8-10-2 Memory Channel Scope

The reception levels are displayed for the frequencies of neighboring programmed memory channels with the frequency of the displayed memory channel in the center.

• The Channel Scope function ignores empty memory channels.



In Memory mode, select the bank for which to display a scope display.

2 Press the $\frac{M-V}{500^{\text{E}}}$ key.

The memory channel scope operation starts. The signals of the displayed memory channel (center channel) are received and the reception levels of the nearby programmed memory channels are indicated in the scope display.

3 Rotate the dial to select the center channel.

The center channel changes upward or downward to the next target memory channel. The scope display shifts to the right or left accordingly.



By pressing the [FUNC] key to display and then pressing the key, you can change the reception operation for the center channel as follows.

Normal mode: When signals are received through the center channel, the sound is output. The reception time follows the "Scan mode setting" (P. 88). The Channel Scope operation always starts in Normal mode.

Display mode: Like other channels, the reception of the center channel signals is indicated with the level display only and no sound is output even when signals are received.

• You can switch the band to operate by pressing the www or sub keys. The bands are switched and the Channel Scope operation remains active. When the dual-band display is set, the Channel Scope operation can be conducted simultaneously for both bands.

8-11 Copying the Memory Channel Data into VFO Mode

You can copy the frequency of a memory channel into VFO mode. This function is useful when you want to receive a frequency slightly different from that of a memory channel or when you edit a memory channel.

- **1** In Memory mode, select a memory channel to copy its data into VFO mode.
- **2** Press the [FUNC] key to display **F** on the LCD.
- Press the key; the frequency of the memory channel is copied into VFO mode.

When the copy is complete, the mode changes to VFO mode.

8-12 F Tuning Function

This function allows reception of unknown radio signals by detecting a strong radio signal and quickly tuning to its frequency. The F Tuning function can be used in two modes: F COUNT (Frequency counter) and F TUNE (Strong signal-priority tuning).

- In F COUNT mode, when an extremely strong signal is detected among the received signals, its frequency is displayed in real time.
- In F TUNE mode, priority is given to detecting an extremely strong signal among the received signals. A normal scan is then performed around the frequency of the signal to catch the target signal more quickly and accurately.

Setting the F Tuning function

- **1** Press the [FUNC] key to display **F** on the LCD.
- Press the SCAN key several times to select "F COUNT" or "F TUNE".
- 3 When "F TUNE" is selected, the receiver automatically changes to VFO mode when it detects a frequency, allowing you to hear the sound.



4 Press the [FUNC] key to finish the setting.



- The operating frequency for F COUNT and F TUNE is within the range of 50 MHz to 1299.99995 MHz.
- This function may not work depending on the frequency condition, such as when there are radio signals or noise stronger than the target radio signal.
 - The resolution of F COUNT is 5 kHz.
 - The sensitivity may vary depending on the frequency.

9. Useful Functions

9-1 Key-lock Function

The Key-lock function prevents accidental operation of the keys and dials while the receiver is being used or carried.

Two types of locking are available: Quick Lock which can be activated easily, and Normal Lock which is more complicated to unlock.

9-1-1 Key-lock procedure

Quick Lock

Hold down the [FUNC] key (approx. one second) to switch the function ON/OFF. While the Key-lock is active, the imark appears on the LCD.

Normal Lock

Hold down the Sole key and press the left dial three times to switch the function ON/ OFF.

While the Key-lock is active, the **On** mark appears on the LCD.



• To release the Key-lock function, use the same method you used to activate the lock. There is no other way to release the lock.

• If the set key is held down but the dial is not pressed for about 1 second, the mono-band display is switched to the dual-band display and vice versa.

9-1-2 Operations available while the Key-lock is active

• Volume adjustment:

You can adjust the volume level by rotating the lower dial.

• Squelch adjustment:

You can adjust the squelch level by holding down the dial and rotating it. For the key settings which are available while the Key-lock is active, refer to "Key-lock mode setting" (P. 83).

9-2 Scanning Function

The Scan function automatically changes the frequencies and searches for signals being sent.

The following scan types are available.

