

Manufacturer

ALINCO, INC.

Yodoyabashi Dai-bldg 13F

4-4-9 Koraibashi, Chuo-ku, Osaka 541-0043 Japan

Phone: +81-6-7636-2362 Fax: +81-6-6208-3801

<http://www.alinco.com>

E-mail: export@alinco.co.jp



DJ-W70HT DJ-W70HE

Electrical and electronic equipment and batteries should be recycled at a facility capable of handling these items. Contact your local authority for details of disposal rules.

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ALINCO



VHF/UHF FM Transceiver

DJ-W70/HE/HT

Instruction Manual

Thank you for purchasing your new Alinco transceiver. Please read this manual carefully before using the product to ensure full performance, and keep this manual for future reference as it contains information on after-sales services.

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.

[MEMO]

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.

■ Safety

It is prohibited to operate transceivers without permission in advance in places such as:

- Airports and ports
- Hospitals and medical facilities
- Abord public transports
- Radio stations and repater sites

RF may interfere to important equipment and may cause serious accidents.

■ Lightning

Any person is not safe outdoor during thunderstorm and lightning. This condition is getting worse if somebody keeps a hand-held radio; chances of being hit by lightning are doubled since lightning may hit a radio antenna as well. At this time, there is no hand-held radio having any kind of protection against lightning current (which is higher than 10 kA.). Note also that no car provides adequate protection of its

passengers or drivers against lightning as well. Therefore, Alinco will not take responsibility for any danger associated with using its hand-held radios outdoor or inside the car during lightning.

■ IP67 Dust and water proof

About IP67 rating

IP6X: Dust tight / No ingress of dust; complete protection against contact. Test duration of up to 8 hours based on air flow using specified powders.

IPX7: No water penetration / Submerge the device for 30 minutes at a depth of 1 meter from the fresh water's surface.

Important: IP67 ingress protection is void when the MIC/SP cover is removed or an accessory is connected to the MIC/SP port.

The IP67 designation provides for limited dust and fresh water proofing of the radio, antenna and battery pack when integrated, perspecified above. This compatibility is factory guaranteed for a period of one year provided all specified conditions of use are respected, any accessories connected must be specified genuine Alinco accessories and the device has not been disassembled by the consumer. The device is designed to remain operational when used in rain, severe weather or in accidental cases of dropping it in wet place when used in extreme conditions and is in no way stating that you should attempt to use the device under water or submerge the radio for cleaning. Warranty will not cover devices that are damaged due to negligence or misuse of the product. Never remove the small label attached on the rear chassis of this product, or cover it with other materials. This label is essential to adjust an air pressure inside to secure dust/water proofing. A periodical, professional maintenance is recommended when the ingress protection is very important to you.

■ Covering ranges

You may expect a range of approx 8km/5 miles or more at high-power when located on a flat, noise-free place like on a beach. However, it may vary drastically depending on how to wear and carry the radios, surrounding locations/conditions and static noise levels (below or near power transmission lines), etc. In urban areas with many buildings or inside a building, such covering range will become drastically short even to several tens of meters.

■ Important Notice DJ-W70 Commercial-use version

The utility software may be available to distributors/dealers only. Programming cable is optional. The manufacturer will not release the software to unauthorized party so please contact your dealer for details. This product may be delivered to the consumer after being preprogrammed with the operating parameters, then certain operation may be disabled for user-accesses. The manufacturer and distributors are not aware of details of such dealer-programming. Therefore, please contact to your dealer in case any technical assistance may be necessary.

■ Compliance Information Statement

WARNING

This equipment generates or uses radio frequency energy. Changes or modifications to this equipment may cause harmful interference unless the modifications are expressly approved in the instruction manual.

An amateur radio operator license is required to use DJ-W70HT and DJ-W70HE.

FCC INFORMATION / DJ-W70HT

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

WARNING: Modification of this device to receive cellular phone service signals is prohibited under FCC rules and Federal Law.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

CAUTION:

Changes or modifications to this device, not expressly approved by Alinco, Inc., could void your authority to operate this device under

MODIFICATION OF THIS DEVICE TO RECEIVE CELLULAR RADIOTELEPHONE SERVICE SIGNALS IS PROHIBITED UNDER FCC RULES AND FEDERAL LAW.

ABOUT CE AND DOC / DJ-W70HE



Hereby, Alinco, Inc. declares DJ-W70HE which has the “CE” symbol on the product, complies with the essential requirements of the radio Equipment Directive, 2014/53/EU, and the restriction of the use of certain hazardous substances in electrical and electronic equipment Directive, 2011/65/EU. The full text of the EU declaration of conformity is available at the following internet address: <http://www.alinco.com/Ce/>

■ Electromagnetic Interference / Compatibility

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

To avoid such interference, turn off the transceiver in areas where signs are posted to do so.

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

This Alinco transceiver generates RF EME while transmitting. RF EME (Radio Frequency Electric and Magnetic Energy) has the potential to cause slight thermal, or heating effects to any part of your body less than the recommended distance from this radio transmitter's antenna. RF energy exposure is determined primarily by the distance to and the power of the transmitting device. In general, RF exposure is minimized when the lowest possible power is used or transmission time is kept to the minimum required for consistent communications, and the greatest distance possible from the antenna

to the body is maintained. Occupational/ controlled exposure limits are applicable to situations in which persons are exposed to RF energy as a consequence of their employment, and such persons have been made aware of the potential for exposure and can exercise control over their exposure. This means you can use the transceiver only if you are aware of the potential hazards of operating a transceiver and are familiar in ways to minimize these hazards. This transceiver is not intended for use by the general public in uncontrolled environments. Uncontrolled environment exposure limits are applicable to situations in which the general public may be exposed to RF energy, or in which the persons who are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

■ About DJ-W70

DJ-W70 without HT/HE on the name plate attached to rear chassis is a land mobile (commercial-use) version made available to authorized distributors of specific regions only, and may not be available to all countries of distribution.

Some features may not work as explained herein or blocked due to dealer programming.

DJ-W70 is not CE/FCC certified.

WARNING

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

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

Danger

-  Turn off the radio before entering any area with a potentially explosive atmosphere or blasting caps.
-  Do not operate the radio, disassemble or charge the battery in the potentially flammable and explosive atmosphere (such as gas station, coal gas station, etc.).

Alert

■ **Environment and condition of use**

-  It is recommended that you check local traffic regulations regarding the use of a radio equipment while driving. Some countries prohibit or apply restrictions for the operation of radios and mobile-phones while driving.
-  Do not use this product in close proximity to other electronic devices, especially medical ones. It may cause interference to those devices.
-  Keep the radio out of the reach of children.
-  In case a liquid leaks from the product, do not touch it. It may damage your skin. Rinse with plenty of cold water if the liquid contacted your skin.
-  Never operate this product in facilities where radio products are prohibited for use such as aboard aircraft, in airports, in ports, within or near the operating area of business wireless stations or their relay stations.
-  Use of this product may be prohibited or illegal outside of your country. Be informed in advance when you travel.
-  The manufacturer declines any responsibilities against loss of life and/or a property due to a failure of this product when used to perform important tasks like life-guarding, surveillance, and rescue.

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

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

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

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

 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.
-  Electrical products with built-in inverters such as those listed below may generate large amounts of noise. This noise cannot be canceled on the radio device side.
 - LED lighting • IH cooking utensils • Solar power generation equipment • Vehicle equipment such as DC-AC inverters

■ About transceiver

-  Be cautious of the whip antenna when carried in your shirt-pocket etc. It may make contact with your eye and cause injury.
-  Do not connect devices other than specified ones to the jacks and ports on the product. It may result in damage to the devices.
-  Turn off and remove the power source (AC cable, DC cable, battery, cigar cable, charger adapter etc.) from the product when the product is not in use for extended period of time or in case of maintenance.
-  Never pull the cord alone when you unplug AC cable from the wall outlet.
-  Use a clean, dry cloth to wipe off dirt and condensation from the surface of the product. Never use thinner or benzene for cleaning.



