# ALINCO

PRIVATE MOBILE RADIO
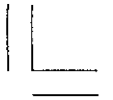
# DJ-V446

## Instruction Manual

Thank you for purchasing your new Alinco transceiver.
This instruction manual contains important safety
and operating instructions. Please read this manual
carefully before using the product and keep it for
future reference.

ALINCO, INC.

# NOTICE / Compliance Information Statement

**C€** Conformity Information
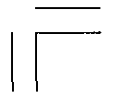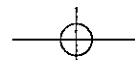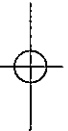
In case the unit you have purchased is marked with a CE symbol, a copy of relative conformity certificate or document can be reviewed at http://www.alinco.com/usa.html.

DJ-V446: UHF FM Transceiver 446.00625~446.09375MHz (PMR446/8channels)

**C€0336 ⊕**

This device is authorized for use in all EU and EFTA member states.

# 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 to a possible hazard that may cause loss of property or injure the user if the warning is disregarded. |

| ⚠ | Alert symbol. An explanation is given. |
| --- | --- |
| ❶ | Warning symbol. An explanation is given. |
| 🚫 | Instruction symbol. An explanation is given. |

## ⚠ Alert

### ■ Environment and condition of use

🚫 Do not drive while handling the radio for your safety. It is recommended that you check local traffic regulations regarding the use of radio equipment while driving. Some countries prohibit the operation of transceiver while driving.

🚫 Do not use this product in close proximity to other electronic devices, especially medical ones. It may cause interference to those devices.

❶ Keep the product 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.

❶ The manufacturer declines any responsibilities against loss of life and/or 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).

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

❶ 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.

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

### ■ Handling this product

❶ 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 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.

❶ 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.

### ■ About power supply

🚫 Use only appropriate, reliable power supply of correct voltage and capacity.

🚫 Do not connect cables in reverse polarity. It may result in electric shock, fire and/or malfunction.

🚫 Do not plug multiple devices including the power supply into a single wall outlet. It may result in overheating and/or fire.

Do not handle a power supply with a wet hand. It may result in electric shock.

Securely plug the power supply to the wall outlet. Insecure installation may result in short-circuiting, electronic shock and/or fire.

Do not plug the power supply into the wall outlet if the contacts are dirty. Short-circuit and/or overheating may result in fire, electric shock and/or damage to the product.

Do not modify or remove fuse-assembly from the DC cable. It may result in fire, electric shock and/or damage to the product.

■ Cigar-lighter cable
Do not use the cable at any other than the specified voltage. It may result in electric shock, fire and/or malfunction.

Do not handle cigar cable with a wet hand. It may result in electric shock.

■ 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.

⚠ Caution

■ 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.

■ About power supply
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 60950-1.

■ Ligntning

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.

■ Limited Power Source

Adhering to the requirement of the following warning ensures compliance of the transceiver with the safety standard for information technology equipment, EN 60950. Please note that the transceiver enclosure only provides mechanical protection of its internal parts; it will not contain a fire within the device if the fire starts under certain fault conditions. Alinco will not take responsibility for any fire hazard associated with powering the transceiver or charging its batteries using a power source which does not belong to the limited power sources in the meaning of EN 60950-1. Excluded from possible use with the transceiver are most car cigarette lighters and some DC (AC/DC) power supplies. Make sure that the power supply used with the transceiver is a limited power source.

# 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 TO LEARN ALL THE FUNCTIONS THE PRODUCT OFFERS. WE MADE EVERY ATTEMPT TO WRITE THIS MANUAL TO BE AS COMPREHENSIVE AND EASY TO UNDERSTAND AS POSSIBLE. 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 RISK NOT UNDERSTANDING THE COMPLETE EXPLANATION OF THE FUNCTION.

# Contents

Contents

## 1.   Features

This transceiver has the following main features.

■ High-grade waterproof compatible to IPX7 * (submersible 1m/3feet for 30min.) and rugged body

■ 39 CTCSS tone squelch

■ Time-Out-Timer

■ Alphanumeric display

■ 200 memory channels

■ Refresh function for rechargeable battery reconditioning

■ Cable Cloning

* The IEC 60529/IPX7 is an European system of test specification standards for classifying the degrees of protection provided by the enclosures of electrical equipment. An IPX7 designation means that the unit withstands immersion in one meter (approx 3ft) of still water for up to 30 minutes.

Please understand that this product is not IPX7 COMPLIANT but compatible; we have tested and approved by ourselves that this product could resist against water as per IPX7 requirement during the engineering stage, however, we don't test the water-proof grade of this product one by one before shipment at the factory. Never immerse the unit uselessly under the water nor wash it with running water. V/UHF signal does not propagate in water. If the unit is dropped in water, please pick it up immediately and wipe with a clean dry cloth.

The factory guarantees declared water-proof grade on this product for 1 year provided all the jack covers are properly and securely closed. A tiny obstacle such as even dust or a hair caught between the jack and cover could lead the water to penetrate inside the product.

### 1.1   Accessories

• Ni-MH battery pack EBP-65 (7.2V 700mAh)

• EDC-147 (AC 230V) or EDC-148 (AC 230V U.K.plug) wall charger

• Belt clip

• Hand strap

• Instruction manual

* Accessories may differ depending on the version you have purchased.

Please contact your local dealer for details of standard accessories and the warranty-policy.

# 2. Accessories

## 2.1 Installations

### 2.1.1 Hand Strap

Attach the hand strap as shown. There are two ways to attach it.

Hand strap
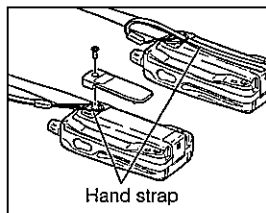
### 2.1.2 Belt Clip

#### ■ Attaching the Belt Clip

1. Put the belt clip on the back of the unit, and turn the screw clockwise until it stops.

2. Confirm that the belt clip is securely attached.
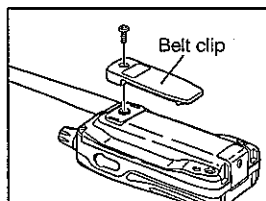
Belt clip

#### ■ Removing the Belt Clip

Turn the screw counter-clockwise to remove the belt clip.

### 2.1.3 Battery Pack

For the specifications and the charging procedures, please refer to "Battery Packs"(page 43) and "Using the Chargers"(page 44).

#### ■ Attaching the Battery Pack

Align the catches on the battery pack with the grooves on the unit, and close the latch until it clicks.

Catch

Latch

Groove
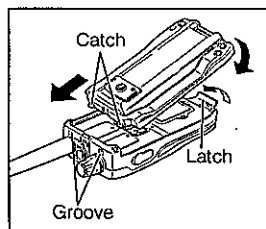
#### ■ Removing the Battery Pack

Push the latch in the direction of the arrow, and pull out the battery pack.
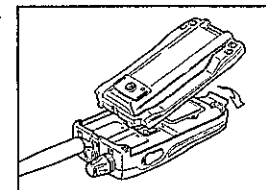
⚠ Caution
- The battery pack isn't fully charged when shipped. It must be charged before use.
- Charging should be conducted in a temperature range of 0°C to +40°C (+32°F to +104°F).
- Don't modify, dismantle, incinerate or immerse the battery pack in the water as this can be dangerous.
- Never short-circuit the battery pack terminals, as this can cause damage to the equipment or lead to heating of the battery which may cause burns.
- Unnecessary prolonged charging (overcharging) can deteriorate battery performance.
- The battery pack should be stored in a dry place where temperature is in -10°C to +45°C (-14°F to +113°F) 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.
- Li-ion battery packs can't be charged using DC-jack on the unit (Only Ni-MH battery packs can be charged).
- 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.

