Contents

Chapter1   Names and Functions of Parts

Chapter2   Basic Operation

Chapter3   Convenient Functions on DJ-X3

Chapter4   Appendix

Features

The DJ-X3 is a wide band communication receiver which has various functions in a small package.

Easy operation with a simple key arrangement allows you to access a wide range of communications.

The DJ-X3 has the following features.

Types of Memory

The DJ-X3 has different types of memory functions. For instance, except Memory channel for regular calling up usage, "Program channel" which allows you to specify upper and lower limit of range for scanning frequency, "Priority channel" which allows you to receive two programmed frequencies alternately, and so on.

For more information, see "Memory Function." (P.23)

Types of Scanning

The DJ-X3 has several types of scanning functions, which search for receiving signals quickly and easily. It allows you to select a variety of scanning operations, such as "Memory scan", "Program scan", and so on.

For more information, see "Scan Function." (P.26)

Descrambling

The DJ-X3 can return scrambled voice transmissions to normal voice reception.

For more information, see "Descrambling." (P.32)

Bugging Detector

The DJ-X3 can detect a frequency which may be used for bugging. When a listening microphone is found, the DJ-X3 alerts you with a display and a warning sound.

For more information, see "Bugging Detector." (P.33)

NOTICE

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 instruction manual, 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.

FC Tested to Comply
With FCC Standards

FOR HOME OR OFFICE USE

Information in this document are subject to change without notice or obligation.All brand names and trademarks are the property of their respective owners. Alinco cannot be liable for pictorial or typographical inaccuracies. Some parts, options and/or accessories are unavailable in certain areas. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Precautions

No warranty is made on the effectiveness of the "Bugging Detector" function. The function should be considered experimental and for educational or entertainment use.
Use of the descrambling function may not be permitted in certain jurisdictions. Check with the regulations that apply in your area before using.

Request and Agreement

· This product is manufactured and shipped under strict quality control. However, in some rare instances, if questionable or doubtful points are found, please notify the store where you purchased the product.
· Since this product is a wide band communication receiver, its internal oscillation sometimes block a signal, or defect an internal signal (sometimes referred to as a "birdie.") These symptoms are not a malfunction.
· The contents of this instruction manual may change without notice.

DANGER ⚠

Improper product handling may cause cracking, fire, smoke, performance loss or other troubles. Observe the following precautions in usage.

1. Do not disassemble or modify this product.
2. Do not insert any metal objects into the charger terminal.
3. Avoid using or storing the product in excessively hot environments, i.e. inside hot cars or outdoors in scorching heat. Also, avoid highly humid and dusty places.
4. Do not drop the product or subject it to strong shocks.
5. Use the exclusive recharger EDC-105 to charge the DJ-X3.

Accessories

Open the box and check that the following accessories are included.
- Instruction manual
- Belt clip (with one screw)
- Battery case (EDH-31S)
- AC adapter (EDC-92)
- Frequency data list
- NiMH (Nickel Metal Hydride) battery pack (EBP-52NS)
- Antenna
- Hand strap
- Battery recharger (EDC-105)
- Warranty

■ Connecting the Antenna
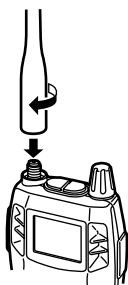
Connect the antenna to the SMA antenna connector at upper left corner.
Hold the antenna by its base, and turn it clockwise until it stops.

To disconnect the antenna, turn it counter-clockwise.

■ Attaching the Battery Case

· How to attach the battery case

Align with the grooves on the transceiver, and slide in the direction of the arrow until it clicks.

Groove
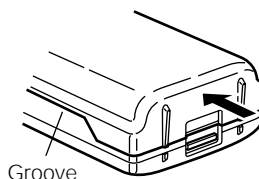
· How to detach the battery case

Push down the catch, and pull out the battery pack or case free of the transceiver.

Tip
Attaching/detaching the NiMH battery pack is the same way as the battery case.

Catch

8

■ Loading the Batteries

Load three AA batteries in the battery case in the "+" and "-" orientation marked at the bottom of the case.

> ⚡ **Caution!**
> · **Do not use NiCad AA batteries on the market.**
> · **Use new batteries of the same type and brand.**
> · **Use high capacity of alkaline batteries.**

■ The NiMH Battery Pack

Battery Pack Type	Charging Time
EBP-52NS (3.6V-500mAh)	About 10 hours
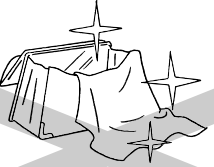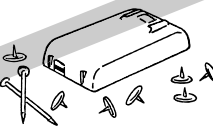
> ⚡ **Caution!**
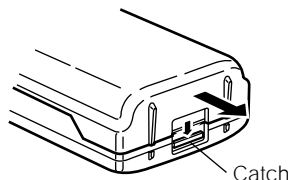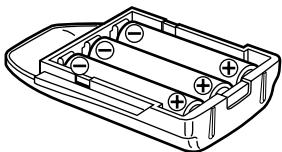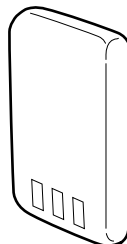> · **The battery pack is not charged when shipped. It must be charged before use.**
> · **It takes 10 hours maximum to fully charge the battery pack with the EDC-105.**
> · **Charging should be conducted in a temperature range of 0 to 40°C. (32 to 104°F)**
> · **Do not modify, dismantle, incinerate 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 dry place where temperature is from -20 to +45°C. (-4 to +113°F)**
> **Temperatures outside this range can cause the battery liquid to leak. Exposure to prolonged high humidity can cause corrosion of metal components.**
> · **Normally, the battery pack can be charged up to 500 times. However, the battery pack can be considered dead if the period of use drops off markedly despite the pack being charged for the aforementioned charging time. When this happens, a new pack should be used.**
> · **Do not dispose the battery pack due to environmental protection. At the end of its useful life, check with your local solid waste officials for details on recycling options or proper disposal in your area. You may also contact to our office.**

■ Prevent Short Circuiting the Battery Pack
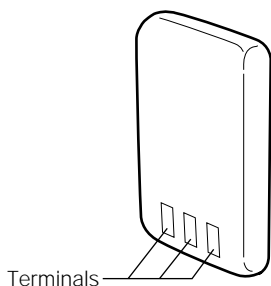
Be extra cautious when carrying the battery pack; short-circuiting will produce surge current possibly resulting in fire.

Terminals

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

DON'T carry the NiMH battery pack inside bags of metal plated interior.

DON'T place in the proximity of metals or conductives, 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 to place on a flat surface.

■ Battery Recharger
· Recharging with the EDC-105

Power plug

AC adapter plug

Terminals
(rear side)

Terminals
on the rechager

Lever 1 3
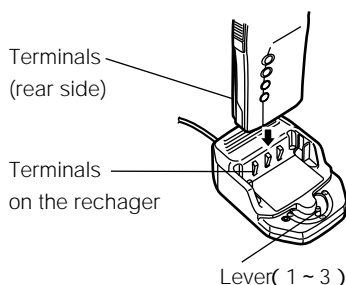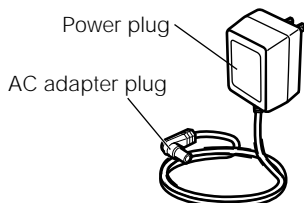
1. Mount NiMH battery pack on the transceiver. (The NiMH battery pack itself is also mountable on the battery recharger.)
2. Connect AC adapter plug to the battery recharger.
3. Select the position 1 to 3 with the lever on the recharger and adjust the battery pack to fit with it. (According to a type of battery pack, position of the lever changes.)
4. Set the battery pack to the recharger making contact with terminals on the rear side of the transceiver and those on the recharger side.
5. Connect the power plug to the AC outlet.
6. The red light on the recharger goes on and starts to recharge. (While connecting to the AC outlet, the charge status is maintained.)