Check with your local waste officials for details on recycling or proper disposal in your area.

Maintenance and repair

The radio is a sophisticated electronic product and should be used carefully. The following suggestion may make your radio service life longer.

- Please do not attempt to disassemble the radio, disassembling the radio by laypeople may cause damage. Use CE-certified power supplies for HE models.
- When using stable voltage power supply, the supply voltage must be between 6.8V-8.4V to avoid damage to the radio.
- Please do not expose the radio to sunlight for a long time, or putting it in an overheated environment, high temperature will shorten the life of electronic devices and may cause deformation of plastic parts.
- Please do not put the radio in a dusty or dirty place.
- Please keep the radio dry. Rain or moisture can corrode electrical wiring.
- If the radio is found to have odor or smoke, please turn off the power immediately. Remove the charging pack or battery pack from the radio and contact the ALINCO dealership.
- Don't transmit without an antenna installed.

Feature

- 200 storage channels wide and narrow band optional (25kHz/12.5kHz)
- VOX transmission function
- CTCSS/DCS Scan
- Frequency scan
- Voice encryption (DJ-W70 commercial radio only, amateur radios excluded)
- FM radio
- Emergency alarm
- Dual watch
- AM/FM
- AI noise cancelling
- Support TYPE-C charger
- Clock
- Intelligent power saving



for DJW70HE for DJW70HT

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STANDARD ACCESSORIES

Please take the radio out of the packing box carefully. We recommend that you check the contents of the packaging materials listed below before discarding them.

Please contact your dealer if there may be something missing or different.

Standard accessories

Item	Quantity
Antenna	1
Battery pack	1
Charger stand	1
USB type-C cable	1
Belt clip	1
User's manual	1

Optional accessories

Item
Earphones
Programming cable
Programming software

NOTE: Before unplugging the USB cable from the PC, ensure that the radio is powered off. Failure to do so may result in unintended transmission.

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

BATTERY INFORMATION

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Charging operation

A common USB adapter is required to charge the battery.

The battery is not charged at the factory, so please charge it before use. The battery life is over when its operating time decreases even though it is fully and correctly charged, and it must be replaced with a new one.

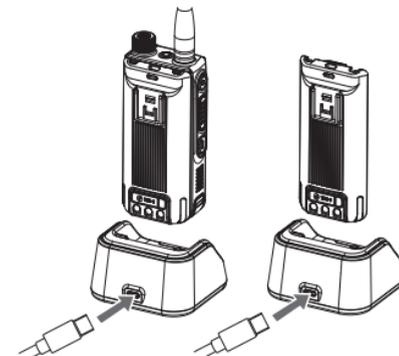
Using the charger stand:

Plug the USB connector to the USB adapter, and connect it to the wall AC outlet.

Plug the USB type-C cable to the USB type-C port on the back of the charger. When the battery is set with the radio, turn it off.

Set it on the charger and ensure the charger terminals are properly connected.

The LED turns on red and charging starts, and turns to green when completed.



BATTERY INFORMATION

Using the USB port:

Plug the USB connector to the USB adapter, and connect it to the wall AC outlet.

Plug the USB type-C cable to the USB type-C port on the back of the battery pack under the rubber cover. When the battery is set with the radio, turn it off.

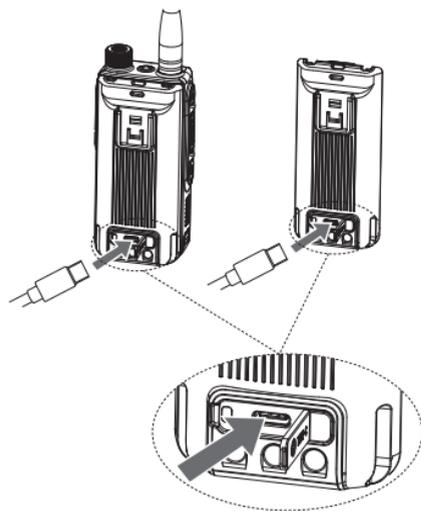
The LED turns on red and charging starts, and turns to green when completed.

WARNING: Avoid overcharging.

Never keep the battery connected to AC outlet after the charge. Overcharging cause damage or deterioration to the battery. Remove the battery or AC power from the charger after the charge is completed.

Warning: If the battery is fully charged, do not charge it again, otherwise, the battery life will be shortened or damaged.

After charging, remove the battery from the charger.



BATTERY INFORMATION

ALINGO

Notice for charging battery

Please be sure to turn off the radio when the battery is set to the radio, and the ambient temperature should be between 5°C and 40°C (41°F and 104°F) while charging otherwise the charging will fail. The manufacturer of the battery suggests to replace it with a new one after being used for 3 years to keep the performance and to prevent fire and explosion caused by deterioration due to prolonged use.

NOTE:

- ▲ **Trouble means battery heating, short circuit or charger malfunction. Remove the battery pack from the charger immediately and contact to your local dealer for services.**
- ▲ **It is known that Li-Ion battery packs heat up over 400°C by itself when kept in a temperature of over 80°C for extended period of time. Although the packs are protected against overheating with a protective circuit, never leave the battery under direct sunlight or nearby a source of heat.**
- ▲ **The charger is to charge the battery pack only. It is not an AC adapter to operate the radio. Never attempt to transmit the radio with using the charger as it will cause the damage to the charger and a repair/replace may become necessary.**
- ▲ **Try charging the battery pack only when having trouble charging with the radio. In case the radio may have troubles, the charge can't be conducted properly. If the battery pack can be charged alone, please take the radio to your local dealer for services.**

◦ BATTERY INFORMATION

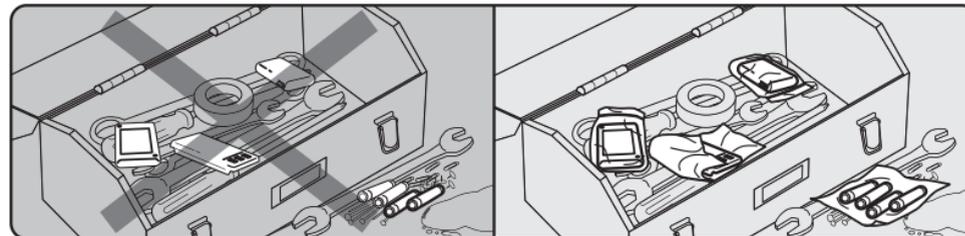
- ▲ Wipe off dirt on the terminals of the back of the battery pack occasionally with using a clean, dry cotton swab to prevent the failure of charging.
- ▲ The battery should be kept at 50% charge state when stored for prolonged period. Keeping it low voltage will cause the malfunction of charging, and full charge state will shorten the battery life.
- ▲ To store, remove it from the radio and keep it in a dark, dry well-ventilated place of ambient temperature.
- ▲ Do not short circuit battery terminals.
- ▲ Never attempt to remove the casing from the battery pack.
- ▲ Never assemble the battery hazardous in explosive atmosphere, as spark may cause explosion.
- ▲ Do not put the battery in hot environment or throw it into fire, it may cause explosion.
- ▲ Battery pack discharges faster when it is attached to the radio. Please always remove it from the radio when not in use.
- ▲ Risk of explosion, generation of heat or leak of chemicals inside if the battery is replaced by an incorrect type or reverse polarity.
- ▲ 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.

◦ BATTERY INFORMATION

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■ Handling and storing information of batteries and battery packs.