VFO scan	In VFO mode, the scan searches all frequencies within the selected band by using the tuning step specified in advance.
Preset scan	The scan searches the frequencies within the band specified in Preset mode.
Memory scan	In memory mode, the scan searches for only frequencies which have been programmed in the memory.
Programmed scan	The scan searches a range of frequencies between upper and lower limits which can be set by the user in advance.



The programmable items shown in P.35 with \star do not affect their functions while programmed scannintg, but setting such as tone-squelch and modulation mode must be completed in VFO mode, and VFO parameters are always respected for programmed scan.

Operations common to all scan types

- Scanning stops when any one of the [FUNC], where is pressed.
- The scanning direction can be changed by rotating the dial during scanning.
- When the Monitor function is used, scanning is suspended to open the squelch temporarily. Releasing the Monitor function resumes scanning.
- Scanning starts in the direction of the last scan. (Programmed scan, however, starts scanning from ** A to ** b.)
- You can specify conditions to resume scanning. For the setting procedure, refer to "Scan mode setting" (P. 88).

9-3 VFO Scan

- **1** Press the $\frac{M}{\sqrt{PPM}}$ key to switch to VFO mode.
- 2 Hold down the \int_{SCAN}^{FTUNE} key and rotate the upper dial to select "VFO scan".



During scanning, the decimal point of the displayed frequency flashes.

4 Press the [FUNC] or \int_{SCAM}^{FTUNE} key to stop scanning.



9-4 Preset Scan

			NAU V						
1	Press	the	V/P/M	key	to	switch	to	Preset	mode.

- 2 Press the key to select the band.
- 3 Press the Scanning key to start scanning. During scanning, the decimal point of the displayed frequency flashes.

FM	87.600 _{WFM}
VFO	433.000 FM

4 Press the [FUNC] or Scan key to stop scanning.

9-5 Memory scan

In Memory mode, either a specified bank or all banks are scanned. The memory scan offers the following three types of scanning methods.

Single bank scan	This scans only through a specified bank.
Group scan	This scans only a group of previously selected banks.
All-bank scan	This scans all available banks which are previously programmed.

- Banks other than those for normal memory channels cannot be scanned.
- MEMO By using the utility software to expand the bank, the all-bank scan can be expanded to scan between banks 0 and 49.
 - The group scan cannot be used unless the Bank Link setting (P. 54) is completed.
- 1 Press the key to switch to Memory mode.
- 2 Hold down the CAN key and rotate the upper dial to select the scan type.



- The following types are available for the memory scan.
- Single bank scan
- Group scan
- All-bank scan

When the single-bank scan is selected, the current bank will be scanned.

3 Release the $\frac{F_{TUNE}}{SCAN}$ key to start scanning.

During scanning, the decimal point of the displayed frequency flashes.

4 Press the [FUNC] or $\int_{SCAN}^{F TUNE}$ key to stop scanning.

9-6 Programmed Scan

The Programmed scan searches a range of frequencies specified by upper and lower limits. The specified upper and lower frequencies are collectively referred to as a "programmed scan channel". The DJ-X11 can store up to 50 pairs of programmed scan channels. For more information, refer to "Programming a Memory Channel" (P. 35). Note that you need to program data in the bank for programmed scan channels in advance. If you do not do this, the following operation cannot be performed.

1 Press the *WPM* key to switch to VFO mode.

2 Hold down the way and rotate the upper dial to select "Prg-Scan".





3 Release the $\frac{FINE}{SCAN}$ key to start scanning.

During scanning, the decimal point of the displayed frequency flashes.

4 Press the [FUNC] or scanning.

9-7 Tone Scan

The Tone scan automatically detects a tone frequency in the received radio signals.

- 1 In VFO mode, tune to the frequency to search for a tone frequency.
- 2 Hold down the way and rotate the upper dial to select "TONE scan".



3 Release the $\frac{F_{TUNE}}{SCAN}$ key to start scanning.

Scanning starts. Tone frequencies being scanned for are displayed on the LCD one at a time.

When a matching tone is found, a beep sounds, " <u>T S Q</u> " and the tone frequency are displayed on the LCD, and scanning stops. Scanning continues when no tone frequency is found in the received radio signals.

4 Press the [FUNC] or $\frac{F TUNE}{SCAN}$ key to stop scanning.

9-8 DCS Scan

The DCS scan automatically detects DCS codes in the received radio signals.