**2**

### ■ Charging the Battery Pack Using DC-Jack on the Unit

The unit can charge the EBP-65 and EBP-66 optional Ni-MH battery packs by supplying DC power through the DC-jack on the unit using EDC-147/148 wall chargers or an optional DC power supply (DC 12V–DC 16V, 1A or more: IEC/EN 60950-1 compliant). The charge can be performed even the unit is left turned on.

1. Attach the battery pack by referring to "Battery Pack" (page 12).

2. Connect the AC adapter plug to the DC-jack on the unit then connect the charger's adapter to the wall outlet.
   * AC adapter may look different.

> AC adapter*
>
> AC adapter plug

3. Turn on the unit and set the battery charge parameters. Please refer to "Set Mode" procedure (page 31) then:
   * "Battery Charge Function" (page 36) Select CHG-ON.
   * "Battery Type Setting" (page 36) Select BATT-NI.

4. After completing the settings, a flashing ▇ appears on the display. Make sure the icon is flashing then turn off the unit. It takes about 10 hours/30hours for EBP-65/66 respectively to complete the charge.
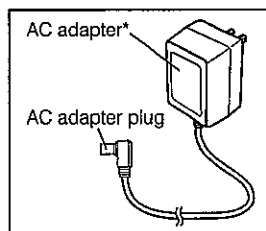
> **IMPORTANT NOTE:**
> While this function is activated without attaching a battery pack or the remaining battery level is below the usable range, the unit turns on by just connecting the DC source such as an adapter or a DC cable (without operating the power key).

> **NOTE:**
> • Please read the general safety instructions included in the optional accessories to correctly and safely use them.
> • EDC-147/148 can't be used as the adapter for operation. These adapters are for charging purposes only.
> • Chargers can't perform the correct charge when the AC voltage is unstable.
> • ▇ flashes even EBP-65/66 aren't attached. To avoid short-circuit, never activate this function when the pack isn't attached to the unit.
> • Li-ion battery packs can't be charged in this way.

### 2.1.4 Prevent Short Circuiting the Battery Pack

Be extra cautious when carrying the rechargeable battery pack; short circuiting will produce surge current possibly resulting in fire.

**2**



DON'T carry with metals of any type, e.g chains.

DON'T carry the battery pack inside bags made of conductive materials.

DON'T place in the proximity of metals or conductive, e.g. nails, chains.

Do enclose inside a non-conductive enclosure. (bags or handkerchief made only of non-conductive material)

Do protect by spreading a non-conductive sheet on a flat surface.
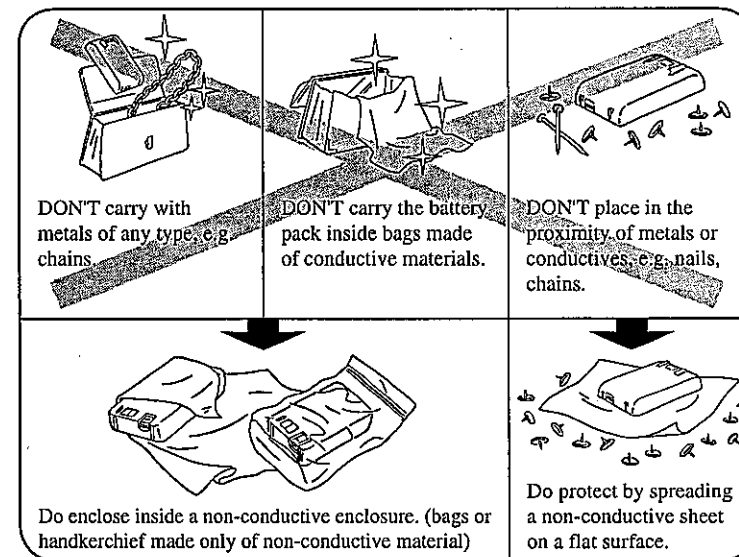
### 2.1.5  Dry Cell Case (optional)

An EDH-34 is available for operation with using AA cells.

Lift up the catches ① on the top of the case to remove the cover.
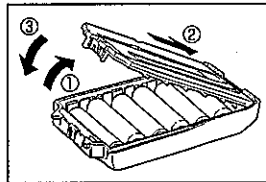
Place 6 AA cells, then close the cover in order of ② then ③. Be sure that the cover is securely closed.
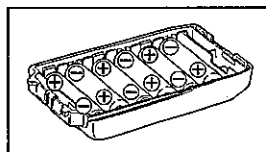
> **⚠ Caution**
> * This dry cell case isn't water-proof.
> * Be extra-cautious to the polarity of the cells (+)/(-). Misplacing cells may result in leak, fire or explosion.
> * Use new batteries of the same type and brand when placing them.
> * Use of rechargeable cells is prohibited and the manufacturer declines any responsibilities for damages/injuries that may cause to the users and their properties.
> * It is recommended to clean the battery contacting terminals with a clean dry cloth from time to time.
> * Risk of explosion if batteries are replaced by an incorrect type.
> * Batteries are recyclable. Please check the local rules for proper recycle/disposal in your area.

### 2.1.6  Battery-Level Icon

During the operation, a black battery icon indicates that the battery-level is in usable range. When it turns to empty, please charge the pack or replace the cells with new ones.
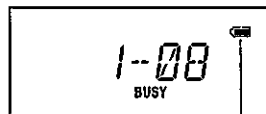
Battery-level icon

▭ The battery is in usable condition.
▭ Battery-level is low. Replace or charge the pack.

## 3.  Names and Operations of Parts

■ Top and Front
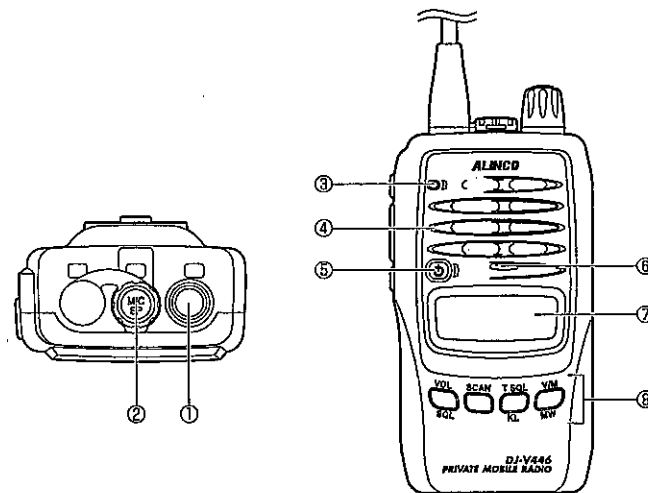
| ① | Dial | Rotate the dial to select the channel of operation, memory channel, tone number, Set mode settings, and the characters for name-tags. |
|---|---|---|
| ② | Microphone/ Speaker jack | For an optional speaker/Mic connection. Securely close the cover for water-proof while the accessory isn't in use. |
| ③ | TX/RX lamp | Lights green when the squelch is unmuted. Lights red during transmission. |
| ④ | Speaker | A speaker is built in. |
| ⑤ | Power key | Press the ⏻ key down for approximately one second to turn on/off the unit. |
| ⑥ | Microphone | Speak into the microphone from a distance of about 5cm (2"). |
| ⑦ | Display (LCD) | Refer to "Display" (page 20). |
| ⑧ | Keypad | Refer to "Keypad" (page 19). |