☀ Caution!
· **When battery temperature exceeds a certain level, protective function operates automatically and turns off the charge status. (The red light goes off.)**
In that case, unplug the recharger and dismount the transceiver or the battery pack immediately. After removing the cause, then use the battery recharger.
· **Turn the transceiver power off before recharging the battery pack.**
· **Disconnect the EDC-105 from the outlet while not using it.**
· **Never charge battery packs of other manufactures with this charger.**
· **The required recharging time depends on the condition and model of a battery pack, but it may take at most 10 hours. Refer to the instruction manual of the battery pack.**
· **Never short-circuit the recharging terminals of this recharger with metal objects, etc. The charger can be damaged.**
· **The ECD-105 does not work when the voltage from the wall outlet is extremely low.**

■ Attaching the Belt Clip
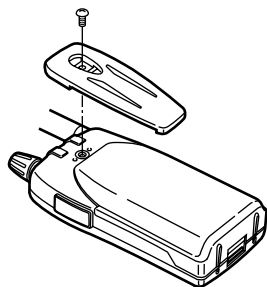
Attach the belt clip on the rear side of the transceiver with an included screw. Make sure it is screwed properly.

■ Attaching the Hand Strap
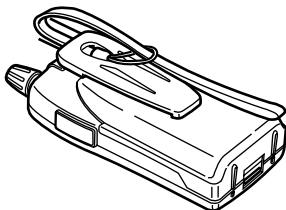
Attach the hand strap through a ditch between the belt clip and the transceiver as shown in the illustration on the left.

External View

■ Front

Display
Displays the frequency and other information. (P.16)

Speaker
Thin built-in speaker

Keyboard
For changing the mode and various settings. (P.15)

POWER
SCAN
SCRT
V/P/M
MW
BANK
1M/10M

DJ-X3
WIDE BAND
COMMUNICATION RECEIVER
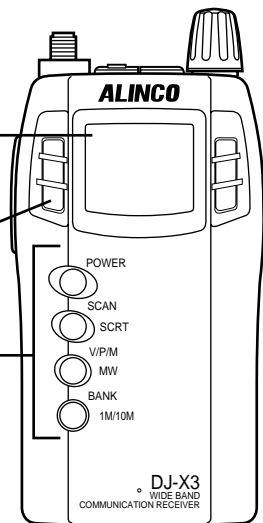
■ Top
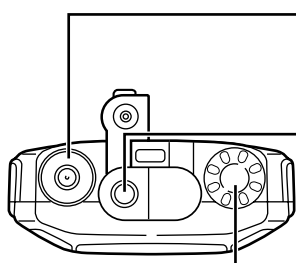
Antenna connector
For connecting the included antenna. (P.8)

Earphone jack
For connecting of an earphone.

Dial, [VOL/SQL(SET)] key
Use this dial to change frequency and various settings. When press it down, change the volume level and settings of squelch, or select options in Set mode.

■ **Side**
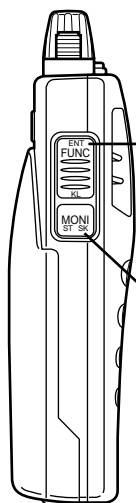
[FUNC/ENTER] key
Use this key to set and execute several settings. Besides, hold this key down for about one second, key-lock function is on. (P.35)

[MONI(ST/SK)] key
While holding this key down, squelch temporarily opens. Besides, use for Mute function. (P.19)
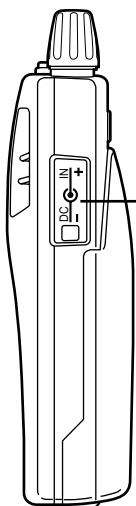
DC-IN
Terminal for connecting an external DC power supply.

※ **Caution!**
When use an antenna on the market, set a ground for the antenna which should be different from the one for an external power.

Keyboard
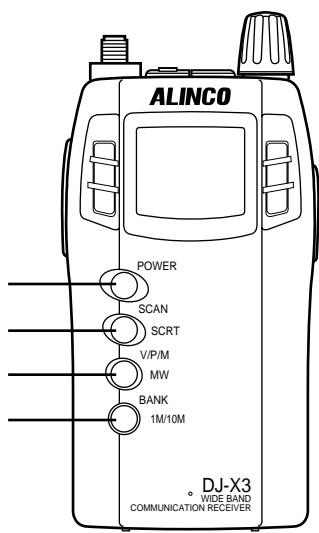
Key	Function
[POWER] key	Turn the power on/off.
[SCAN (SCRT)] key	Executes scanning. (P.26) When "F" is displayed, used for Descrambling. (P.32)
[V/P/M (MW)] key	Switches the operating mode. (P.21) When "F" is displayed, programs and clears the Memory channels. (P.24,25)
[BANK (1M/10M)] key	Switches the Preset and Memory mode. (P.22,23) In VFO mode, switches a unit for increasing/decreasing frequency by one click of the dial.

"F" appears on the display when you press the [FUNC/ENTER] key

Display

In the illustration below, all indicators are displayed.
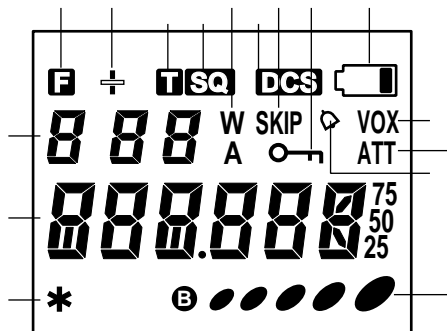
	Descriptions
	Appears when you press the [FUNC/ENTER] key.
	Flashes when displaying over 1000MHz frequency. (Indicates a digit of 1000MHz.)
	Indicates the modulation mode. Appears "W" when WFM radio is selected and "A" when AM radio is selected. When FM radio is selected, nothing appears.
	Appears when executing Memory skip.
	Appears when the keys are locked.
	Appears when the battery is exhausted.
	Displays the bank No. (left one digit) and the channel No. (right two digits) of Programmed memory.
	Displays the frequency and value of various settings.
	Appears when using the Bugging Detector. Flashes when Descrambling.
	Appears when the Attenuator is ON.
	Displays the relative signal strength.

From   to   are not displayed on this transceiver.

Power Switch

Hold the POWER switch down for a second. "HELLO" will appear on the display. (The indication may be different from the illustration below depending on the version: North America or Europe.)

[POWER] key

POWER

SCAN
SCRT

V/P/M
MW

BANK
1M/10M

HELLO
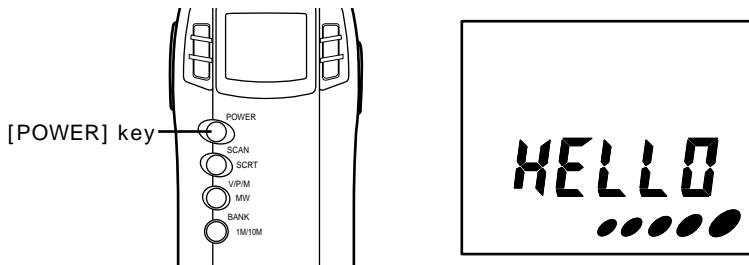
To turn the power off, hold the POWER switch down until the indication disappears.

Adjusting the Audio Volume

1 Press the [VOL/SQL (SET)] key. (dial)
"voL" will appear on the display.

2 Adjust the audio volume by rotating the dial.
There are 31 levels of audio volume. (00-30) As the value increases, the audio becomes louder.