- In VFO mode, tune to the frequency to search for a DCS code.
- 2 Hold down the Seaw key and rotate the upper dial to select "DCS scan".



3 Release the $\frac{F_{TUNE}}{\delta CAM}$ key to start scanning.

Scanning starts. DCS codes being searched for are displayed on the LCD one at a time.

When a matching DCS code is found, a beep sounds, " D c s " and the DCS code are displayed on the LCD, and scanning stops. Scanning continues when no DCS code is found in the received radio signals.

4 Press the [FUNC] or Scan key to stop scanning.

9-9 Sweep Scan

The Sweep scan scans frequencies during the Channel Scope operation and displays the reception levels. Even when scanning moves to the next channel, the reception level of the previous channel is displayed continuously. Like scanning, there are three types of Sweep scan: Band, Program and Memory.

1 While the Channel Scope operation is active, press the *FILME* key.

The Sweep scan starts. The Sweep scan scans each channel step frequency one at a time. During the Sweep scan, the decimal point of the displayed frequency flashes. When signals at the displayed frequency are received, the reception will be handled according to the scan-resume condition.

Press the [FUNC] or Scale key to return to the Channel Scope operation.

Sweep scan level indication

Example: Sweep scan in the UP direction (when the channel step is set to 20 kHz)



During the Sweep scan, reception levels are updated from the rightmost frequency, and the update display moves to the left one step at a time. For the DOWN direction, the update display moves in the reverse direction. The $\mathbf{\nabla}$ indicating the currently scanned frequency does not move.

9-10 Bug Detector Function

This function automatically scans frequencies possibly used by bugging devices (wireless microphones) to find such devices. When the receiver determines the presence of a bugging device, it provides notification via the display and an alarm. The DJ-X11 provides two modes for the function: Silent and Sound.

The default setting is a combination of both Silent and Sound modes. Refer to "Mode coupling setting of the Bug Detector function" (P. 71).

It is also possible to search for bugging devices by linking the user-programmed memory banks to the bank for Bug Detector channels.



- In the Silent mode, you can set the search sensitivity of the Bug Detector function. Refer to "Sensitivity setting of the Bug Detector function" (P. 72).
- MEMO The Bug Detector function searches the memory channels in the bank linked with the bank for Bug Detector channels. Refer to "Bank Link Setting Function" (P. 54).



- When Voice Guidance is active, an announcement of "Detected" might be made even when non-bugging signals are received due to a malfunction caused by use environments or radio signal conditions. Note that this is an accessory function and should be used as a guide only.
- This function is designed based on a simple method and does not guarantee security and safety. Alinco does not guarantee against the failure of bugging device detection.
- Alinco does not provide any services such as discovering bugging devices or dealing with discovered devices.
- Alinco's Customer Service will not answer any general inquiries concerning bugging attempts other than the operation and operating procedure for this function.

9-10-1 Operating procedure in Silent mode

This mode provides an accurate search by producing the sound of received signals from the speaker and making a judgment based on the occurrence of a "howling" phenomenon which occurs if the signal is emitted from a bugging device. When you hear this ambient sound from the speaker, a bugging device may possibly be installed. (Be careful, as the sound may be loud.) If you want to use the Silent mode alone, set the "Bug coupling" option for the mode coupling setting of the Bug Detector function to "OFF".

1 Hold down the right dial (approx. one second) to activate the Silent mode.

Scanning starts automatically. No beep sounds during scanning. When the receiver determines the presence of a bugging device, it sounds an alarm and display a notice on the LCD as shown on the right.



2 Rotate the lower left dial to adjust the audio volume.

Adjust the volume so that the DJ-X11 produces a howling noise (shrill sound) and then search for a bugging device. During the search, do not cover the opening of the speaker.

3 Move around the DJ-X11 slowly.

When you get closer to the bugging device, the howling noise becomes louder; when you move away from the bugging device, the howling noise becomes quieter. The function pauses when you press the \int_{SCAN}^{FTUNE} key. Pressing the \int_{SCAN}^{FTUNE} key again resumes the search.

4 To cancel the Bug Detector function, repeat the operation in Step **1**.

• Do not use earphones when using the Bug Detector function in this mode.

CAUTION

• The scanning may stop due to a malfunction caused by noise. If, however, a bugging device is actually present, you can judge this from the fact that the howling noise is always part of the ambient sound.