## ■ Side

Antenna side                    Dial side

| ⑨ | Antenna | whip antenna (Not removable) |
|---|---|---|
| ⑩ | FUNC key | The FUNC key is used in combination with the other keys to access the various functions of the unit. To enter the Set mode to set operating parameters, press the FUNC key continuously for about 2 seconds. |
| ⑪ | PTT key | Press the PTT key to transmit, release to receive. |
| ⑫ | MONI key | When the MONI key is pressed, the squelch unmutes regardless of the Tone squelch setting. Pressing the MONI key after pressing the FUNC key illuminates display for about 5 seconds. Pressing the MONI key while pressing the PTT key transmits an alert-tone or a tone-burst signal. |
| ⑬ | DC-IN jack | Connect an external power source of DC 7.0V~DC 16.0V at 2A or more. An optional EDC-36 cigar-cable is available for mobile operation. EBP-65/66 packs can be charged using this jack (page 14). |

## ■ Keypad

DJ-V446
PRIVATE MOBILE RADIO
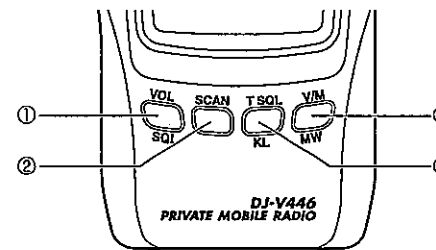
| No. | Without pressing the FUNC key. | While ⊡ appears after the FUNC key is pressed. |
|---|---|---|
| ① | Audio level adjustment. | SQL (Squelch) adjustment |
| ② | Start/Stop scanning. | (Not in use) |
| ③ | Switches between the Channel and Memory mode. | Memory programming. |
| ④ | Tone squelch setting. | Key/channel lock setting. |

## 3.2 Display (LCD)



| ① | **F** | Appears when the FUNC key is pressed. |
|---|---|---|
| ② | 🔊 | Displayed when the BELL function is on. |
| ③ | O━ | Displayed when the channel or the keypad is locked. |
| ④ | **A** | Appears when Auto-Power-Off function is activated. |
| ⑤ | ▬ / ▭ | Indicates battery-level. The black icon flashes when the battery charge function is on. |
| ⑥ | ■■■■■■ | Indicates the receiving signal (S-meter) and transmission output signal. |
| ⑦ | **BUSY** | Appears when the squelch is unmuted. |
| ⑧ | **ATT** | Appears when the attenuator is activated. |
| ⑨ | 𝟠𝟠𝟠𝟠𝟠𝟠s | Displays the operating channels, tone-squelch number, name-tags and parameters in the setting mode. |
| ⑩ | 188 | Displays the memory channel No. |
| ⑪ | **M** | Displayed when in the Memory mode. |

# 4. Basic Operation

## 4.1 Turning On the Power

Hold the ⊚ key down for a second.

To turn off the power, hold the ⊚ key down until the display turns off.

*The number on the left is channel, the right is tone number.



## 4.2 Adjusting the Audio Output (Volume)

• There are 21 audio output levels (00~20).
• The default setting is level 00. There is no audio output at this status.
1. Press the 🔊 key. The level is displayed on the LCD.

2. Pressing the MONI key, rotate the dial to increase or decrease the level. As the setting value increases, the audio becomes louder.
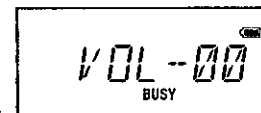


3. Press any key except for the MONI key or just leave it for 5 seconds to automatically complete the setting.

## 4.3 Adjusting the Squelch

Squelch is a function that eliminates the noise when no signals are being received.
• There are 10 squelch levels (00~10).
• The default setting is Level 00.
1. Press the FUNC key, and while **F** is displayed on the LCD, press the 🔊 key.

2. Rotate the dial clockwise until the TX/RX lamp (green) turns off and **BUSY** icon disappears from the display. Set to the lowest level that **BUSY** disappears.

3. Press any key except for the MONI key or just leave it for 5 seconds to automatically complete the setting.

> **NOTE:**
> To set the squelch level by monitoring the white noise, press the ⬤ key twice to display flashing OF, press the FUNC key twice then press the ⬤ key. Adjust to the lowest level that the noise is gone. Press the ⬤ key to activate the tone squelch.

## 4.4 Setting the Channel in the Channel Mode

### 4.4.1 Setting the Channel Number

**■ Selecting the Operating Channel**

Rotate the dial clockwise to increase the channel number, or counter-clockwise to decrease.

## 4.5 Memory Mode

This mode allows recalling and operating the preprogrammed setting in the memory channels. This unit provides up to 200 memory channels.

### 4.5.1 How to Program Memory Channel(s)

1. Set a channel and operating parameters in the channel mode to be programmed to a memory channel. Programmable parameters are explained later. Press the FUNC key. ⬛ appears on the display.

2. Press the ⬤ key while ⬛ is displayed. An empty memory channel is shown with a flashing **M** and a flashing channel number. When only **M** is flashing, the memory channel is already programmed.

3. Rotate the dial to select the desired memory channel number. You may choose the programmed channel if you wish to overwrite new parameters.

4. By pressing the ⬤ key again, a beep sounds and programming is completed.

### 4.5.2 Recalling a Memory Channel

1. Select the Memory mode by pressing the ⬤ key. **M** and channel number appear on the display to indicate that the unit is in the Memory mode.
Repeat to switch between the Memory and channel modes.

2. Select a memory channel.
Rotating the main dial will increase or decrease a memory channel number.

### 4.5.3 Deleting a Memory Channel

1. Select the Memory mode by pressing the ⬤ key.

2. Rotate the dial to select the memory channel No. that you wish to delete.

3. Press the FUNC key, and while ⬛ is displayed on the LCD, press the ⬤ key. A beep sounds, then **M** flashes on the display.

> **NOTE:**
> When **M** is flashing in step 3 (when the memory contents are displayed as is on the display), it is still possible to cancel the operation by pressing the FUNC key, and while ⬛ is displayed on the LCD, press the ⬤ key. After changing channels or modes, this is no longer possible.

### 4.5.4 Programmable Parameters in Memory Channels

The following parameters can be stored in each of the memory channels.
• Channel
• Tone Number
• Skip channel setting
• Busy channel lockout (BCLO)
• Battery save setting
• Clock Shift setting
• Alphanumeric channel tag (Name Tag)
• Attenuator level

## 4.6 Channel Display Mode

This mode is to display the memory channel number only in memory mode operation. Prior to use this mode, please program the memory channel(s).

1. Press the ⓞ key while pressing the ⬤ key until the unit is turned on.

2. Repeat the same sequence to return to the original display indication mode.

```
199
```

3. Please note that in this status the operating parameters are only limited to those programmed in memory and the access to the Setting mode becomes disabled. Go back to the original display indication mode to change the parameters.
• In case Name-Tag is programmed, the alphanumeric characters appear instead of channel numbers (page 27).

**4**
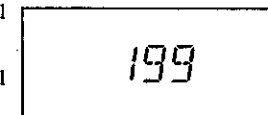
## 4.7 Receiving

1. Turn on the unit.

2. Adjust audio output and squelch levels (page 21).

3. Select the channel that you wish to operate by rotating the dial. When a signal is received on the channel that you selected, **BUSY** and S-meter are displayed on the LCD, then the received signal can be heard. The green RX indicator also lights while receiving.
   - In case **BUSY** and S-meter appear but you can't hear the audio, please be sure if the tone number matches to the receiving signal (page 29).

### 4.7.1   Monitor Function

In case the receiving signal is weak and the audio is intermittently cut off by the squelch, press the MONI key. As long as this key is pressed, the squelch including tone unmutes making the audio easier to hear.
- The squelch is unmuted while the MONI key is pressed, regardless of the squelch level setting.

## 4.8 Transmitting

1. Select the channel and tone-squelch number (page 29) that you wish by rotating the dial.

2. Press the PTT key.
   While transmitting, the red TX indicator lights and ■ ■ ■ ■ ■ is displayed on the LCD.

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.

