A1.0-12/07

Alinco Incorporated, Electronics Division

Yodoyabashi Dai-bldg 13F
4-4-9 Koraibashi, Chuo-ku, Osaka 541-0043 Japan
Phone: +81-6-7636-2362 Fax: +81-6-6208-3802
http://www.alinco.com
E-mail:export@alinco.co.jp

ALINCO

User Manual
VHF FM HANDHELD TRANSCEIVER
FCC ID: PH3DJ-A10
Brand : ALINCO

DJ-A10

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.

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 than10 kA.). Note also that no car provides adequate protection of its passengers or drivers against lightning as well. Therefore, Alinco will not take responsibility for any danger associated with using its hand-held radios outdoor or inside the car during lightning.

■ 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.

Features

- Output power selectable 5W, 128 PC-programmable channels
- Li-Ion battery pack and stand-charger as standard accessories
- Alphanumeric name tags
- FM broadcasting 76-108MHz receiver built-in
- Selectable Battery-save parameters
- Busy Channel Lockout
- Voice Compander (Reduce Noise & enhance audio clarity)
- Inversion Scramble(Analog encryption)
- Sub-tone (CTCSS/DCS) Encode/ Decode and DTMF/ANI
- VOX built-in
- Voice prompt in English, Emergency Kill/Stun/Waken, Alarm signal, Various scan modes, Key lock, Wide/Narrow operations and more at NO extra costs.

SAFETY TRAINING INFORMATION

WARNING

Your radio generates 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”. In addition, your 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 specified may result in RF exposure levels exceeding the FCC requirements for wireless RF exposure.; Belt Clip (MB-94), Rechargeable Li-Ion Battery Pack (BP-230N/BP-232N) and Speaker-microphone (HM-131L).

CAUTION

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

- DO NOT operate the radio without a proper antenna attached, as this may damaged the radio and may also cause you to exceed FCC RF exposure limits. A proper antenna is the antenna supplied with this radio by the manufacturer or antenna specifically authorized by the manufacturer for use with this radio.
- DO NOT transmit for more than 50% of total radio use time ("50% duty cycle"). "50% duty cycle" is also applicable to VOX/PTT mode. Transmitting more than 50% of the time can cause FCC RF exposure compliance requirements to be exceeded. The radio is transmitting when the "LED indicator" lights red. You can cause the radio to transmit by pressing the "PTT" switch or VOX function.
- ALWAYS keep the antenna at least 2.5 cm (1 inch) away from the body when transmitting and only use the belt-clip which is listed on page 33 when attaching the radio to your belt, etc., to ensure FCC RF exposure compliance requirements are not exceeded. To provide the recipients of your transmission the best sound quality, hold the antenna at least 5 cm (2 inches) from your mouth, and slightly off to one side.

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 assure that this radio operates with the FCC RF exposure limits of this radio.

Electromagnetic Interference/Compatibility

During transmissions, your 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.

⚠ Alert

■ Environment and condition of use

- It is recommended that you check local traffic regulations regarding the use of aradio 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, jespecially 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 jskin. Rinse with plenty of cold water if the liquid contacted your skin.
- Never operate this product in facilities where radio products are prohibited for juse such as aboard aircraft, in airports, in ports, within or near the operating area of business wireless stations or their relay stations.
- Use of this product may be prohibited or illegal outside of your country. Be jinformed in advance when you travel.
- The manufacturer declines any responsibilities against loss of life and/or aproperty 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.

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

Do not place the product in a container carrying conductive materials, such as water or metal in close proximity to the product. 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.

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.

Maintenance

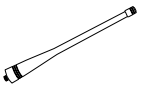
- Use only reliable power supply of specific DC output range and be mindful of the polarity of the cable and DC-jack.
- Always turn off the power supply when connecting or disconnecting the cables.
- When using an external antenna, make sure that the antenna ground is not common with the ground of the power supply.
- European users: When a unit is powered from an external DC power source (adapter, power supply, cigar-plug etc.), make sure that this power supply has approval to the level of IEC/EN 60950.

◦ TABLE OF CONTENTS

◦ TABLE OF CONTENTS

◦STANDARD ACCESSORIES

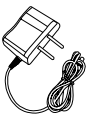
Standard Accessories



Antenna

Battery

Charger



AC Adaptor

Belt Clip

Instruction Manual

Hand Strap

◦ OPERATION MODE (VFO mode and Channel mode)

ALINCO

You may set the radio as VFO mode and Channel mode. There are also different setting parameters to properly set functions as per your operating comfort.

1. By programming software:

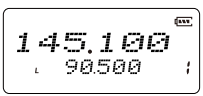
In PC programming utility software, "General Setting" menu, choose "Display Mode" to select VFO mode or Channel mode.

2. By manual setup:

Please refer to "Display Mode" in Page 51.

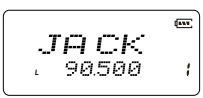
VFO Mode: In this mode, press **【D】** key to switch between Channel mode and VFO.

A.Frequency + Channel mode: At this mode, when set display as "**FREQ**", it enters into Frequency + Channel mode. Once the radio is turned off or switched to another channel, the temporary setting will be erased and back to initial settings. (As pic 1)



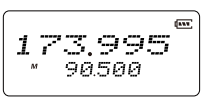
(Pic 1)

B.Channel + Name Tag Mode: When set display as "**NAME**", it enters into Channel +Name Tag Mode. At this mode, it will display corresponding channel name when the current channel is edited with name in advance. Otherwise, it will display frequency and channel number. Its operations are the same as frequency + channel mode. (As pic 2)



(Pic 2)

C.VFO Mode (Frequency mode): This mode shows only frequency on the display. Set mode operation and Channel setting are stored as the latest value. Once the radio is turned off or changed to new frequency using VFO, the value remains until next change. (As pic 3)

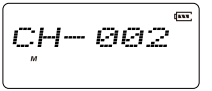


(Pic 3)

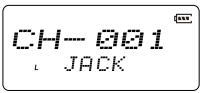
◦ OPERATION MODE (VFO mode and Channel mode)

3.Commercial radio Mode:

When set display mode as "CH", it enters into Commercial radio mode. At this mode, except scanning, talk around/frequency reverse, DTMF encode or editing, BEEP on/off and keypad lock, all other functions should be set by PC software in advance to the operation (As pic 4). If name tag is programmed, the LCD will display current channel and name tag. (As pic 5)



(Pic 4)



(Pic 5)

Note: In Commercial radio mode, you can't switch the mode to VFO or channel manually, but you must use PC utility software.

4. In each operating mode, access to the set mode is possible.

◦ FIRST LEVEL MENU:SHORTCUT OPERATIONS

Function	Setup Entry	Parameter Instruction	Page
FM Radio On/Off	【A】 → 【1】	Activate FM broadcasting receiver	27
Beep Setup	【A】 → 【2】	Beep sound ON/OFF	28
CTCSS/DCS Scan	【A】 → 【3】	CTCSS Scan	28
CTCSS/DCS Scan	【A】 → 【3】	DCS Scan	28
Offset Frequency Direction Setup	【A】 → 【4】	(+):Transmitting frequency higher than receiving frequency	28
Offset Frequency Direction Setup	【A】 → 【4】	(–):Transmitting frequency lower than receiving frequency	29
Scan	【A】 → 【5】	Channel or Frequency Scan	29
Channel Scan Skip	【A】 → 【6】	S: Scan without current channel	30
Priority Scan	【A】 → 【7】	PRI: Check priority channel one time when scan each 10 channels	30
TX Power Selection	【A】 → 【9】	H: High Power 5 W	31
Frequency Reverse / Talk Around	【A】 → 【✱】	R: Frequency Reverse	34
Frequency Reverse / Talk Around	【A】 → 【✱】	T: Talk Around	34
DTMF Code Enquiry	【A】 → 【0】	Displaying "–" when no data Displaying data when being with data	31
Keypad Lock	【A】 → 【#】	All keys locked, except PTT/PF1/ PF2	35

◦ SECOND LEVEL MENU: CHANNEL OPERATIONS

Function	Setup Entry	Function Option	Display
Sub tone (CTCSS / DCS) Decode Setup	【A】 ⟶ 【8】	【B】 / 【C】	
Sub tone (CTCSS / DCS) Encode Setup	【A】 ⟶ 【8】	【B】 / 【C】	
Sub tone (CTCSS / DCS) Encode/Decode Synchronous Setup	【A】 ⟶ 【8】	【B】 / 【C】	
Offset Frequency	【A】 ⟶ 【8】	【B】 / 【C】	
Wide/ Narrow Band Selection	【A】 ⟶ 【8】	【B】 / 【C】	
Frequency Reverse/Talk Around	【A】 ⟶ 【8】	【B】 / 【C】	
Scramble Setup(Encryption)	【A】 ⟶ 【8】	【B】 / 【C】	
Voice Compander Function	【A】 ⟶ 【8】	【B】 / 【C】	
Busy Channel Lockout	【A】 ⟶ 【8】	【B】 / 【C】	
Add Optional Signaling	【A】 ⟶ 【8】	【B】 / 【C】	
Signaling Relations	【A】 ⟶ 【8】	【B】 / 【C】	
PTT ID Setup	【A】 ⟶ 【8】	【B】 / 【C】	
TX Off Function	【A】 ⟶ 【8】	【B】 / 【C】	
Whisper	【A】 ⟶ 【8】	【B】 / 【C】	