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

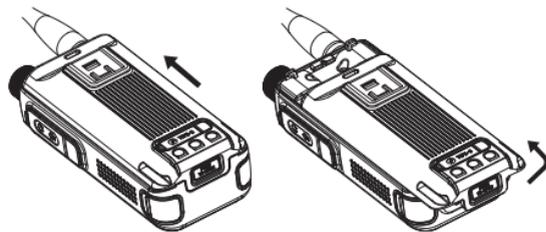


- Do not carry batteries in metal containers or in a bag containing objects such as metal tools, clips, screws, keys and jewelries.
- Do not carry batteries in wet conditions. Water is conductive and may cause short-circuit.
- The batteries must be packed in a dry nylon bag one by one when carried or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

Preparation

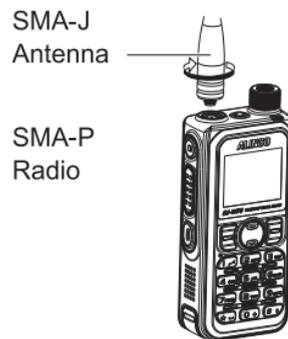
Install/remove battery

Align the top notch of the battery with the corresponding buckle on the radio.
Press the battery down towards the radio until it clicks.
Pressing and holding the clip at the bottom of the battery pack then slide the battery upwards to remove the battery.



Install / remove antenna

Screw the antenna into the connector at the top of the radio clockwise until it is tightened.
Turn the antenna anticlockwise till the antenna separates to remove it.
Do not grab the antenna while carrying the radio. It will damage the antenna.



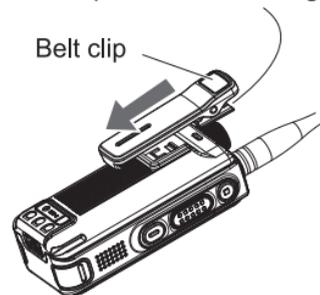
Preparation

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Install / remove belt clip

To install the belt clip, place the catch and slide downward as indicated until clicks. To remove, observe a small metal part on the top of the clip, pressing and holding it with a thin-pointed tool while sliding up the clip.

Press a metal part while removing



Open / close microphone jack cover

Please keep the jack cover tightly closed when not using the microphone.

NOTE:

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



Preparation

Install / remove optional / microphone

Plug the microphone into the jack as shown.

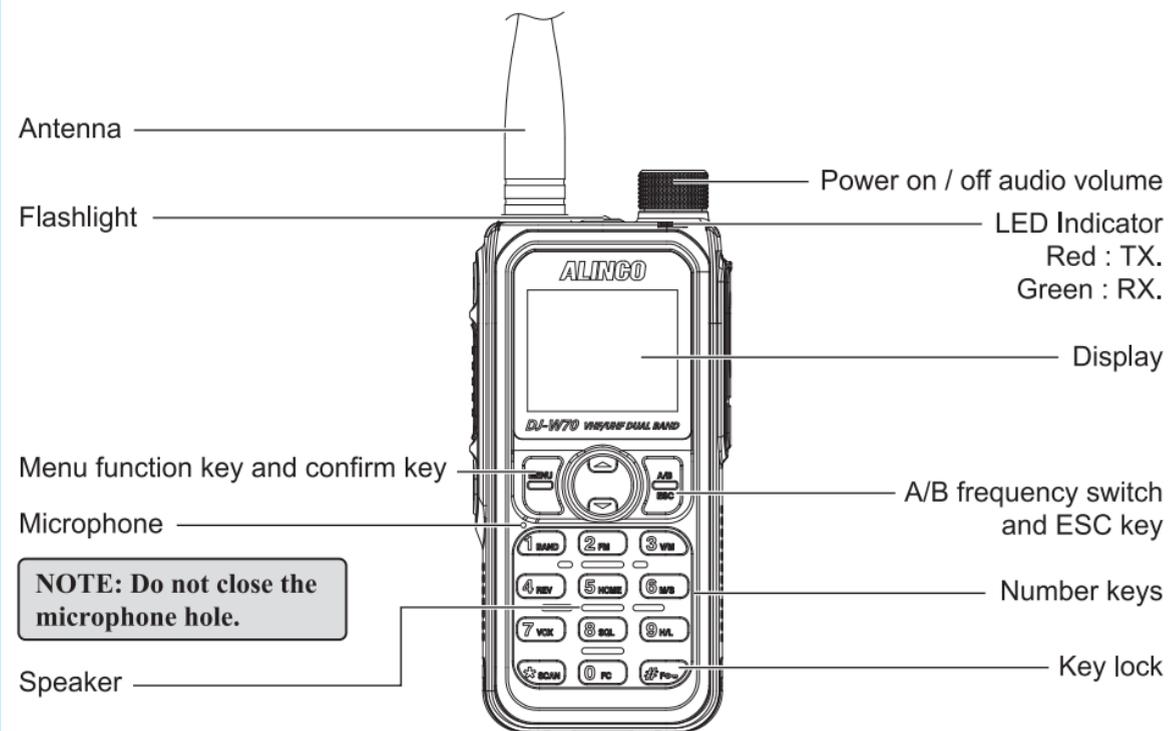
Do the opposite to unplug. It accepts only genuine accessories, and third-party accessories may damage to the radio.

NOTE: When wearing earphones or headset in a place or wearing clothing that is prone to static electricity buildup, you may feel a static shock in your ears. This is the same as the shock you may feel when touching a doorknob, and is not an abnormality such as a short circuit.



GETTING ACQUAINTED

ALINGO



NOTE: Do not close the microphone hole.

• GETTING ACQUAINTED

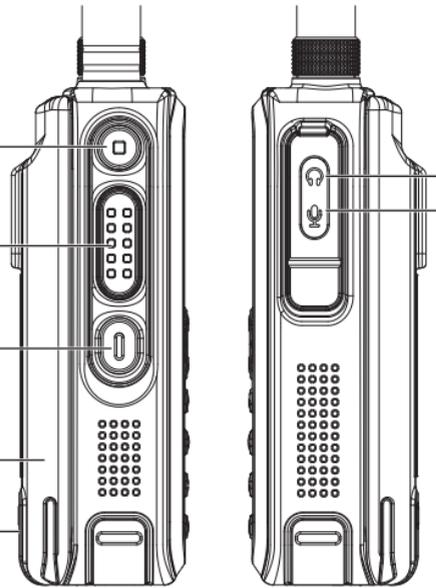
Side key PF1
(Programmable
function key 1)

PTT

Side key PF2
(Programmable
function key 2)

Battery pack

TYPE-C charger port



Earphones / Microphone
jack and rubber cover

NOTE: When using headset accessories, turn the audio level to minimum, then press PF2 key. Increase the audio level to hear the noise and fix at the appropriate level. Press PF2 again to mute the noise.

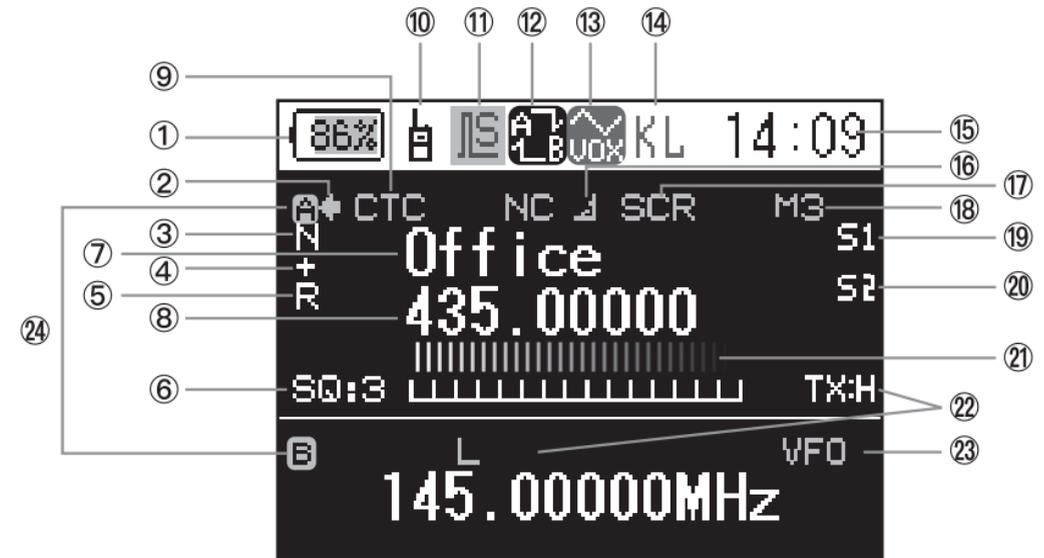
Note: Side key PF1 and PF 2 are programmable using the software. Function are assignable to each key for long and short pressing operation. Assignable functions are as follows:
1: None 2: Scan list 3: 1750Hz tone burst 4: Alert 5: Monitor 6: Flash light

• GETTING ACQUAINTED

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Display

The following table can help you understand what the instructions mean or how they are set.