9-10-2 Operating procedure in Sound mode

This mode searches for a bugging device and determines an approximate distance to it by producing a sound from the DJ-X11 to make the bugging device emit the sound and measuring the time difference between when the DJ-X11 produces the sound and when it receives the signal of the sound. The advantage is that when the receiver determines the presence of a bugging device, it provides a notification of the approximate distance to the device with a sound and on the display. The receiver emits a continuous loud beep during the search.

If you want to use Sound mode alone, set the "Bug coupling" option for the mode coupling setting of the Bug Detector function to "OFF".

1 Hold down the left dial (approx. one second) to activate the Sound mode.

Scanning starts automatically.

The receiver emits a continuous beep during scanning.



When no bugging device is found after the specified range is scanned for a certain period of time, "Stop" is displayed on the LCD and the search finishes.

2 Move around the DJ-X11 slowly and search places where a bugging device might be installed.

When the receiver determines the presence of a bugging device, it produces shorter beeps.

When the receiver gets closer to the bugging device, the intervals between the icons and beeps become shorter; when the receiver moves away from the bugging device, the intervals between the icons and beeps become longer. The function pauses when you press the $\frac{FTUNE}{SCAN}$ key. Pressing the $\frac{FTUNE}{SCAN}$ key again resumes the search.

3 To cancel the Bug Detector function, repeat the operation in Step **1**.



- Do not use earphones when using the Bug Detector function in this mode.
- The effective detection distance of the Bug Detector function is about 1 to 5 m.
- The Bug Detector function is greatly affected by the ambient sound, the strength of the radio signals of the bugging device, and the sensitivity of the microphone. The function may not work properly or may not be usable depending on the surrounding environment (reverberation, etc.).
 - When the DJ-X11 is moved quickly during the search, it may malfunction due to the Doppler effect.
 - The function may not work properly depending on the relationship between the speaker orientation and the position of a bugging device.
 - A malfunction may occur when the receiver receives radio signals including a sound similar to the tone it produces during the Sound mode operation.
 - The scan time may become longer during the bugging device search when frequencies other than those often used by bugging devices have been linked with the bank for Bug Detector channels. (P. 54)

9-10-3 Mode coupling setting of the Bug Detector function

You can use the Bug Detector function with a combination of both Silent and Sound modes.

This setting cannot be selected while the Bug Detector function is active. When you set this setting to "ON" and start the function, the search starts in the mode specified in advance. When a suspicious signal is found, the search is automatically switched to the other mode.

- **1** Press the [FUNC] key to display **F** on the LCD.
- 2 Press the left dial to display "Bug coupling" on the LCD.
- 3 Rotate the dial to select from "OFF", "ON" and "ON continue".

VFO 145.000 Bug coupling

The default is "ON" which activates the coupling operation.

When "ON" is selected, the operation in the Silent mode automatically switches to the Sound mode after suspicious signals are detected, and vice versa. If no suspicious signal is detected, the search finishes without changing the mode.

When "ON continue" is selected, the search continues until any suspicious signals are detected.

9-10-4 Sensitivity setting of the Bug Detector function

You can set the detection sensitivity of the Silent mode of the Bug Detector function.



2 Press the right dial to display "BUG sensitivity" on the LCD.

The LCD displays the contents as shown on the right.



3 Rotate the dial to select from "1" through "5".

The default is set to 3.

The sensitivity of the Bug Detector function can be selected from "1" (lowest) through "5" (highest).



 The higher the sensitivity is set, the more frequently malfunctions will occur. Selecting a lower sensitivity can reduce malfunctions; however, the response becomes slow unless the receiver gets close to the bugging device.

10. Set Mode Configurations

You can improve the ease of use of the DJ-X11 by changing each function according to your preferences.

In the Set mode, the following items can be customized.

The items at the top of the list are called "menus", and the setting items below are called "sub menus".



10

- Setting the Set mode items
- **1** Press the [FUNC] key to display **2** on the LCD.
- **2** Press the $\frac{\text{SET}}{(CR)}$ key to switch to Set mode.
- 3 Rotate the upper dial to select the Set mode menu.
- **A** Press the $\frac{\text{SET}}{\text{CLR}}$ key to display the sub menu.
- 5 Rotate the upper dial to select the sub menu and rotate the lower dial to change the setting.
- 6 Press the [MONI] key to return to the Set mode menu selection screen.
- 7 Press the [FUNC] key to confirm the setting and exit the Set mode.