◦ SECOND LEVEL MENU: CHANNEL OPERATIONS

ALINCO

Parameter Adjustment	Parameter Instruction	Enter and exit	Page
Sub–tone setting: Operations are common to Decode (R–CDC), Encode (T–CDC) and Synchronous (C–CDC). Press 【A】 Key to move cursor to the menu, Press 【1】 Key to choose CTCSS/DCS/OFF, Press 【B】 / 【C】 Key to choose the value , 【#】 Key to choose correct DCS inverted and positive code.	CTCSS (50 Groups in total): 67Hz–254.1Hz DCS (232Groups in total): 017N–765I	【D】 / 【#】	36
Offset frequency shift value: Press 【A】 Key to move cursor to the menu, Press 【B】 / 【C】 Key to choose the value.	Available parameters are 0–70Mhz.	【D】 / 【#】	38
Bandwidth setting: Press 【A】 Key to move cursor to the menu, Press 【B】 / 【C】 Key to choose the value.	band:12.5K	【D】 / 【#】	38
Frequency reverse / Talk–around: Press 【A】 Key to move cursor to the menu, Press 【B】 / 【C】 Key to choose the value.	REV : Frequency Reverse TA : Talk Around	【D】 / 【#】	39
Inversion scrambling: Press 【A】 Key to move cursor to the value of menu, Press 【B】 / 【C】 Key to choose the value.	OFF: Disable scramble ON: Enable scramble	【D】 / 【#】	39
Voice Compander: Press 【A】 Key to move cursor to the menu, Press 【B】 / 【C】 Key to choose the value. Note: Do not activate this function while communicating with Non–Compander radios.	ON: Enable compander OFF: Disable compander	【D】 / 【#】	40

◦ SECOND LEVEL MENU: CHANNEL OPERATIONS

Parameter Adjustment	Parameter Instruction	Enter and exit	Page
Busy–Channel–Lockout (BCL): Press【A】Key to move cursor to the menu, Press【B】/【C】Key to choose the value.	OFF: Disable BCL: Prohibit transmitting when receiving a carrier and squelch is open. BTL: Prohibit transmitting when receiving a carrier with unmatched signaling.	【D】/【#】	40
Adding Optional Signaling tones: Press【A】Key to move cursor to the menu, Press【B】/【C】Key to choose the value. DCS (232Groups in total):017N–765I	CTCSS (50 Groups in total):67Hz–254.1Hz	【D】/【#】	41
Signaling relations: Press【A】Key to move cursor to the menu, Press【B】/【C】Key to choose the value.	AND: The other parties' traffics can be heard as long as the matched CTCSS / DCS signal AND optional signal are received. OR: The other parties' traffics can be heard as long as the matched CTCSS / DCS signal OR optional signal is received.	【D】/【#】	42
PTT ID Setup (DTMF encoding): Press【A】Key to move cursor to the menu, Press【B】/【C】Key to choose the value.	OFF: Disable PTT ID BOT: Press PTT key to transmit DTMF tones EOT: Release PTT key to transmit DTMF tones BOTH: Press and Release PTT key can both transmit DTMF tones	【D】/【#】	43
TX OFF (PTT lock): Press【A】Key to move cursor to the menu, Press【B】/【C】Key to choose the value.	ON: Enable TX Off function OFF: Disable TX Off function	【D】/【#】	43
Whisper (Enhance voice level while talking in undertones): Press【A】Key to move cursor to the menu, Press【B】/【C】Key to choose the value.	ON: Enable whisper function OFF: Disable whisper function	【D】/【#】	44

○ THIRD LEVEL MENU:BACKGROUND OPERATIONS

ALINCO

Function	Menu Entry	Function Option	Display
Voice Prompting Selection	Press PF2 and hold this key for 3 seconds	【B】/【C】	VOICE OFF 1
Time-Out Timer (TOT)	Press PF2 and hold this key for 3 seconds	【B】/【C】	TOT 15 S 2
Voice Operated Transmission (VOX) Setup	Press PF2 and hold this key for 3 seconds	【B】/【C】	VOX 1 3
Voice Operated Transmission (VOX) Delay	Press PF2 and hold this key for 3 seconds	【B】/【C】	VOXDEY 2.5 S 4
Voice Operated Transmission (VOX) Beep	Press PF2 and hold this key for 3 seconds	【B】/【C】	VOXTON OFF 5
Frequency Step Setup	Press PF2 and hold this key for 3 seconds	【B】/【C】	STEP 50 K 6
Squelch level Setup	Press PF2 and hold this key for 3 seconds	【B】/【C】	SQL 3 7
Battery Save Setup	Press PF2 and hold this key for 3 seconds	【B】/【C】	SAVE OFF 8
LCD Backlight Setup	Press PF2 and hold this key for 3 seconds	【B】/【C】	LIGHT AUTO 9
LCD Backlight Color	Press PF2 and hold this key for 3 seconds	【B】/【C】	COLOR ORG 10
Scan Dwell Time Setup	Press PF2 and hold this key for 3 seconds	【B】/【C】	SCANTM 5 S 11
Display Mode Setup	Press PF2 and hold this key for 3 seconds	【B】/【C】	DSP FREQ 12
Tone Pulse Frequency Setup	Press PF2 and hold this key for 3 seconds	【B】/【C】	TBST 1750Hz 13
DTMF Transmitting Time Setup	Press PF2 and hold this key for 3 seconds	【B】/【C】	DTMFSD 100MS 14
Beep Volume Control	Press PF2 and hold this key for 3 seconds	【B】/【C】	VOLBE 2 15
Priority Channel Setup	Press PF2 and hold this key for 3 seconds	【B】/【C】	PRI-CH CH-005 16
Current Battery Voltage Enquiry	Press PF2 and hold this key for 3 seconds	【B】/【C】	V-BATT 7.5V 17
Resume Factory Default	Press PF2 and hold this key for 3 seconds	【B】/【C】	RESET FACT? 18

◦ THIRD LEVEL MENU:BACKGROUND OPERATIONS

Parameter Adjustment	Parameter Instruction	Confirm to back	Page
Press 【A】 Key to move cursor to the menu Press 【B】 / 【C】 key to choose the value	Voice prompt: ENG: Activate English Voice–guide OFF: OFF	【D】 / 【#】	45
Press 【A】 Key to move cursor to the menu Press 【B】 / 【C】 key to choose the value	Time–out–timer setting: Selectable parameter: 15 seconds to 240 seconds OFF: TOT Off	【D】 / 【#】	45
Press 【A】 Key to move cursor to the menu Press 【B】 / 【C】 key to choose the value	VOX activation and its operational audio level: Audio level parameter: 1, 2, 3 OFF: VOX OFF	【D】 / 【#】	46
Press 【A】 Key to move cursor to the menu Press 【B】 / 【C】 key to choose the value	VOX delay time (Time delay from end of TX to switch to RX) 10 parameters between 0.5 seconds to 5 seconds	【D】 / 【#】	46
Press 【A】 Key to move cursor to the menu Press 【B】 / 【C】 key to choose the value	ON: Enable VOX beep OFF: Disable VOX beep	【D】 / 【#】	47
Press 【A】 Key to move cursor to the menu Press 【B】 / 【C】 key to choose the value	VFO frequency step: Available Steps: 5KHz/ 6.25KHz/ 10KHz/ 12.5KHz/ 15KHz/ 20KHz/ 25KHz/ 30KHz/ 50KHz	【D】 / 【#】	47
Press 【A】 Key to move cursor to the menu Press 【B】 / 【C】 key to choose the value	Squelch level setting: Available level settings : 0 (opens squelch) to 9	【D】 / 【#】	48
Press 【A】 Key to move cursor to the menu Press 【B】 / 【C】 key to choose the value	Battery–save ratio: 4 different ratios (1:1 to 1:4) are available. 1:4 to obtain the best battery save effort but your risk to miss initial part of receiving signals becomes higher. OFF: Disable Battery–save function	【D】 / 【#】	48
Press 【A】 Key to move cursor to the menu Press 【B】 / 【C】 key to choose the value	LCD backlight operation OFF: Turned off always ON: Turned on always (consumes battery much faster) AUTO: Turns on with the key operation then turns off automatically	【D】 / 【#】	49