1

2

ALINCO

3

POWER

10
uoL
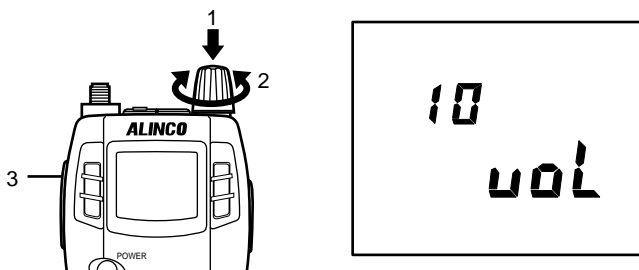
3 Press the [FUNC/ENTER] key.
Be back to normal mode.

If the DJ-X3 makes no sound...
When the squelch closes or the Mute function is activated, the DJ-X3 does not make sound even if you increase the value of audio volume. For more information, see "Adjusting the Squelch Level" (P.18) and "Mute Function." (P.19)

Adjusting the Squelch

The squelch silences the DJ-X3 except for signals above a certain level.
Squelch eliminates noise when the DJ-X3 receives less than a certain level.
"To unmute the squelch" means that the DJ-X3 receives a signal and reproduces the sound.
Conversely, "to close the squelch" means that the DJ-X3 does not generate audio because of insufficient signal level.

■ Adjusting the Squelch Level

You can specify the signal level at which the DJ-X3 unmutes by adjusting the squelch level.

1 Press the [VOL/SQL (SET)] key (dial) twice.
(When "voL" is on the display, press it once.)
"SqL" will appear on the display.

2 Adjust the squelch level by rotating the dial.
There are 11 squelch levels. (0-10) A higher squelch level requires a stronger signal to unmute the squelch.
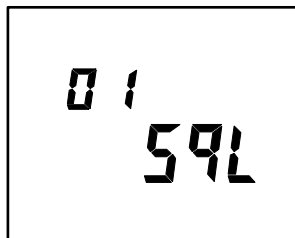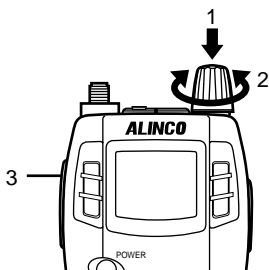
3 Press the [FUNC/ENTER] key.
Be back to normal mode.

Tip
To keep the squelch open, set the squelch level to 0.

■ Monitor Function

The Monitor function temporarily unmutes the squelch. This is useful when the desired signal is weak or intermittent. This function is activated when the status of the [MONI(ST/SK)] key is set as Monitor function in the Set mode. For more information, see "Setting Operation of the MONI key." (P.46)

There are two options in the Monitor function: PUSH and HOLD. Both two options open squelch, and "B" appears on the display when press the [MONI(ST/SK)] key.

[MONI(ST/SK)] key

145.000

Ⓑ
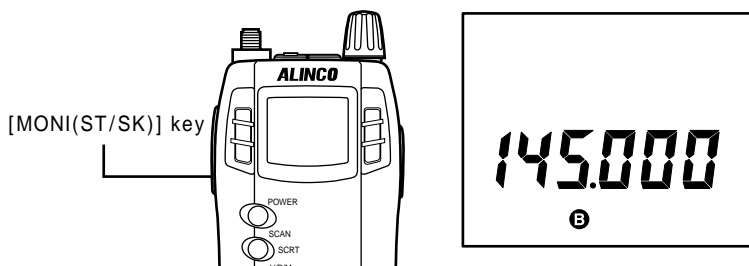
· PUSH: Squelch unmutes while holding the [MONI(ST/SK)] key down. When release the key, squelch goes back to be normal as you set before.
· HOLD: Squelch unmutes and remains the status once press the [MONI(ST/SK)] key. Press the key again, then Monitor function is off, and squelch goes back to be normal as you set before.

Switch the mode between PUSH and HOLD in the Set mode. For more information, see "Setting Operation of the MONI key." (P.46)

■ Mute Function

This function mutes sound. Even when squelch opens, this function makes sound off, and while it is activated, beep sound does not go off either. This function is activated when the status of the [MONI(ST/SK)] key is set as Mute function in the Set mode. For more information, see "Setting Operation of the MONI key." (P.46)

There are two options in the Mute function: PUSH and HOLD, as well. Both two options execute Mute function, and "B" appears on the display when press the [MONI(ST/SK)] key.

[MONI(ST/SK)] key

145.000

Ⓑ
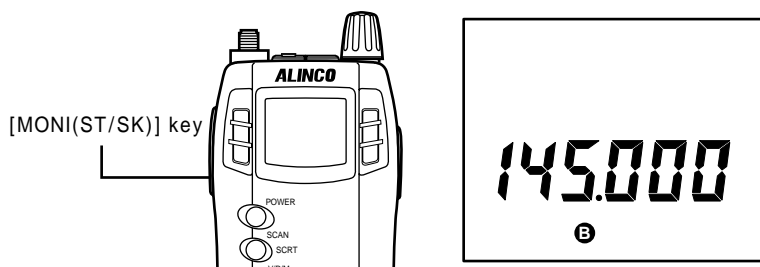
· PUSH: Mute function is on while holding the [MONI(ST/SK)] key down. When release the key, the function is off and receiving signals and beep sound unmute.

· HOLD: Mute function is on and it remains the status once press the [MONI(ST/SK)] key. Press the key again, then the function is off and receiving signals and beep sound unmute.

Tip
Select either Monitor function or Mute function.

The preparation for receiving a signal has been finished. Now, try to adjust the frequency and receive a signal.
Next section explains the three operating models of the DJ-X3.

Operating Mode

The DJ-X3 has three operating modes; VFO mode, Preset mode, and Memory mode.

VFO mode ···································VFO mode allows you to change the frequency by the dial.

Preset mode ······························The frequencies of AM radio, FM radio, and TV have been set already and you can call up among them.

Memory mode ····························You can call up and receive a previously programmed frequency.

Tip
To program memory, see "Memory Function." (P.23)

■ Switching Modes

Every press of the [V/P/M (MW)] key changes the operating mode as shown below.
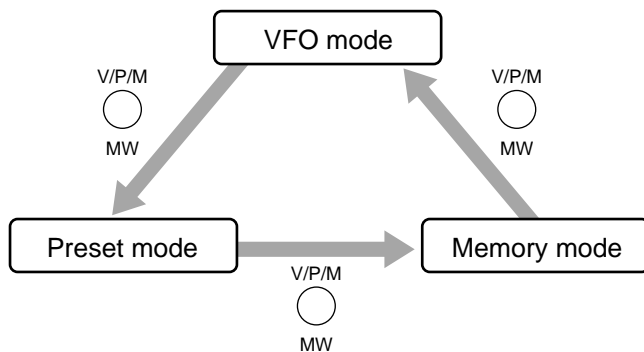
Tip

When nothing is programmed in Memory mode, Memory mode is skipped and switches between VFO mode and Preset mode in turn.

Setting the Frequency

■ In VFO Mode

Rotating the dial increases or decreases frequency for a tuning step.

To increase/decrease the frequency by 1MHz-step, press the [BANK(1M/10M)] key one time and rotate the dial one click each.

To increase/decrease the frequency by 10MHz-step, press the [BANK(1M/10M)] key once again and rotate the dial one click each.

In 1MHz and 10MHz mode, each digit of 1MHz or 10 MHz number flashes.