• GETTING ACQUAINTED

①	Battery status Battery voltage(V) Battery capacity(%)	⑭	F F key pressed KL Key lock SA Scan all S1 Scan list1 S2 Scan list2
②	Activity channel	⑮	Clock
③	Bandwidth Narrow/Wide	⑯	Compand Voice compandor turn on
④	Shift direction	⑰	Voice encryption turn on (Not compatible with HE/HT.)
⑤	TX/RX reverse	⑱	Channel code
⑥	Squelch level SQ: 0-9	⑲	Scan list1
⑦	Memory name tag (i.e. Office)	⑳	Scan list2
⑧	Channel frequency	㉑	S-meter
⑨	CTS/DCS mode	㉒	Transmit power H/M/L
⑩	Radio turn on		Forbid transmit
⑪	RX Receiving TX Transmitting PS Power saving		B channel TX:L
⑫	A/B Channel dual watch	㉓	Frequency mode
⑬	VOX VOX transmit	㉔	A / B channel display

• Operation guidance

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🔊 Keyboard, knob control, switch, indicators

■ PWR/VOL (Power/volume) knob control	Use for turn on/off radio and volume control
■ Transmit indicator	Press PTT, the LED turns to red, indicate the radio is transmitting
■ PTT key	Press-To-Talk switch. Press and hold while transmitting, release to receive.
■ Monitor side key definition	Side PF2 key is assigned with Monitor function as default. Press to open squelch and release CTS/DCS setting to monitor the channel. Press it again to close.
■ Menu key	Press to access MENU to customize functions.
■ A/B key ESC key	Press to set and return to previous MENU or press and hold to switching A/B channel

Operation guidance

Jack and connector

- | | |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| ■ SMA-P Antenna connector | Connect supplied whip or an external antenna |
| ■ Accessory port | Connect an optional headset or earphones. Use Alinco's genuine accessory otherwise the warranty is void. Close it tightly while not in use. |

BASIC OPERATIONS

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Power on/off

Turn on: Turn the volume knob clockwise, hear a click, and the radio turns on. Note that the display turns off automatically after a short while to save battery. Press MENU or PF keys to see the display.

Turn off: Turn the volume knob counterclockwise, hear a click, and the radio turns off.

Adjust volume

Turn the knob clockwise to increase, counterclockwise to reduce audio level. Be cautious not to set the level too loud. Hearing excessively loud sound for long time will damage your hearing.

Switch between Main band and Sub band

Under standby state, press and hold [A/B | ESC] key to switch channel between Main band and Sub band.



• BASIC OPERATIONS

☞ Switch between Channel mode and VFO mode

Memory channels must be programmed in advance to operate Channel mode. Refer to P.32 of this manual or use the software to edit channels. After at least 1 channel is stored in memory, press and hold [3/V/M] key.

The frequency will be switched to a memory channel. [VFO] icon at the end of frequency digit will turn to M*, displaying a memory channel number. Repeat the same to return to VFO mode.

☞ Selecting Memory Channel

In channel mode, press UP/DOWN key to select a desired channel. Only programmed channel numbers appear and skips blank channels.

☞ Selecting VFO Frequencies

In VFO mode press UP/DOWN key to select a desired frequency.

Press UP key to change upward, press DOWN key to downward in order of preset step

**NOTE: Channel step: 2.5k, 5k, 6.25k, 10k, 12.5k, 20k, 25k, 30k, and 50kHz in total 9 options.
FM radio step frequency is 50kHz.**

• BASIC OPERATIONS

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☞ 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. The squelch including TSQ/DCS unmutes making the audio easier to hear. Just press again 【PF2】 to unmute the squelch, press it again to close.

☞ 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 is displayed on the LCD, then the received signal can be heard. The RX indicator also lights green at this time.

NOTE: Please be aware of the squelch level and selective-calling settings such as CTCSS and DCS as you may risk not hearing the receiving signal. Use Monitor function to temporary release the selective-calling functions.

• BASIC OPERATIONS

📡 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 **【PF2】** key.

• Default Settings

ALINCO

Menu No.	LCD Display	Default	Menu No.	LCD Display	Default
1	RX SQL	3	14	COMPANDOR	OFF
2	TX POWER	HIGH	15	BCLO	OFF
3	FREQ STEP	DJW70/HT: 10kHz DJW70HE: 12.5kHz	16	TX SHIFT	OFF
4	BAND W/N	WIDE	17	TX OFF SET	0MHz
5	DEMOD	FM	18	TX TOT	1min
6	RX DCS	OFF	19	CH SAVE	--
7	RX CTC	OFF	20	CH NAME	--
8	TX DCS	OFF	21	CH HOME	CH:001
9	TX CTC	OFF	22	CH DISP	FREQ
10	STE	ON	23	CH DEL	--
11	ROGER	OFF	24	SCAN ADD1	ON
12	BATT SAVE	1:5	25	SCAN ADD2	OFF
13	SCRAMBLER (Only for DJW70)	OFF	26	SCAN LIST	LIST1

Default Settings

Menu No.	LCD Display	Default	Menu No.	LCD Display	Default
27	SCAN LIST1	CH:001	40	EOT CODE	CD123
28	SCAN LIST2	--	41	PTT ID	OFF
29	SCAN MODE	CARRIER	42	DTMF ST	ON
30	PF1 SHORT	FLASH LIGHT	43	RX MODE	DUAL RX RESPOND
31	PF1 LONG	NONE	44	VOX	OFF
32	PF2 SHORT	MONITOR	45	MIC GAIN	5
33	PF2 LONG	NONE	46	AI NC	NC OFF
34	KEY LOCK	OFF	47	TIME	Retain the original Settings
35	BATT LEVEL	Retain the original Settings	48	UI MODE	Retain the original Settings
36	BACK LIGHT	20sec	49	RESET	VFO
37	BEEP TONE	ON	50	INFO	BOOT、DSP、FWV、HWV
38	ALERT MODE	TX 15s			
39	BOT CODE	AB123			

FUNCTION MENU SETUP

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How to operate MENU setup

The instruction herein is common to all [MENU] operation.

Please read and understand how to press keys in [MENU] state.

- 1: Press **MENU** key to enter to the MENU mode. MENU and its reference number is displayed at the top, followed by a MENU list as shown below.
- 2: Press or press and hold **▼** or **▲** key to select the function you wish to customize.
- 3: Press **MENU** key again and use **▼** or **▲** key to select desired parameter in sub menu.
- 4: Press **MENU** key again to set the value and return to **MENU** list to continue, or press **A/BESC** to return to standby.

[MENU 01] "RX SQL" squelch level

- 1: Select RX SQL in the MENU list. Press **MENU** again and select squelch levels using **▼** or **▲** key. Available values are 0-9, and 0 opens squelch.
- 2: Press **MENU** or **A/BESC** key to continue or exit.



FUNCTION MENU SETUP

[MENU 02] "TX POWER" RF output power

- 1: Select TX POWER in the MENU list. Press **MENU** again and select levels LOW 1W/MID 5W/HIGH 10W using **▼** or **▲** key.
- 2: Press **MENU** or **A/BESC** key to continue or exit.



*Values indicated here are the factory default.

[MENU 03] "FREQ STEP" Frequency step

- 1: Select FREQ STEP in the MENU list. Press **MENU** again and select STEP using **▼** or **▲** key. Available values are 2.50k/5.00k/6.25k/8.33k/10.00k/12.50k/20.00k/25.00k/50.00k(kHz).
- 2: Press **MENU** or **A/BESC** key to continue or exit.