Press 【A】 Key to move cursor to the menu Press 【B】 / 【C】 key to choose the value	LCD backlight color selection: BLUE: Blue backlight ORG: Orange backlight PUR: Purple backlight	【D】 / 【#】	50
Press 【A】 Key to move cursor to the menu Press 【B】 / 【C】 key to choose the value	Scan resume time setting: 3 parameters: 5 seconds / 10 seconds / 15 seconds	【D】 / 【#】	50
Press 【A】 Key to move cursor to the menu Press 【B】 / 【C】 key to choose the value	Display mode: (May be preprogrammed by dealer and locked) FREQ: Frequency and Channel display CH: Channel display NAME: Channel number with name–tag display if programmed	【D】 / 【#】	51
Press 【A】 Key to move cursor to the menu Press 【B】 / 【C】 key to choose the value	Tone–Burst tones: 4 tones available: 1750Hz / 2100Hz / 1000Hz / 1450Hz	【D】 / 【#】	51
Press 【A】 Key to move cursor to the menu Press 【B】 / 【C】 key to choose the value	DTMF tone encoding time: 10 parameters including 50Microseconds, 100Ms, 150Ms, 200Ms, 250Ms,300Ms, 350Ms, 400Ms, 450Ms, and 500Ms	【D】 / 【#】	52
Press 【A】 Key to move cursor to the menu Press 【B】 / 【C】 key to choose the value	Beep sound audio levels: 5 levels from 1 to 5	【D】 / 【#】	52
Press 【A】 Key to move cursor to the menu Press 【B】 / 【C】 key to choose the value	Priority scan channel setup: Select one from available programmed channels OFF: Disable Priority Channel	【D】 / 【#】	53
Press 【A】 Key to move cursor to the menu Press 【B】 / 【C】 key to choose the value	Battery–voltage display (approx) Display current battery voltage	【D】 / 【#】	53
Press 【A】 Key to move cursor to the menu Press 【B】 / 【C】 key to choose the value	Perform RESET FACT? : Resume Factory Default, erasing the memory channels INIT? : Resume General Setting, keeping memory channel programming OFF: Cancels reset	【D】 / 【#】	54

◦ BATTERY INFORMATION

Charging Operation

The battery is not charged at the factory, 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 for two or three times, 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. Replace the battery.

Battery Charger Type

Please use our company's designated charger, other models may cause explosion and injure people. After installing the battery, if the radio displays low battery, please charge the battery.

Notice for Charging Battery

▲Do not shortcircuit our company designated charger. Never attempt to remove the casing from the battery, we show no responsibility on the faulty caused by modifying freely without permission of our factory.

▲The ambient temperature should be between 5℃ and 40℃ 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 or damage the battery.

○ BATTERY INFORMATION

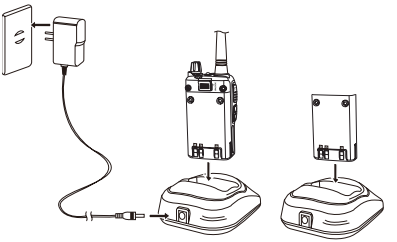
▲Do not charge the battery or transceiver if it is damp. Dry it before charging to avoid danger.

Caution

- Risk of explosion, generation of heat or leak of chemicals inside if the battery is replaced by an incorrect type. 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 0ºC to +40ºC (+32ºF to +104ºF).
- Don't modify, dismantle, incinerate or immerse the battery pack in the water as this can be dangerous.
- Never short-circuit the battery pack terminals, as this can cause damage to the equipment or lead to heating of the battery which may cause burns.
- Unnecessary prolonged charging (overcharging) can deteriorate battery performance.
- The battery pack should be stored in a dry place where temperature is in -10ºC to +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.
- Li-ion battery packs can't be charged using DC-jack on the unit (Only Ni-MH battery packs can be charged).
- Even if you do not use the battery pack for a long time, charge it at least once every three months to prevent deterioration.

◦ BATTERY INFORMATION

How to Charge the battery pack



1. Plug the AC adaptor into the AC outlet, then plug the cable of AC adaptor 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 well. LED turns into twinkling RED –––pre–charging begins.
3. Pre–charging for about 5 minutes, LED twinkles stop then charging begins.
4. It takes about 4 hours to fully charge the battery, and LED turns to green when the charge is complete.

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

5. Charging Process:

Status	LED
Standby (self–examine orange lights	
1second when power on) ––––––––––––––––––––––––	None
Pre–charging (pre–charging stage) ––––––––––––––––	Red light twinkles for about 5 minutes
Charging (charge in constant currency) ––––––––––––	RED light lightens for about 4 hours
Full charged (charge in constant voltage) ––––––––––	Green light

6. LED Indicator:

STATUS	self–examine when power on	(No battery)	Pre–charging	Charge normally	Full Charged	Trouble
LED	Orange (for 1 second)	None	Red light twinkles for 5 minutes	Red	Green	Red twinkles alternatively

NOTE: Trouble means battery heating, battery short–circuit or charger short–circuit. Remove the battery pack immediately from the charger and contect to your local service bench.

Charging Prompt

1.Self– examination: When charging, ORANGE light twinkles for 1 second and turns off. That means the charger has passed its self–examination and it can charge the battery normally. If the light remains orange or the red light twinkles, which means the charge has a failure and can't charge. Please consult with your dealer for services.

2.Trickle pre–charging: when the battery is inserted into the charger and red light twinkles, which means the voltage is low, the charger trickle charge the battery (pre–charging status), until the battery reaches a certain condition, then charger automatically turns into normal charging. And if the red light stop twinkling, which means the voltage meets a charging condition and the charger will charge the battery normally.

Note: The max time trickle pre–charging is 30 min. Incase the red indicator continues to blink, consult your local dealer for services.

◦INSTALLATION & CONNECTION

How to Store the Battery

1.The battery should be kept in the status of 50% discharge when storing.

2.It should be kept in cool, dry environment and remove it from the transceiver.

3.Keep away from source of heat and direct sunlight.

WARNING

▲ Do not short circuit battery terminals.

▲ Never attempt to remove the casing from the battery pack.

▲ Never assemble the battery in dangerous surroundings, spark may cause explosion.

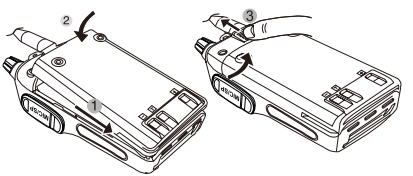
▲ Do not put the battery in hot environment or throw it into fire, it may also cause explosion.

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.



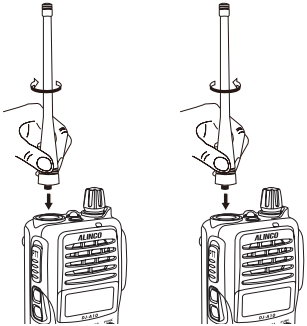
Installing / Removing the Antenna

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.

Removing the Antenna:

Turn the antenna counter-clockwise to disconnect the antenna.



Installing / Removing the Belt Clip

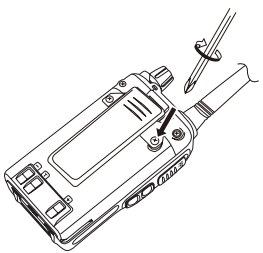
Installing the Belt Clip:

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.

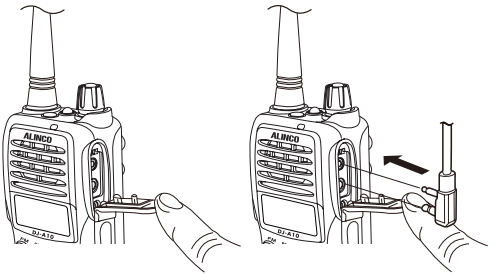


◦INSTALLATION & CONNECTION

Accessories

Open the jack cover and insert the accessory plug into the jack.

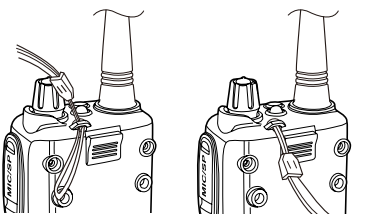
When the accessory is not used, please be sure to close the cover securely.



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.

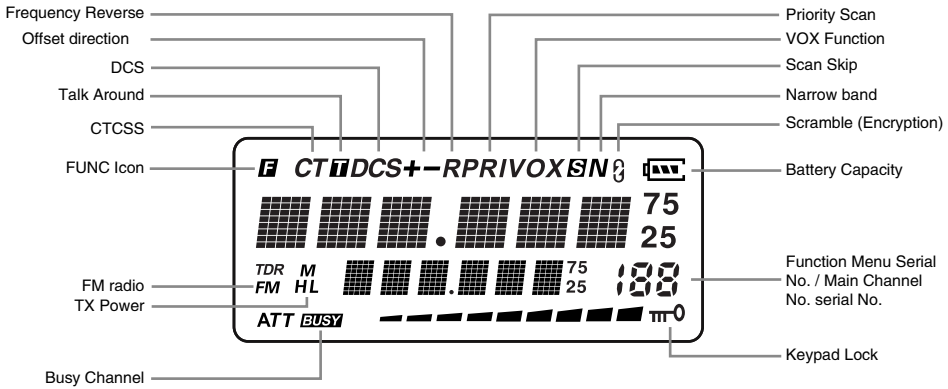
Installing the Hand Strap

Attach the hand strap as shown.