Adjust the frequency

**Increases/decreases
by 1MHz-step with one press,
by 10MHz-step with double press.**
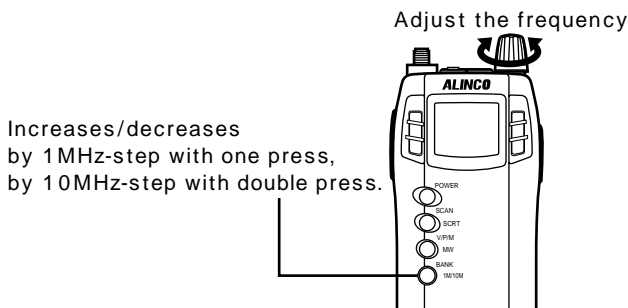
■ In Preset Mode

1 Select a band by pressing the BANK key.

Every press of the [BANK(1M/10M)] key changes the band as shown below:

AM radio   FM radio   TV   AM radio...
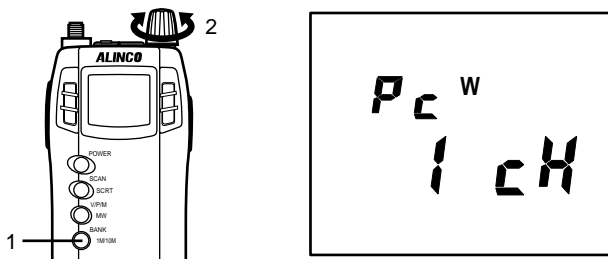
2 Increase/decrease the frequency by rotating the dial.

Tip

"A" appears on the display when selecting AM radio, and "W" appears when selecting TV. However, nothing appears when selecting FM radio. Also, frequency displays when AM/FM radio is selected and channel displays when TV is selected.

■ In Memory Mode

1 **Select a bank by pressing the [BANK(1M/10M)] key.**

Bank No.   Channel No.
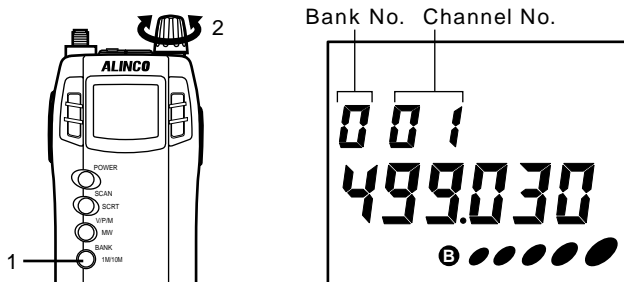
2 Select a channel by rotating the dial.
It is not possible to select a channel which is not programmed.

Memory Function

This function allows you to program the frequently used frequencies, and call them up. A programmed frequency is called a channel.
The DJ-X3 has four types of memory functions; Memory channel, Program scan channel, Priority channel, and Search-pass memory channel.

■ Types of Memory

Memory channel ···························· The channel which is called up in Memory mode. The DJ-X3 has 700 Memory bank channels. (70 channels 10 banks) You can call up a frequently used frequency easily.

Program scan channel ···················· A channel which is used for Program scan. You can program 20 pairs of frequency ranges. (upper and lower limits)

Priority channel ···························· The channel which is used for Priority monitoring functions. You can program up to 8 channels.

Search-pass memory channel ········ If you program a frequency which you do not want to use, it will be skipped when executing VFO scan and Program scan. You can program up to 100 "Skip" channels.

Caution!
It is not possible to program duplicated frequencies in the Search-pass memory channel. If you try to do so, error beep would go off.

23

■ **Programming a Channel**

1 **In VFO mode, select the frequency which you want to program.**
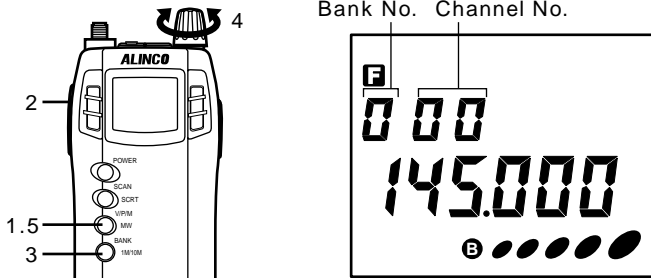
Bank No. Channel No.

2 **Press the [FUNC/ENTER] key.**
"F", bank No., and channel No. will appear on the display.

3 **Select a bank by pressing the [BANK(1M/10M)] key.**
Each bank No. corresponds to the following bank.
0 - 9 ·· For Memory channel
A, B ·· For Program scan channel
P ·· For Priority channel
J ·· For Search-pass memory channel
Select a bank according to the use.

4 **Select a channel by rotating the dial.**
According to the type of bank, available channels are different as shown below.
Bank 0 - 9 ································ 00 - 69
Bank A, B ································ A00 - B19
Bank P ····································· 00 - 07
Bank J ····································· 00 - 99
If bank No. flashes, the channel is available and if it appears on the display, a channel(s) is already programmed.

5 **Press the [V/P/M (MW)] key.**
The setting will be completed.

Tip
· It is not possible to increase the number of memory channels.
· It is not possible to overwrite the memory in the default setting. For more information, see "Overwrite Memory Setting." (P.44)

■ Erase the Channel

1 **Switch to the Memory mode by pressing the [V/P/M (MW)] key.**

2 **Select a channel which you want to erase.**
For more information, see "In Memory Mode." (P.23)

3 **Press the [FUNC/ENTER] key.**
"F" will appear on the display.
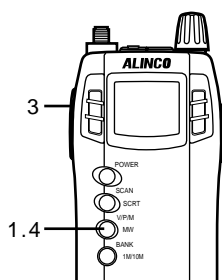
Bank No. Channel No.
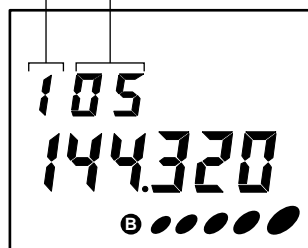
4 **Press the [V/P/M (MW)] key.**
The channel will be erased.

Tip
You can clear all the programmed channels at one time. For more information, see "Resetting." (P.36)

Scan Function

The scan function periodically changes the frequency to search for a signal.

The DJ-X3 has four types of scan functions.

VFO scan ·······································Scans the entire band in VFO mode.
Program scan·······························Scans a specified range of frequencies. The upper limit and lower limit of the range need to be set in advance.
Preset scan ·································Scans the entire band in Preset mode.
Memory scan ·······························Scans specified memory banks.

■ VFO Scan

1 **Switch to VFO mode by pressing the [V/P/M (MW)] key.**

2 **Press the [SCAN (MODE)] key.**

3 **Rotate the dial as holding the [SCAN(SCRT)] key and change display to "vFo."**
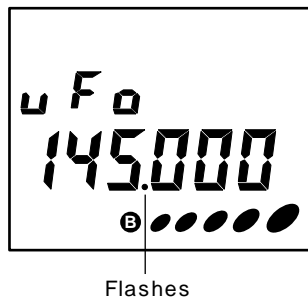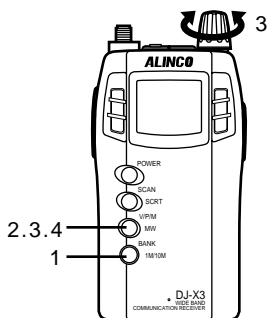
Flashes

4 **Release the [SCAN (MODE)] key.**
VFO scan starts, and ". (decimal point)" flashes on the display.
Scanning pauses when receiving a signal.

■ Program Scan

This function scans a specified range of frequencies. Before operating this function, you need to specify the upper and lower frequency limits. These frequencies are called a "Program channel", and the DJ-X3 has 20 pairs of program channels. Set the combination of upper and lower limits. (i.e. A00 and B00, or A01 and B01) For more information, see "Programming a Channel." (P.24)

1 **Switch to the VFO mode by pressing the [V/P/M (MW)] key.**

2 **Press the [SCAN(SCRT)] key.**

3 **Rotate the dial as holding the [SCAN(SCRT)] key, and select a set of program channel which is to be scanned.**

Frequencies between A and B of the same No. will be scanned.

Program channel No.

Flashes

4 **Release the [SCAN(SCRT)] key.**

Program scan starts. ". (decimal point)" flashes, and "PS" appears on the display. Scanning pauses when receiving a signal.

Tip

The tuning step and modulation mode of Program scan depends on not the settings in the Memory mode, but the settings in the VFO mode.