FUNCTION MENU SETUP

ALINCO

[MENU 04] "BAND W/N" Bandwidth

- 1: Select BAND W/N in the MENU list. Press **MENU** again and select WIDE or NARROW using **▼** or **▲** key. WIDE is adequate for 25kHz, narrow is for 12.5kHz step setting. Inadequate setting will result in poor audio quality. Bandwidth often referred to as Channel spacing.
- 2: Press **MENU** or **A/BESC** key to continue or exit.



[MENU 05] "DEMOD MODE" AM mode reception

- 1: Select DEMODMODE in the MENU list. Press **MENU** again to see the DEMOD MODE. Manual programming is not available.
- 2: Press **MENU** or **A/BESC** key to continue or exit.



NOTE: Some menus such as DCS and CTCSS tone setting will be disabled when AM is selected.

FUNCTION MENU SETUP

[MENU 06] "RX DCS" DCS decode tone

1: Select RX DCS in the MENU list. Press **MENU** again and select a tone using **▼** or **▲** key.

Available tones are 104 and listed in page 57. Select OFF to disable. DCS Encoding setting is MENU 08.

2: Press **MENU** or **A/BESC** key to continue or exit.

The DCS stands for Digital Coded Squelch.



[MENU 07] "RX CTC" CTCSS decode tone

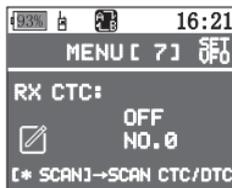
1: Select RX CTC in the MENU list. Press **MENU** again and select RX DCS using **▼** or **▲** key.

Available tones are common 50 and listed in page 56.

Select OFF to disable. CTCSS Encoding setting is MENU 09.

2: Press **MENU** or **A/BESC** key to continue or exit.

Continuous Tone Controlled (Coded) Squelch System sometimes called as Tone squelch, CTS or PL. Decoding setting is necessary for tone-squelch operation.



FUNCTION MENU SETUP

ALINCO

[MENU 08] "TX DCS" DCS encode tone

1: Select TX DCS in the MENU list. Press **MENU** again and select a tone using **▼** or **▲** key.

The same tones as MENU06 are available. Select OFF to disable.

2: Press **MENU** or **A/BESC** key to continue or exit.

DCS encoding is necessary to access DCS controlled repeaters.



[MENU 09] "TX CTC" CTCSS decode tone

1: Select TX CTC in the MENU list. Press **MENU** again and select a tone using **▼** or **▲** key.

Available tones are common 50 and listed in page 56.

Select OFF to disable.

2: Press **MENU** or **A/BESC** key to continue or exit.

Decoding tone is necessary to operate tone-squelch operation.

Encode and decode tones may differ.



FUNCTION MENU SETUP

☎ [MENU 10] “STE” Squelch tail elimination

1: Select STE in the MENU list. Press **MENU** again and select ON/OFF by **▼** or **▲** key.

2: Press **MENU** or **A/BESC** key to continue or exit.

Default is ON and reduces annoying noise that occurs when the squelch closes.



☎ [MENU 11] “ROGER” Roger Beep

1: Select ROGER in the MENU list. Press **MENU** again and select ON or OFF by **▼** or **▲** key.

2: Press **MENU** or **A/BESC** key to continue or exit.

Roger beep is a beep tone that is sent out automatically at the every end of your TX. Select off if not desired.



FUNCTION MENU SETUP

ALINCO

☎ [MENU 12] “BATT SAVE” Battery Saver

1: Select BATT SAVE in the MENU list. Press **MENU** again and select parameter by **▼** or **▲** key.

OFF, 1:1, 1:2, 1:3, 1:4, 1:5, 1:6, 1:7, 1:8 are available. They are power On and OFF ratio.

The BS function turns on/off the battery circuit automatically to save the battery consumption. Bigger the number, longer the battery duration, but longer setting may miss initial part of receiving signals.

2: Press **MENU** or **A/BESC** key to continue or exit.



☎ [MENU 13] “SCRAMBLER” Voice encryption (Not compatible with HE/HT.)

1: Select SCRAMBLER in the MENU list. Press **MENU** again and select 1-10/OFF by **▼** or **▲** key.

2: Press **MENU** or **A/BESC** key to continue or exit.

An analog voice inversion scrambler can be equipped as optionals to land mobile versions only

This special audio process can offer a more confidential communication.

Other radios at same frequency will receive only disordered noises.

Default: Off



*Remains OFF for T / E versions.

FUNCTION MENU SETUP

[MENU 14] “COMPANDOR” Audio Compandor

- 1: Select COMPANDOR in the MENU list. Press **MENU** again and select TX/RX/TX and RX/OFF by **▼** or **▲** key.
- 2: Press **MENU** or **A/BESC** key to continue or exit.

This function works only when all users enable Voice-compander. If not, it worse the audio quality, Enable this function to reduce background noise and enhance audio clarity, especially in long range communication.



[MENU 15] “BCLO” Busy Channel Lock Out

- 1: Select BCLO in the MENU list. Press **MENU** again and select ON/OFF by **▼** or **▲** key.
- 2: Press **MENU** or **A/BESC** key to continue or exit.

This function prohibits the transmitting when the channel is busy.



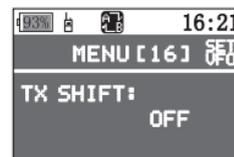
FUNCTION MENU SETUP

ALINCO

[MENU 16] “TX SHIFT” Transmit frequency offset direction

- 1: Select TX SHIFT in the MENU list. Press **MENU** again and select +/- /OFF by **▼** or **▲** key.
- 2: Press **MENU** or **A/BESC** key to continue or exit.

When the transmitting frequency is above the receiving frequency, it is called + direction, and when opposite, it is called - direction. Select OFF when the offset is not in use.



[MENU 17] “TX OFFSET” OFFSET Frequency

- 1: Select TX OFFSET in the MENU list. Press **MENU** again and select frequency using **▼** or **▲** key.
- 2: Press **MENU** or **A/BESC** key to continue or exit.

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.



FUNCTION MENU SETUP

[MENU 18] "TX TOT" Time Out Timer

- 1: Select TX OFFSET in the MENU list. Press **MENU** again and select time using **▼** or **▲** key. Available values are 30Sec, 1min-9min. Select 0 (zero) to disable.
 - 2: Press **MENU** or **A/BESC** key to continue or exit.
- TOT is a timer to limit length of single transmission.
When the time elapses, the transmission will be cut.



[MENU 19] "MEMORY CH" Memory channels

Before you store the memory, set the frequency and other parameters like tones, repeater setting etc at band A in VFO mode. This operation will store the current setting in VFO/A.

- 1: Select MEMORY CH in the MENU list. Press **MENU** again and select channel number you wish to store as memory ch using **▼** or **▲** key. Available numbers are 1 to 200 (ch). The channel number and frequency will be displayed when the selected channel is already programmed. Available channel will display EMPTY, channel number and under-bars.
- 2: Press **MENU** or **A/BESC** key to continue or exit.

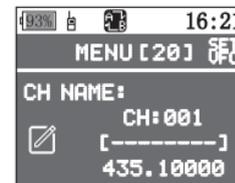


FUNCTION MENU SETUP

ALINCO

[MENU 20] "CH NAME" Memory name

- 1: Select CH NAME in the MENU list. Press **MENU** again to show a screen as shown.
 - 2: Select the channel you wish to display characters instead of frequency using **▼** or **▲** key.
 - 3: Press **MENU** so that [] disappears and a cursor appears at the bottom of the under-bar.
 - 4: For memory channel name, press **▼** to input lowercase alphabet characters. Press **▲** to input symbols. Press **MENU** to set and move cursor to just next to the right.
- When you press the **MENU** with the eighth cursor, the message "OK?" will appear, so press the menu button again and the name will be set.
- If you want to delete just one letter. decide name once, and set name from the beginning.