LCD Display

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



NOTE:

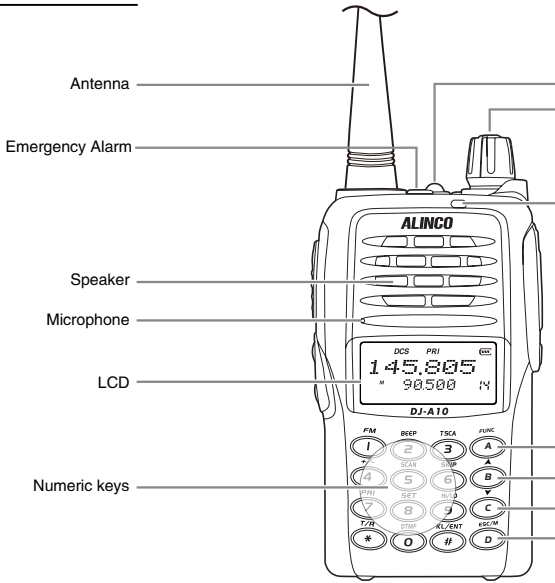
Battery capacity indicator(full)

Battery power consuming

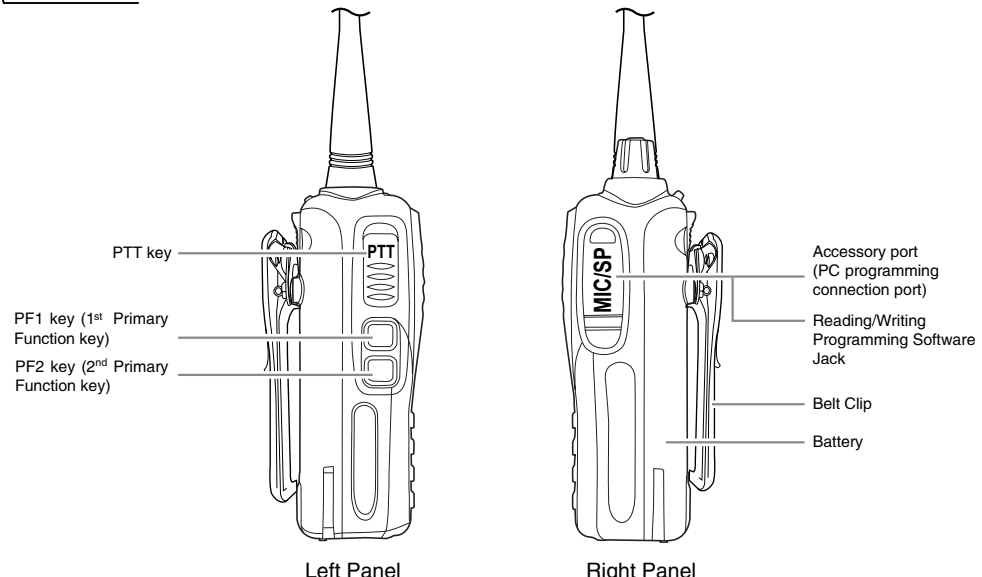
No power,replace battery pack or charge battery

Real time display receiving signal strength/Power Indicator

Front Panel


Antenna
Emergency Alarm
Speaker
Microphone
LCD
Numeric keys
Jacklight
Power / Volume Switch
LED Indicator, green light when transmitting, red light when receiving
A key/Function key
B key / Up key
C key / Down key
D key, Exit key or channel/VFO Exchange key
ALINCO
DJ-A10

Side Panel

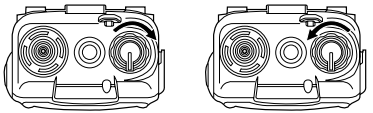


Left Panel

Right Panel

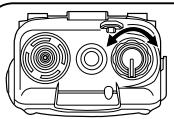
◦ BASIC OPERATIONS

Power On and off



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

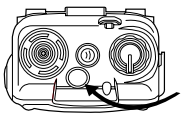
Adjusting Audio output level



Press and hold 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.

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

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. The alarming lasts 1 minute, then the radio will exit and return to Stand-by. You may press this key again to stop alarming.

Change between Main Channel and FM Radio

Press【*A*】key and then press【*1*】key to switch between Main Channel and FM broadcasting receiver. When switching to FM radio, the radio will automatically start receiving both FM radio frequency and Main Channel. An arrow directs the current operational channel.

NOTE: While receiving FM radio, only the following functions are supported: Channel editing, channel deletion, keypad lock and beeping on/off. Other functions are available only for main channel.

FM radio station scanning

While listening to the FM broadcasting, press【*B*】key or【*C*】key to start scanning. When a signal is received, LCD displays current frequency and stops scanning.

◦ BASIC OPERATIONS

Frequency Input by Keypad

In VFO mode or FM radio receiver, You may directly enter frequency through numeric keys.

1.Press 【*D*】 to switch to VFO.

2.Enter the desired frequency by numeric keys.

NOTE:
In Frequency + Channel mode, it shows current channel number on the right of main frequency display.
The direct input is relevant to the stepping and transceiver frequency scope. If entering frequency is beyond scope or not matching with step size, the input is invalid.
In the FM receiver mode, the frequency step size input by numeric keys is 50KHz

Channel Input by Keypad

In Frequency + Channel or Channel + Name Tag mode, you may select the channel by entering three channel digits (001-128). If the entered channel has not been preprogrammed, the radio will make a beep to alert you that input is wrong and then return to current channel.

Adjusting Channel / Frequency By "【B】" Key & "【C】" Key

In VFO mode, you may use【B】key/【C】key as up/down keys to change the operating frequency. Press and hold 【B】to increase, 【C】key to decrease the frequency. Every press can add or reduce by a channel step.

NOTE: Channel step: 5K, 6.25K, 10K, 12.5K, 15K, 20K, 25K, 30K and 50KHz in total 9 for option. Please refer to stepping frequency setup.

In Channel mode, press【B】key/【C】key to choose the desired channel. Press【B】key once to enter the downward channel while press【C】key to enter the upward channel..

Alarm

While side key【PF1】has been assigned to alarm function, press this key. An alarm beeps and starts transmitting. Press again this key or turn off the radio to exit.

NOTE: This function is available only by PC preprogramming.

Monitor / Squelch Off

Assign【PF2】key to Squelch Off function. In case the receiving signal is weak and the audio is intermittently cut off by the squelch, press and hold【PF2】key. As long as this key is pressed, the squelch including TSQ/DCS unmutes making the audio easier to hear. Just press and release【PF2】to unmute the squelch, press it again to close.

NOTE: This function is available only by PC preprogramming.

◦ BASIC OPERATIONS

Receiving

Select the operating mode and frequency or channel that you wish to operate.

When a signal is received on the frequency that you selected, and S-meter are displayed on the LCD, then the received signal can be heard. The green RX indicator also lights green at this time.

NOTE: Please be aware of the squelch level and selective–calling settings as you may risk not hearing the receiving signal.

Transmitting

1. Select the frequency by using the dial or keypad.
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】** side key.

Side Key【PF1】Function Instruction

Side Key **【PF1】** can be programmed to achieve the following functions:

Default setting: Press this key once to turn on/ off jacklight. Press and hold this key to turn on/off the alarm.

1. DTMF code TX: In standby conditions, press this key to transmit pre–stored DTMF tones.
2. Alarm: Press this key to start alarm function as described in advance.

3. Alarm Off: In the alarm mode, press this key to stop the alarm.
4. Jacklight Switch: In standby, press this key to switch on or off the jacklight.
5. Tone–burst tone transmitting: While transmitting, press and hold this key to send the selected tone–burst tone.

Side Key【PF2】Function Instruction

Default: Monitor function

1. Monitor function: In standby state, press and hold this key to open the squelch and monitor the channel. Release the key to Exit.
2. Squelch Off: In standby state, press this key once to monitor, press it again to exit.
3. Press this key to turn on transceiver and hold it for 3 seconds to come into general setting setup.

Switch between VFO and Frequency+Channel Mode

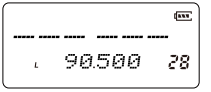
Press【*D*】key to switch between frequency mode (VFO) and Frequency + Channel mode or Channel+Name Tag mode.

NOTE: When the channel hasn't been preprogrammed, this operation is unavailable.

◦SHORTCUT OPERATIONS

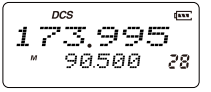
Editing Channels

1.In VFO mode, enter the frequency and set the operating parameters as you desire. After pressing 【*A*】 key, While **F** icon is displayed on the top left corner, press and hold 【*D*】 key for 2 seconds. A beep sounds "DU" and LCD displays the channel No. icon.



2.Press 【*B*】 / 【*C*】 key to select desired channel number. LCD will display "– – – – – –" if current channel name is not preprogrammed.

3.After pressing and holding 【*D*】 key for 2 seconds, a beep sounds "DU" and completes the operation.

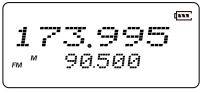


Deleting Channels

In the Channel mode, select the channel to be deleted. After pressing 【*A*】 key, While **F** icon is displayed on the top left corner, press and hold 【*D*】 key for 2 seconds. A beep sounds "DU" and skips to another channel. The channel is deleted and completes the operation.