■ **Preset Scan**

1 **Switch to Preset mode by pressing the [V/P/M (MW)] key.**

2 **Select AM radio, FM radio, or TV by pressing the [BANK(1M/10M)] key.**

POWER

SCAN

3 ── SCRT

V/P/M
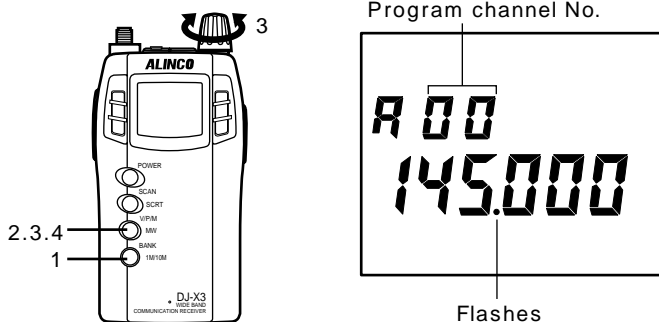
1 ── MW

BANK

2 ── 1M/10M

P_c W
76.100
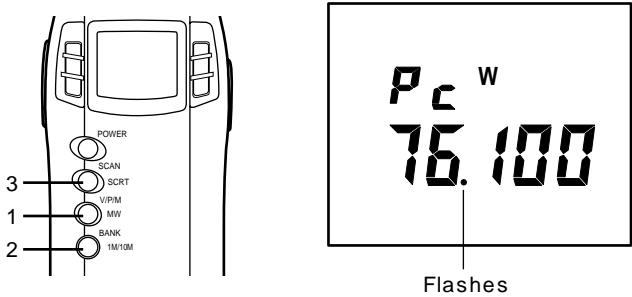
Flashes

3 **Press the [SCAN(SCRT)] key.**
Preset scan starts, and ". (decimal point)" flashes on the display.
Scanning pauses when receiving a signal.

■ **Memory Scan**
This function scans the specified banks or all banks in the Memory mode.

There are three types of Memory scan.
Bank scan ·····································Scans a specified bank only.
Bank link scan································Scans multiple banks. Up to five banks can be linked. Link setting is required in advance. For more information, see "Setting Bank Link." (P.41)
All-bank scan ·······························Scans banks 0 to 9.

Tip
In any type of scan, bank A (B), P, and J are not scanned.

To operate Memory scan:

1 Switch to Memory mode by pressing the [V/P/M (MW)] key.

2 Press the [SCAN(SCRT)] key.
Type of Memory scan will appear on the display.
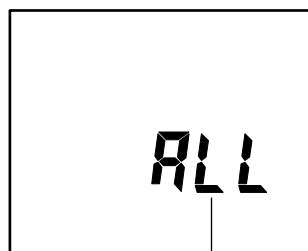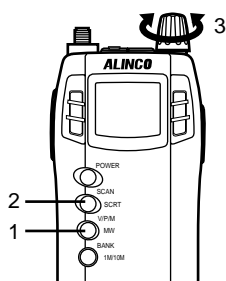
Type of Memory scan

3 Rotate the dial as holding the [SCAN(SCRT)] key, and select a type of Memory scan.
mEmory : ···································Bank scan

LInk : ··Bank link scan

ALL : ···All-bank scan

When selecting Bank scan, current bank displayed in the Memory mode will be scanned.

4 Release the [SCAN(SCRT)] key.
Memory scan starts, and ". (decimal point)" flashes on the display.
Scanning pauses when receiving a signal.

Tip
The following are common to all the scans.
· Scanning direction depends on the direction of the last operation. (However, in the case of Program scan, scan toward the direction of the other side.)
· Rotate the dial while scanning, the direction of scanning can change.
· To stop scanning, press any key except the dial and the [MONI(ST/SK)] key.
· Operate Monitor function while scanning, scanning pauses. Once clear the Monitor function, scanning restarts.
· You can set the scan-resume conditions. For more information, see "Setting the Scan Mode (Timer Scan/Busy Scan)." (P.42)

Setting the Tuning Step

The tuning step sets the increment/decrement of each click of the dial when adjusting the frequency in VFO mode.

1 Switch to VFO mode by pressing the [V/P/M (MW)] key.

2 Press the [FUNC/ENTER] key.
"F" will appear on the display.

3 Press the [MONI(ST/SK)] key.
The currently selected tuning step will appear on the display.
The default setting is AUTO. ("AUto")
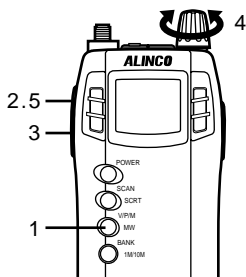
4 Select a tuning step by rotating the dial from the followings.
5, 6.25, 8.33, 10, 12.5, 15, 20, 25, 30, 50, 100, or AUTO. (Unit: kHz)

5 Press the [FUNC/ENTER] key.
The setting will be completed.

Tip
· AUTO is for selecting the suitable tuning step and modulation mode automatically.
· When AUTO is selected, it is not possible to change the modulation mode.
And under 1620 MHz frequency, both tuning step and modulation mode are fixed, and they are not possible to change the settings.

Memory Skip

This function is for skipping the specified memory channel(s) when executing the Memory scan.

1 Switch to Memory mode by pressing the [V/P/M (MW)] key.

2 Call up the memory channel you want to skip.

3 Press the [FUNC/ENTER] key.
"F" will appear on the display.
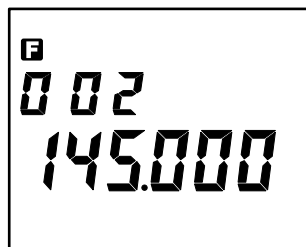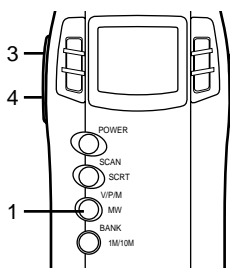
4 Press the [MONI(ST/SK)] key.
The setting will be completed.

How do you cancel the memory skip?
Call up the memory channel to cancel, and then operate step 3 and 4 above.

Descrambling

This function returns scrambled voice to normal reception.

1 Select the frequency of the scrambled voice.

2 Press the [FUNC/ENTER] key.
"F" will appear on the display.

3 Press the [MONI(ST/SK)] key.
Descrambling function starts operating, and " " at the bottom left of the display flashes. Decode No. for scrambling will appear on the display.
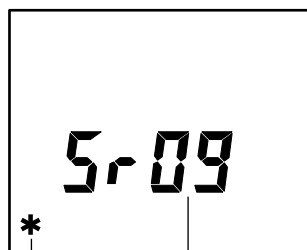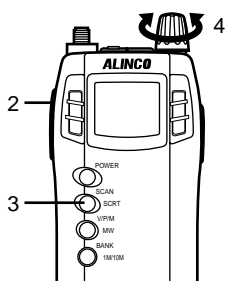
Flashes   Decode No.

4 Select a decode No. by rotating the dial.
Select a decode No. from 01 to 16. Select the No. which allows you to recognize the voice.

Tip
Pressing the [FUNC/ENTER] key allows you to descramble the voice using the specified decode No., and change the frequency at the same time.

How do you cancel the Descrambling function?
Press the [FUNC/ENTER] key, then the [SCAN(SCRT)] key.

Bugging Detector

The DJ-X3 detects a bugging signal by scanning frequencies in the programmed memory banks. When a listening microphone is found, the DJ-X3 notifies you with its display and a warning sound.

Caution!
Be sure to remove the earphone when detecting Bugging.

1 **Turn the power ON as holding down the [MONI(ST/SK)] key.**

"   " will appear on the display and the DJ-X3 starts scanning according to the set memory bank link.