[MENU 21] "CH HOME" CALL channel short-cut

- 1: Select CH HOME in the MENU list. Press **MENU** again and select a memory channel you use most using **▼** or **▲** key.
 - 2: Press **MENU** or **A/BESC** key to continue or exit.
- This HOME (CALL) channel can be recalled by pressing **# F0-m** key then **[5 HOME]** key in stand-by state.



FUNCTION MENU SETUP

[MENU 22] “CH DISP” Channel display mode

- 1: Select CH DISP in the MENU list. Press **MENU** again and select a parameter using **▼** or **▲** key.
FREQ (only) / NAME+FREQ /.NAME (only) / CHANNEL NUMBER (only) are available.
- 2: Press **MENU** or **A/BESC** key to continue or exit.
This setting is to define how to display frequency information on the display.



[MENU 23] “CH DEL” Delete the Channel

- 1: Select CH DEL in the MENU list. Press **MENU** again and select a channel that you wish to delete by **▼** or **▲** key.
- 2: Press **MENU** or **A/BESC** key to continue or exit.
This setting is to delete programmed memory channels.
The channels won't be recalled once they are deleted.



FUNCTION MENU SETUP

ALINCO

[MENU 24] “SCAN ADD1” Add CH to the scan list 1

- 1: Select SCAN ADD1 in the MENU list. Press **MENU** again and select SCAN ADD1 using **▼** or **▲** key.
Select ON to add a channel to the Scan list 1. There are 2 scan lists available. If the second list is preferable, go to menu [25].
Select OFF to skip function.
- 2: Press **MENU** or **A/BESC** key to continue or exit.



[MENU 25] “SCAN ADD2” Add CH to the scan list 2

- 1: Select SCAN ADD2 in the MENU list. Press **MENU** again and select SCAN ADD2 using **▼** or **▲** key.
Select ON to add a channel to the Scan list 2. There are 2 scan lists available. If the first list is preferable, go to menu[24].
Select OFF to skip function.
- 2: Press **MENU** or **A/BESC** key to continue or exit.



FUNCTION MENU SETUP

[MENU 26] "SCAN LIST" Scan list selection

1: Select SCAN LIST in the MENU list. Press **MENU** again and select parameter using **▼** or **▲** key.

Select ALL to scan both lists, LIST1 or LIST 2 to scan selected list only.

All: Scan All Scan list.

LIST1: Scan only Scan list1.

LIST2: Scan only Scan lis2.

2: Press **MENU** or **A/BESC** key to continue or exit.



[MENU 27] "SCAN LIST1" Review the list 1

1: Select SCANLIST1 in the MENU list. Press **MENU** again and press **▼** or **▲** key.

The channel numbers stored in list 1 will be displayed.

2: Press **MENU** to confirm or **A/BESC** key to continue or exit.

No setting is possible, just review programmed channels in the list 1.



FUNCTION MENU SETUP

ALINCO

[MENU 28] "SCAN LIST2" Check the scan list 2

1: Select SCANLIST2 in the MENU list. Press **MENU** again and press **▼** or **▲** key. The channel numbers stored in list 2 will be displayed.

2: Press **MENU** to confirm or **A/BESC** key to continue or exit.

No setting is possible, just review programmed channels in the list 2.



[MENU 29] "SCAN MODE" Scan mode

1: Select SCAN MODE in the MENU list. Press **MENU** again and use **▼** or **▲** key to select parameter.

STOP: Stops scanning and doesn't resume

TIME OUT: Resumes scanning after elapsing 5 seconds of RX

CARRIER : Resumes scanning after elapsing 5 seconds from the end of traffic

2: Press **MENU** to confirm or **A/BESC** key to continue or exit.

※ TIMEOUT is a TIMED scan, CARRIER is a BUSY scan.



FUNCTION MENU SETUP

[MENU 30] to [MENU33] assign functions listed below to PF1/PF2 keys of short and long press operations. Take a closer look to the list and plan assignments in advance.

[MENU 30] “PF1 SHORT” PF1 key function - short press

- 1: Select PF1 SHORT in the MENU list. Press **MENU** again and press **▼** or **▲** key to select a function to assign to PF1 key for pressing down the key once and release.
- 2: Press **MENU** to confirm or **A/BESC** key to continue or exit.

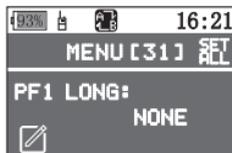
Available parameters are: below and common to [MENU 30/31/32/33]

NONE (disable) , SCAN LIST, 1750Hz Tone Burst, ALERT, MONITOR and FLASHLIGHT



[MENU 31] “PF1 LONG” PF1 key function - long press

- 1: Select PF1 LONG in the MENU list. Press **MENU** again and press **▼** or **▲** key to select a function to assign to PF1 key for pressing and holding the key until it enters to the assigned function.
- 2: Press **MENU** to confirm or **A/BESC** key to continue or exit.



FUNCTION MENU SETUP

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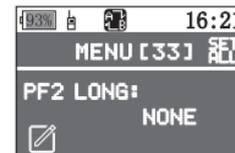
[MENU 32] “PF2 SHORT” PF2 key function - short press

- 1: Select PF2 SHORT in the MENU list. Press **MENU** again and press **▼** or **▲** key to select a function to assign to PF2 key for pressing down the key once and release.
- 2: Press **MENU** to confirm or **A/BESC** key to continue or exit.



[MENU 33] “PF2 LONG” PF2 key function - long press

- 1: Select PF2 LONG in the MENU list. Press **MENU** again and press **▼** or **▲** key to select a function to assign to PF1 key for pressing and holding the key until it enters to the assigned function.
- 2: Press **MENU** to confirm or **A/BESC** key to continue or exit.



FUNCTION MENU SETUP

[MENU 34] "KEY LOCK" Setting

- 1: Select KEY LOCK in the MENU list. Press **MENU** again and select AUTO using **▼** or **▲** key. Select OFF to disable key-lock.
- 2: Press **MENU** or **A/BESC** key to continue or exit.

KEY LOCK in MENU34 can be set to AUTO or OFF. If it is set to AUTO, the KEY LOCK will be activated automatically after about 15 seconds.

To activate the KEY LOCK manually, press and hold the **# F0-1** key, the letters "KL" will be displayed to the left of the time, and the KEY LOCK will be activated. To release the KEY LOCK, press and hold the **# F0-1** key.



[MENU 35] "BATT LEVEL" Battery Indicator Setting

- 1: Select BATT LEVEL in the MENU list. Press **MENU** again and select parameter using **▼** or **▲** key.
- 2: Press **MENU** or **A/BESC** key to continue or exit.

Available parameters are:

NORMAL= lines in the battery icon / VOLTAGE=current battery voltage
PERCENT=relative remaining battery power in %.



FUNCTION MENU SETUP

ALINCO

[MENU 36] "BACKLIGHT" Display illumination

- 1: Select BACKLIGHT in the MENU list. Press **MENU** again and select parameter using **▼** or **▲** key.
Available duration times are 5sec / 10sec / 20sec / 1min / 2min / 5min.
ON is selectable and stays lit when the radio is in use, but consumes battery quickly.
- 2: Press **MENU** or **A/BESC** key to continue or exit.



[MENU 37] "BEEP TONE" Setting

- 1: Select BEEP TONE in the MENU list. Press **MENU** again and select OFF by **▼** or **▲** key to disable all beep tones that sounds during the key operations.
- 2: Press **MENU** or **A/BESC** key to continue or exit.



FUNCTION MENU SETUP

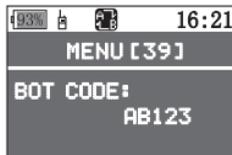
[MENU 38] "ALERT MODE" Setting

1. Press the **MENU** to enter the menu list.
2. Press the **▼** or **▲** to select to "ALERT MODE" setting and then press the **MENU** to confirm to enter the sub-menu.
3. Press the **▼** or **▲** to define the needed alert mode and then press the **MENU** to confirm the operations. (TONE/TX15s Selectable)
4. Press the **A/BESC** to return to the main page.
(Press the pre-defined alert side to define/enable/disable this function.)
Available parameters are:
TONE: Sounds alert tone when alert is pressed.
TX 15s: Transmits Alert signal and tone 15 seconds when alert is pressed.



