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Client: Alinco, Inc.
Model: DJ-C7T
Standards: FCC 15.121/IC RSS-215
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APPENDIX H: MANUAL

Please see the following pages.

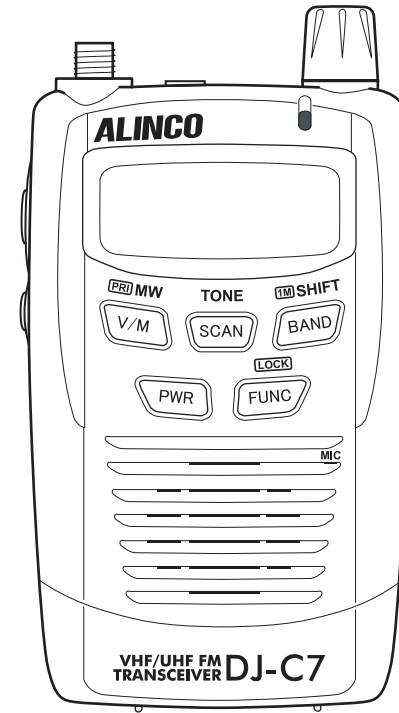
ALINCO

VHF/UHF FM TRANSCEIVER

DJ-C7 T/E

Instruction Manual

Thank you for purchasing this ALINCO transceiver.
This instruction manual contains important safety and
operation instructions.
Please read it carefully before using the transceiver
and be sure to keep it for future reference.



ALINCO, INC.

NOTICE / Compliance Information Statement

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 receive.
- 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.

FCC Tested to Comply
With FCC Standards
FOR HOME OR OFFICE USE

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VHF/UHF FM Transceiver DJ-C7 T/E

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

CE 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>.

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Contents

Before Operating the Transceiver.....

- Attention
- Points to Note Before Transmitting.....
- Points to Note When Using an External Power Supply

1. Functions and Features.....

- 1.1 Standard Accessories

2. Accessories.....

- 2.1 Attaching Accessories
- Connecting and Disconnecting the Antenna
- Attaching and Detaching the Battery Pack
- Prevent Short Circuiting the Battery Pack
- Battery Recharger (AC Adapter)
- Low Battery Indicator

3. Control Function

- 3.1 Name and Operation of the Transceiver Controls.....
- Top and Front Views.....
- Side View
- 3.2 Keypad
- 3.3 Display.....

4. Basic Operations

- 4.1 Turning the Power ON.....
- 4.2 Adjusting the Audio Volume
- 4.3 Adjusting the Squelch
- 4.4 Operating Modes
- Switching Between Modes
- 4.5 VFO Mode
- Switching the Band
- 1MHz UP/DOWN
- Entry Completion Digit for Different Tuning Steps.....

4.6 Memory Mode

- Types of Memory
- Programming a Memory Channel
- Selecting a Memory Channel
- Clearing a Memory Channel.....
- Contents of Memory Channel.....

4.7 Receiving.....

- Monitoring

4.8 Transmitting.....

5. Advanced Operations.....

5.1 Scanning

- VFO Scan
- Program Scan
- Memory Scan

5.2 Keylock.....

5.3 Tone Burst

5.4 Priority.....

5.5 Tone Squelch and the Related Functions

5.6 Tone Scan

5.7 Shift / Split Function.....

6. Parameter Setting Mode

6.1 Mode Setting Items

6.2 Selecting the Setting Mode

6.3 Selecting the Parameters

- (1) Audio Volume Level
- (2) Antenna Type.....
- (3) Repeater function
- (4) Tone Burst Frequency
- (5) APO (Auto Power Off).....
- (6) Battery Save function.....
- (7) BEEP Sound.....
- (8) BELL
- (9) Memory Write Protect function.....
- (10) Scan Type.....
- (11) AM / FM.....

7. Cloning

7.1 Cloning

 ■ Connecting the Transceiver

 ■ Receiving the Master Data

 ■ Transmitting Data from the Master Transceiver

8. Maintenance and Reference

8.1 Troubleshooting.....

8.2 Resetting

8.3 Options

8.4 Transmission System.....

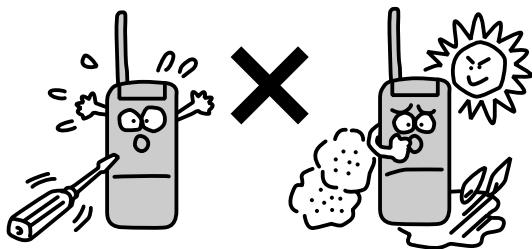
9. Specifications

Before Operating the Transceiver

Attention

- Do not open the case or touch the interior components. Tampering can cause equipment.
- Do not expose the transceiver to direct sunlight, dusty places or place it near sources of heat.
- Keep the transceiver away from TVs, tuners or other equipment if it interferes with reception.
- Securely connect the antenna included with the transceiver.
- When transmitting for a long time, the transceiver can overheat.
- Turn the power off immediately if the transceiver emits smoke or strange odors.

Ensure that the transceiver is safe, then bring it to the nearest Alinco Service Center.



Points to Note Before Transmitting

Many wireless stations use frequency adjacent to the ham bands for business purpose.

Be mindful when transmitting near them.

Even when amateur stations obey regulators, unexpected interference can occur.

Pay sufficient attention during mobile operation.

⚠ Caution

The use of a transceiver in the following places should be prohibited:

- Aboard aircraft
- In airport
- In shipping ports
- Within or near the operating area of business wireless stations or their relay stations.

Before using in any of the above places, obtain any necessary permissions from the proper authorities, and be mindful of local laws that govern amateur radio operation.

Points to Note When Using an External Power Supply

- Use a regulated 3.7V - 6.0V DC external power supply.
- When connecting the power supply to the transceiver, use the attachment AC adaptor for charge of battery (EDC-126).
- When power is supplied from cigarette socket of a car, use the cigarette lighter cable for charge of battery (EDH-32).
- Turn the transceiver's power off when connecting or disconnecting the DC cable.

1. Functions and Features

- 39 CTCSS tone squelch settings
- Tone burst function (1000, 1450, 1750 and 2100Hz)
- Split function
- Cloning
- Li-ion Battery adoption

1.1 Standard Accessories

- Li-ion Battery Pack EBP-58N (3.7V 600mAh)
- AC Adaptor for charge of battery (6.0V 0.5A)
- Helical Antenna
- Antenna Cap
- Instruction Manual

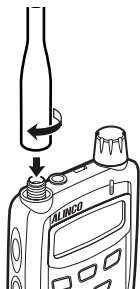
*Standard accessories may differ depending on the version.

