$C \in 0700$ RoHS

UHF FM Transceiver 8 PMR446 channels.
Use of this device is authorized in all EU and EFTA
member states (CH/ICE/LI/NOR).

A1.131218

PRIVATE MOBILE RADIO

DJ-A46

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-A46
PRIVATE MOBILE RADIO

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 proximity to 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 1.5km/1 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

■ **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**

■ **Sub-tone(CTCSS/DCS) Encode/Decode**

■ **VOX built-in(An optional earphone-microphone is necessary)**

Conformity Symbols

$C \in 0700$ $\boxed{\text{RoHS}}$

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. 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.

○ TABLE OF CONTENTS

STANDARD ACCESSORIES

(((Standard Accessories

Li-ion Battery Pack

Charger

AC Adaptor

Belt Clip
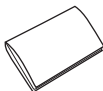
Instruction
Manual
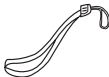
Hand Strap

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.

ALINCO

(((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.

(((How to Charge the battery pack

1. Plug the AC adaptor into the AC outlet, then plug into the DC jack, the indicator lights orange for 1 second and goes out---waits to charge.
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 into twinkling RED---pre-charging begins.
3. Pre-charging for about 5 minutes, LED stop blinking then charging begins.
4. It takes up to 4 hours to fully charge the battery, and LED turns to green when the charge is complete.

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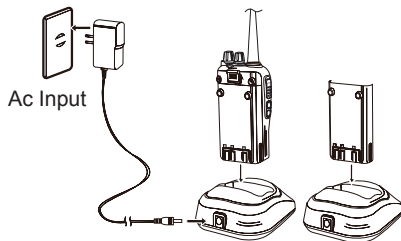
Warning: Never charge while the radio is turned on. When turned on, the charger can't detect the charging voltage properly and LED fails to indicate charge status correctly.

5. LED Indicator:

STATUS	self-examine when power on	(No battery)	Pre-charging	Charge normally	Fully Charged	Trouble
LED	Orange (for 1 second)	None	Red blinks for 5 minutes	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.

▲ 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℃ by itself when kept in a temperature of over 80℃ 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.

(((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.

○ **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.
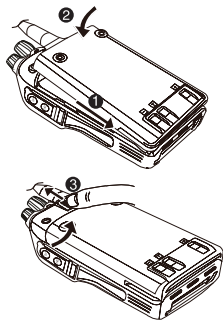
(((**Installing / Removing the Belt Clip**

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 Φ 2.5mm x 3mm)
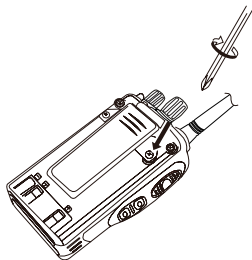
(((**Accessories**

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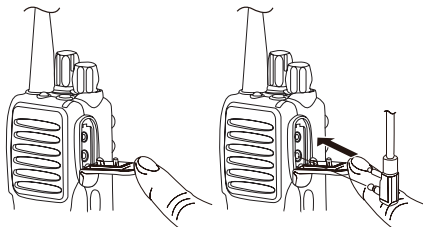
NOTE:
1. To keep the radio dust and splash resistant, the cover must be closed properly with the original supplied cover.
2. The radio is not dust and splash resistant while using the optional accessory risking that the water may penetrate inside through the plug.

(((**Installing the Hand Strap**

Attach the hand strap as shown.
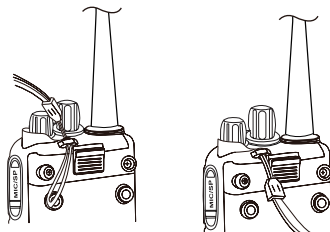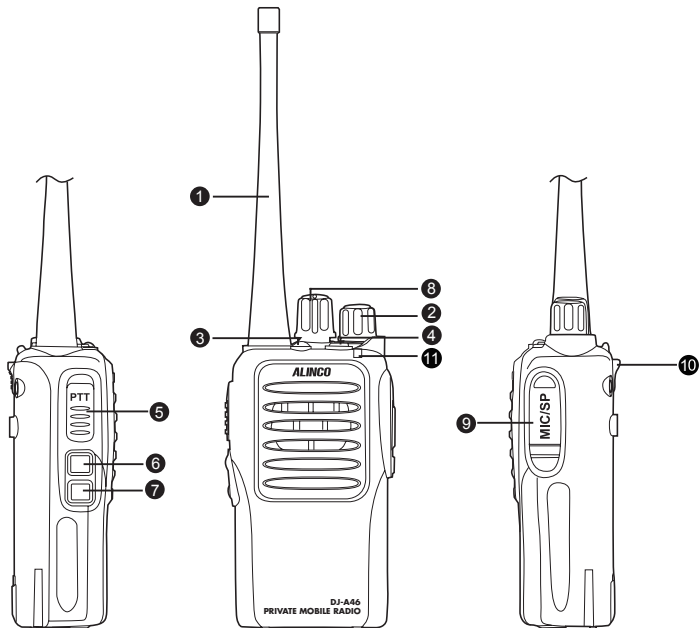
❶ Antenna

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.
Key Operation	A beep sounds when activating a function. Beeps twice when exiting from a function.

(((**[PF1] & [PF2] Key (Default)**

Press [PF1]	Squelch Off
Press [PF2]	Scan
Press and hold [PF1]	Battery Power Indicator
Press and hold [PF2]	Scrambler

The [PF1] and [PF2] keys are programmable by using programming software.

