

ALINCO, INC.

Head office: "TWIN 21" MID Tower Building 23F
1-61, 2-Chome, Shiomi, Chuo-ku, Osaka 540 Japan
Phone: 06-946-8150 Fax: 06-946-8175 Telex: 63086
E-mail: 101243.1446@compuserve.com
U.S.A.: 438 Arapola Ave., Suite 130, Torrance, CA 90501-6201, U.S.A.
Phone: 310-618-8616 Fax: 310-618-8758
<http://www.alinco.com/>
Germany: Eschbomer Landstrasse 55, 60489 Frankfurt am Main, Germany
Phone: 069-786018 Fax: 069-789-60766

©Copyright 1997 Alinco, Inc. Osaka Japan
PS0267 Printed in Japan

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 Alinco's EDC-76K/EDC-77K charger to charge the DJ-C1/C4.

Battery Life

This product is equipped with a lithium-ion battery, which allows charging approximately 500 times under ordinary temperatures. If the power easily turns off with a fully charged battery, the battery might be dead. Contact an authorized dealer to replace the battery (subject to billing).

Warning:

This product uses an earphone or audio accessory to hear the received signals.

To avoid hearing hazard, it is recommended to:

- Hold the earphone or audio accessory about an inch (2~3cm) away from your ear, then turn the power on, and adjust the volume per Section 3.2 of this manual;

- Turn the unit off or lower the volume level, if you experience a ringing in your ear(s);

Do not operate the radio with an earphone or audio accessories at high volume levels.

ALINCO

VHF FM HANDHELD TRANSCEIVER

DJ-C1

UHF FM HANDHELD TRANSCEIVER

DJ-C4

INSTRUCTION MANUAL

Thank you for purchasing this ALINCO transceiver. To obtain optimum performance from this transceiver, read this Instruction Manual thoroughly. Also, keep it for future reference.



NOTE:

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.

Specifications and information found in this document are subject to change without notice.

Copyright © 1997. All rights reserved. No part of this manual may be reproduced, copied, translated or transcribed in any form or by any means without the prior written permission of Alinco Inc., Osaka, Japan.

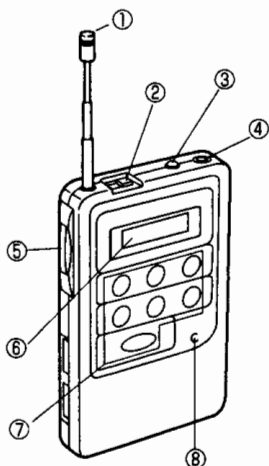
Names of products used in this manual are for identification purpose only and may be trademarks or registered trademarks of their respective company.

Table of Contents

1. Setting Up the DJ-C1/C4.....	5
2. Part Names and Functions.....	6
3. Basic Operation.....	8
4. Operation Modes.....	9
5. Advanced Operations.....	11
6. Troubleshooting.....	14
7. Specifications.....	15
8. Optional Accessories.....	16
9. Quick Reference.....	17
Quick Reference.....	17
Operation Basics.....	18
Сводная Таблица Функций.....	19
中文說明.....	20

4

2. Part Names and Functions

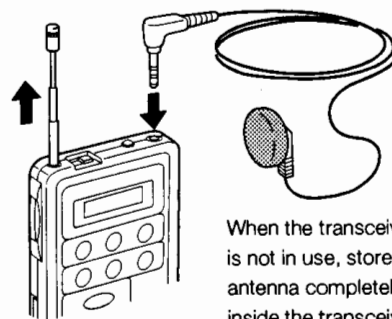


- ① **Antenna**
- ② **PWR (power) switch**
To turn the power on, slide this switch to "ON" (right), and to turn the power off, slide the switch to "OFF" (left).
- ③ **Transmit lamp**
This lamp is lit while you are transmitting.
- ④ **Mic/Earphone Jack**
Connect the plug of the included earphone here. Optional mic or audio accessories plug here. (See p.13 for details)
- ⑤ **PTT switch**
To transmit, hold this switch down and speak into the microphone.
- ⑥ **Display**
See "Display Layout" on the next page.
- ⑦ **Operation Keys**
For information about how to use these keys, see "Basic Operation" and later sections.
- ⑧ **Microphone**
- ⑨ **Charging terminals (on the rear panel).**
Do not touch them. Keep clean.