2. Accessories

2.1 Attaching the Accessories

■Connecting and Disconnecting the Antenna

- Connecting



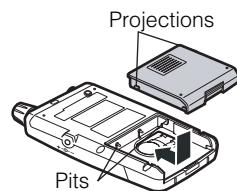
- 1.Connect the helical antenna to the antenna connector at the upper left corner.
- 2.Hold the helical antenna by its base, and turn it clockwise until it stops.

- Disconnecting

To disconnect the antenna, turn it counter-clockwise.

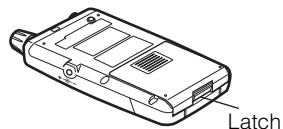
■ Attaching and Detaching the Battery Pack

• Attaching



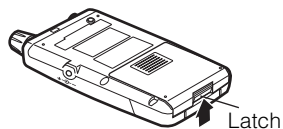
1. Align the projections on the battery pack with the pits on the transceiver.

2. Push in the direction of the arrow until the latch clicks.

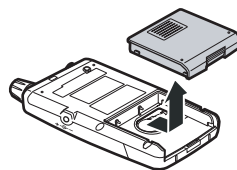


• Detaching

1. Push the latch upward.



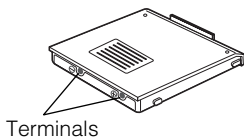
2. Pull out the battery pack in the direction of the arrow shown left.



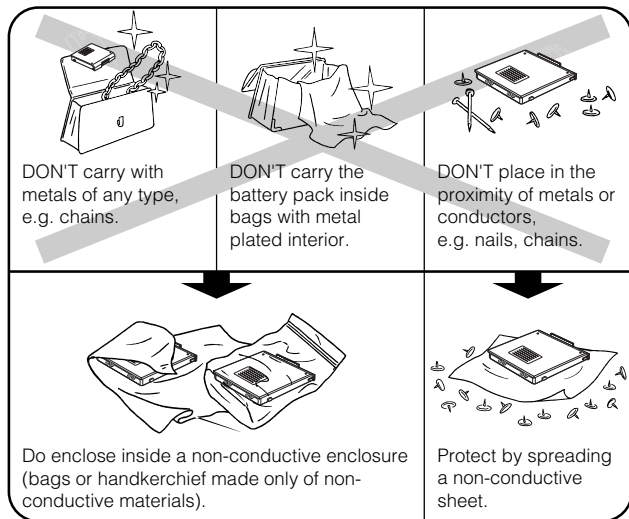
Caution

- The battery pack is not charged when shipped. It must be charged before using.
- The battery pack can be charged by mounting it on the DJ-C7 and connecting AC adaptor for charge of battery to the DC power supply jack on the transceiver.
- It takes up to 2 hours and 30 minutes (maximum) to fully charge the battery pack.
- Charging should be conducted within a temperature range of 0 to 40°C (32 to 104°F).
- Do not modify, dismantle, incinerate, or immerse the battery pack in water, as these practices can be dangerous.
- Never short-circuit the battery pack terminals, as this can cause damage to the equipment or lead to overheating the battery, which could cause burns.
- Please be sure to remove the battery pack when the unit is not in use.
- The battery pack should be stored in a dry place where the temperature is from -20 to 45°C (-4 to 113°F).
- Typically, the battery pack can be charged up to 500 times.
However, the battery pack can be considered dead if the period of use drops significantly despite the pack being charged for the aforementioned charging time.
When this happens, a new pack should be used.
- In the interests of environmental protection, do not dispose of the used battery pack improperly. Check with your local solid waste officials for details on recycling options or proper disposal in your area.

■Prevent Short Circuiting the Battery Pack

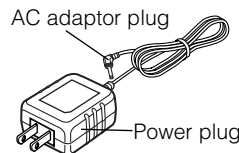


Be extra cautious when carrying the battery pack; short-circuiting will produce surge current possibly resulting in fire.



■Battery Recharger (EDC-126)

• Recharging



1. Mount the battery pack on the transceiver.
2. Connect AC adaptor plug to the external power supply jack on the transceiver.
3. Connect the power plug in an outlet.

Regardless of whether the power of the transceiver is on or off, it will start charging.

Low battery Indicator shown below blinks and TX/RX lamp illuminates red during the charge with off status of the transceiver. Once it will be full-charged, TX/RX lamp will turn green.



Caution

- Be sure to connect EDC-126 to the battery pack after mounting it to the transceiver. Otherwise, the battery pack won't be recharged.
- Disconnect EDC-126 from an outlet while not using it.
- Never charge the battery packs of other manufacturers with this EDC-126 charger.
- The required charging time depends on the condition of the battery pack.
- Never short-circuit the terminals of the battery pack with metal objects and the like. Both this EDC-126 charger and the transceiver should be damaged.
- The EDC-126 does not work when the voltage from an outlet is extremely low.

■Low Battery Indicator



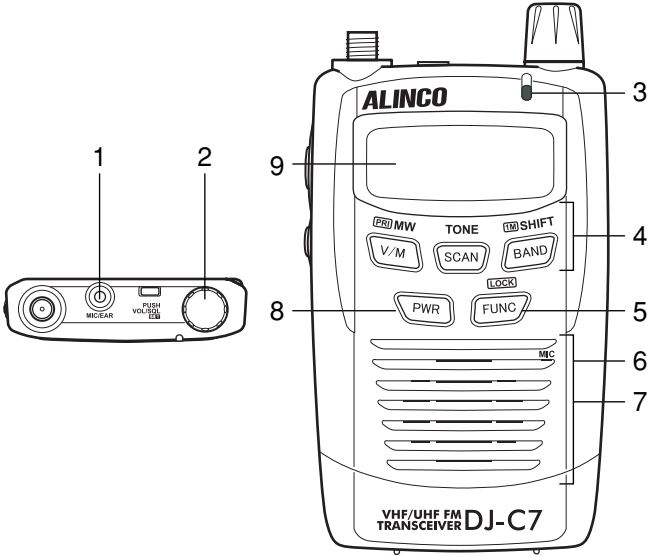
Low Battery Indicator
The charge level is low.

- Battery consumption level may change depending on the surrounding temperature or the frequency of use.
- Charge the battery when the Low Battery Indicator appears.
- The Low Battery Indicator is not an indicator for battery left over.