Turn On/ Off FM Radio receiver

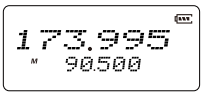
In Standby conditions, after pressing 【*A*】 key, While **F** icon is displayed on the top left corner, press 【*1*】 key. LCD displays '**FM**' and starts receiving FM broadcasting frequency. Repeat the operations to turn off.



Enable /Disable Beeping

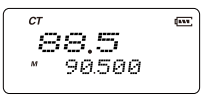
Beep sounds to confirm or alert the operation status.

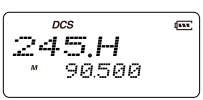
In Standby conditions, after pressing 【A】 key, While F icon is displayed on the top left corner, press 【2】 key to turn off the beep. Repeat it to enable beep sounds.



CTCSS / DCS Scan

In Standby conditions, after pressing 【A】 key, While F icon is displayed on the top left corner, press 【3】 key to activate CTCSS / DCS Scanning. Press 【B】 key or 【C】 key to change the scan direction. When the matched tone is detected with the radio's signaling setting, it will stay tuned for 15 seconds and resumes scanning. Press any key except 【A】 , 【✱】 , 【#】 keys to exit.



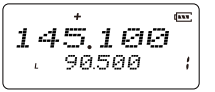


NOTE: This function is not available in Commercial radio mode and no sub tone is received in current channel. In current channel, if signaling sets as CTCSS, it will scan CTCSS, if signaling sets as DCS, it will scan DCS.

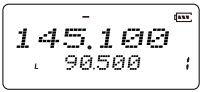
Offset Frequency Direction Setup

In VFO mode, frequency + channel mode or channel + name tag mode, after

pressing 【A】 key, while F icon is displayed on the top left corner, press 【4】 key to choose positive offset direction (+), minus offset direction (-) or exit setting (no icons displayed).



1.(+)Positive offset: Indicates the frequency is higher than receiving frequency. When enable reverse function, the receiving frequency is higher than transmitting frequency.



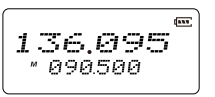
2.(–)Minus offset: Indicates the frequency is lower than receiving frequency. When enable reverse function, the receiving frequency is lower than transmitting frequency.

3. None: Indicates the radio is in the simplex mode.

NOTE:This function is unavailable in commercial radio mode.

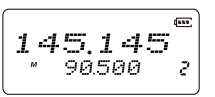
Frequency/Channel Scan

While receiving, after pressing 【A】 key, while Ficon is displayed on the top left corner, press 【5】 key to begin frequency scan or channel scan.



1.Frequency Scan

In VFO mode, it scans in accordance with the channel step. Press numeric key or 【D】 key to stop scanning.



2.Channel Scan

In channel mode, it scans in accordance with preprogrammed channels. Press numeric key or 【D】 key to stop scanning.

NOTE:
Frequency scan checks all bands allocated to the VFO. When channel scanning, the skipped channel is excluded from the scanning. While scanning, change the direction upward/downward by pressing【B】key or【C】key. When a signal is being received, the scan stops for 15 seconds and resume scanning.

Channel Scan Skip

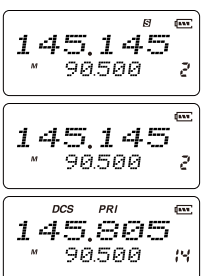
In Channel+Name Tag mode or Frequency+Channel mode, after pressing【A】key, while **F** and then press【6】icon is displayed on the top left corner, press【6】key to set the current channel to be skipped while channel-scanning, and 'S' icon appears to indicate the channel is set as the skip. Repeat the operations to cancel channel scan skip setting.

NOTE: This feature is available only in the Channel modes.

Priority Scan

In channel mode, after pressing【A】key, while **F** icon is displayed on the top left corner, press【7】key to activate the priority scan. In priority scan state, it monitors priority channel once every 10 channel scanning. When the priority channel receives a matching signaling, transceiver will stay tuned to the priority channel until current signal disappear.

NOTE: To activate this feature, it is required to set and select the priority channel. In VFO mode, priority scanning is unavailable



◦SHORTCUT OPERATIONS

TX Power Selection

After pressing 【A】 key, while F icon is displayed on the top left corner, press 【9】 key to set the output power. When the bottom left corner of screen displays 'H' the power is 5W/high power.

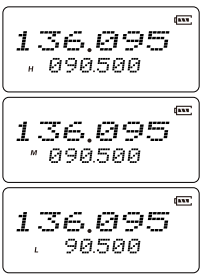
DTMF Code Enquiry and Setup

After pressing 【A】 key, while F icon is displayed on the top left corner, press 【O】 key to show the DTMF Auto-dialer group setting (16 groups in total). You should preprogram the DTMF auto-dialer group in advance to activate this feature.

1.Press 【B】 key or 【C】 key to choose the desired Auto–dialer group. If it's not been edited in advance, it displays the current group number and "__".

2.When current group is displayed as "__", press 【A】 key, while F icon is displayed on the top left corner, press and holding 【O】 key for 2 seconds. A beep sounds "DU" and enters to DTMF code edit mode. Now you can enter the DTMF data using keypad.

3.After editing, press side key 【PF2】 to sound DTMF tones then to save and exit the edit mode.



Manually Transmitting DTMF Tones

Method 1: Press and hold 【PTT】 key to transmit. While transmitting enter the desired DTMF

characters using corresponding keys.

Method 2: Press and hold 【**PTT**】 key to enter the first DTMF character, then release 【**PTT**】 key. It will remain transmitting for 2 seconds. You can keep entering the desired DTMF characters using keypad and don't need to always press and hold 【**PTT**】 key while operating. When transmitting DTMF tones, you can monitor the tone sounds from a speaker. Using DTMF codes for Selective Call, Group Call and All Call, this radio allots ID for each channel, and can be programmed 16 different DTMF auto-dialer group code by the utility software or manually.

1.**ANI:** When receive a matching ANI calling, the LCD will display the caller's ID, then recognize who is the caller.

2.**PTT ID:** Set available channel as PTT ID, press or release PTT key to send ID code.

3.By programming software, you can set group call wildcard for each group(DTMF character: A. B. C. D."*" or "**#**"). The caller can call different group by sending different group call code. After receiving a matching ID from caller, carry out selective call, group call and all call function. Meanwhile, one or all of character of receiver's ID will be replaced by wildcard character. Also, Press PTT to input ID code by numeric keys in keypad to carry out selective call, group call and all call function. It is more convenient and flexible.

◦ SHORTCUT OPERATIONS

For example: Group code as**"C"**

	(Radio A)	(Radio B)	(Radio C)	(Radio D)
Receiver self ID	123	223	235	355

Caller press and hold PTT to input 123 223 235 or 355, A or B or C or D will receive selective calling.

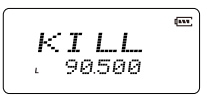
Caller press and hold PTT to input C23 , A and B will receive group calling.

Caller press and hold PTT to input CC5, C and D will receive group calling.

Caller press and hold PTT to input CCC, all radios receive all calling.

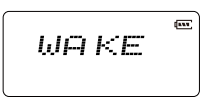
Remotely Kill / Waken

For security reasons, it is possible to make radios of your user group blocked by sending a special **"kill"** code. When the user group manager remotely sends kill code, **"KILL"** is shown on the display. To recover, send the kill code + **"#"**. For example, if **"1234"** is remotely kill code, sending **"1234#"** can wake up the radios. When wakening, **"WAKE"** is showed on LCD.



Remotely Stun / Waken

For security reasons, it is possible to make radios of your user group all keys and performance temporarily completely unavailable except for receiving by sending a special **"Stun"** code. When the user group manager remotely sends the code, **"STUN"** is shown on the display. To recover, send the stun code + **"#"**. For example, if **"1234"** is remotely stun code, sending **"1234#"** can wake up the radios. When wakening, **"WAKE"** is showed on LCD.



NOTE:
Remotely kill/stun codes should be preprogrammed using the programming software. The maximum available digit for the kill/stun codes is16. When awaken, radios return to normal operation

Frequency Reverse / Talk Around ON/OFF

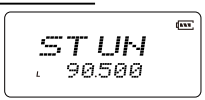
After pressing【A】key, while F icon is displayed on the top left corner, press【✱】key for 1 second to start frequency reverse or talk around. Repeat the above operations to exit.

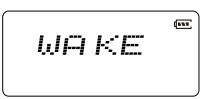
NOTE:
This operation is available only when the channel has been set with shift setting.

Frequency Reverse. Or else,it is as enable and disable Talk Around.

When it displays **"R"** icon on screen, it means that current channel open the frequency reversion function. Now the transmitting frequency and receiving frequency are interchanged, namely, receiving frequency switches to transmitting frequency while transmitting frequency switches to receiving frequency. If CTCSS/ DCS signaling is set, it will also interchange.

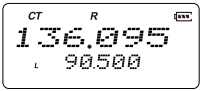
When it display **"T"** icon on screen, it means that current channel start talk around function. Under these conditions, transceiver will transmit as receiving frequency. If CTCSS /DCS signaling is set, it will interchange decoding CTCSS /as encoding.