[MENU 39] "BOT CODE" View DTMF code BOT

- 1: Select BOT CODE in the MENU list. Press **MENU** again to see the DTMF codes programmed by CPS software. Manual programming is not available. See [MENU 40] also when EOT code is programmed. To transmit the tones, refer to [MENU 41] PTT ID.
- 2: Press **MENU** or **A/BESC** key to continue or exit.
See CPS instruction for programming. BOT is the tones transmitted when PTT is pressed.

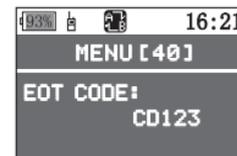


FUNCTION MENU SETUP

ALINCO

[MENU 40] "EOT CODE" View DTMF codes EOT

- 1: Select EOT CODE in the MENU list. Press **MENU** again to see the DTMF codes programmed by CPS software. Manual programming is not available. See [MENU 39] also when BOT code is programmed. To transmit the tones, refer to [MENU 41] PTT ID.
- 2: Press **MENU** or **A/BESC** key to continue or exit.
See CPS instruction for programming. EOT is the tones transmitted when PTT is released.



[MENU 41] "PTT ID" DTMF code TX Setting

- 1: Select PTT ID in the MENU list. Press **MENU** again and select parameter using **▼** or **▲** key. Select OFF to disable.
- 2: Press **MENU** or **A/BESC** key to continue or exit.
Available parameters are:
BOT (only) : Transmits BOT tones when PTT is pressed.
EOT (only) : Transmits EOT tones when PTT is released.
BOT EOT (Both BOT/EOT) : Transmits both when PTT is pressed and released.
Repeaters may require DTMF tones to enable special functions.



FUNCTION MENU SETUP

[MENU 42] "DTMF ST" DTMF sending tone monitoring

- 1: Select DTMF ST in the MENU list. Press **MENU** again and select ON to sound sending tones by **▼** or **▲** key. Select OFF to mute.
- 2: Press **MENU** or **A/BESC** key to continue or exit.



[MENU 43] "RX MODE" Dualband RX/TX setting

- 1: Select RX MODE in the MENU list. Press **MENU** again and select parameter by **▼** or **▲** key.
- 2: Press **MENU** or **A/BESC** key to continue or exit.

Available parameters are as follows:

- MAIN ONLY: Transmits and receives in MAIN band only.
- MAIN TX DUAL RX: Transmits on MAIN only, receives both MAIN and SUB
- MAIN TX SEC RX: Transmits on MAIN, receives SUB only
- DUAL RX RESPOND: Transmits and receives in both bands.



FUNCTION MENU SETUP

ALINCO

When [MAIN VFO] is selected in MENU48, frequency-display switches up and down when a signal is received at the SUB side. When the signal is gone, the display turns back after 5 seconds. It receives SUB frequency signal ONLY when the SUB frequency is displayed at upper (MAIN) side.

When [A/B VFO] is selected, appears [T] icon and S-meter on the SUB display when a signal is received at SUB side. When the signal is gone, the [T] icon will disappear after 5 seconds. It receives SUB frequency signal only when the [T] icon is lit.

[MENU 44] "VOX" Voice-activated TX

- 1: Select VOX in the MENU list. Press **MENU** again and select parameter using **▼** or **▲** key. Select OFF to disable. Available VOX levels are 1 to 10, and 1 is most sensitive.
- 2: Press **MENU** or **A/BESC** key to continue or exit.



Note that surrounding noise may activate transmission, and initial part of your speech may be missing as it takes a fraction of second after it detects voice and starts TX. If want to stop VOX while the VOX is activated and transmitted, press PTT to stop transmitting.

FUNCTION MENU SETUP

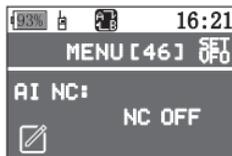
☎ [MENU 45] “MIC GAIN” Microphone sensitivity

- 1: Select MIC GAIN in the MENU list. Press **MENU** again and select parameter using **▼** or **▲** key.
Available MIC GAIN levels are 1 to 5, and 5 is most sensitive.
- 2: Press **MENU** or **A/BESC** key to continue or exit.
Select higher level when the user speaks in low voice.



☎ [MENU 46] “AI NC” AI Intelligent Noise Canceller

- 1: Select AI NC in the MENU list. Press **MENU** again and select NC ON by **▼** or **▲** key.
Select NC OFF to disable.
- 2: Press **MENU** or **A/BESC** key to continue or exit.
AI intelligent Noise Canceller effectively reduces back-noise that your microphone picks up. Due to audio processing, sounds like music and animals may not be received correctly.



FUNCTION MENU SETUP

ALINCO

☎ [MENU 47] “TIME” Clock setting

- 1: Select TIME in the MENU list. Press **MENU** again and use numeric keys to enter the time in 24-hour system.
After 4 digits are input, press **MENU**. Observe that the clock on upper right shows the same time.
- 2: Use **▼** / **▲** key to continue or press **A/BESC** key to exit.
The clock is not so accurate as GPS-driven clock.



☎ [MENU 48] “UI MODE” Main/Sub display size

- 1: Select UI MODE in the MENU list. Press **MENU** again and select parameter using **▼** or **▲** key.
- 2: Press **MENU** or **A/BESC** key to continue or exit.
A/B VFO: When switch to VFO, the size of the main and sub frequency displays will be the same.
MAIN VFO: In the case of Main VFO, the main frequency display will be larger than the sub frequency display when in VFO.



FUNCTION MENU SETUP

[MENU 49] "RESET" operation

1: Select RESET in the MENU list. Press **MENU** again and select parameter using **▼** or **▲** key.
Press **MENU** key again. It turns on/off automatically to perform reset.

2: Press **MENU** or **A/B ESC** key to continue or exit.

VFO: Functions and settings will return to default condition. Memory ch data remains.

ALL: All functions, settings and memories will be reset.



Note: RESET may not be available to landmobile version of DJ-W70 due to dealer programming.

[MENU 50] "INFO" Transceiver Information

1: Select INFO in the MENU list. Press **MENU** again to display firmware version (FWV).

2: Press **MENU** or **A/B ESC** key to resume or exit.

This is to display the information only.



SHORTCUT FUNCTION

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2 ways for Shortcut operation / Important

There are 2 ways to access to frequently-used settings and features. Press and hold a numeric key, or press **# F₀₋₉** key then press a numeric key. Characters in orange on numeric keys refer to shortcut function. For example, to listen to FM radio, press and hold **2_{FM}** key, or Press **# F₀₋₉** key then press **2_{FM}** key. Repeat the same or use **A/B ESC** key to go back to the Stand-by state. Following explains "Press and Hold" operations only. Shortcuts won't work during scanning.

"A/B" BAND / Channel switching

Press and hold the **A/B ESC** key to switch A/B bands in VFO, channels in memory mode.

"BAND" switching

In VFO mode, press and hold **I BAND** key to switch operating bands. It will switch to VFO mode first when in the memory mode.

"FM" FM radio

Press and hold **2_{FM}** key to listen to FM radio stations. Press and hold *** SCAN** key to start AUTO SCAN entire 76-108MHz band. It will return to receive the first radio station found automatically

◦ SHORTCUT FUNCTION

when scan is completed. Press  /  key to switch stations. To scan manually, press  **SCAN** key.

Repeat the same or press  to return to stand-by state.

Note : When receive FM signal while receive WFM signal, the display changes to FM receive display, and once finish FM receiving, return to WFM receiving display automatic.

(((“V/M” VFO/Memory mode Switching

Press and hold  key to switch between VFO (frequency) and Memory channel mode.

(((“REV” reverse up/downlink frequencies

Pressing and holding  key to reverse TX and RX frequencies in repeater system. SHIFT/OFFSET settings are required in advance. This is to check uplink frequency if you can talk near-by users direct. “R” is displayed while in reverse. Repeat the same to exit.