3. Control Function

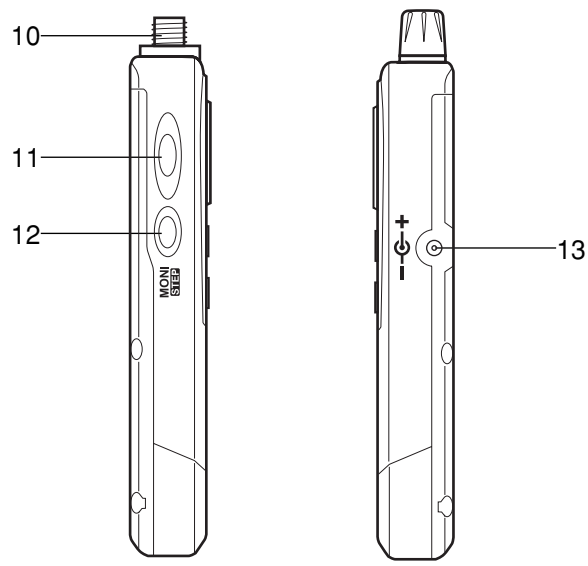
3.1 Name and Operation of the Transceiver Controls

■Top and Front Views



Item		Description
1	SP/MIC Connector	For connection of the optional external speaker (8Ω) and microphone (2kΩ) with 2.5ø stereo plug.
2	Dial	Rotate this dial to select transmitting / receiving frequency, memory channel, and other functions. When you press it down, you can change the volume and squelch level, or select options in the Setting mode while the F icon appears. (See on P.XX)
3	TX/RX Lamp	It illuminates green when the squelch unmutes, red when transmitting.
4	Keypad	It commands various operations. (See on P.XX)
5	FUNC Key	Use this key in combination with other keys to access various functions of the transceiver. Holding this key for 1 second activates Key-lock setting.
6	Microphone	Speak into microphone from a distance of Approx. 5 cm.
7	Speaker	This is a thin built-in speaker.
8	Power Key	Turn the power on/off.
9	Display (LCD)	Refer to "Display" in this manual. (See on P.XX)

■Side View

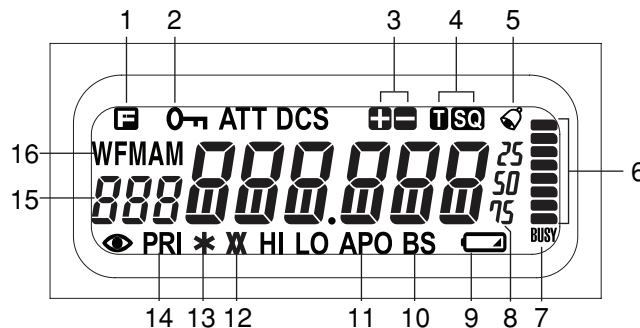


Item		Description
10	SMA Antenna Connector	For connection of the included helical antenna. If you use other antenna, choose one with low SWR (Standing Wave Ratio) designed for VHF and UHF frequencies.
11	PTT Key	Press this key to transmit. When the key is released, the transceiver returns to a receiving state.
12	MONI Key	When this key is pressed, the squelch is unmuted and you can hear the received signal. The squelch is also unmuted when TSQ is set. (See on P.XX) If this key is pressed while the F icon appears, you can change a tuning step. (See on P.XX)
13	DC-IN Jack	This is for connecting an external power supply. By connecting included AC adaptor (EDC-126), you can charge the battery. By connecting an optional cigarette lighter cable (EDH-32), you can supply power from a car battery and charge the battery.



Key	Independent Operation	Press FUNC While F is ON	Press Key for 1 Sec	Dial Operation with Holding Key
V/M	Switches between VFO and Memory mode. (See on P.XX)	Programs to memory channels. (See on P.XX)	Starts Priority monitoring function. (See on P.XX)	
SCAN	Starts and stops scanning. (See on P.XX)	Sets Tone Squelch setting. (See on P.XX)		Switches between Busy and Timer scan. (See on P.XX)
BAND	Switches between bands. (See on P.XX)	Sets Shift setting. (See on P.XX)		Adjusts frequency in 1 MHz unit. (See on P.XX)
FUNC	Switches between functions.		Switches ON/OFF of Keylock function. (See on P.XX)	
PWR	Turns power ON/OFF. (See on P.XX)			
Dial	Adjusts volume, squelch, and other parameters/values. (See on P.XX)	Enters Setting mode. (See on P.XX)		

3.3 Display

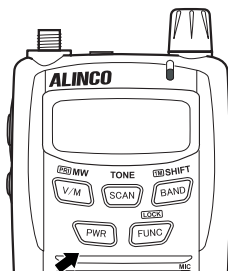


1		Appears when the key is pressed.	9		Appears when the charge level is low.
2		Appears when keys are locked.	10	BS	Appears when the battery save function is on.
3		Indicates the shift (+/-) direction or split operation.	11	APO	Appears when the auto power off function is activated.
4		Appears when the tone squelch is set.	12	XX	Appears when the reverse tone squelch is set.
5		Appears when the bell function is on.	13	*	Appears when the repeater mode is on.
6		Indicates received signal level and the transmission output.	14	PRI	Appears when the priority monitoring function is on.
7	BUSY	Appears when the squelch is unmuted.	15	888	Indicates memory channel No. and other setting status.
8		Indicates the frequency and status of various settings.	16	WFMAM	Indicates the electric wave form.

Other icons which are not mentioned in the table are not used with the DJ-C7.

4. Basic Operations

4.1 Turning the Power ON



Hold the  key down for a second.

To turn the power OFF, hold the  key down until the display disappears.



Caution

When you turn it on through the external power supply of a voltage of over 6.5 volts, "dC-ovEr" is displayed on the LCD with red and green LED alternately blinking. If so, pull out the external power supply jack immediately from the transceiver. When this status continues for a while, it will be damaged.

Especially, note that none of warning signs are displayed on the LCD when the external power supply exceeds over 6.5 volts with the ON status of the transceiver.

Application of a voltage of over 10 volts should break down this transceiver.

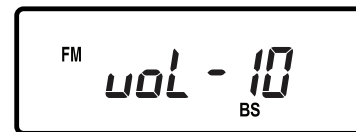
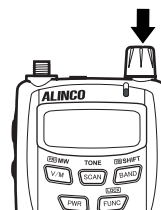
Never use an AC adaptor and an AC adaptor cable of other manufacturers other than the supplied.

4.2 Adjusting the Audio Volume

- There are 31 volume levels. (00-30)
- Default is set as 10.

1. Press the dial once.

 will be displayed on the LCD indicating the present volume level.