Appear
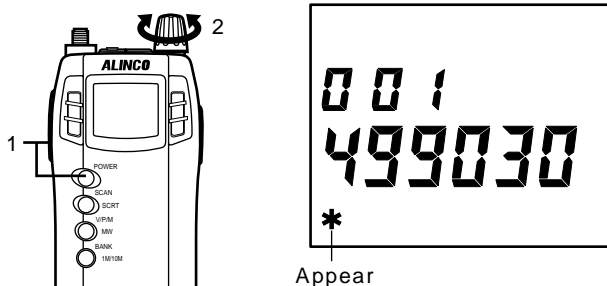
When a bugging signal is found, "dc" flashes on the display, and scanning stops.

Flashes
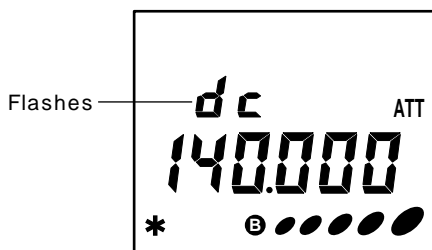
2 **Press the dial (the [VOL/SQL(SET)] key) down to adjust the audio volume.**

Adjust the audio volume so that the howling noise sounds at an angle to the DJ-X3, and detect the listening microphone. Be sure not to cover the speaker.

Tip
You can set a level of Bugging Detector sensitivity. For more information, see "Setting Bugging Detector Sensitivity." (P.40)

Caution!
- **Operate in a quiet environment where doors and windows are closed. It is hard to find a listening microphone in a noisy environment.**
- **Depending on the modulation setting, this function may not work correctly.**
- **When the battery voltage is low, this function does not work normally. Be sure to recharge the battery pack completely, load new AA batteries, or supply sufficient voltage from the DC power supply.**
- **Since this function detects a bugging signal by the presence or absence of a howling noise, a loud sound may be emitted during detection; however, it is not a malfunction.**
- **Detection area is approximately 15 square meters (18 square yards) depending on the type of listening microphone.**

How do you stop detecting?

Turn the power OFF, then turn the power ON as holding the [MONI(ST/SK)] key down.

Tip

When turn the power on as holding the [MONI(ST/SK)] key down, but the Bugging Detector function doesn't operate, the following reasons are considered: Bank link scan mode is not selected or there is no memory data in the area. If so, select the bank link scan mode and program at least one data in the area.

3

Convenient Functions on DJ-X3

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Keylock

To prevent incorrect or unauthorized operations, you can lock the keys.
The following operations can be used while the keylock is ON.
- · Monitor function
- · Mute function
- · Adjusting the audio volume and squelch
- · Canceling the keylock
- · Turning the power ON/OFF

1 **Hold down the [FUNC/ENTER] key for a second.**
   The keylock will turn ON, and the key icon will appear on the display.
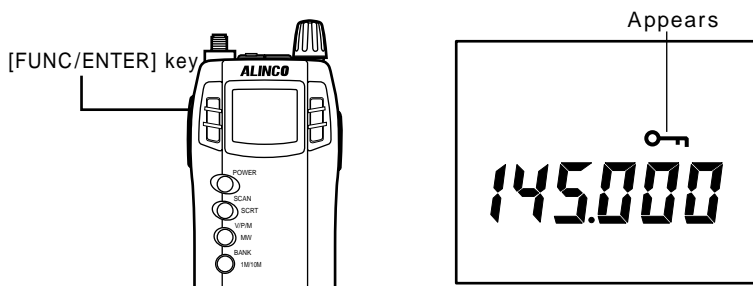
How do you cancel the keylock?
Hold down the [FUNC/ENTER] key for a second while the keylock is ON. The keylock will turn OFF, and the key icon will disappear.

Battery Indication

When the battery is exhausted, the battery icon at the upper right corner of the display will appear. If the indicator starts to flash, the battery power will soon be depleted and the transceiver won't work any longer. Recharge the battery pack or load new AA batteries at that time.

3

Convenient Functions on DJ-X3
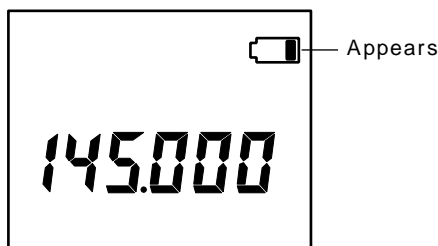
Resetting

You can reset programmed memory channels and settings.

There are two types of reset; Partial reset and All reset.

Partial reset ·································Programmed memory channels remain, and the other settings are reset.

All reset ··All the memory channels and settings are reset. However, Preset channels (AM radio/FM radio/TV) cannot be reset.

■ How to Reset Partially

Turn the power on as holding the [FUNC/ENTER] key down.
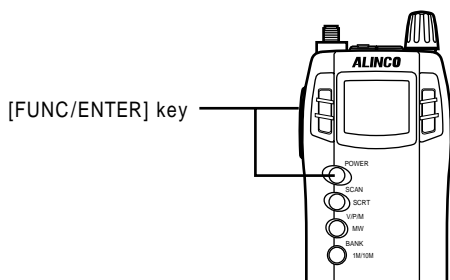
[FUNC/ENTER] key

■ How to Reset All

Turn the power on as holding down the [FUNC/ENTER] key, the [BANK(1M/10M)] key, and the dial altogether.

[FUNC/ENTER] key
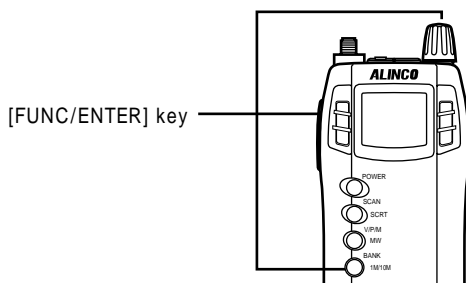
The Set Mode Function

This Set mode allows you to customize the DJ-X3 for your particular application. The following items can be set in Set mode.

■ Setting Each Item

All the items of the Set mode are set by the same operation.

1 **Press the [FUNC/ENTER] key.**
"F" will appear on the display.

2 **Press the dial (the [VOL/SQL(SET)] key) down.**
Change to the Set mode and the item name will be displayed.

3 **Select an item by pressing the dial. (the [VOL/SQL(SET)] key)**
Each press of the [VOL/SQL (SET)] key changes the item as shown below.
Att → wHIP(EAr) → AbAr → SbAr → wAvE → StErEo(mono) → bUg → bL0 → LAmP → tImEr(bUSy) → APo → bS → ow → Pr → bEEP → PUSH(HoLd) → monI(mUtE) → Att...
When press the [MONI(ST/SK)] key, the setting direction reverses.

4 **Change the value or setting by rotating the dial.**

5 **Press the [FUNC/ENTER] key.**
The setting will be completed.
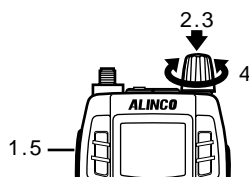
For detailed information of each item, see the followings.

2.3

4

ALINCO

1.5

37

■ ATT (Attenuator) Function

This function attenuates strong signals on nearby channels.
Use this function when the received signal is influenced by a strong signal.
ATT function attenuates about 20 dB in received signal.

In Set mode, select "Att."

```
┌─────────────────────────┐
│  ▣                      │
│  □FF                    │
│            Att          │
│                         │
└─────────────────────────┘
```

· Select ON/OFF by rotating the dial.
· The default setting is OFF.

■ Setting the Antenna

You can select the antenna depending on the frequency you wish to receive.

The DJ-X3 has four types of antennas.

AM bar antenna ····························	The internal antenna which receives 100 kHz to 1620 kHz including AM radio band.
Short-wave bar antenna················	The internal antenna which receives 1625 kHz to 12 MHz including short-wave band.
Earphone antenna·························	The earphone's cord performs the role of antenna. Receives over 12 MHz.
External antenna ···························	The whip antenna attached to the DJ-X3. Available to receive entire frequency band.