If you exit the set mode from sub-menu status, DJ-X11 resumes the last-operated sub menu.

10-1 Receiver Setting

Use this menu to set basic receiver options.



- **1** Select <RECEIVER> from the Set mode menu.
- **2** Press the $\frac{\text{SET}}{(C_{LR})}$ key to display the <RECEIVER> sub menu.



10-1-1 Bar antenna setting

Use this setting to switch the antenna used to receive signals in the AM radio band between the built-in bar antenna and an antenna connected to SMA port.



1 Rotate the upper dial to select "Bar antenna".

The LCD displays the information as shown on the right.



2 Rotate the lower dial to select "ON" or "OFF".

The built-in bar antenna is the default antenna used to receive AM radio band signals. To use the supplied whip antenna, you need to connect it to the antenna connector (SMA).



The built-in bar antenna does not support shortwave broadcasts. You need to connect an oppropriate antenna.

10-1-2 Earphone antenna setting

Use this setting to switch between the earphone antenna and the supplied whip antenna. When the earphone antenna is selected, you can receive signals even without connecting the supplied whip antenna because the earphone cord serves as an antenna.

Rotate the upper dial to select "Earphone antenna".

The LCD displays the information as shown on the right.



- 2 Rotate the lower dial to select "ON" or "OFF".
 - Any commercially-available earphones can work as antenna to receive signals. (Both stereo and monaural antennae can be used.)
 - MEMO . When the earphone antenna is used, the received signals may be unstable depending on the condition of the earphone cord.
 - · Like the earphone antenna of a miniature transistor radio, this earphone antenna is not tuned to particular frequencies. As a result, it may properly receive only strong signals such as those of FM broadcasts or those sent from nearby sources.

10-1-3 Preset mode setting

Use this setting to prevent the Preset mode from being displayed as the operation mode.



1 Rotate the upper dial to select "Preset mode".



2 Rotate the lower dial to select "Activate" or "Deactivate". When "Deactivate" is selected, the Preset mode for the main band is not displayed when the real key is pressed.

10-1-4 CW setting

Use this setting to receive unmodulated continuous waves (Morse code signals).

- **1** Rotate the upper dial to select "CW"
- 2 Rotate the lower dial to select "CWL" or "CWU".



Select the setting with which you can hear more easily.

10-1-5 Detected signal output function

Some digital signals, such as 9600 bps high-speed packet communication of amateur radio, use modulation methods called FSK or GMSK. Consequently, these signals cannot be received properly with the DJ-X11 which receives filtered audio signals such as 1200 bps AFSK packets. In such a case, you may be able to receive data communication by inputting the signals to a dedicated connecting device (TNC, etc.) or a PC.



- The communication you want to receive may not be able to be decoded due to various conditions such as the compatibility of your device, software and PC, PC properties setting, and the signal receiving environment (noise or suppression). Note that Alinco does not offer any support other than testing "Weather or not your DJ-X11 meets our factory-standard specifications." for this reason. Also, we cannot answer questions about the operating procedure of specific devices or software, or the type or environment settings of PCs.
 - The received data will be output from the data signal output terminal of the 3-pole stereo mini-plug (P. 98).
- **1** Rotate the upper dial to select "DET out".
- 2 Rotate the lower dial to select "Disable" or "enable".



When "enable" is selected, the sound of the main band is not output.

10-1-6 F Tuning function operation setting

Use this setting to specify the frequency range used to scan signals detected by the F Tuning function. When "3" is selected, the scanning range is set to be wide to allow accurate tuning; however, extra time is required. Selecting "1" finishes scanning faster; however, the receiver may not tune to the target signal properly. The DJ-X11 provides a variable range because the required accuracy varies depending on the conditions such as the strength of the target signal.

- **1** Rotate the upper dial to select "Tune setting".
- 145.000^{11}
- 2 Rotate the lower dial to select from "1" through "3".