2. Adjust a volume level by rotating the dial.

As the value increases, the sound becomes louder.

3. Press the dial again or the PTT key to complete the setting and to return to the normal.

It also returns to the normal when no dial operations continue for 5 seconds.



Caution

When you use an earphone, be sure to set the volume to a proper level. Besides, Audio Volume Level in the Setting mode should be set as "LOW". For more information, please refer to "Audio Volume Level" on P.XX.

4.3 Adjusting the Squelch

The squelch is a function for eliminating noise which is generated when none of the signals are monitored.

"To open squelch" means that the DJ-C7 monitors any of the higher signals than the squelch level you set, and the receiving sound will be heard.

- There are 10 squelch levels. (0-9)
- Default is set as 3.

1. Press the dial twice.

59L - 3 will be displayed on the LCD indicating the present squelch level.



2. Adjust a squelch level by rotating the dial.

When you set it to a higher level, insufficient (weak) signals would be interrupted while monitoring or would not be monitored at all.

Generally, you should set the squelch to the lowest level where the noise would be cut off.

Depending on the frequencies and the radio wave circumstances around you, the squelch level may need to be adjusted.

3. Press the dial again or the PTT key to complete the setting and to return to the normal.

It also returns to the normal when no dial operations continue for 5 seconds.

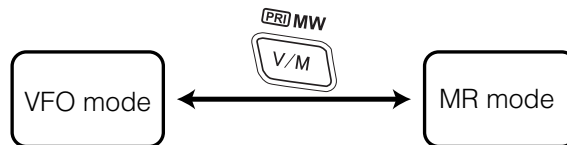
4.4 Operating Modes

The DJ-C7 has two operating modes; VFO mode and Memory (MR) mode.

■ Switching Between Modes

Everytime you press the  key, the operating mode can be switched between these two.

When you switch to the Memory mode, the memory number will be displayed on the LED, however, nothing indicates in VFO mode.



Caution

When nothing is programmed as memory channels, you may not switch to the Memory mode.

4.5 VFO Mode

This is a mode which is set as the factory-shipped configuration.

Radio frequencies and various settings can be changed by rotating the dial in this mode.

Switching the Band

Everytime you press the BAND key, below 7 bands can be switched in order.

Default	VHF	145.000(142.000~169.995MHz)	FM
	L-UHF	380.000(380.000~429.995MHz)	FM
	H-UHF	433.000(430.000~469.995MHz)	FM
	AM Radio	.531(531~1620kHz)	AM
	Short Wave	1.625(1.625~9.995MHz)	AM
	FM Radio	76.100(76.100~89.995MHz)	WFM
	Air	118.000(108.000~141.995MHz)	AM/FM

1 MHz UP/DOWN

When you rotate the dial with holding the  key down, you can increase or decrease a frequency by a 1MHz-step in accordance with the direction of dial rotation.

This function is a quick way to increase or decrease the frequency by a large amount.

After pressing the  key, releasing it without any dial operations can switch among bands.

Entry Completion Digit for Different Tuning Steps

Tuning step frequency can be changed. You may choose one of the unit selections as follows;

Auto, 5, 6.25, 8.33, 10, 12.5, 15, 20, 25, 30, 50, 100, 125, 200 kHz.

1. Press the  key to select the band to be changed its tuning step.
2. Press the  key, and press the MONI key when you see the F icon appears on the LED.
3. Rotate the dial to choose a tuning step frequency mentioned above.
4. Press the PTT key to complete the setting and to return to the frequency display.

The default tuning step is set as "Auto".

Choosing a tuning step but "Auto" in any of the bands releases the default setting as "Auto" in all provided band selections. And the last selection of the tuning step for a specified band is programmed.

Returning the setting as "Auto" in a specified band, all tuning steps for all provided bands will be returned as "Auto".

"Auto" uses tuning steps and modes which are both programmed to the DJ-C7 in advance.

4.6 Memory Mode

This mode allows you to program frequencies into the DJ-C7 memory. A programmed frequency is called as a channel.

The DJ-C7 has four types of memory functions; Memory channel (general), Program scan channel, Priority channel, and VFO auto programmed channel.

■Types of Memory

Memory channel (general) (0-199)	This is a channel which is called up in Memory mode. You may program up to 200 channels in the DJ-C7. When you program frequently used frequencies in advance, you can easily call up whatever you want to use.
Program scan channel (OA, Ob-4A, 4b)	This is a channel which is used for Program scanning function. You can program up to 5 pairs of frequency ranges. (higher and lower limits) (See on P.XX)
Priority channel (PRI)	This is a channel which is used for Priority monitoring function. (See on P.XX)
VFO auto programmed channel (AH, AL)	This is a channel which is used for Repeater function. (See on P.XX) You can program a pair of frequency range (higher and lower limit) to apply settings for the repeater automatically.

■Programming a Memory Channel

1. In VFO mode, adjust the frequency you want to program by rotating the dial.

2. Set Shift (+/-) and/or Split settings, if necessary.

For more information on these settings, please refer to "Shift / Split Functions" on P.XX.

3. Press the  key to display memory channel number on the LCD, and select a channel you want to write to by rotating the dial.

The blank channels will blink and programmed channels will stay lit up.

4. Press the  key while the F icon appears on the LCD.

A beep sounds telling that the frequency is written to the memory channel successfully.



Tip

To overwrite to an already-exist memory channel, be sure that Memory Write Protect function is set as "OFF". For more information on this function, please refer to "Memory Write Protect function" on P.XX.

■Selecting a Memory Channel

1. Press the  key to switch to the Memory mode.

A memory channel number will be displayed on the LCD.



Caution

When nothing is written as a memory channel, you may not switch to the Memory mode.



2. Rotate the dial to select the memory channel number you want to call up.

Clockwise rotation:

Each click increases the memory channel number by one.

Counter-clockwise rotation:

Each click decreases the memory channel number by one.

■ Clearing a Memory Channel

1. Set Memory Write Protect function to "OFF" state, if necessary.

For more information on this function, please refer to "Memory Write Protect function" on P.XX.

2. Press the key to switch to the Memory mode.

3. Rotate the dial to select the memory channel number you want to delete.

4. Press the key, and press the key while the F icon appears on the LCD.

A beep sounds telling that the frequency is deleted successfully, and "-----" is displayed on the LCD.

5. With "-----" displayed on the LCD, rotate the dial to return to the Memory mode.

Press the  key to return to the VFO mode.

When nothing is written as a memory channel, press the  key to return to the VFO mode.