Each type of antenna displays below.

AM bar antenna ····························	AbAr
Short-wave bar antenna················	SbAR
Earphone antenna·························	EAr
External antenna ···························	wHIP

In Set mode, select the type of antenna.

· In the case of each type of bar antenna, rotate the dial and set ON/OFF.
· In the case of earphone antenna, rotate the dial and select whether earphone antenna or whip antenna.

Tip
· If each type of bar antenna sets to be OFF, external antenna, which is attached to the DJ-X3, receives a signal.
· When using the earphone antenna, a signal may be unstable depending on the position of the earphone cord.
· When using the bar antenna, a signal may be unstable depending on the condition of the frequency.

■ Selecting the Modulation Mode
You can select a modulation mode from AM, FM, and WFM.

In Set mode, select "wAvE."

· Every click of the dial changes modulation mode as shown below:
  AM → WFM → FM → AM...
· "A" appears on the display when selecting AM radio, and "W" appears when selecting TV. However, nothing appears when selecting FM radio.

Tip
When a setting of channel step is selected as AUTO or the frequency band is set under 1620 kHz, modulation mode can not be changed.

■ **Selecting from Stereo and Monophonic**

In Set mode, select either "mono" or "StErEo."

```
  F
        W

StErEo
```

· When rotating the dial, the setting of "mono" and "StErEo" changes alternately.
· Stereo mode is available only when the modulation mode is set to WFM. Receive a signal with monophonic mode even stereo mode is selected when AM or FM is selected.
· The default setting is stereo mode.

■ **Setting Bugging Detector Sensitivity**

You can select the sensitivity when detecting a bugging. There are 5 sensitivity levels; 0 (highest)-4 (lowest).

In Set mode, select "bUg."

```
  F
      2
        bUg
```
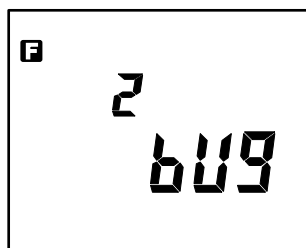
· Select the sensitivity by rotating the dial.
· The default setting is 2.

■ Setting Bank Link

This is the setting for the "Bank link scan", which scans specified multiple banks.

You can select up to 5 banks from 10 (0 to 9) programmed banks.

In Set mode, select "bL."

```
 F

 bL0    0
```
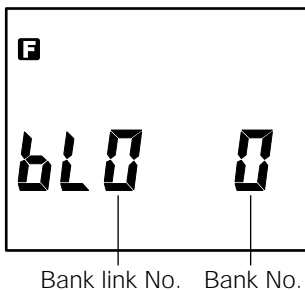
Bank link No.   Bank No.

· Select bank link No. by rotating the dial.
· Select a bank to link by pressing the [BANK(1M/10M)] key. One bank can be assigned to each bank link No. 0-4.

Tip
· When only one bank is set to the bank link, if you execute the bank link scan, only one bank will be scanned.
· For more information about bank link scan, see "Memory Scan." (P.28)
· Scanning while Bugging Detector operates reflects the settings of bank link.
· Bugging Detector detects the listening microphone from bank linked memories.
· When using the Bugging Detector, corresponding banks must be linked.

■ Lamp Function

This function sets the display backlight ON or OFF.

When ON is selected, an operation of any key turns ON the backlight, and it automatically turns OFF after 5 seconds.

In Set mode, select "LAmP."

```
F
  o n
L A m P
```
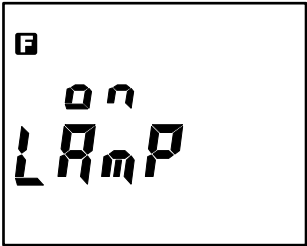
· Select ON/OFF by rotating the dial.
· The default setting is ON.

■ Setting the Scan Mode (Timer Scan/Busy Scan)

You can set the scan-resume condition.

While executing the scan, if the DJ-X3 receives a signal, scanning will pause.

You can set the timing that the DJ-X3 restarts scanning.

Timer scan (tImEr)························Restarts after five-second stop, even while receiving a signal.
Busy scan (bUSy) ························Restarts when the DJ-X3 does not receive a signal.

In Set mode, select "tImEr(bUSy)."

```
F

t ImEr
```
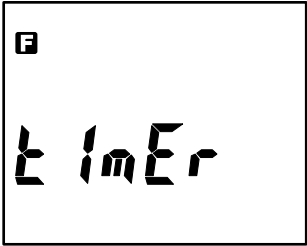
· Select Timer/Busy scan by rotating the dial.
· The default setting is Timer scan.

■ APO (Auto Power Off) Function

This function automatically turns the power off if there is no key operation for a specified period of time.

Right before cutting the power off, beep sound will go off. Select the time from 30, 60, 90 minutes, and OFF. When OFF is selected, this function does not work.

In Set mode, select "APO."

· Select ON/OFF by rotating the dial.
· The default setting is OFF.

Tip
APO function does not operate while scanning.

■ **BS (Battery Save) Function**

This function extends battery life.

If there is no key operation for five seconds, the internal power rapidly cycles between ON and OFF.

In Set mode, select "bS."

```
┌─────────────────────────┐
│ ▣                       │
│    o n                  │
│                         │
│                  b S    │
│                         │
└─────────────────────────┘
```
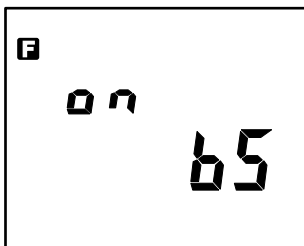
· Select ON/OFF by rotating the dial.

· The default setting is ON.

■ **Overwrite Memory Setting**

To prevent from overwriting memory channels by mistake, set whether disable or enable to overwrite.

In Set mode, select "ow."

```
┌─────────────────────────┐
│ ▣                       │
│  o F F                  │
│                         │
│    O w                  │
│                         │
└─────────────────────────┘
```

· Select ON/OFF by rotating the dial.

"on" :   Enabled to overwrite

"oFF" : Disabled to overwrite

· The default setting is OFF.

■ PRIO (Priority) Watch Function

This function monitors two frequencies alternately.
Every five seconds, the DJ-X3 momentarily switches from the frequency in the VFO mode to the frequency in the Priority channel.

In Set mode, select "Pr."

Priority channel ─── *(display showing)* 1 Pr 145.000
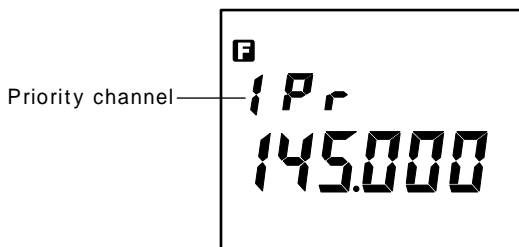
· Select a Priority channel No. from 0 to 7 by rotating the dial.
· When pressing the [FUNC/ENTER] key, release from the Set mode, and start to operate Priority Watch function at the same time.

Tip
· Scanning is not available during Priority Watch.
· If the DJ-X3 received a signal of the Priority channel, receiving time will be extended for 2 seconds.

How do you cancel the Priority Watch?
Press either the [SCAN(SCRT)] key or the [FUNC/ENTER] key during the Priority Watch.

■ Beep Function

The beep sound which sounds when operating keys on the DJ-X3 can be turned OFF.

In Set mode, select "bEEP."

(display showing) on bEEP

· Select ON/OFF by rotating the dial.
· The default setting is ON.

■ **Setting Operation in the Monitor and Mute Function**

Select operation of the [MONI(ST/SK)] key when Monitor and Mute function is set.