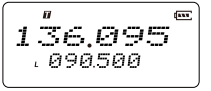
◦SHORTCUT OPERATIONS

Keypad Lock



Keypad lock function is useful to prevent from wrong operation, In standby state, after pressing【A】key, while F icon is displayed on the top left corner, press and hold【#】key for 2 seconds to start keypad lock function. Repeat to cancel the key lock function.

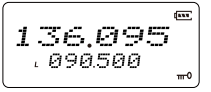
NOTE:
When keypad is locked, only PTT / PF1 / PF2 / A key are usable.



You may change currently set functions in channel mode temporary. Once the radio is turned off or switched to another channel, such temporarily parameters are erased.

In frequency+channel mode, channel+Name Tag mode or VFO mode,

1 after pressing【A】key, while F icon is displayed on the top left corner, press【8】key to enter function menu.



2.Press【B】/【C】key to choose the desired function to be set.

3 Press【A】key to enter into function menu setup.

4.Press【B】key or【C】key to choose the desired parameters to be set.

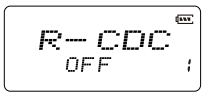
5.Press【D】to return to upward menu. Press【#】key to set it and to exit.

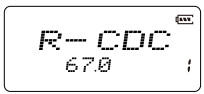
NOTE:
This function is not available in the commercial radio mode. In VFO mode, once the radio is turned off or changed to new VFO frequency, the channel operation setting will remain until next change.

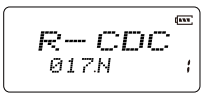
Tone Squelch / DCS squelch (Sub tone CTCSS / DCS) Decode Tone Setup

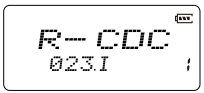
This function enables the selective-calling and speaker sounds only when a signal with matching encoded CTCSS/DCS tone being received.

1. after pressing 【A】 key, while F icon is displayed on the top left corner, press 【8】 key to enter into function menu.
2. Press 【B】 / 【C】 key to choose Menu 1 and display **"R-CDC"** .
3. Press 【A】 then press 【 I 】 key to choose CTCSS, DCS or OFF. When DCS signaling is selected, press 【✱】 key to choose DCS positive or inverse code.
4. Press 【A】 key to choose the desired CTCSS / DCS decode tone
5. Available CTCSS tones: 67Hz– 254.1Hz, 50 tones in total, Default: 67Hz.
6. DCS: 017N–765I, 232 codes, 【N】 stands for positive, 【I】 stands for inverse codes. Default is 017N.









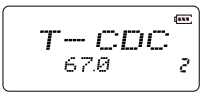
Tone Squelch / DCS squelch (Sub tone CTCSS / DCS) Encode Tone Setup

1. after pressing 【A】 key, while F icon is displayed on the top left corner, press 【8】 key to enter into function menu.
2. Press 【A】 key to choose Menu 2 and display "**T-CDC"** .
3. Press 【A】 then press 【1】 key to choose CTCSS, DCS or OFF. When DCS signaling is selected, press 【✱】 key to choose DCS positive or inverse code.

4. Press 【B】 key or 【C】 key to choose the desired CTCSS / DCS encode tone.

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

6.DCS: 017N–765I, 232 codes, **【N】** stands for positive, **【I】** stands for inverse codes. Default is 017N



Tone Squelch / DCS squelch (Sub tone CTCSS / DCS)

Encode/Decode tones synchronized setup

1.after pressing 【A】 key, while **F** icon is displayed on the top left corner, press 【8】 key to enter into function menu.

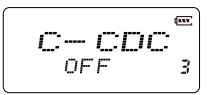
2.Press 【A】 key to choose Menu 3 and display "C–CDC" .

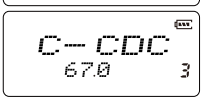
3.Press 【A】 then press 【1】 key to choose CTCSS, DCS or OFF. When DCS signaling is selected, press 【✱】 key to choose DCS positive or inverse code.

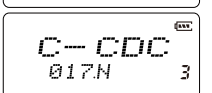
4.Press 【A】 key to choose the desired CTCSS / DCS encode tone.

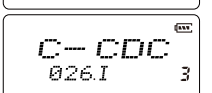
5.Available CTCSS tones: 67Hz– 254.1Hz, 50 tones in total, Default: 67Hz.

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









Offset Frequency

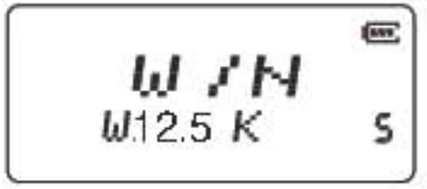
In conventional repeater systems, a signal received on one frequency is retransmitted on another frequency. The difference between these two frequencies is called the offset frequency. The selectable offset frequency of this unit is from 0 to 70.00MHz.

1. after pressing 【A】 key, while F icon is displayed on the top left corner, press 【 8 】 key to enter into function menu.
2. Press 【B】 / 【C】 key to choose Menu 4 and display "OFFSET" .
3. Press 【A】 key then press 【B】 key or 【C】 key to choose the offset frequency. Available frequency range is 00–70MHz, and default is 5.00MHz.

Wide/ Narrow Channel–spacing Selection

Set the proper channel-spacing value allocated to the radio services in your area. This is not a Channel-step setting, but to determine the deviation width of the modulation.

1. after pressing 【A】 key, while F icon is displayed on the top left corner, press 【8】 key to enter into function menu.
2. Press 【B】 / 【C】 key to choose Menu 5 and display "WIN" .
3. Press 【A】 key then press 【B】 key or 【C】 key to choose the channel–spacing: 12.5K .



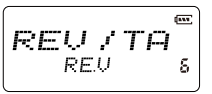
◦ CHANNEL OPERATIONS

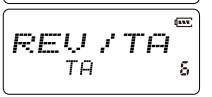
Frequency Reverse or Talk Around

1.after pressing 【A】 key, while F icon is displayed on the top left corner, press 【 8 】 key to enter into function menu.

2.Press 【B】 / 【C】 key to choose Menu 6 and display "REV/TA" .

3.Press 【A】 key then press 【B】 key or 【C】 key to choose the desired parameter.





REV: The frequency reverse function is selected.

TA: The talk around function is selected.

Press 【A】 and hold 【✱】 key while receiving to activate the selected function.

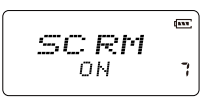
Inversion scrambling (Encryption)

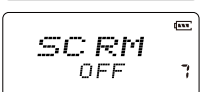
An analog voice inversion scrambler is equipped and such audio processing can offer an advanced confidentiality to your business communications.

1.after pressing 【A】 key, while F icon is displayed on the top left corner, press 【8】 key to enter into function menu.

2.Press 【B】 / 【C】 key to choose Menu 7 and display "SCRM" .

3.Press 【A】 key then press 【B】 key or 【C】 key to choose the desired parameter.





ON: Scramble is enabled.

OFF: Scramble is disabled. Default setting is OFF.

Note:
All radios in your group must use the same setting to communicate properly.

Voice Compander (Reduce noise & enhance audio clarity)

Enabling this function to reduce background noise and enhance audio clarity. It is recommended to activate this function if all radios in your group are equipped with Voice Compander otherwise worse the clarity of communications.

1.after pressing 【A】 key, while F icon is displayed on the top left corner, press 【8】 key to enter into function menu.

2.Press 【B】 / 【C】 key to choose Menu 8 and display "COMP"

3.Press 【A】 key then press 【B】 key or 【C】 key to choose the desired parameter.

ON: Compander is enabled.

OFF: Compander is disabled. Default is OFF.

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.

1. after pressing 【A】 key, while F icon is displayed on the top left corner, press 【8】 key to enter into

function menu.

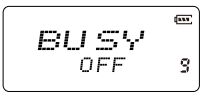
2.Press 【B】 / 【C】 key to choose Menu 9 and display "*BUSY*" .

3.Press 【A】 key then press 【B】 key or 【C】 key to choose the desired parameter.

BCL: Enable BCL, carrier wave lockout, transmitting is prohibited when receives any carrier.

BTL: Enable BTL, transmitting is prohibited when current channel receives a carrier signal that CTCSS/DCS tones are different from your group's.

OFF: Busy channel lockout is disabled. Default is OFF.



Turn On/Off Optional Signaling function

Optional signaling function is similar to CTCSS/DCS. Without receiving correspondent tone signaling, the speaker will remain mute. Optional signaling can be applied for other advanced features such as ANI, PTT ID, group call, individual call, remotely stun, remotely kill, waken etc.

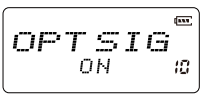
1. after pressing 【A】 key, while **F** icon is displayed on the top left corner, press 【8】 key to enter into function menu.

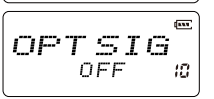
2.Press 【B】 / 【C】 key to choose Menu 10 and display "*OPTSIG*" .

3.Press 【A】 key then press 【B】 key or 【C】 key to choose the desired parameter.

ON: Optional signaling DTMF is enabled.

OFF: Optional signaling DTMF is disabled. Default is OFF

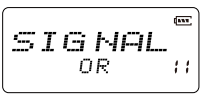




Note:
DTMF signaling is applied as an optional signaling to this product.