6

1. Setting Up the DJ-C1/C4

Pull the antenna out completely. Making sure the power to the transceiver is off, insert the plug of the supplied earphone into the earphone jack on the transceiver.

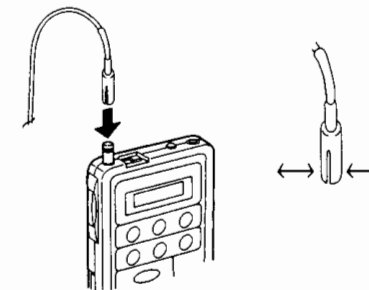


When the transceiver is not in use, store the antenna completely inside the transceiver unit.

For information on charging, see EDC-76K/EDC-77K Instruction Manual.

When using the DJ-C1/C4 in your pocket ...

The included wire antenna may be useful if you use the DJ-C1/C4 in your pocket. It saves you the inconveniences of an ordinary whip antenna. With the whip antenna stored completely in the transceiver unit, attach the wire antenna cap to the top of the whip antenna. Open or close the slit of the cap to adjust tightness. (Efficiency may be lower with the wire antenna).



5

Display Layout

Indicates the AM Aircraft frequency band (DJ-C1 T version only).

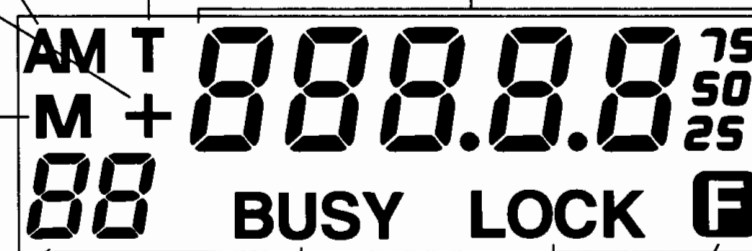
Indicates the frequency shift direction (+ or -).

Appears in the memory mode.

Displays the selected memory channel (1~20, or C).

Appears when the tone encoder is enabled.

Displays the current frequency.



Appears when the transceiver receives a signal.

Appears when the key lock is on.

Appears after **FUNC** is pressed, and blinks when **FUNC** is held down for more than 1 sec.

7

1. Turn the power on.
2. Adjust the volume, if needed.

Slide the PWR switch to "ON" (right).

Press **MONITOR** to disengage the squelch, and press **VOLUME**, then press **DOWN** / **UP** to select a volume level from 1 to 8. The higher the number the louder the volume. Note that volume level 8 is too loud for use with the earphone.

To avoid hearing hazard, hold the earphone about an inch (2 - 3cm) away from your ear before adjusting volume.

Press **MONITOR** to engage the squelch.

3. Adjust the squelch level, if needed. Press **VOLUME** twice, then press **DOWN** / **UP** to select a squelch level from 0 to 5. The larger the number the tighter the squelch. After a few seconds the radio comes back to frequency display.

4. Select a frequency. While a frequency is displayed, press **DOWN** / **UP** to increase or decrease the frequency in one tuning step. To change the frequency in 1 MHz steps, press **FUNC** to display **F** then press **DOWN** / **UP**.

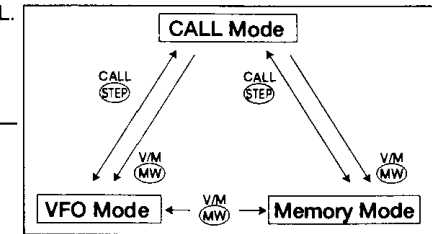
5. When you receive a signal ... BUSY appears on the display and you can hear the other person's voice from the earphone. If it is hard to hear, press **MONITOR** (BUSY appears) to disengage the squelch. To re-engage the squelch, press **MONITOR** or **VM**.