In Set mode, select either "HoLd" or "PUSH."
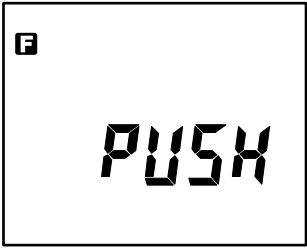
```
┌─────────────────────────┐
│  🅵                      │
│                         │
│                         │
│          PUSH           │
│                         │
└─────────────────────────┘
```

· Select either "HoLd" or "PUSH" by rotating the dial.
· When "PUSH" is set, Monitor and Mute function is activated while holding down the [MONI(ST/SK)] key.
· When "HoLd" is set, Monitor and Mute function is activated every time press the [MONI(ST/SK)] key down.
· The default setting is PUSH.

■ **Setting Operation of the MONI key**

Select to use the [MONI(ST/SK)] key for either Monitor or Mute function.

In Set mode, select "monI" or "mUtE."

```
┌─────────────────────────┐
│  🅵                      │
│                         │
│                         │
│          monI           │
│                         │
└─────────────────────────┘
```
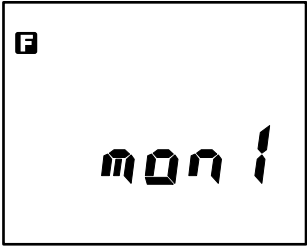
· Select either "HoLd" or "PUSH" by rotating the dial.
  When "monI" is selected, the [MONI(ST/SK)] key operates Monitor function.
  When "mUtE" is selected, the [MONI(ST/SK)] key operates Mute function.
· The default setting is Moniter.

3

Convenient Functions on DJ-X3

Cloning

When using Clone function, all memories and the settings of one DJ-X3 (master) can be copied to another DJ-X3 (slave).

1 **Turn OFF both DJ-X3s. (master and slave)**

2 **Connect the earphone jacks on both master and slave DJ-X3s with the cloning cable.**

Connect to the earphone jack of the master unit of the DJ-X3.
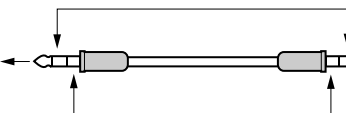
Connect to the earphone jack of the slave unit of the DJ-X3.

3 **Turning on both master and slave power as holding the [BANK(1M/10M)] key down.**
"cLonE" will appear on the display.

4 **Press the dial (the [VOL/SQL(SET)] key) on the master side of the DJ-X3.**
Cloning starts. "Sd   " appears on the master DJ-X3's display, and
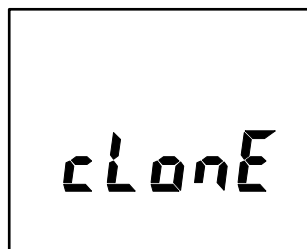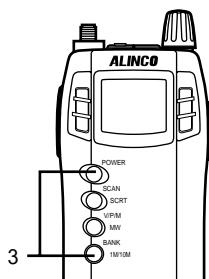"Ld   " appears on the slave DJ-X3's display. (changes
constantly.)

(Master)   (Slave)

When cloning is completed, "PASS" appears on both DJ-X3s' displays.
To return to normal operation, turn the power off, and then turn it on again.

☀ **Caution!**
· **Do not disconnect the cable while cloning.**
· **All data in the slave DJ-X3 will be updated if cloning is executed. Be
careful with current data on the slave side before cloning.**
· **If you disconnect the cable or turn off the other DJ-X3 after "PASS" was
displayed, "comErr" will appear on the display; however, cloning has been
executed normally.**

If "Error" appears on the display...
If incorrect data is transmitted while cloning, "Error" will appear on both DJ-X3s'
displays. When pressing the dial (the [VOL/SQL(SET)] key) down on the master
side of the DJ-X3, restart cloning. If "Error" appears on both DJ-X3s' displays
once again, it is not possible to transmit data as it may be incorrect data.
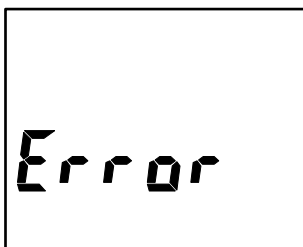
If "comErr" appears on the display...

If a communication error occurs, "comErr" will appear on both DJ-X3s' displays.
Make sure the cloning cable is connected to each side of the earphone jack properly.
When pressing the dial (the [VOL/SQL(SET)] key) down on the master side of the DJ-X3, restart cloning.

```
comErr
```

To copy the data to another slave DJ-X3

After completing one cloning operation, connect the master DJ-X3 to another slave DJ-X3, and then turn power on as holding the [BANK(1M/10M)] key on the master side of the DJ-X3. When pressing the dial (the [VOL/SQL(SET)] key) down on the master side of the DJ-X3, restart cloning.

3

Convenient Functions on DJ-X3

Troubleshooting

Please check the list below before concluding the DJ-X3 is faulty. If a problem persists, reset the DJ-X3. This can sometimes correct erroneous operation.

Symptom	Possible Cause	Action
Cannot turn the power on	Dead battery	Recharge or exchange batteries.
	Incorrect position of battery	Check the "+" and "-" orientation
	Poor contact with the battery case and transceiver terminals	Remove dirt in/on the battery case
No speaker audio	Volume too low	Adjust the volume
	Earphone connected	Remove the earphone
	Squelch closed	Adjust the squelch level or turn off
Abnormal display or operation	Incorrect operation of CPU	Turn the power off, then on (If unit does not recover, reset)
	Battery exhausted	Recharge or exchange batteries
Low sensitivity	Squelch level too high	Adjust the squelch level or turn off
	Attenuator is ON	Turn the Attenuator OFF
	Incorrect antenna selection (WHIP, EAR, ABAR, SBAR)	Check the type of antenna, and then switch
Unclear sound	Incorrect frequency	Change the tuning step, and adjust the frequency
	Incorrect modulation mode	Select the suitable modulation mode
	Dead battery	Recharge or exchange batteries
Cannot set the frequency etc.	Keylock is ON	Turn OFF keylock
Cannot scan	Squelch opens	Set the squelch value to cut the noise off
Cannot execute Program scan	Incorrect programmed edge in Program scan	Program upper and lower limit properly

4

Appendix

Specifications

■ General

Receiving range	E	:	0.1 - 1299.995 MHz
	T	:	0.1 - 1299.995 MHz
Modulation modes		:	A3 (AM),F3 (FM, WFM)
Ant. impedance		:	50Ω
Ant. terminal		:	SMA
Supply voltage		:	DC 3.6V - DC 6V
			(external input voltage DC 4.5V - DC 16V)
Ground		:	Negative ground
Current consumption		:	Reception : approx. 75 mA
			Battery save (1 : 4) : approx. 39 mA
Temperature range		:	–10 ~ +60°C (+14 ~ +140°F)
Frequency stability		:	±5 ppm (–10 ~ +60°C / +14 ~ +140°F)
Dimension		:	W:56 H:102 D:23 mm (without projections)
			(W:2.20 H:4.01 D:0.90 in.)
Weight		:	Approx. 145 g
			(a NiMH battery pack and an antenna inclusive)
			(Approx. 5 oz.)

■ Receiver

System		:	Triple-conversion superheterodyne
1st I.F		:	248.45 MHz
2nd I.F.		:	38.85 MHz
3rd I.F.		:	450 kHz
Selectivity	AM/FM	:	–6 dB/12 kHz or over, –60 dB/30 kHz or less
	WFM	:	–6 dB/150 kHz or over
Sensitivity	AM	:	0.5 - 1.62 MHz 17dBµ or less 10dB S/N
(Typical)			1.62 MHz or over 5dBµ or less 10dB S/N
	FM	:	30 - 550 MHz -3dBµ or less 12dB SINAD
			550 MHz or over 0dBµ or less 12dB SINAD
	WFM	:	13dBµ or less 12dB SINAD
Sub-freq. output		:	MAX 220mW or over (8Ω)