Tip

Right after deleting the memory channel with "-----" displayed on the LCD, you can resume what you erased. To restore the channel, press the  key and press the

 key again while the F icon appears on the LCD.

Note that you won't be able to restore it once you change the operating mode.

■ Contents of Memory Channel

The following settings can be stored in each memory channel.

- Frequency
- Shift frequency
- Shift direction (+/-) and Split setting
- Tone encoder frequency
- Tone decoder frequency
- Tone encoder/decoder setting
- Radio wave type (AM/FM)

4.7 Receiving

1. Adjust a volume level. (See on P.XX)
2. Adjust a squelch level. (See on P.XX)
3. Select a frequency on which you want to receive signals.

When a signal is received on the frequency you selected, the BUSY icon will appear at the lower right on the LCD, and signal level indicators are displayed according to the received signals, as well.

Also, the green TX/RX indicator will light at the time.

■ Monitoring

This function can be used to temporarily release the squelch level setting you set only when the received signal is too insufficient (weak) to monitor or is interrupted during monitoring.

- The squelch is unmuted (is opened completely) while the MONI key is held down, regardless of the squelch level setting.
- This function unmutes (opens completely) the squelch even Tone Squelch function is set.

4.8 Transmitting

1. Select a frequency on which you want to transmit signals.
2. Press the PTT key.
When the red TX/RX indicator lights, it is now ready for transmitting.
3. While holding the PTT key down, speak toward the microphone on the transceiver at normal speaking volume.
4. Release the PTT key when you finish speaking.



Caution

- Pressing the PTT key outside the transmission frequency range displays "FF" on the LCD. Transmission is not possible in this state.
- Especially, note that a receiving and a transmitting frequency range differs when you set Shift direction and/or Split setting.



Tip

Transmission available frequency ranges:

VHF...	144.000-147.995 MHz (DJ-C7T)
	144.000-145.995 MHz (DJ-C7E)
UHF...	420.000-449.995 MHz (DJ-C7T)
	430.000-439.995 MHz (DJ-C7E)

5. Advanced Operations

5-1 Scanning

This function automatically detects receiving frequencies to help you locate the signal that you want to receive.

There are two types of scanning: Busy scan and Timer scan. The default is set as Busy ("bUSY") scan.

Switching between those two types can be done in the Setting mode. (See on P.XX)

Busy scan:

If no signal is monitored after scanning stops, it will detect the next frequency.

Timer scan:

Even if a signal is detected after scanning stops, it will switch to the next frequency after a lapse of 5 seconds.

- While it is under scanning, the decimal point (.) on the LCD blinks.
- Even if it is under scanning, a scan will be suspended and a squelch will open temporarily when you hold the MONI key down. Scanning will be continued when you release the MONI key.
- While it is under scanning, a scanning direction can be changed with a dial operation. Scanning starts in the direction of the last dial operation. (up or down)
- Press any key other than the MONI key to stop scanning.

■VFO Scan

In VFO mode, scanning is performed to detect signals with the tuning step unit you set in advance (see on P.XX) for any frequencies in a specified band.

1. Press the  key to switch to the VFO mode.
2. While holding the  key down, rotate the dial to display "vFo" on the LCD.

3. Release the  key.

Scanning will be performed with the tuning step unit in the direction of the last dial operation. (up or down)

4. Rotate the dial in the clockwise direction to make the scanning take place in the UP direction.
Conversely, rotate the dial in the counter-clockwise direction to make the scanning take place in the DOWN direction.

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

■Program Scan

Scanning is performed to detect signals between a specified range of frequencies. Both higher limit and lower limit of the range need to be set in advance. Otherwise, the following operations can't be done.

A programmed pair of frequency range (higher and lower limit) is called as a "program scan channel". You can program up to 5 pairs of frequency ranges.

For more information on how to program, please refer to "Programming a Memory Channel" on P.XX.

1. Press the  key to switch to the VFO mode.
2. While holding the  key down, rotate the dial to select a program scan channel to be detected.
3. Release the  key.
When you have selected A side, scanning will be performed in the direction of side "b".
Conversely, when you have selected b side, scanning will be performed in the direction of side "A".

4. Rotate the dial in the clockwise direction to make the scanning take place in the UP direction.
Conversely, rotate the dial in the counter-clockwise direction to make the scanning take place in the DOWN direction.

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

■Memory Scan

Scanning is performed to detect signals among programmed frequencies as the memory channels. Memory channels need to be set in advance. Otherwise, the following operations can't be done.

For more information on how to program, please refer to "Programming a Memory Channel" on P.XX.

1. Press the  key to switch to the Memory mode.

2. Press the  key.
"mEmorY" is displayed on the LCD.

3. Release the  key.
Scanning will be performed.

4. Rotate the dial in the clockwise direction to make the scanning take place in the UP direction.
Conversely, rotate the dial in the counter-clockwise direction to make the scanning take place in the DOWN direction.

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



Tip

With the DJ-C7 either Memory Skip function, which is excluded specified channels during a scan, or Memory Bank function, which divides channels into several groups, is NOT available.

5.2 Keylock

The keylock function avoids incorrect or unauthorized operations to lock the keys.

The following can be done even the keylock function is ON.

- Receiving signals with the MONI key held down
- Transmitting with the PTT key held down
- Adjusting the volume and squelch level
- Turning the power ON/OFF
- Canceling the keylock

1. Hold the  key for a second to switch ON/OFF the keylock function.

When the keylock function is ON, the  icon will appear on the LCD.

5.3 Tone Burst

The Tone Burst function is used to call up another station or to activate a repeater by adding a tone signal to the transmitted signal.

- The tone signal is added while both the MONI key and the PTT key are held down at the same time. The default frequency of the tone signal is 1750Hz, and it can be changed in the Setting mode. (See on P.XX)
- CTCSS Tone frequency is added and transmitted automatically when a tone signal is set. You must select the tone that matches the one monitored by the receiving station, if that station is using a tone squelch. (See on P.XX)

5.4 Priority

This function monitors two frequencies alternately to increase efficiency for receiving signals.

Every 5 seconds, the DJ-C7 momentarily switches from a specified frequency to the frequency which is programmed as a priority channel (see on P.XX) for 0.5 seconds.

1. Hold the  key down for a second to start the Priority monitoring function.

The "PRI" icon will appear on the LCD.