To transmit

Hold **PTT** down and speak into the microphone. The transmit lamp will turn red.

There are three operation modes: VFO, Memory, and CALL.

The figure on the right shows the key operation for changing these modes.



VFO Mode

The radio will start up in the VFO mode by factory-default.

You can manually select the frequency. While in the VFO mode, the "M" or "C" is not on the display.

To change the frequency:

Press **DOWN** / **UP** to increase or decrease the frequency in one tuning step.

To scan :

Hold down **DOWN** / **UP** for a while to start scanning. Scanning will pause if a frequency receiving a signal is found. After five seconds, scanning will automatically restart. The decimal "." blinks while scanning.

Press any key to stop scanning.

Memory Mode

The memory mode provides 20 memory channels (1 to 20), allowing you to easily access pre-programmed frequencies. To go to the memory mode, press **M**, so that "M" appears in the extreme left. The number below the "M" is the channel number. If the channel is blank (unprogrammed), "-----" is displayed instead of a memorized frequency.

To call up only frequency-programmed memory channels, be in the Memory Mode with the "M" displayed, and press **DOWN** / **UP**. To call up both blank and frequency-programmed memory channels, be in the Memory Mode with the "M" displayed, and press **FUNC** to display **F** then press **DOWN** / **UP**.

(continued from page9)

To store a frequency in a memory channel:

To newly program a frequency or change the existing frequency in a memory channel, first call up the desired channel, and press **VM** to return to the VFO mode. Then, use **DOWN** / **UP** to select a frequency. Press **FUNC** then **VM** to store the frequency.

To clear a specific memory channel, select the memory channel, and while in the Memory Mode, press **FUNC** to display **F**, then press **VM**.

"Channel Display"

*Holding down **VM** at power on sets the transceiver so that the current memory channel number appears instead of the frequency. Holding down **VM** at power on again returns the frequency display.

CALL Mode

The CALL mode is used to call up the most-frequently-used frequency. The DJ-C1/C4 provides one CALL channel. To enter the CALL mode, press **C** to display C.

To change the frequency for the CALL channel:

While in the CALL Mode, press **FUNC** then press **C**. While C is blinking, use **DOWN** / **UP** to select a frequency and press **VM** to store it.

Shifted Frequency (Offset)

To transmit on an offset frequency, you need to set the offset. While in the VFO mode, press **FUNC** to display **F** then press **VOLUME** repeatedly until the desired shift direction (- or +) appears*. Then, press **DOWN** / **UP** to select an offset in the range of 0 to 99.995 MHz. You can change the offset in 1 MHz units by pressing **FUNC** then **DOWN** / **UP**. Press **PTT** once to set and exit.

Once the offset has been set, pressing **MONITOR** lets you monitor the transmission frequency (reversed frequency function), until canceled by pressing the **MONITOR** again (Busy blinks while in reverse).

To disable the offset frequency function, press **CAL** until neither - nor + appears. (* If none of - or + is displayed, the offset will not be effected.)

Tone Encoder

To enable the tone encoder, while in the VFO mode, hold **FUNC** down until **F** blinks, and press **VOLUME** repeatedly to display "T". Press **DOWN** / **UP** to select a frequency from 39 standard tones. Press **PTT** to set and exit.

Tone Burst

While in the VFO mode, hold **FUNC** down until **F** blinks and press **C**. Then, press **DOWN** / **UP** to select a tone burst frequency in Hz. Press **PTT** to set and exit. To output a tone burst, while pressing **PTT**, press **CAL**.

Key Lock

Press **FUNC** to display **F** then press **MONITOR** to turn the key lock function on. This disables key operations other than **PTT**, monitor, volume, squelch, tone burst, and unlock functions.