(((**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 **PF1** 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 warned by a continuous beep tone.

◦ **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, set the selector knob at "1" then press and hold [PF2] to turn on. Still holding [PF2] for another 2 seconds, it will announce "Group 1". Rotate the selector knob to choose the desired group by hearing the voice announce up to Group 8. Numbers higher than 9 is selected, you will hear a warning beep.

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 **[PF1]** 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.

(((Resetting

When you reset the unit, all settings are returned to the initial factory 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.

◦ **ADVANCED OPERATIONS ([PF1] & [PF2] KEY)**

The **[PF1]** and **[PF2]** keys are programmable by using programming software.

(((**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

This special audio process can offer a more confidential communications.

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.

◦ ADVANCED OPERATIONS ([PF1] & [PF2] KEY)

(((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. Never use this feature to talk to 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.

Following features can be set by using 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.

(((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.

(((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.

◦ PRESET OPERATIONS (FUNCTION SETUP)

(((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.

((⸱ Voice Operated Transmission (VOX: An optional earphone-microphone is necessary)

When this function is on, the transmitting can be started by voice, no need to press [PTT] key.

NOTE: VOX is not usable in noisy areas as it may start transmitting by the back noise.

((⸱ 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.

((⸱ Priority Scan Setup

This transceiver can be set with two priority channels by using programming software. It monitors a priority channel and monitoring channels alternatively.it will scan every channel and also monitors priority channel at a time. When the monitoring channel receives signal, it will monitor priority channel according to preprogrammed "flyback time A" and "flyback time B".

○ OPTIONAL ACCESSORIES

EBC-34	**Belt Clip**
EBP-87	**Li-ion Battery Pack (DC 7.4V 1500mAh)**
EBP-88	**Li-ion Battery Pack (DC 7.4V 1700mAh)**
EDC-189	**Li-ion Battery Charger**
EDC-191E	**AC Adaptor (220V)**
EME-56A	**Earphone Microphone**
EMS-76	**Speaker 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.
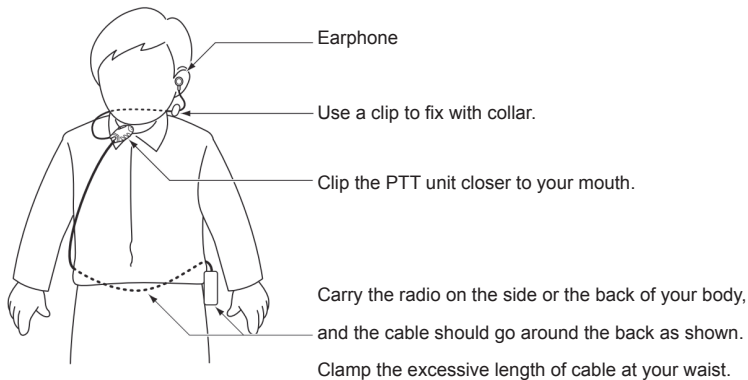
((•DJ-A46 TECHNICAL SPECIFICATIONS

General	
Frequency Range	446.00625 – 446.09375 MHz
Channel Capacity	128 channels
Operating Voltage	7.4V DC ±20%
Battery Life	More than 14 Hours (1500mAh), by 5-5-90 work cycle
Frequency Stability	±2.5ppm
Temperature Range	Operating:-10~+45℃(+14~113 °F)/ Charging:-5~+40℃(+41~104 °F)
Size	240x56x35mm (with battery pack, antenna)
Weight	227g (with battery pack, antenna)

Transmitting	
Power Output	0.5W
Modulation	8K50F3E(FM)
Max.deviation	±2.5KHz

Receiving	
Sensitivity(12dB SINAD)	≤0.35μV
Adjacent Channel Selectivity	≥60dB
Intermodulation	≥60dB
Spurious Rejection	≥70dB
Audio Distortion	≤5%
Audio Power Output	1000mW

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 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.

○ 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.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.

((Preset Channel Frequency Chart (Reset won't delete these channels)

Group	Channel	Frequency	CTCSS/DCS	Group	Channel	Frequency	CTCSS/DCS
1	1	446.00625	94.8	2	5	446.05625	110.9
1	2	446.09375	88.5	2	6	446.06875	114.8
1	3	446.03125	103.5	2	7	446.08125	118.8
1	4	446.06875	79.7	2	8	446.09375	123.0
1	5	446.04375	118.8	2	9	446.00625	127.3
1	6	446.01875	123.0	2	10	446.01875	131.8
1	7	446.08125	127.3	2	11	446.03125	136.5
1	8	446.05625	85.4	2	12	446.04375	141.3
1	9	446.00625	107.2	2	13	446.05625	146.2
1	10	446.09375	110.9	2	14	446.06875	151.4
1	11	446.03125	114.8	2	15	446.08125	156.7
1	12	446.06875	82.5	2	16	446.09375	159.8
1	13	446.04375	132N	3	1	446.00625	None
1	14	446.01875	155N	3	2	446.01875	None
1	15	446.05625	134N	3	3	446.03125	None
1	16	446.08125	243N	3	4	446.04375	None
2	1	446.00625	None	3	5	446.05625	None
2	2	446.01875	None	3	6	446.06875	None
2	3	446.03125	None	3	7	446.08125	None
2	4	446.04375	107.2	3	8	446.09375	None