2. Press the  key while it is monitoring on the specified frequency band to release this function.



Tip

- You are required to program a priority channel in advance. Otherwise, a beep sounds and the above operations can't be done. For more information on how to program, please refer to "Programming a Memory Channel" on P.XX.
- Scanning is not available during Priority monitoring function.
- Even if a signal is received in the priority channel side, it returns to the specified frequency band after a lapse of 5 seconds.
- You can specify a frequency in either VFO mode or one of the memory channels (general).

5.5 Tone Squelch and the Related Functions

The Tone Squelch (The T and the SQ icons appear on the LCD when it is set) is a function to unmute (open) squelch only when one of the tone (encoder) frequency you set matches the tone of another station.

Besides, when you set a decoder frequency and tell it to another station, the station would easily catch your signals to communicate with.

This function allows you to communicate with other stations easily and quickly.

1. Press the  key, and press the  key while the F icon appears on the LCD.

Both the T icon and a tone frequency are displayed on the LCD. The tone encoder function is now ready to set.

2. Rotate the dial to adjust to a tone encoder frequency.

If you want to activate a repeater, press the PTT key or leave 5 seconds as it is to complete the setting. Also, go on to "Shift / Split Function" on P.XX.

Otherwise, follow below steps.

3. Press the  key while the tone encoder frequency is displayed on the LCD.

The T icon, the SQ icon, and the programmed tone encoder frequency are displayed on the LCD. The tone encoder/decoder function (Tone Squelch) is now ready to set.

4. Rotate the dial to adjust to a tone decoder frequency.

It is possible to set a tone encoder and a tone decoder frequency independently. You may set different frequencies between an encoder and a decoder.

5. Press the PTT key or leave 5 seconds as it is to complete the setting.

Tone Squelch function will be performed.

6. Repeat steps from 1 to 4, and press the  key in the state of step 4.

After "XX" is displayed, press the  key again to display **OFF**. With the OFF state, press the PTT key or leave 5 seconds as it is to release the Tone Squelch function.

7. While "XX" is displayed on the LCD, press the PTT key or leave 5 seconds as it is to perform the Reverse Tone Squelch.

To release the Reverse Tone Squelch function, press the PTT key or leave 5 seconds as it is while "XX" is displayed. **OFF** is displayed on the LCD indicating the function is now released.

The Reverse Tone Squelch ("XX" is displayed on the LCD when it is set) is a function to mute (close) squelch only when the DJ-C7 receives frequency matched to the programmed encoder frequency.

And it unmutes (opens) squelch when the DJ-C7 receives frequency unmatched to the programmed encoder frequency.

This function is not generally used in ham radio. However, when you set a tone which is used in wide-band communications between range of 450 to 453 MHz and which continues to transmit signals all the time, only a voice will be heard and a grating noise will be cut off.

5.6 Tone Scan

This function detects tone frequencies automatically on a receiving radio wave.

1. In VFO mode, rotate the dial to adjust to a frequency on which a tone signal is transmitted.
2. While holding the  key down, rotate the dial to display "tonE" on the LCD.

3. Release the  key.

Tone Scan function will be performed. Tone frequencies are displayed on the LCD constantly.

Once the DJ-C7 finds a tone, a beep sounds and Tone Scan function stops.

The found tone is programmed as a decoder frequency automatically.

4. Press the  key to return to the VFO mode.

This function continues searching a tone until it detects one. Press the same key to quit or suspend temporarily.

5.7 Shift / Split Function

This function is usually used when you communicate via a repeater station in ham radio.

Shift function:

It functions to shift a transmitting frequency from a receiving frequency.

Split function:

It functions to receive signals in the VFO mode and to transmit signals in the Memory mode, or vice versa.

1. Press the  key. Everytime you press the  key while the F icon appears on the LCD, a display indication will be changed as follows.

Shift frequency -> ⁺Shift frequency -> ⁻Shift frequency -> ^{+/-}"SPLit"



Caution

When a transmitting frequency turns to be the one on the prohibited transmitting frequency band after the Shift / Split function is set, **OFF** is displayed on the LCD. If so, you are not allowed to transmit any signals.

6. Parameter Setting Mode

The DJ-C7's Setting mode is used to set the various operating functions.

6.1 Mode Setting Items

- (1) Audio Volume Level
- (2) Antenna Type
- (3) Repeater function
- (4) Tone Burst Frequency
- (5) APO (Auto Power Off)
- (6) Battery Save function
- (7) BEEP Sound
- (8) BELL
- (9) Memory Write Protect function
- (10) Scan Type
- (11) AM / FM

6.2 Selecting the Setting Mode

1. Press the  key, and press the dial once while the **F icon appears on the LCD.**
It switches to the Setting mode, and the item name will be displayed on the LCD.
2. **Select an item by pressing the dial.**
Everytime you press the dial, the displayed item is changed by turns.
When you press the MONI key, the items are displayed in reverse direction.
3. **When the item to be configured is displayed on the LCD, change a value or a setting by rotating the dial.**
4. **Press the PTT key to complete the setting.**

6.3 Selecting the Parameters

The following 11 functions can be set in the DJ-C7's Setting mode.

(1) Audio Volume Level

When you use an earphone, you may reduce entire volume level with this function if the volume is too loud.

1. "H.LoLUmE" is displayed on the LCD.

2. Rotate the dial to switch HIGH/LOW of the volume level as follows.

"H.LoLUmE" -> "LoLoLUmE"



Caution

Never change the setting while you are wearing the earphone. Your ear may be hurt with extremely loud noise.

(2) Antenna Type

You can select an antenna according to a frequency you wish to receive.

You may choose an antenna type from the following options.

- | | |
|-------------------|--|
| Bar antenna: | The internal antenna which receives the AM radio band and the Short Wave. You are not allowed to exchange it to the other antenna. Any settings are not necessary to use this antenna. |
| Earphone antenna: | The earphone's cord performs a role of an antenna. The earphone antenna only receives the FM radio broadcasts. |
| External antenna: | You are allowed to use the helical antenna attached to the DJ-C7 or any antennas on the market. The external antenna receives all frequency bands over 10 MHz. |

1. "SmA" is displayed on the LCD.

2. Rotate the dial to select an antenna between Earphone and External (SMA) as follows.

"SmA" -> "EAR"



(3) Repeater function

With this function on, you may activate a repeater easily and quickly.

1. "rPt" is displayed on the LCD.

2. Rotate the dial to switch ON/OFF of Repeater function.

When you set ON, "★" will appear on the LCD.

When you set "AH" and "AL" as a pair of VFO auto programmed channel in the Memory mode, a tone frequency and a value of the Shift setting are applied automatically when DJ-C7 receives signals from that range.

