, Incorporated; Electronics Division radio complies with the following Standards and Guidelines with regard to RF energy and electromagnetic energy levels and evaluation of such levels for exposure to humans:

   � FCC OET Bulletin 65 Edition 97-01 Supplement C, Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields.
   � American National Standards Institute (C95.1-1992), IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.
   � American National Standards Institute (C95.3-1992), IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields– RF and Microwave.
   � The following accessories are authorized for use with this product. Use of accessories other than those (listed in the instruction) specified may result in RF exposure levels exceed the FCC requirements for wireless RF exposure.

To ensure you're your expose to RF electromagnetic energy is within the FCC allowable limits for occupational use, always adhere to the following guidelines

The information listed above provides the user with the information needed to make him or her aware of RF exposure, and what to do to as-sure that this radio operates with the FCC RF exposure limits of this radio.

Electromagnetic Interference/Compatibility

During transmissions, Alinco, Incorporated; Electronics Division radio generates RF energy that can possibly cause interference with other devices or systems. To avoid such interference, turn off the radio in areas where signs are posted to do so. **DO NOT** operate the transmitter in areas that are sensitive to electromagnetic radiation such as hospitals, aircraft, and blasting sites.

Occupational/Controlled Use

The radio transmitter is used in situations in which persons are exposed as consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure.

Attention:

This radio complieswith IEEE and ICNIRP exposure limits for occupational/controlled RF exposure emvironment at operating duty   factors of up to 50% and is authorized by the FCC for occupational use only. An appropriate warning lable is affixed to all units.

In order to comply with RF exposure requirements, a minimum distance of 2.5cm must be maintained when held-to-face, and   body-worn operations are restricted to the approved original acessories (belt clip). Do not use this device when antenna shows obvious damages

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions:

 (1) this device may not cause interference, and

 (2) this device must accept any interference, including interference that may cause undesired operation of the device.

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