Signaling Relations

Select how to operate the Selective–calling(Signaling) function.



1. after pressing 【A】 key, while F icon is displayed on the top left corner, press 【B】 key to enter into function menu.
2. Press 【B】 / 【C】 key to choose Menu 11 and display "SIGNAL".
3. Press 【A】 key then press 【B】 key or 【C】 key to choose the desired parameter.

OR: As long as receiving a matching CTCSS / DCS tones OR any one of optional signaling, the squelch unmutes and receives audio. Default if OR.

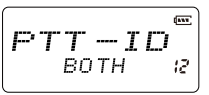
AND: As long as receiving a matching CTCSS / DCS signaling AND optional signaling at the same time, the squelch unmutes and receives audio.

Note: DTMF signaling is used as an optional signaling to this product.

NOTE: The optional signaling of this transceiver is DTMF signaling.

◦ CHANNEL OPERATIONS

PTT ID

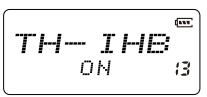


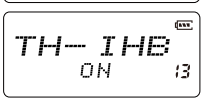
1. after pressing 【A】 key, while F icon is displayed on the top left corner, press 【8】 key to enter into function menu.
2. Press 【B】 / 【C】 key to choose Menu 12 and display "PTT-ID".
3. Press 【A】 key then press 【B】 key or 【C】 key to choose the desired parameter.

OFF: PTT ID is disabled. Default is OFF.

BOT: Press 【PTT】 key to send a preprogrammed DTMF code as PTT ID at the beginning of transmission.

TX OFF (Transmission Prohibited)





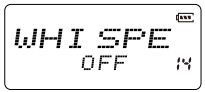
1. after pressing 【A】 key, while F icon is displayed on the top left corner, press 【8】 key to enter into function menu.
2. Press 【B】 / 【C】 key to choose Menu 13 and display "TX-IHB".
3. Press 【A】 key then press 【B】 key or 【C】 key to choose the desired parameter.

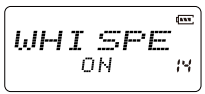
ON: TX Off is enabled. PTT operation is disabled. Default setting is OFF.

OFF: TX Off is disabled. PTT operation is possible.

Whisper

This function is to increase your voice level while talking in low voice. Do not activate this function while you can talk normally otherwise the voice may be distorted.





1. after pressing 【A】 key, while F icon is displayed on the top left corner, press 【B】 key to enter into function menu.
2. Press 【B】 / 【C】 key to choose Menu 14 and display "WHISPE".
3. Press 【A】 key then press 【B】 key or 【C】 key to choose the desired parameter.

ON: Whisper on

OFF: Whisper off. Default is OFF.

Set Mode Setting

The Set mode is used to customize the various operational parameters of DJ-A10. The Set Mode parameters are stored and remain until next change regardless of power on/off operation. Set Mode Setting operation is as follows and common to all available menus:

1. Press and hold 【PF2】 key while turning on the radio, and keep pressing 【PF2】 key for 3 seconds to enter into the Set Mode operations.
2. Press 【B】 / 【C】 key to choose the menu.
3. Press 【A】 key to enter to the setup mode.

4.Press 【B】 key or 【C】 key to choose the desired parameter.

5.Press 【D】 key or 【#】 key to confirm and exit.

Voice Prompt

English Voice-guidance is available. Key touch and some other major operations are assisted with English voice.

1.Press and hold 【PF2】 key while turning on the radio, and keep pressing 【PF2】 key for 3 seconds to enter into the Set Mode operations.

2.Press 【B】 / 【C】 key to choose the Menu 1 and display "VOICE" .

3.Press 【A】 key then press 【B】 key or 【C】 key to choose the parameter.

OFF: Voice prompting is disabled.

ENG: English guidance activated. Default is ENG.

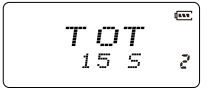
Time-Out-Timer(TOT)

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

1.Press and hold 【PF2】 key while turning on the radio, and keep pressing 【PF2】 key for 3 seconds to enter into the Set Mode operations.

2.Press 【B】 / 【C】 key to choose the Menu 2 and display "TOT" .

3.Press 【A】 key then press 【B】 key or 【C】 key to choose the parameter, that is from 15 to 240 seconds (4 minutes) in 15 seconds step.



OFF: TOT is OFF and default is OFF.

Voice Operated Transmission (VOX)

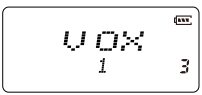
After enabling this function, you can directly start transmitting by voice instead of pressing **【PTT】** key.

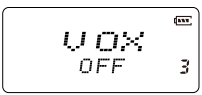
1.Press and hold **【PF2】** key while turning on the radio, and keep pressing **【PF2】** key for 3 seconds to enter into the Set Mode operations.

2.Press **【B】** / **【C】** key to choose the Menu 3 and display **"VOX"** .

3.Press **【A】** key then press **【B】** key or **【C】** key to choose the parameter

Available parameters are 3 levels of VOX sensitivity in 1, 2 or 3. 1 is most sensitive, 3 is less sensitive that requires more voice level to activate VOX.





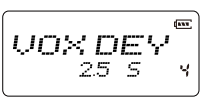
OFF: VOX transmitting is disabled. Default is OFF

VOX Delay

This is to make a time delay at the end of VOX transmission. When you stop speaking to take breath, the radio still holds the transmission for the time you set in this menu.

1.Press and hold **【PF2】** key while turning on the radio, and keep pressing **【PF2】** key for 3 seconds to enter into the Set Mode operations.

2.Press **【B】** / **【C】** key to choose the Menu 4 and display **"VOXDEY"** .



3.Press **【A】** key then press **【B】** key or **【C】** key to choose the parameter, that is from 0.5 to 5 seconds in 0.5 seconds step. Default is 2 seconds.

◦ BACKGROUND OPERATIONS

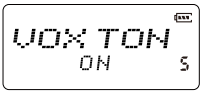
VOX Beep

After enabling this function, beginning transmitting by VOX, the transceiver will voice beeping.

1.Press and hold 【PF2】 key while turning on the radio, and keep pressing 【PF2】 key for 3 seconds to enter into the Set Mode operations.

2.Press 【B】 / 【C】 key to choose the Menu 5 and display "VOXTON" .

3.Press 【A】 key then press 【B】 key or 【C】 key to choose the parameter.



ON: VOX beeping is enabled.

OFF: VOX beeping is disabled. Default setting is OFF

Frequency Step Size Setup

Tuning step can't be changed in the Channel modes but usable only in VFO mode.

Frequency input and frequency scan are both affected by tuning step setting.

1.Press and hold 【PF2】 key while turning on the radio, and keep pressing 【PF2】 key for 3 seconds to enter into the Set Mode operations.

2.Press 【B】 / 【C】 key to choose the Menu 6 and display "STEP" .

3.Press 【A】 key then press 【B】 key or 【C】 key to choose the parameter.

Available steps are 5 / 6.25 / 10 / 12.5 / 15 / 20 / 25 /30 / 50KHz.

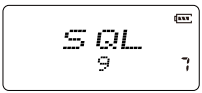
Default is 5KHz

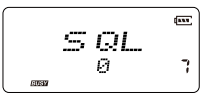
Squelch Level

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 currentstatus. For example the noise is cut at level 3, set the level to 4 and exit.





1.Press and hold 【PF2】 key while turning on the radio, and keep pressing 【PF2】 key for 3 seconds to enter into the Set Mode operations.

2.Press 【B】 / 【C】 key to choose the Menu 7 and display "SQL" .

3.Press 【A】 key then press 【B】 key or 【C】 key to choose the parameter, that is from 00 to 09 in 10 levels. Default is 04

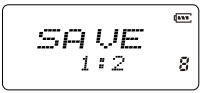
Battery Save

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. The display remain unchanged even the BS function is in the OFF cycle.

1.Press and hold 【PF2】 key while turning on the radio, and keep pressing 【PF2】 key for 3 seconds to enter into the Set Mode operations.

2.Press 【B】 / 【C】 key to choose the Menu 8 and display "SAVE".

3.Press 【A】 key then press 【B】 key or 【C】 key to choose the parameter from 3 ratios.1:1 / 1:2 / 1:4



OFF: Battery saving is disabled. Not recommended for normal operations. Default setting is 1:2.

LCD Backlight operation

Normally open, normally closed, automatic, these three modes in total of transceiver backlight to be optional.

1.Press and hold 【PF2】 key while turning on the radio, and keep pressing 【PF2】 key for 3 seconds to enter into the Set Mode operations.

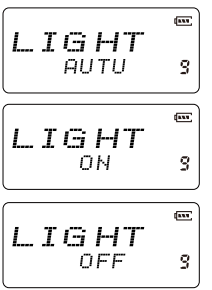
2.Press 【B】 / 【C】 key to choose the Menu 9 and display "LIGHT".

3.Press 【A】 key then press 【B】 key or 【C】 key to choose the parameter.

AUTO: Automatic, turns on and off automatically. Default is AUTO.