Repeat the same procedure to cancel the key lock.

Tuning Step

The tuning step is the minimum unit (kHz) used in frequency tuning. While in the VFO mode, press **FUNC** to display **F**, then press **STEP**, and press **DOWN** / **UP** to select the tuning step. Press **PTT** to set and exit.

Battery Save

Hold **FUNC** down until F blinks then press **DOWN**. Each time you press **DOWN** / **UP**, the battery save is enabled (bS.on) or disabled (bS.off). Press **PTT** to set and exit. With the battery save enabled, if no signal is received or no operation is made for five seconds, the transceiver automatically reduces its power consumption.

Auto-Power Off(APO)

Hold **FUNC** down until F blinks then press **UP**. Each time you press **DOWN** / **UP**, auto-power off is enabled (APo.on) or disabled (APo.off). Press **PTT** to set and exit. With the auto-power off enabled, if no operation is made for 60 minutes, the transceiver will turn itself off automatically. An alert by Morse-code "END" is heard three times shortly before the shut off. Slide the power switch to "PWR OFF" as soon as possible because the transceiver keeps consuming a small amount of power after shut down by the auto-power-off. To turn on again, leave at OFF for at least 5 sec.

Note: Regardless the APO, the radio has automatic shut-down function which protects the battery from excessive dissipation when it is almost flat. Slide the power switch to OFF also in this case as soon as possible.

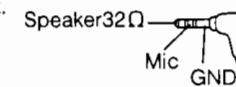
Reset

Hold down **FUNC** and **MON** together and slide the PWR switch to "ON" to reset the transceiver to the factory-default settings.

Factory-default settings

	DJ-C1	DJ-C4
Frequency	145.000 MHz	T : 445.000 MHz E : 433.000 MHz
Tuning step	T : 5 kHz	E : 12.5 kHz
Offset frequency	Disabled 0.6 MHz	Disabled T : 5 MHz E : 1.6 MHz
Tone encoder	Disabled, 88.5 Hz	
Tone burst	1750 Hz	
Memory channels	blank	
Squelch level	1	
Volume level	3	

Plug Configuration for Mic/Earphone jack.
An 8Ω speaker may be used.



Problem	Possible causes	Solutions
Nothing appears on the display at power on.	The battery is flat.	Recharge the battery. See "EDC-76K/EDC-77K Instruction Manual" about recharging. Also see p.2 "Battery Life".
No sound is heard from the earphone. Receiving is disabled.	Squelch level is too high.	Adjust the squelch to a suitable level.
	The earphone is not connected firmly.	Make sure the earphone is connected firmly.
	PTT is held down.	Release PTT .
Transmitting is disabled.	PTT is not held down completely.	Hold PTT down and make sure the transmit lamp turns red.
	The frequency is out of the supported frequency band because of the offset.	Transmit within the specified frequency range. See "Shifted Frequency (offset)" in "5. Advanced Operations."
Key entries are not accepted.	The key lock is on.	Turn the key lock off. See "Key Lock" in "5. Advanced Operations."
The radio shuts down itself without the APO activated.	The radio has automatic shut-down function to protect the battery from excessive dissipation when the battery is flat.	Recharge the battery. See "EDC-76K/EDC-77K Instruction Manual" about recharging.

	DJ-C1	DJ-C4
Frequency coverage	T : 118.000~173.995 *(RX) E : 144.000~147.995 (TX)	T : 420.000~449.995 MHz
	E : 144.000~145.995 MHz	E : 430.000~439.995 MHz
Modulation	F3E(FM)	
Transmit output	300mW	
Modulation system	Reactance modulation	
Spurious ratio	Max. -60 dB	
Receiving system	Double-conversion superheterodyne	
Sensitivity	Max. -16 dBμ	Max. -15 dBμ
AF output	Max. 20 mW (32Ω)	
Microphone impedance	Approx. 2 kΩ	
Current	Transmitting: Approx. 240 mA	Transmitting: Approx. 300 mA
	Waiting: Approx. 30 mA	Waiting: Approx. 40 mA
Grounding	Negative	
Rated voltage	3.7V	
Operating temperature	-10°C to +50°C(14°F to 122°F)	
Intermediate frequency	1st IF E : 20.8MHz / T:21.7MHz	1st IF 21.7MHz
	2nd IF 450kHz	2nd IF 450kHz
Dimensions	56W x 94H x 10.6D (mm) (without projections)	
Weight	75g (including battery)	