**IMPORTANT NOTE:**
- To transmit an alert-tone or a tone-burst signal, press the MONI key while holding down the PTT key.
- Speaking too loud, too close or too far from the unit may distort the audio.

# 5.  Useful Functions

## 5.1 Scan Modes

The scan function automatically searches the receiving signals. There are 2 modes for scan-resume condition.
- Busy Scan: The scan stops when a signal is detected, stays until the signal is gone then resumes scanning.
- Timer Scan: The scan stops when a signal is detected, and resumes scanning after 5 seconds regardless of receiving status.

During scanning, the decimal point beside the tone number flashes.

Press any key other than the MONI key to stop scanning.

Scanning starts in the direction of the last dial operation (up or down).

> **NOTE:**
> - Please refer to the Set mode to switch the setting between Timer and Busy scan modes (page 32).
> - Tone-scan (page 26) stops when the tone frequency matches, and it doesn't resume automatically.

**5**

### 5.1.1   Channel-Scan
1. Use the 🔘 key to select the channel mode.

2. Press the 🔘 key to start scanning. The unit scans in accordance with the order of one channel.

3. Rotate the dial clockwise/counter-clockwise to change the scan direction.

4. Press any key other than the MONI key to stop scanning.

### 5.1.2   Memory-Scan
1. Use the 🔘 key to select the Memory mode.

2. Press the 🔘 key to start memory scanning.

3. Rotate the dial clockwise/counter-clockwise to change the scan direction.
   Memory-scan scans all programmed memory channels.

4. Press any key other than the MONI key to stop scanning.

> **NOTE:**
> Please set the squelch level correctly before scanning, even in the tone scanning the normal squelch level adjustment is required to activate this function.

### 5.1.3 Setting Skip Channels

You can select the memory channels that you wish to skip during the memory-scan.

> **NOTE:**
> Skip channels can be set in the Set mode (page 35).

### 5.1.4 Tone-Scan

This function helps you to find the tone frequency in case the tone-squelch tone of the receiving signal is unknown.

1. Press the ⬚ key and then the ⬚ key to scan the tone frequencies (page 29).
   During scanning, the decimal point beside the tone number flashes.
   39 kinds of tone frequencies are scanned in order.
   When the tone frequency matches, scanning stops and you can hear the receiving signal. When the tone matches, the tone-scan stops automatically.
   Repeat the same to resume the scanning.

2. Press any key other than the MONI key to stop tone-scanning if so desire.

## 5.2 Keylock

Press the FUNC key, and while 🄵 is displayed, press the ⬚ key to set the Keylock function on, and repeat the same to quit.
When the Keylock is on, O━ is displayed on the LCD.
When the Keylock is on, other than the following, all operations are blocked.
* PTT      * LAMP     * MONI   * VOL     * SQL      * Tone-burst
* POWER ON/OFF

## 5.3 Alert-Tone and Tone-Burst

### 5.3.1 Alert-Tone

• Alert-tone function is to generate an audible tone and transmit it instead of voice.
• To output the alert-tone, press the MONI key while holding down the PTT key.
  The tone is transmitted as long as the MONI key is pressed.
• The initial setting for the alert-tone frequency is ALT, but this can be changed in the
  Set mode (page 32)

### 5.3.2 Tone-Burst

• Tone-Burst function is to generate an audible tone to access European repeaters.
• To output the tone-burst tone, press the MONI key while holding down the PTT key.
  The tone is transmitted as long as the MONI key is pressed.
• The initial setting for the tone-burst frequency is ALT, but this can be changed in the
  Set mode (page 32).

> **NOTE:**
> The repeater system is not permitted in the PMR446 services. Please use this function
> as a part of Alert-Tone.

## 5.4 Naming Memory Channels

In the Memory mode, it is possible to display up to 6 alphanumeric characters (Name-tag) instead of conventional frequency display.

### 5.4.1 Setting Name-Tag

1. Select the memory channel.

2. Press the ⬚ key continuously for about 2 seconds.

3. [A   ] flashes on the display.

4. Rotate the dial to select a character to be the first digit.

5. Press the ⬚ key to input the next character. The previous character will stop flashing.

6. Repeat the same sequence as necessary.
   Press the ⬚ key during setting to delete all characters.

7. Press the PTT key or the FUNC key or the ⬚ key or the ⬚ key to complete the setting.

### 5.4.2 Using the Channel Name Function

• Programmed memory channels are displayed with alphanumeric characters. The channel number is displayed as it normally is.
• Press the FUNC key to display the frequency display for 5 seconds. Pressing certain keys during this 5 sec period may immediately recall the alphanumeric display, while other keys access their allocated functions.

## 5.5 Lamp

Press the FUNC key, and while 🅵 is displayed on the LCD, press the MONI key to illuminate the display and keypad.

- The backlight automatically switches off if there is no key operation for 5 seconds.
- Pressing any key other than the LAMP key extends the LAMP function for another 5 seconds.
- Turning on the power while pressing the MONI key illuminates the backlight permanently. Repeat the same to turn it off.
- When the lamp is set for the "permanent-on" position, pressing the FUNC key then the MONI key to turn on/off the backlight.

---

**NOTE:**

The LAMP function consumes battery. The "permanent-on" position is recommended only for the operation using an external power source.

---

# 6. Selective Calling

■ **Selective Calling Operations**

- To communicate only with selected stations, Tone Squelch is commonly used. The Tone Squelch function unmutes the squelch only when a signal added with one of the matching 39 CTCSS tone frequencies is received. On this product, this system is described as tone or tone number.

## 6.1 Tone Squelch (TSQ)

### 6.1.1 Setting the Tone Squelch (Tone Number)

1. Press the 🔲 key. Tone number is flashing.
   If you want to cancel the tone squelch, by pressing the 🔲 key again, OF (OFF) is Displayed on the LCD. In this status, any receiving signal can be heard.

2. While the tone number is flashing, turn the dial to select the tone number to use from among the standard tone list below.

3. Pressing any key other than the 🔲 key or the MONI key will complete the setting.

(unit: Hz)

| No. | Frequency | No. | Frequency | No. | Frequency | No. | Frequency |
|-----|-----------|-----|-----------|-----|-----------|-----|-----------|
| 1 | 67.0 | 11 | 97.4 | 21 | 136.5 | 31 | 192.8 |
| 2 | 71.9 | 12 | 100.0 | 22 | 141.3 | 32 | 203.5 |
| 3 | 74.4 | 13 | 103.5 | 23 | 146.2 | 33 | 210.7 |
| 4 | 77.0 | 14 | 107.2 | 24 | 151.4 | 34 | 218.1 |
| 5 | 79.7 | 15 | 110.9 | 25 | 156.7 | 35 | 225.7 |
| 6 | 82.5 | 16 | 114.8 | 26 | 162.2 | 36 | 233.6 |
| 7 | 85.4 | 17 | 118.8 | 27 | 167.9 | 37 | 241.8 |
| 8 | 88.5 | 18 | 123.0 | 28 | 173.8 | 38 | 250.3 |
| 9 | 91.5 | 19 | 127.3 | 29 | 179.9 | 39 | 69.3 |
| 10 | 94.8 | 20 | 131.8 | 30 | 186.2 | | |

## 7. Special Functions

### 7.1 Battery Refresh

Repeating improper recharge of the Ni-MH battery pack may cause so-called the "memory effect" that the battery holds less charge. To avoid this, it is recommended to fully discharge the battery pack then full charge. This function helps discharging the battery pack. Please remove the unit from a charger or a DC cable before this operation.