(4) Tone Burst Frequency

1. "1750" is displayed on the LCD.

2. Rotate the dial to select Tone Burst Frequency setting as follows.

"1750" -> "2100" -> "1000" -> "1450"



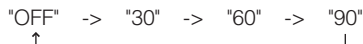
(5) APO (Auto Power Off)

This function automatically turns the power OFF if there is no key operation for a specified period of time to prevent battery charge wastage.

This is useful if you easily forget to turn off the transceiver.

1. " **OFF** " is displayed on the LCD.

2. Rotate the dial to select a setting value as follows.

"OFF" -> "30" -> "60" -> "90"


Just before cutting the power OFF, a beep will be heard. Select the time from 30, 60, 90 minutes, and OFF. When OFF is selected, this function does not work.

To turn the power ON, press the POWER (PWR) key again.



Tip

With this function ON, even if the DJ-C7 receives signals, it won't put off the turn-off period. Only key operations will expand the period.

(6) Battery Save function

This function prevents battery charge wastage by switching the reception circuit power supply OFF.

With this function ON, the transceiver will be a hibernation state if there is no key operation or received signals for a continuous period of 5 seconds.

1. " **BS** " is displayed on the LCD.

2. Rotate the dial to switch ON/OFF of Battery Save function.

When you set ON, " **BS** " will appear on the LCD.

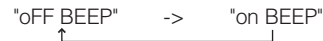
- The factory-shipped default is set as ON.
- This function will be released temporarily when the DJ-C7 receives signals or there is a key operation.
- This function will not be performed while the DJ-C7 is under scanning.
- LCD displays even with the hibernation state.

(7) BEEP Sound

This function sounds a beep during operations. When you feel it noisy or annoyed, you may turn off its sound.

1. " **oFF BEEP** " is displayed on the LCD.

2. Rotate the dial to switch ON/OFF of BEEP Sound as follows.

"oFF BEEP" -> "on BEEP"


(8) BELL

It functions like a beeper. The DJ-C7 tells you with a bell sound that another station calls up.

1. " **bELL** " is displayed on the LCD.

2. Rotate the dial to switch ON/OFF of the bell function.

When you set ON, "  " will appear on the LCD.

When the DJ-C7 receives signals, "  " will blink on the LCD and a bell sounds.

To release the bell sound, press the PTT key.

(9) Memory Write Protect function

This function prevents from overwriting or deleting memory channels by mistake and protects what you've programmed. You can always program frequencies to blank channels regardless of this setting.

1. "onProtCt" is displayed on the LCD.
2. Rotate the dial to switch ON/OFF of Memory Write Protect function as follows.

"onProtCt" -> "oFFProtCt"

Caution

Note that when you reset all settings (see on P.XX) with the state of "oFFProtCt", which means allowing to overwrite, ALL memory channels you programmed are deleted. The factory-shipped default is set as "onProtCt" which means preventing from overwriting.

(10) Scan Type

You can select a scan-resume condition between Busy scan and Timer scan.

1. "bUSY" is displayed on the LCD.
2. Rotate the dial to switch a scan-resume condition as follows.

"bUSY" -> "timEr"

(11) AM / FM

You can select a modulation mode between AM and FM.

It is necessary to switch a display for setting a tuning step in a specified band in advance. For more information on this, please refer to "Entry Completion Digit for Different Tuning Steps" on P.XX.

1. "wRUE" is displayed on the LCD.
2. Rotate the dial to switch a scan-resume condition between AM and FM.



Tip

When you set a tuning step as "Auto", you are not able to switch a modulation mode. In the case, you will see "-----" displayed on the LCD.

7. Cloning

7.1 Cloning

With the Cloning function, it is possible to connect two transceivers by a cable, and copy all settings from one unit (call as a Master) to the other (call as a Slave).

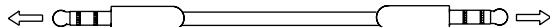
This function transfers all master's settings including memory channel data.

■Connecting the Transceiver

- Connect both of the speaker jacks on the sending transceiver (Master side) and the receiving transceiver (Slave side) with a ø 2.5 stereo mini-plug cord as shown in the below illustration.
- Be sure that both transceivers are switched OFF before connecting them.

Master
To SP/MIC connector
on the transceiver

Slave
To SP/MIC connector
on the transceiver



■Receiving the Master Data

Here are the operations of a slave transceiver side.

1. While holding the MONI key down, turn the power ON.

"*CLonE*" is displayed on the LCD, and the transceiver enters the Clone mode.



2. Wait for a while until master data is transferred completely.

For more information on sending the master data, please refer to the next section.

3. Turn the power OFF on the slave's side.

- The stereo mini-plug cord should be a direct-coupled so that it can avoid internal resistance.
- Even while the DJ-C7 transfers data, it can be suspended with any key operations. To restart transferring, press the PTT key.
- Do not disconnect the cable while cloning. When the cord is disconnected, "*FRIL*" is displayed on the master's LCD, and the DJ-C7 suspends transferring.
- All data in the slave side will be overwritten if cloning is executed. Be careful with current data on the slave before cloning.

■Transmitting Data from the Master Transceiver

Here are the operations of a master transceiver side.

1. While holding the MONI key down, turn the power ON.

"*CLonE*" is displayed on the LCD, and the master's transceiver enters the Clone mode.

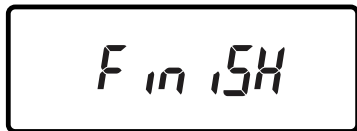


2. Press the dial.

"*Sd 00*" is displayed on the LCD, and the master's transceiver starts to transfer data.



"*F in 15H*" is displayed on the LCD when transfer is completed successfully.



3. Turn the power OFF on the master's side to release the Clone mode.

If the DJ-C7 should fail to transfer data, "*FR IL*" is displayed on the LCD. When you see the indicator, redo from step 1.

8. Maintenance and Reference

8.1 Troubleshooting

Please check the list below before concluding that the transceiver is faulty.
If a problem persists, reset the transceiver. This may correct erroneous operations.