* 118.000~135.995 :AM reception

- **EME-2** Earphone microphone (tie pin type with straight plug)
- **EME-3** Earphone (with straight plug)
- **EDS-7** Conversion cable

The following products require the conversion cable **EDS-7**:

- **EMS-9** Speaker microphone
- **EME-4** Earphone microphone (tie-pin type)
- **EME-16** Earphone microphone (tie-pin type)
- **EME-17** Earphone microphone (telephone-operator type)
- **EMS-47** Speaker microphone
- **EDC-76K** Wall charger (120VAC)
- **EDC-77K** Wall charger (220VAC)
- **EDH-26** Charger tray part of EDC-76K/77K
- **EDC-36** Car-charging cable (for use with EDH-26)

Related Product: **DR-605 Twinband Mobile Transceiver** (to relay the DJ-C1/C4 signals using the crossband repeater function)

Quick Reference

Key	Basic Utility	If pressed after pressing the FUNC key	Press and hold FUNC for 1 second, then press this key
PTT	Press to talk		
V/M	VFO<=>Memory	Memory Write	
MONITER	Opens squelch	Key-lock	
CALL	CALL Channel(Transmits Tone-Burst if pressed with PTT)	Tuning Step(when in VFO mode)*: Scan-Skip(when in Memory mode:** disappears)	Tone-Burst setting*
DOWN	Freq/Mem.up. Press and hold for 1 second to scan	freq up by 1MHz step(when in VFO mode); Access blank channels(when in Memory mode)	Battery Save "BS" on/off
UP	Freq/Mem.up.Press and hold for 1 second to scan	freq up by 1MHz step (when in VFO mode); Access blank channels(when in Memory mode)	Auto-Power-off(60minutes)*"APO" on/off
VOL /SQL	Press once to set volume "VOL";* press twice to set squelch "SQL"	Offset*. Press repeatedly to decide the offset direction + or - .	CTCSS(PL)Tone setting.* Press repeatedly to display "T" to activate.

*Use UP/DOWN to set the value.

**Select channel first, by pressing FUNC then UP/DOWN sequentially

Resetting: Press and hold FUNC and V/M together and turn the power ON.

Press and hold V/M and turn the power ON to display Channel Number only (without frequency).

OPERACION BASICA

Teclado	Uso básico	Empuje después de haber empujado FUNC	Empujando FUNC por 1 segundo, pues empuje este teclado
PTT	Transmitir		
V/M	VFO(Dial por sintonizar) <=> Memoria	Programa la memoria **	
MONITOR	Abrir el squelch	Bloqueo de teclado	
CALL	Canal de CALL (Transmite Tone-Burst si empujado con PTT)	Paso de sintonía(Cuando en modo de VFO)*Scan bandido-Skip(Cuando en modo de memoria:** desaparece)	Programa Tone-burst*
DOWN	Disminuye las frec./mem.(Empuja por 1 segundo para Scan)	Frec.baja por 1 MHz (en modo de VFO);Busca canales en blanco (en modo de memoria)	Ahorro de batería (BS)on/off
UP	Aumenta las frec./mem. (Empuja por 1 segundo para Scan)	Frec.aumenta por 1 MHz(en modo de VFO); Busca canales en blanco (en modo de memoria)	Desconexión automática (60 minutos)*"APO" on/off
VOL/SQL	Empuje una vez para ajustar volumen "VOL";* empuje 2 veces para squelch "SQL"	Offset(desplazamiento)* Empuje repetidamente para decidir la dirección de offset + o -	CTCSS(PL)tono*; para activar empuje para mostrar "T" en pantalla

*Use UP/DOWN para ajustar el valor

**Elige el canal en primer empujando FUNC y UP/DOWN continuamente.

Reinicialización(Reset);Empujando FUNC y V/M al mismo tiempo, enciende el radio.