1. Activate the Keylock (page 26).

2. Press the MONI key, the ⭘ key twice, the ⭘ key twice, the ⭘ key twice, and then the ⭘ key. "DISCHG" will be displayed on the LCD, and the battery-refresh starts.

**DISCHG**
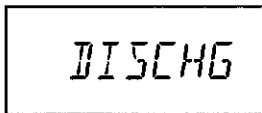
3. To cancel this operation, just turn off the unit, turn it on again, then unlock the Keylock function.

4. The unit will turn off automatically when finished the refresh.

⚠ **Caution**
- The time to refresh totally depends on the remaining charge of the battery pack. To discharge the fully-charged EBP-65 may take up to approx. 7 hours.
- When this function is on, the backlight and the keys are illuminated, and noise from the speaker can be heard.
- Before storing the rechargeable battery pack for an extended period of time, please full-charge it after this operation. Leaving the discharged Ni-MH battery pack for an extended period of time may cause damage to the rechargeable cells inside the pack and at worst case the battery pack can't be charged.

## 8. Set Mode

The Set mode is used to customize the various operational parameters of your DJ-V446.
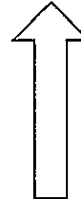
### 8.1 Set Mode Operation

This chart shows the available parameters in the Set mode.

| Menu | Default setting | Function | |
|---|---|---|---|
| 01 | BS-ON | Battery Save ON/OFF | MONI key |
| 02 | TIMER | Timer/Busy scan setting | |
| 03 | BEP-ON | Beep sound ON/OFF | |
| 04 | ALT | Alert-Tone and Tone-Burst Frequency Setting | |
| 05 | SFT-OF | CPU Clock Frequency shift ON/OFF | |
| 06 | BCL-OF | Busy Channel Lock Out ON/OFF | |
| 07 | T-OFF | Timeout timer setting | |
| 08 | TP-OFF | TOT Penalty setting | |
| 09 | BEL-OF | Bell ON/OFF | |
| 10 | STB-ON | Stand-by Beep ON/OFF | |
| 11 | APO-OF | Auto power off ON/OFF | |
| 12 | SKP-OF | Setting Skip Channel | |
| 13 | ATT-OF | ATT Setting | |
| 14 | CHG-ON | Battery Charge ON/OFF | |
| 15 | BATT-NI | Battery type setting | FUNC key |

### 8.2 Entering the Set Mode

1. Press the FUNC key for at least 2 seconds.
   The unit enters the Set mode.
   "BS-ON" is displayed as a factory-default.

2. Press the MONI key or the FUNC key to select a menu.
   The Monitor function can't be used in this status.

3. Rotate the dial to change the parameter.

4. Press any key other than the MONI key and the FUNC key to complete the settings.

The last operated menu will be selected the next time you enter the Set mode.
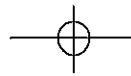
## 8.3 Available Parameters

### 8.3.1  Menu 1  Battery Save (BS) Function

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.

1. BS-ON is displayed on the LCD.

2. Rotate the dial to select the battery save setting (on or off).

BS-ON → BS-OFF
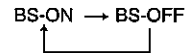
• The factory setting is BS-ON

• 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.

### 8.3.2  Menu 2  Timer/Busy Scan Setting

Select the scan-resume condition in this menu (page 25).

1. TIMER is displayed on the LCD.

2. Rotate the dial to select the scan-resume condition between TIMER and BUSY.

TIMER → BUSY
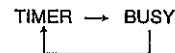
### 8.3.3  Menu 3  Beep Function

Select OFF to turn off all the beep sounds inclusive of alerting beeps.

1. BEP-ON is displayed on the LCD.

2. Rotate the dial to select the beep setting on and off.

BEP-ON → BEP-OF
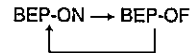
### 8.3.4  Menu 4 Alert-Tone and Tone-Burst Frequency Setting

1. ALT is displayed on the LCD. ALT means a normal alert tone.

2. Rotate the dial to switch the display as shown below.
   Then the tone-burst frequency will be changed.

ALT → 1000 → 1450 → 1750 → 2100    (unit: Hz)
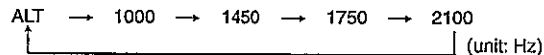
*The tone can't be heard when the Menu3 Beep Function is in off position.
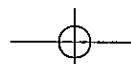
### 8.3.5  Menu 5  Clock Shift Setting

In the unlikely event that you may hear a weak noise always on the same channel, it may be so-called a CPU-clock noise. Unfortunately this is due to the circuit-design of this product and can't be eliminated, but can be moved away to another frequency.

1. SFT-OF is displayed on the LCD.

2. Rotate the dial to select the clock shift setting on and off.

SFT-OF → SFT-ON
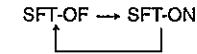
> NOTE:
> This function isn't a noise-blanker. Not only CPU-clock causes noise.

### 8.3.6  Menu 6  Busy Channel Lockout Setting

This function restricts the PTT (transmit) operation.

1. BCL-OF is displayed on the LCD.

2. Rotate the dial to select the Busy Channel Lockout setting on and off.

BCL-OF → BCL-ON
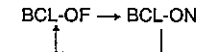
When Busy Channel Lockout is set to on, transmission is possible only in the following conditions (and isn't possible otherwise).
The alarm sounds if the PTT key is pressed when transmission is prohibited.

1) When no signal is being received (BUSY isn't displayed).

2) When the tone matchs and the squelch is unmuted based on the Tone Squelch setting conditions.

### 8.3.7  Menu 7 Time Out Timer (TOT) Setting

This function stops the transmission automatically when the continuous transmission time exceeds the set time.

1. T-OFF is displayed on the LCD.

2. Rotate the dial to change the TOT time.
   TOT time can be set to a maximum of 450 sec.

OFF → 30 → 60 → 90 → ---- → 450    (unit: seconds)
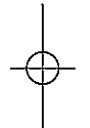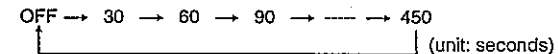
### ■ TOT Operation

When the preset time is about to be elapsed, a beep sounds to alert that the unit is forced to quit transmitting. Release the PTT key to quit transmitting otherwise the TOT penalty may be activated. Refer to the following for TOT penalty time setting.

### 8.3.8   Menu 8 TOT Penalty Time Setting

This parameter determines the time to resume the transmission after the unit is forced to quit transmitting by TOT.

1. TP-OFF is displayed on the LCD.

2. Rotate the dial to change the TOT Penalty Time setting.

TP-OFF → TP-1 → ----- → TP-4 → ----- → TP-15
                                                              (unit: seconds)

Transmission is prohibited until the penalty time (up to 15 seconds) elapses.
• An alert beep sounds when the PTT key is pressed during the penalty time.

### 8.3.9   Menu 9 BELL Setting

1. BEL-OF is displayed on the LCD.

2. Rotate the dial to switch the display as shown below.

BEL-OF → BEL-ON

### ■ BELL Operation

*□ is displayed on the LCD when BELL function is set ON.
By setting ON, you can hear a bell sound and □ flashes, when receiving signals.
□ stops flashing when you press the PTT key.

### 8.3.10 Menu10 Stand-by Beep Setting

1. STB-ON is displayed on the LCD.

2. Rotate the dial to switch the display as shown below.

STB-ON → STB-OF

### ■ Stand-by Beep Operation

By activating this function, a short beep sounds to indicate that your transmission is end.

### 8.3.11 Menu 11 Auto-Power-Off Setting

This function prevents the batteries from being exhausted when you forget to switch off the power.

1. APO-OF is displayed on the LCD.

2. The auto power off setting will change between ON and OFF when the dial is turned.

3. When the setting is set to ON, **A** is displayed on the LCD.

APO-OF → APO-ON

### ■ APO Operation

After having activated the APO and about 30 minutes elapse without any key-operation, the unit turns off automatically alerting with a beep sound. The time to Auto-Power-Off is determined by the last key operation only, not the last signal received.