10-1-7 IQ signal output function

The DJ-X11 can output IQ signals from the earphone jack. By connecting the earphone jack and the PC's MIC/LINE IN input port with a commercially-available cable with Ø3.5 mm stereo mini-plugs on both ends (the specification is the same as the cable used for the Cable-clone function described on P. 98), you can use SDR (Software Defined Radio) programs to enjoy reception on the PC using software available on the Internet. Since some of these programs offer functions which are unavailable with the DJ-X11 such as DSP (Digital Signal Processor), this function will expand the fun of "watching".



 Although Alinco has confirmed operation by testing several software programs developed by third-parties, some programs may not be usable due to various conditions such as the compatibility of your program and PC, PC properties setting, and the signal receiving environment (noise or suppression). Note that Alinco does not offer any support other than testing "Weather or not your DJ-X11 meets our factorystandard specifications." for this reason. Moreover, we cannot answer questions about the operating procedure of specific software or the type or environment settings of PCs.

10

- **1** Rotate the upper dial to select "IQ output".
- 2 Rotate the lower dial to select "enable" or "Disable".

When "enable" is selected, the sound of both the main and sub bands is not output.

VFO

IQ out put

Disable

10-2 Screen Display Setting

Use this menu to set the screen display and illumination.

1 Select <SCREEN DISPLAY> from the Set mode menu.



BS 💻

145.000

Press the ^{SET} (LFP) key to display the <SCREEN DISPLAY> sub menu.

10-2-1 Language setting

Use this setting to select the language display from English or Japanese.

1 Rotate the upper dial to select "language/言語"

The LCD displays the information as shown on the right.

- v^{FO^{III} 145.000^{BS}■ language ⁄言語 English}
- 2 Rotate the lower dial to select "English" or "日本語(Japanese)".



• We intentionally left this feature to export models because many kanji characters are common with Chinese.

10-2-2 Illumination setting

Use this setting to specify whether to turn on or off the illumination for the LCD and keys as well as the illumination time. The default is set to 5 seconds.

1 Rotate the upper dial to select "Illumination".

The LCD displays the information as shown on the right.





78

2 Rotate the lower dial to select the illumination time.

Rotating the dial switches to select the options as follows:

Always lit → Disable all → Turn out → 5sec → 10sec → 15sec → 20sec → 25sec → 30sec +

Always lit	The illumination is on all the time.
Disable all	The illumination and RX lamp go off.
Turn out	The illumination goes off.
5sec to 30sec	The illumination stays on for the specified time after operation.

10-2-3 Contrast setting

Use this setting to adjust the depth of the contrast displayed on the LCD. The default is set to 6.

1 Rotate the upper dial to select "LCD contrast".

The LCD displays the information as shown on the right.



2 Rotate the lower dial to select the contrast of the LCD from "1" through "10".

10-2-4 Font size setting

When the dual-display is selected, use this setting to switch the font size for the band which is not being operated.

1 Rotate the upper dial to select "Font size".

> The LCD displays the information as shown on the right.



2 Rotate the lower dial to select "Small" or "Large".

10-2-5 Font style setting

Use this setting to switch the font styles used for numbers.



1 Rotate the upper dial to select "Font Bold".



2 Rotate the lower dial to select the number font option.

Rotating the dial switches the options as follows:

 \rightarrow Bold all \leftrightarrow Op, band bold \leftrightarrow Op, band thin \leftrightarrow Thin all \leftarrow

Bold all	All numbers are displayed in a bold font.
Op. band bold	The numbers of the band being operated are displayed in a bold font, and those of the other band are displayed in a thin font.
Op. band thin	The numbers of the band being operated are displayed in a thin font, and those of the other band are displayed in a bold font.
Thin all	All numbers are displayed in a thin font.

10-2-6 Welcome screen setting

Use this setting to display your favorite text on the welcome screen (the screen displayed immediately after the receiver is turned on).

1 Rotate the upper dial to select "Welcome".

VFO	145.	000
Welco	me/slide	ΕM

- **Press the** β_{CLR}^{SE1} key to go to the edit screen.
- 3 Rotate the lower left dial to select from "slide, "disable" and "still" for the status of the text on the welcome screen.
- 4 Rotate the lower right dial and you can move the character entry cursor.
- 5 To enter characters, refer to the procedure to enter a memory name (P. 42).

When no character is entered or "still" is selected, the normal welcome screen will be displayed.