(((“HOME” Recall HOME (Call) channel

Pressing and holding  key to recall HOME channel (CALL ch) set in advance at [MENU21]. To move to other memory channels, use  /  keys or press and hold  key to switch to VFO mode.

◦ SHORTCUT FUNCTION

(((“M/S” memory channel

Pressing and holding  key to shortcut to [MENU 19] to store memory channels.

Refer to page 32 for operations. Follow the same instruction to store data and return to stand-by state.

(((“VOX” operation

VOX setting is required in advance. Refer to [MENU 44] for setting.

Pressing and holding  key to activate VOX. Repeat the same to deactivate.

VOX icon appears on the display while in the VOX mode.

If want to stop VOX while the VOX is activated and transmitted, press PTT to stop transmitting.

(((“SQL” squelch setting

Press and hold  key to shortcut to [MENU01] RX SQL. Use  /  key or numeric key to set level. Use  or  key to exit to stand-by state.

(((“H/L” Output power setting

Everytime you press and hold  key, the TX power switches among Low/Mid/High.

Observe the H/M/L indicator to confirm.

◦ SHORTCUT FUNCTION

📡 “FC” frequency counting

Press and hold **O_{FC}** key to enter freq. counter function. The display changes and starts scanning to search for strong RF signal around. When detects a strong signal, it displays frequency in MHz. Use **A/BESC** key to exit.

NOTE: Frequency counter detects RF signal of strength (more than -30dBm) , Mode is FM. This function is for reference purposes and is not accurate and reliable as an instrument.

📡 “SCAN” CTCSS/DCS tone scanning

Press **#_{F0-m}** and ***_{SCAN}** key to CTCSS/DCS scanning, The CTCSS/DCS scan can be performed only at the same frequency. When scan starts, display changes during the scan. Scan will stop when a matching tone is detected. Use **A/BESC** key to exit to stand-by state.

Press **MENU** key to save the tone. Scan won't stop when the matching tone is not found.

📡 “SCAN” scanning

Long press ***_{SCAN}** to enable the scan function.

Scan in VFO mode: Long press ***_{SCAN}** to enable frequency scanning in the current band, and

◦ SHORTCUT FUNCTION

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press **▼** or **▲** to change the scanning direction.

Press **I_{BAND}** key to select scanning range as below. Use **MENU** or **A/BESC** to exit the scanning function.

SCAN_1M: ±1MHz

SCAN_3M: ±3MHz

SCAN_5M: ±5MHz

SCAN_10M: ±10MHz

SCAN_BAND: current frequency range

Scan in mode: Long press ***_{SCAN}** to enable scanning. Press and hold again to switch the scan list S1/S2/SA, and press **▼** or **▲** during scanning to change the scanning direction. Press the **MENU** or **A/BESC** key to exit scan function.

You must program memory ch and scan lists in advance to operate as explained.

📡 “KEY LOCK” Key lock

Long press **#_{F0-m}** to enable or disable the keypad lock function.

KL appears on the screen while keys are locked.

• SPECIFICATIONS

General

	DJ-W70	DJ-W70HT	DJ-W70HE
RX Frequency Coverage	FM: 136-174MHz / 400-470MHz WFM: 76-108MHz / AM 108-136MHz		
TX Frequency Coverage	FM: 136-174MHz	FM: 144-148MHz / 420-450MHz	FM: 144-146MHz / 430-440MHz
Working temperature	-20°C ~ +55°C		
Operation voltage	DC 7.4V (Li-Ion battery pack EBP-124)		
Dimension	129.8mm*61.1mm*42.62mm (projection/antenna excluded)		
Weight	Approx 310g (Including antenna and battery)		
Antenna impedance	50Ω		

• SPECIFICATIONS

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Transmission

Carrier frequency tolerance	±2.5ppm
Carrier output power (Approx. MAX.)	DJ-W70 : VHF · UHF 1W/5W/10W DJ-W70HT · DJ-W70HE:VHF · UHF 1W/5W/8W
Modulation limiting	≤2.5@12.5KHz; ≤5@25KHz
Audio distortion	≤3%
Modulation characteristic	+3dB ~ -3dB
Adjacent channel power	≥65dB
Spurious radiation	≤7.5μV

Receiver

Occupied bandwidth	≤16KHz	Reference sensitivity	<0.2μV
Audio distortion	≤3%	Audio Response	+2dB ~ -10dB
Co-channel suppression	≥-8dB	Adjacent channel selectivity	≥60dB
Intermodulation rejection	≥55dB	Spurious response rejection	≥70dB
Blocking characteristic	≥85dB		

• Troubleshooting

Problem	Corrective Action
No power	<ul style="list-style-type: none"> The battery may be exhausting. Recharge or replace the battery. The battery may not be installed correctly. Remove the battery and install it again.
Battery lasts shortly after charging	<ul style="list-style-type: none"> The battery life is finished. Replace the battery pack with a new one.
Can't communication with other stations	<ul style="list-style-type: none"> Double check the frequency and CTCSS/DCS is same as other stations Out of communication range, double check whether it is within the effective range of other radios.
Other (non-group member) voices appear in the channel	<ul style="list-style-type: none"> Incorrect CTCSS/DCS setting. Check the signaling tones and settings.

• APPENDIX

📡 50 Tone CTCSS Frequency Chart

67.0	85.4	107.2	136.5	165.5	186.2	210.7	254.1
69.3	88.5	110.9	141.3	167.9	189.9	218.1	(Hz)
71.9	91.5	114.8	146.2	171.3	192.8	225.7	
74.4	94.8	118.8	151.4	173.8	196.6	229.1	
77.0	97.4	123.0	156.7	177.3	199.5	233.6	
79.7	100.0	127.3	159.8	179.9	203.5	241.8	
82.5	103.5	131.8	162.2	183.5	206.5	250.3	

APPENDIX

104 DCS chart

023	065	132	205	255	331	413	465	612	731
025	071	134	212	261	332	423	466	624	732
026	072	143	223	263	343	431	503	627	734
031	073	145	225	265	346	432	506	631	743
032	074	152	226	266	351	445	516	632	754
036	114	155	243	271	356	446	523	654	
043	115	156	244	274	364	452	526	662	
047	116	162	245	306	365	454	532	664	
051	122	165	246	311	371	455	546	703	
053	125	172	251	315	411	462	565	712	
054	131	174	252	325	412	464	606	723	

REFERENCE

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NOAA FM Weather Channel Frequencies for DJ-W70HT and DJ-W70E users

Weather Channel (WX)	Frequency in MHz
1	162.550
2	162.400
3	162.475
4	162.425
5	162.450
6	162.500
7	162.525
8	161.650
9	161.775
10	163.275

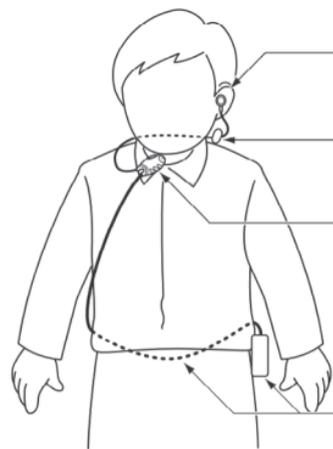
NOAA Weather Radio (NWR) is an automated 24hr network of VHF FM weather radio stations in US that broadcast weather information from National Weather Service offices.

The channel numbers herein are assigned NOAA weather channel for marine radios.

Use memory channel function to store your local NOAA frequency.

Press and hold the ****2 FM**** button to enter FM radio mode. To access the NOAA Weather channel, press and hold the ****2 FM**** button again.

◦ RECOMMENDED INSTALLATION OF HEADSETS



Earphones

Use a clip to fix with collar.

Clip the PTT unit closer to your mouth.

Carry the radio on the side or the back of your body,
and the cable should go around the back as shown.

Clamp the excessive length of cable at your waist

[MEMO]

[MEMO]