### 8.3.12 Menu 12 Setting Skip Channel

1. SKP-OF is displayed on the LCD.

2. The skip channel setting will change between ON and OFF when the dial is turned.

SKP-OF → SKP-ON

3. When the setting is set to ON, the decimal point beside the channel number for the set memory channel is displayed.

*This menu appears only when you enter to the set mode from the memory mode. Select the memory channel to be skipped before entering the set mode.

### 8.3.13 Menu 13 ATT (Attenuator) Setting

Use this function when the receiving signal is interfered by strong signals of nearby channels. When you activate this function, the transceiver attenuates the receiving sensitivity.

1. ATT-OF is displayed on the LCD.

2. Rotate the dial to change the ATT level. There are 2 levels; ATT-1 attenuates the received signal by 6dB and ATT-2 does 12dB.

ATT-OF → ATT-1 → ATT-2

3. When the setting is set to ATT-1 or ATT-2, **ATT** is displayed on the LCD.
*Activate this function only when you have a trouble caused by strong signal.

### 8.3.14 Menu 14  Battery Charge Function (page 14)

The Ni-MH battery pack can be charged with an external power supply or a standard AC adapter using the DC-jack on the unit. Please select ON to activate this function. The factory setting is ON.

1. CHG-ON is displayed on the LCD.

2. Rotate the dial to select the battery charge setting on and off.

3. Please be sure to read the following "Battery Type Setting " to correctly use this function.

CHG-ON → CHG-OFF
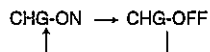
NOTE:
• Please be sure to select OFF when using a dry cell case otherwise it may risk a leak of battery liquid, heat or explosion of the battery cells and the battery case.
• While this function is activated, without attaching a battery pack or the remaining battery level is below the usable range, the unit turns on by just connecting the DC source such as an adapter or a DC cable (without operating the power key).

### 8.3.15 Menu 15  Battery Type Setting (page 14)

Select the correct battery type from Ni-MH battery pack, Li-ion battery pack and Alkaline dry cells in order to display the battery-level icon correctly and to perform the battery-charge using the DC-jack.

1. BATT-NI is displayed on the LCD.

2. Rotate the dial to select battery type from Ni-MH battery pack (BATT-NI), Li-ion battery pack (BATT-LI) and Alkaline dry cells (BATT-AL).

BATT-NI      BATT-LI      BATT-AL
(Ni-MH) →  (Li-ion) → (Dry cell)
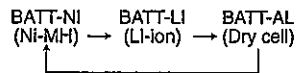
NOTE:
Please set this parameter correctly. When the BATT-LI or BATT-AL is selected, previously explained battery charge function can't be performed.

8

• Cut out the Set Mode Function List below for use as a quick reference.

Reference (Set mode)

BS-ON  Battery Save
TIMER  Timer/Busy scan
BEP-ON  Beep sound
ALT  Alert-Tone and Tone-Burst Frequency
SFT-OF  CPU Clock Frequency shift
BCL-OF  Busy Channel Lock Out
T-OFF  Time Out Timer Setting
TP-OFF  TOT Penalty Time Setting
BEL-OF  BELL Setting
STB-ON  Stand-by Beep Setting
APO-OF  Auto-Power-Off Setting
SKP-OF  Setting Skip Channel
ATT-OF  ATT Setting
CHG-OF  Battery Charge
BATT-NI  Battery type

8

# 9. Cloning

## 9.1 Cloning

The memory data and customized operational parameters can be transferred from a Master unit to other DJ-V446 (Slave units).

### 9.1.1 Cable Connection

• Make sure that both units are turned off before connecting the cable.
• Connect the Microphone/Speaker jack on the Master unit with the Slave unit using an optional clone cable (EDS-11) as shown below, then turn on both units.

To the MIC/SP jack on the Master unit          To the MIC/SP jack on the Slave unit
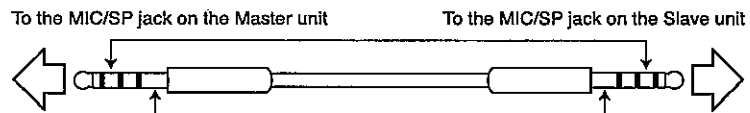
* Be sure to securely screw the plug all the way down to the jack

### 9.1.2 Master/Slave Units

Press the PTT key three times while holding down the MONI key.

"CLONE" is displayed on the LCD, and both units enter the Clone mode.

| CLONE |
|---|

### 9.1.3 Master Unit Operation

1. In the Clone mode, press the PTT key of the master unit. "SD***" is displayed on the LCD, and starts the data-transfer.

| SD *** |
|---|

2. After the transfer is completed successfully, "PASS" is displayed.

3. Turn off the unit. Repeat the same sequence to clone more units.

| PASS |
|---|

Stop moving the SD***, COMERR etc. on the display means that the cloning is failed. Please read below and repeat the procedure.

### 9.1.4 Slave Unit Operation

1. When the data is sent from the master unit, "LD***" is displayed on the receiving unit, and the data-transfer starts.

| LD *** |
|---|

2. After the transfer is completed, "PASS" is displayed.

3. After the cloning is done, turn off the unit by pressing the ⊚ key and remove the cable. Repeat the same sequence to clone more units.

| PASS |
|---|

In case the transfer fails, please turn off the slave unit and perform the reset sequence (page 41) to turn on again before retry. If you quit cloning of this slave unit, please reset it anyway otherwise it may not work properly.

⚠ Caution
• Don't disconnect the cable during data transmission. If you disconnect the cable at this time, "COMERR" is displayed on the LCD of the master unit, and transmission is aborted.
• When data transfer is performed using the Clone function, all settings in the slave unit are overwritten by the master unit settings.

# 10. Maintenance and Reference

## 10.1 Troubleshooting

Please check the list below before concluding that the unit needs to be serviced. If a problem persists, please reset the unit. The setting/CPU program-related troubles are often resolved by the reset.

| Symptom | Possible Cause | Action |
|---|---|---|
| Nothing appears on the display when turning on the power. | Poor battery pack connection. | Check that the battery pack terminals are clean, and pack is correctly attached. |
| | Battery is exhausted. | Recharge or replace the battery. |
| | You are releasing the key too quickly. | Hold the power key down until the display shows figures. |
| No Speaker audio. No reception. | Volume too low. | Adjust the audio level. |
| | Squelch level too high. | Adjust the squelch. |
| | Tone squelch is on. | Turn off tone squelch. |
| | You are pressing the PTT key and transmitting. | Release the PTT key. |
| Channel display is incorrect. | CPU error. | Reset the unit. |
| | A channel name is set. | See Naming Memory Channels function (page 27). |
| Won't scan. | Squelch is unmuted. | Set squelch so that noise mutes. |
| Channel and memory number don't change. | Keylock is on. | Turn off Keylock. |
| Key entry not possible. | Keylock is on. | Turn off Keylock. |
| Can't transmit. Display flashes or goes out when you transmit. | Battery is exhausted. | Recharge or replace the battery. |
| Can't transmit. Can't talk to other stations. | Not pressing the PTT key firmly enough. | Press the PTT key and confirm that TX/RX lamp lights red. |
| The display flashes or disappears during reception. | Battery is exhausted. | Recharge battery or replace the battery. |

\* Please be advised that the water-proof shields including jack caps are subject to consume. The factory warranty for IPX7-grade water-proof is 1 year. Please consult with your local dealer when further service-assistance may be necessary. Please visit alinco.com's "DISTRIBUTION" menu to locate the nearest dealer.