ON: Always lit, not recommended as it considerably consumes battery.

OFF: Remain turned off always.



LCD Backlight Color Setup

There are three backlight colors available to suit your preference.

1.Press and hold 【PF2】 key while turning on the radio, and keep pressing 【PF2】 key for 3 seconds to enter into the Set Mode operations.

2.Press 【B】 / 【C】 key to choose the Menu 10 and display "COLOR".

3.Press 【A】 key then press 【B】 key or 【C】 key to choose the parameter.

ORG: Orange and default.

BLUE: Blue

PUR: Purple

Scan Resume Time

There are three time setting available for scan resume condition.

1.Press and hold 【PF2】 key while turning on the radio, and keep pressing 【PF2】 key for 3 seconds to enter into the Set Mode operations.

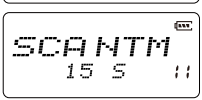
2.Press 【B】 / 【C】 key to choose the Menu 11 and display "SCANTM".

3.Press 【A】 key then press 【B】 key or 【C】 key to choose the parameter.

5ST: When receives signal, scan stops for 5 seconds and resume.

10ST: Same, 10 seconds.

15ST: Same, 15 seconds and default is 15ST.



◦ BACKGROUND OPERATIONS

Frequency/Channel Display Mode

There are 3 different display modes available, Frequency + Channel mode, Channel mode and Channel+Name Tag modes.

1.Press and hold 【PF2】 key while turning on the radio, and keep pressing 【PF2】 key for 3 seconds to enter into the Set Mode operations.

2.Press 【B】/【C】 key to choose the Menu 12 and display "DSP".

3.Press 【A】 key then press 【B】 key or 【C】 key to choose the parameter.

FREQ: Frequency + Channel mode (VFO mode). Press 【D】 key to switch into VFO mode.

CH: Channel mode. Note that manual setting is not available when the radio has been preprogrammed by the dealer using software.

NAME: Channel+Name Tag mode(VFO mode). Press 【D】 key to switch into VFO mode.

Default setting is FREQ.

Tone Burst Tone

Especially in Europe, Tone-burst tone operated repeaters are popular. To access to those repeaters, certain audible tone is required. **DJ-A10** offers 4 major tones.

1.Press and hold 【PF2】 key while turning on the radio, and keep pressing 【PF2】 key for 3 seconds to enter into the Set Mode operations.

2.Press 【B】 / 【C】 key to choose the Menu 13 and display "TBST".

3.Press 【A】 key then press 【B】 key or 【C】 key to choose the parameter.

1000Hz / 1450Hz / 1750Hz / 2100Hz

Default is 1750Hz.

DTMF Transmitting Time

1.Press and hold 【PF2】 key while turning on the radio, and keep pressing 【PF2】 key for 3 seconds to enter into the Set Mode operations.

2.Press 【B】 / 【C】 key to choose the Menu 14 and display "DTMFSD".

3.Press 【A】 key then press 【B】 key or 【C】 key to choose from 10 different parameters.

50MS/100MS/150MS/200MS/250MS/300MS/350MS/400MS/450MS/500MS

(Unit: milliseconds)

This is the time for sending each DTMF signal and an interval between each DTMF being sent. Default is 100MS.

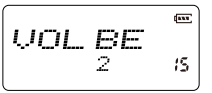
Beep Volume level

1.Press and hold 【PF2】 key while turning on the radio, and keep pressing 【PF2】 key for 3 seconds to enter into the Set Mode operations.

◦ BACKGROUND OPERATIONS

2.Press 【B】 / 【C】 key to choose the Menu 15 and display "VOL-BP" .

3.Press 【A】 key then press 【B】 key or 【C】 key to choose parameters, that is 1 to 5. Higher the louder. Default is 2.

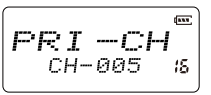


Priority Channel Setup

1.Press and hold 【PF2】 key while turning on the radio, and keep pressing 【 PF2 】 key for 3 seconds to enter into the Set Mode operations.

2.Press 【B】 / 【C 】 key to choose the Menu 16 and display "PRI-CH" .

3.Press 【A】 key then press 【B】 key or 【C】 key to choose the channel you wish to use for Priority Scan operation from any one of 128 available channels.



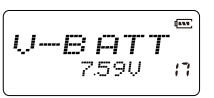
OFF: Priority channel is disabled. Default is OFF

NOTE:
This function is only to set the channel used for the priority scan monitoring. At least one channel must be preprogrammed to activate priority scanning. Scan skip channel or channel without being programmed cannot be selected.

Current Battery Voltage Display

1.Press and hold 【PF2】 key while turning on the radio, and keep pressing 【PF2】 key for 3 seconds to enter into the Set Mode operations.

2.Press 【B】 / 【C】 key to choose the Menu 17 and display "V-BATT" .



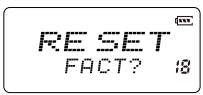
At this state, the approximate battery voltage is displayed on the LCD.

Please note that the voltage is approximate and Alinco doesn't guarantee the accuracy.

Resume Factory Default (RESET)

You can make all the settings of transceiver return to the factory default settings when transceiver cannot work normally because of wrong operation or error setup.

1. Press and hold 【PF2】 key while turning on the radio, and keep pressing 【PF2】 key for 3 seconds to enter into the Set Mode operations.
2. Press 【B】 / 【C】 key to choose the Menu 18 and display "RESET".
3. Press 【A】 key then press 【B】 key or 【C】 key to choose the reset mode.



FACT?: Resume Factory default. Frequency, signaling tones and function settings will return to the factory default.

INIT?: Resume Set mode setting parameters to default. Frequency, signaling tones and function settings remain unchanged.

4. Press 【#】 key to confirm and perform the reset.

NOTE:

Once the reset is performed, previous programming data are gone and can't recall. Please be sure to manually write major setting such as frequency and signaling settings used in your group to manually restore the data after reset.

◦ PC PROGRAMMING

Utility software may be available for distributors/dealers only. USB programming cable is required. Please consult with your local importer/dealer for availability.

◦TECHNICAL SPECIFICATIONS

ALINCO

	General
Frequency Range	VHF:136–174MHz FM Radio: 76–108MHz
Channel Capacity	128 channels
Channel Spacing	12.5KHz
Phase–locked Step	5KHz, 6.25KHz
Operating Voltage	7.4V DC ±20%
Battery Life	More than 14 Hours (1500mAh), More than 16 Hours (1700mAh)
Frequency Stability	±2.5ppm
Operating Temperature	–20℃ +55℃
Size	265 × 60 × 37mm (with battery, antenna)
Weight	230g (with battery, antenna)

Receiving Part (ETSI EN 300 086 standard test)	
	Narrow band
Sensitivity(12dB SINAD)	≤0.35 μ V
Adjacent Channel Selectivity	≥60dB
Intermodulation	≥60dB
Spurious Rejection	≥70dB

◦TECHNICAL SPECIFICATIONS

Audio Response	+1~ –3dB(0.3~2.55KHz)
Hum & Noise	≥40dB
Audio Distortion	≤5%
Audio Power Output	1W / 10%

Transmitting Part (ETSI EN 300 086 standard test)	
	Narrow band
Power Output	
Modulation	11KΦF3E
Adjacent Channel Power	≥60dB
Hum & Noise	≥36dB
Spurious Emission	≤ – 36dB
Audio Response	+1~ 3dB(0.3~2.25KHz)
Audio Distortion	≤5%

○ TROUBLE SHOOTING GUIDE

ALINCO

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 life is finished. Replace the battery pack with a new one.
Transceiver cannot scan	The channels are not programmed.
All band noisy after programmed	Adjust squelch level.
No sound when using earphone. for a while	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 connector 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.

◦ 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.450 filter 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.

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

◦ ATTACHED CHART

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	651
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		

NOTE: 1. N stands for positive code. I stands for inverted code. 232 groups of DCS in total.
2. Overstriking marks are non−standard DCS.

SAFETYTRAINING INFORMATION

Your Alinco Incorporated, Electronics Division radio generates 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”. In addition, 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 that your expose to RF electromagnetic energy is within the FCC allowable limits for occupational use, always adhere to the following guidelines:

- **DO NOT** operate the radio without a proper antenna attached, as this may damaged the radio and may also cause you to exceed FCC RF exposure limits. A proper antenna is the antenna supplied with this radio by the manufacturer or antenna specifically authorized by the manufacturer for use with this radio.
- **DO NOT** transmits for more than 50% of total radio use time (“50%duty cycle”). Transmitting more than 50% of the time can cause FCC RF exposure compliance requirements to be exceeded. The radio is transmitting when the “TX indicator” lights red. You can cause the radio to transmit by pressing the “PTT” switch.
- **ALWAYS** keep the antenna at least 2.5 cm (1 inch) away from the body when transmitting and only use the HYT belt-clip which is listed in instructions when attaching the radio to your belt, etc., to ensure FCC RF exposure compliance requirements are not exceeded. To provide the recipients of your transmission the best sound quality, hold the antenna at least 5 cm (2 inches) from your mouth, and slightly off to one side.

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, your 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.