Symptom	Possible Cause	Action
Nothing appears on the display when you turn the power on.	Poor Li-ion battery pack connection	Check if the battery pack terminals are clean.
	Dead battery.	Recharge the battery pack.
	You are releasing the key too quickly.	Hold the power switch down for 1 second.
No speaker audio. No reception.	Volume too low.	Adjust the volume.
	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.
Frequency display is incorrect.	CPU error.	Detach the battery pack or external power supply, wait 10 seconds and attach it again. If it is still not operation, reset the transceiver.
Won't scan.	Squelch is unmated.	Set squelch so that noise is just muted.
Frequency and memory number do not change.	Keylock is on.	Turn off keylock.
Key entry not possible.	Keylock is on.	Turn off keylock.
One-touch repeater cannot be used.	Incorrect setting for one-touch repeater use.	Set the transceiver correctly for repeater use.
Cannot transmit. Display blinks or goes out when you transmit.	Battery power is insufficient.	Recharge the battery pack.
Cannot transmit. No reply when you transmit.	Not pressing the PTT key firmly enough.	Press the PTT key firmly.
	You are outside of the band.(when shift is set.)	Transmit within transmission frequency range.
	Incorrect frequency.	Match your frequency to receiving station's frequency.
Display blinks or goes out when you receive.	Battery power is insufficient.	Recharge the battery pack.

8.2 Resetting

When you reset the transceiver, all settings are returned to the initial (default) factory setting. You can reset programmed channel memory when the write protect is off.

1. Press and hold the  key and press the  key to turn the power on.

2. Release the keys when all icons are displayed.

The transceiver returns to the initial VFO mode.

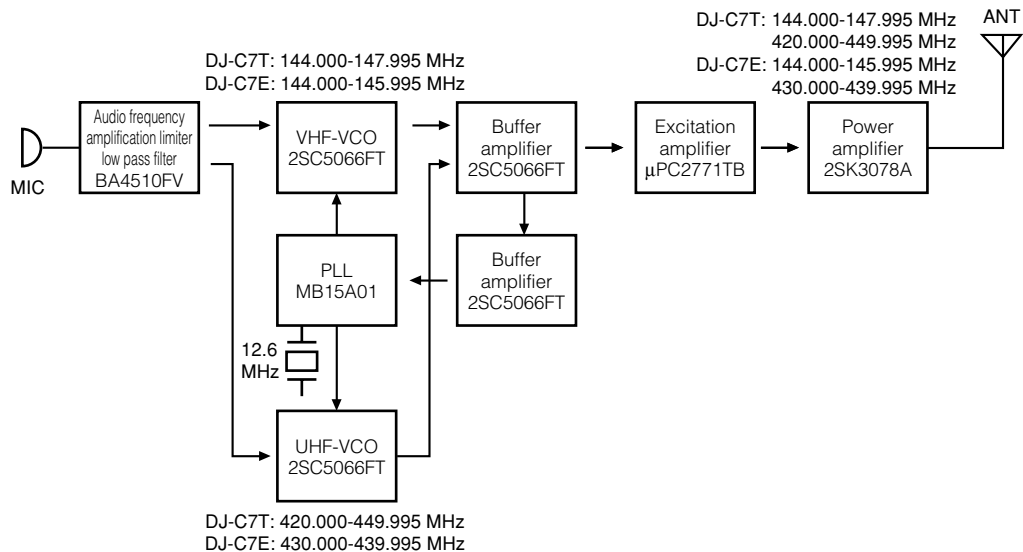
●Factory Setting

- VFO Frequency VHF :145.000MHz
UHF :445.000MHz (T version)
UHF :433.000MHz (E version)
FM Radio :88.100MHz (T version)
FM Radio :87.500MHz (E version)
Air :118.000MHz (T version)
L-UHF :380.000MHz (T version)
- Memory Channel 0 - 199ch blank
- Audio Volume 10
- Squelch Level 3
- Battery Save ON
- Scan Resume Condition Busy Scan
- Beep ON
- Tuning Step Auto
- Shift OFF
- Shift Range VHF :0.6MHz
UHF :5.0MHz
- Tone Squelch OFF
- Tone Frequency 88.5Hz
- APO, BELL OFF

8.3 Options

- | | |
|---------|--|
| EME-24 | Earphone microphone |
| EMS-60 | Speaker microphone |
| EDH-32 | Cigarette lighter cable |
| ESC-38 | Soft case |
| EME-18 | Earphone |
| EBP-58N | Li-ion battery pack (DC3.7V 600mAh) |
| EDC-126 | AC adaptor for charge the battery pack |

8.4 Transmission System



9. Specifications

●General

TX Frequency Range	VHF	144.000 - 147.995MHz (T Version)
		144.000 - 145.995MHz (E Version)
	UHF	420.000 - 449.995MHz (T Version)
		430.000 - 439.995MHz (E Version)
RX Frequency Range	FM Radio	88.100 - 107.995MHz (T Version)
		87.500 - 107.995MHz (E Version)
	VHF	108.000 - 173.995MHz (T Version)
		144.000 - 145.995MHz (E Version)
	UHF	380.000 - 511.995MHz (T Version)
		430.000 - 439.995MHz (E Version)
Modulation		F3E
Antenna Impedance		50ohm (SMA)
Rated Voltage	External Terminal	3.7 - 6.0 VDC
	Battery Terminal	3.7 VDC
Current	Transmit	DC6.0V: VHF Approx. 0.28A,UHF Approx. 0.32A
		3.7V (EBP-58N): VHF Approx. 0.25A, UHF Approx. 0.30A
	Receive	Approx. 70mA
	Battery Save	Approx. 19mA
Frequency Stability		-7 - +3 ppm (-10 - 60°C)
Dimensions (Projection exclusive)		58(W) x 96(H) x 14.5(D) mm
Weight		Approx. 102g (EBP-58N inclusive)

●Transmitter

Power Output	DC6.0V	Approx. 0.5W
	EBP-58N equipped	Approx. 0.3W
Modulation		Variable Reactance
Maximum Deviation		+/- 5kHz
Spurious Emission		-60dB or less
Microphone Impedance		Approx. 2.2kohm

●Receiver

System		Double-conversion super heterodyne
Intermediate	1st	IF 50.85MHz
Frequency	2nd	IF 450kHz(AM/FM), 10.7MHz(WFM)
Sensitivity		(12dB SINAD) -15.0dBu or less
Selectivity	-6dB	12kHz or over (AM/FM), 200kHz or over (WFM)
	-60dB	35kHz or over (AM/FM), 300kHz or over (WFM)
Audio Output		100mW or over (MAX)
		90mW or over (10% Distortion factor 8ohm)
Spurious Response		60dB or over
Squelch Sensitivity		Approx. -16dBu or less

AUS	B	DK	FIN
F	D	GR	IRE
I	LUX	NL	P
E	S	UK	

CE0336!

This device is authorized for use in all EFTA member states (CH, ICE, LI, NOR).
An operator's license is required for this device.



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