**10**

## 10.2 Resetting

When you reset the unit, all settings are returned to the initial factory settings. The reset deletes the programmed memory channels also.
1. Turn on the unit with the FUNC and 🔑 keys pressed together.
2. All the icons appear on the display.
Release the keys. All display will disappear for 2 seconds, and then reappear.

### Factory default settings
| | |
|---|---|
| Channel Number | : 1 |
| Memory Channel | : 0-199ch Blank |
| Tone Number | : 8 |
| Tone Squelch | : ON |
| Audio volume | : 00 |
| Squelch level | : 00 |

> **NOTE:**
> THE RESET DELETES ALL THE MEMORIES.
> Please take notes of the important data and keep it for future reference.

**10**

## 10.3 Options

| | |
|---|---|
| EBP-63 | Li-ion Battery Pack (DC 7.4V 1100mAh) |
| EBP-64 | Li-ion Battery Pack (DC 7.4V 1600mAh) |
| EBP-65 | Ni-MH Battery Pack (DC 7.2V 700mAh) |
| EBP-66 | Ni-MH Battery Pack (DC 7.2V 2000mAh) |
| EDC-36 | Mobile Cigarette Lighter Adapter with Active Noise Filter |
| EDC-37 | External DC Power Supply Cable |
| EDC-43 | Mobile Cigarette Lighter Cable for Charging Ni-MH Packs |
| EDC-143E/UK | Trickle Battery Charger (E: 230V UK: 230V UK plug) |
| EDC-143R | Multiple-Charger Basket (An external DC power supply required) |
| EDC-144A/E/UK | Rapid Battery Charger (E/UK: same as above) |
| EDC-144R | Multiple-Charger Basket (An external DC power supply required) |
| EDC-147 | Wall Charger (230V) |
| EDC-148 | Wall Charger (230V) U.K. Plug |
| EDH-34 | Dry Cell Case |
| EDS-10 | Microphone/Speaker Cable |
| EDS-11 | Clone Cable |
| EME-6 | Earphone * |
| EME-12 | Headset with VOX * |
| EME-13 | Earphone and MIC with VOX * |
| EME-15 | Tie-pin MIC with VOX * |
| EME-20 | Earphone Microphone * |
| EMS-47 | Speaker Microphone with Audio Control * |
| EMS-59 | Speaker Microphone * |
| ESC-41 | Soft Case |

• Please purchase an optional EDS-10 cable to operate optional accessories marked *.
• When using EDC-36, EDC-37, EDC-43, EDC-147, EDC-148, connect them to the unit first before turning on the unit.

---

**NOTE:**
FOR EUROPEAN USERS
Use of cigar-plug and DC cables are at your own risk per IEC/EN60950-1.
Refer to page 5 for details.

---

**IMPORTANT NOTE:**
All accessories except EBP-63/64/65/66 and soft cases above listed are NOT water-proof. Never use these accessories in wet conditions.

---

### 10.3.1 Microphone/Speaker Cable (EDS-10)

1. Turn off the unit.
2. Turn the plug clockwise until it stops. Check to be sure it is securely connected.
3. Connect the Microphone/Speaker plugs to the each jack.



Speaker jack
Microphone jack
Plug
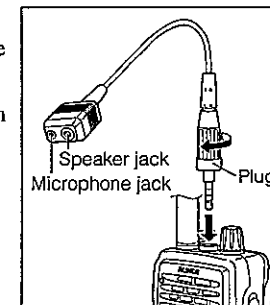
### 10.3.2 Battery Packs

The battery packs aren't fully charged when shipped.
Please charge the pack completely before use.

■ **Available Battery Packs for DJ-V446:**

| | |
|---|---|
| EBP-63 | Li-ion Battery Pack (DC 7.4V 1100mAh) |
| EBP-64 | Li-ion Battery Pack (DC 7.4V 1600mAh) |
| EBP-65 | Ni-MH Battery Pack (DC 7.2V 700mAh) |
| EBP-66 | Ni-MH Battery Pack (DC 7.2V 2000mAh) |

■ **Charging Battery Packs**

Refer to the chart below for the combination of the proper battery pack and charger. The ○ indicates the usable combination, (* hrs) means the approximate time necessary to fully charge the empty pack.

| Battery Packs Chargers | Li-ion Battery Pack | | Ni-MH Battery Pack | |
|---|---|---|---|---|
| | EBP-63 | EBP-64 | EBP-65 | EBP-66 |
| Trickle Charger EDC-143 | | | ○(10hrs) | ○(14hrs) |
| Rapid Charger EDC-144 | ○(2hrs) | ○(3hrs) | ○(1.5hrs) | ○(3.5hrs) |
| Wall Charger EDC-147/148 | | | ○(10hrs) | ○(30hrs) |

### 10.3.3 Using the Chargers

> **⚠ Caution**
> Please also read the "Warning" (page 3 of this manual) and the safety instruction that is included in the accessories' package before operating with them for your safety.

■ **Charging with the EDC-143 (Trickle Charger with a Charging Basket)**

Please make sure that following items are included in the package.

- EDC-143E:    EDC-143 basket, EDC-147 adapter (AC 230V), insulation sheet
- EDC-143UK:  EDC-143 basket, EDC-148 adapter (AC 230V), insulation sheet
- EDC-143R:    EDC-143 basket, connection cable, insulation sheet, 2 screws, connective stay
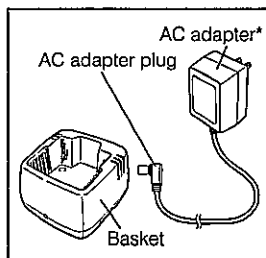
> **⚠ Caution**
> Before using them for the first time, attach the insulation sheet to cover the screw-terminals to avoid short-circuiting. Please refer to page 48 for instruction.
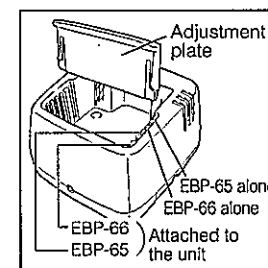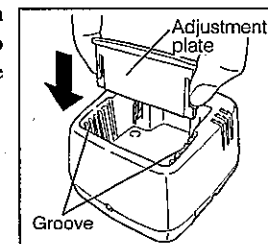
1. Connect the AC adapter plug to the DC-IN jack on the back of the basket.
   *The design of the AC adapter may vary depending on the models.
2. Connect the adapter to an outlet.
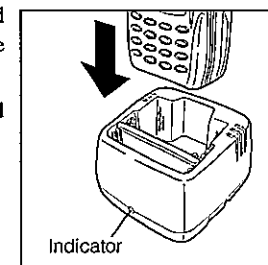


AC adapter*
AC adapter plug
Basket

3. Press the sides of the adjustment plate, and attach it to the proper grooves of the basket according to the size of the battery pack. Please be sure to place the plate all the way down to the bottom.



Adjustment plate
Groove



Adjustment plate
EBP-65 alone
EBP-66 alone
EBP-66 ) Attached to
EBP-65 ) the unit

4. Mount the battery (with or without being attached to the unit) in the basket as shown. Turn off the unit while charging.

   The red indicator on the basket turns on and charging starts.



Indicator

5. After charging time is elapsed (page 43), remove the battery pack from the basket. The red indicator stays turned on as long as the pack is mounted on the basket regardless of the charging status.