Empujando V/M, enciende el radio para mostrar solo Número de Canal (sin frecuencia)

СВОДНАЯ ТАБЛИЦА ФУНКЦИЙ DJ-C1/DJ-C4

Кнопка	Основное назначение	При нажатии после кнопки FUNC	Нажатие кнопки после длительного нажатия на кнопку FUNC
PTT	Прием-передача		
V / M	Переключение между памятью и ГПД	Запись в память**	
MONITOR	Открыть шумоподаватель	Блокировка клавиатуры	
CALL	Вызывной канал При нажатии вместе с кнопкой PTT передается тональный импульс.	Шаг настройки частоты в режиме ГПД*. Пропуск при сканировании в режиме памяти (исчезает десятичная точка на дисплее)	Установка тонального импульса*
DOWN	Вниз (для запуска сканирования сделайте длительное нажатие)	Уменьшение частоты с шагом 1 МГц в режиме ГПД. Переход на свободную ячейку в режиме памяти	Включение/выключение режима сохранения батареи (BS)
UP	Вверх (для запуска сканирования сделайте длительное нажатие)	Увеличение частоты с шагом 1 МГц в режиме ГПД. Переход на свободную ячейку в режиме памяти	Включение-выключение автовыключателя трансивера (60 мин) (APO)
VOL / SQL	Нажмите один раз для установки громкости*, нажмите 2 раза для установки шумоподавителя*	Сдвиг частоты*. Нажимайте повторно для выбора направления сдвига частоты - или +	Установка тона CTCSS*. Нажимайте повторно для активации кодера (индицируется T на дисплее)

ПРИМЕЧАНИЯ

* - используйте кнопки UP / DOWN для установки значения

** - сначала выберите ячейку нажатием FUNC, затем соответственно UP / DOWN

Перезагрузка: одновременно нажав и удерживая кнопки FUNC и V / M, включите питание трансивера.

Режим индикации каналов: нажав и удерживая кнопку V / M, включите питание трансивера.

Длительное нажатие — нажатие в течении не менее чем 1 секунды.

DJ-C1/C4 使用方法

按键	单独按下	按 FUNC 键后使用此键	长按 FUNC 键 1 秒后使用此键
PTT	发射		
V/M	VFO 与记忆信道转换	编写记忆信道**	
MONITOR	监听	锁键 / 开放锁键	
CALL	呼叫信道 (若与PTT键一起使用发射引导讯号)	编频步进级数 (在 VFO 模式时) * 扫描跳越 (在记忆模式 “.” 不出现时)	发射引导讯号设定*
DOWN	频率与信道下降 (若长按1秒后作扫描功能)	频率以1MHz 步级下降 (在 VFO 模式时) 设定空白信道 (在记忆模式时)	省电功能开 / 关设定
UP	频率与信道上升 (若长按1秒后作扫描功能)	频率以1MHz 步级上升 (在 VFO 模式时) 设定空白信道(在记忆模式时)	自动关机(60钟)“APO” 功能开 / 关设定
VOL / SQL	按一次设定音量* 按二次设定锁噪*	发射移频设定* 重复按下以决定发射移频之 方向+或-	CTCSS 哑音频设定* 重复按下使显示屏出现“T” 以开启 CTCSS 编码功能

注释: * 使用 UP/DOWN 键以设定有关数值, 按 PTT 键以完了。

** 先选择有关信道, 然后以顺序按 FUNC 及 UP/DOWN。

重置: 按 FUNC+V/M 然后启电源。

信道显示: 按 V/M 然后开启电源。