### Specifications

| | EBP-65 | EBP-66 |
|---|---|---|
| Input Voltage | DC 12.0V 150mA | DC 12.0V 150mA |
| Operating Temperature Range | 0°C~+40°C (+32°F~+104°F) | 0°C~+40°C (+32°F~+104°F) |
| Charging Current | 70mA | 140mA |
| Battery Capacity | DC 7.2V 700mA | DC 7.2V 2000mA |
| Charging Time | Approx. 10 hours | Approx. 14 hours |

*The charging time may vary depending on the condition of the battery pack and the temperature of the environment.
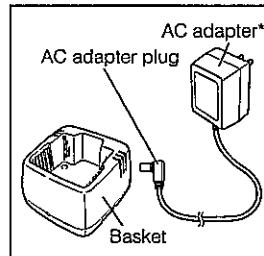
## ■ Charging with the EDC-144 (Quick Charger)

Please make sure that following items are included in the package
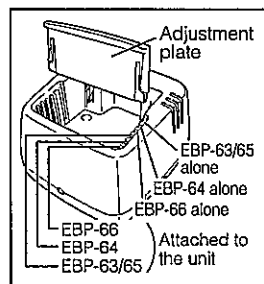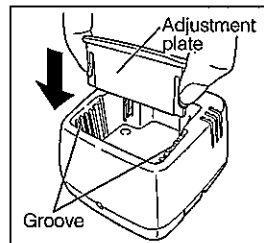
- EDC-144E:   EDC-144 basket, EDC-151 adapter (AC 230V), insulation sheet
- EDC-144UK:  EDC-144 basket, EDC-152 adapter (AC 230V), insulation sheet
- EDC-144R:   EDC-144 basket, connection cable, insulation sheet, 2 screws, connective stay

⚠ Caution
Before using them for the first time, attach the insulation sheet to cover the screw-terminals to avoid short-circuiting. Please refer to page 48 for instruction.

1. Connect the AC adapter plug to the DC-IN jack on the back of the basket.

   *The design of the AC adapter may vary depending on the models.

2. Connect the adapter to an outlet.

AC adapter*
AC adapter plug
Basket

3. Press the sides of the adjustment plate, and attach it to the proper grooves of the basket according to the size of the battery pack. Please be sure to place the plate all the way down to the bottom.

Adjustment plate
Groove

Adjustment plate
EBP-63/65 alone
EBP-64 alone
EBP-66 alone
EBP-66
EBP-64
EBP-63/65
Attached to the unit

4. Mount the battery (with or without being attached to the unit) in the basket as shown. Turn off the unit while charging.

   The red indicator on the basket turns on and charging starts.
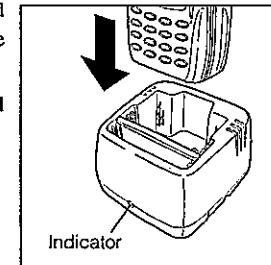
Indicator

5. The red indicator turns off when the charge is completed. Remove the battery pack from the basket.

NOTE:
The flashing red indicator means that the charger isn't working properly. Stop using it immediately, remove the cord form the outlet and consult with your local Alinco dealer.

### Specifications

| | EBP-63 | EBP-64 | EBP-65 | EBP-66 |
|---|---|---|---|---|
| Input Voltage | DC 12.0V 700mA | | | |
| Operating Temperature Range | 0°C~+40°C (+32°F~+104°F) | | | |
| Charging Current | 600mA | | | |
| Battery Capacity | DC 7.4V 1100mA | DC 7.4V 1600mA | DC 7.2V 700mA | DC 7.2V 2000mA |
| Charging Time | Approx. 2 hours | Approx. 3 hours | Approx. 1.5 hours | Approx. 3.5 hours |

*The charging time may vary depending on the condition of the battery pack and the temperature of the environment.

### ■ Connecting Additional Baskets (EDC-143R/144R)

In order to use EDC-143R and EDC-144R, an optional power supply (IEC/EN 60950-1 compliant) of 1A/5A minimum respectively is required.

A DC cable isn't included in the package; the suggested DC cable is 20 AWG wire, shorter than 1m (3feet) in length.

1. Make sure that the output voltage of the power supply is DC 12.0V.

2. Connect the terminals with the provided connection cable, the red cable to the positive and the black cable to the negative terminals.
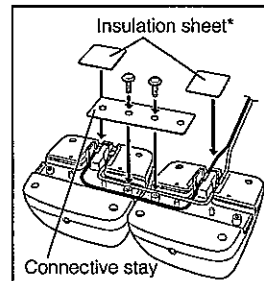   The additional basket can be connected up to 5 in the same way.



Black cable
Red cable
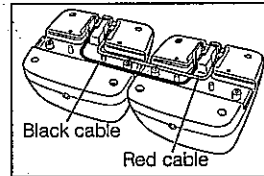
3. Connect the ends of the DC cable to the terminals of the basket.
   * This DC cable isn't provided in the products.



To the power supply
DC cable*
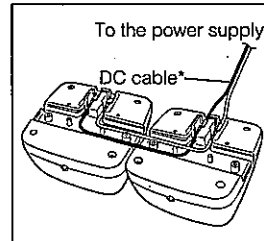
4. Attach the connective stay and the insulation sheets to cover the terminals to avoid short-circuiting.



Insulation sheet*
Connective stay

⚠ **Caution**
This insulation sheet marked * is provided to all EDC-143/144 series chargers. Please be sure to cover the bottom of the charger with this sheet as shown above to prevent short-circuiting.

5. Connect the other ends of the DC cable to the output terminals of the power supply.
   Be mindful to the polarities of the terminals.
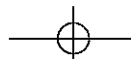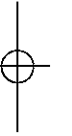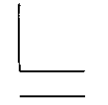


Power supply
DC cable
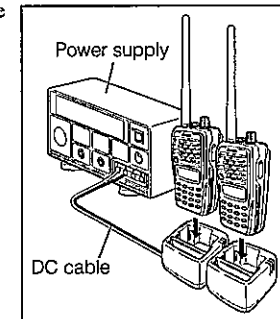
# 11.Specifications

## ■ General

| | |
|---|---|
| Frequency range | TX/RX 446.00625~446.09375MHz |
| | (12.5kHz step, 1~8ch) |
| Modulation: | 8K50F3E (FM) |
| Memory channel: | 200 channels |
| Ant. impedance: | 50 Ω unbalanced |
| Frequency stability: | ±2.5ppm |
| Mic. impedance: | 2k Ω |
| Supply voltage: | DC 7.0~16.0V (EXT DC-IN) |
| Current consumption: | 600mA (typical) Transmit |
| | 250mA (typical) Receive at 500mW |
| | 70mA (typical) Standby |
| | 26mA (typical) Battery save on |
| Temperature range: | External DC:   -10°C~+60°C (+14°F~+140°F) |
| | Battery packs:   -10°C~+45°C (+14°F~+113°F) |
| Ground: | Negative ground |
| Dimension (projections excluded): | 58(W)x110(H)x36.4(D)mm |
| | (2.28"(W)x4.33"(H)x1.43"(D)) |
| | (with EBP-65N) |
| Weight: | Approx. 280g (9.9oz) |
| | (with EBP-65N and antenna) |
| Sub audible Tone (CTCSS): | encoder/decoder installed (39 tones) |

## ■ Transmitter

| | |
|---|---|
| Power output: | Max. 500mW |
| Modulation: | Variable reactance |
| Spurious emission: | -60dB or less |
| Max. deviation: | ±2.5kHz |
| Mic. impedance: | 2k Ω |

## ■ Receiver

| | |
|---|---|
| System: | Double-conversion super heterodyne |
| Sensitivity: | -11.0dBµ (0.28µV) or less |
| Intermediate frequency: | 1st IF 38.85MHz    2nd IF 450kHz |
| Selectivity | -6dB:           6kHz or more |
| | -60dB:          13kHz or less |
| AF output: | 500mW (MAX) |
| | 400mW (8 Ω, 10% distortion) |

**11**

**11**

# ALINCO, INC.