

# DJ-S46

## ■ FEATURES

Do not connect any power supply when dry cells are installed in the radio.  
If NiCd batteries are installed, charging can be done through this terminal using the EDH-18, EDC-78 charger, or an external regulated 5.5V DC source (negative ground).  
(Do not use any other types of charger or else the radio will be damaged and warranty will be void.)

**External Microphone Jack I**  
Connect to this jack when using an optional microphone (e.g. EMS-9, EME-12, etc.)

**External Speaker Jack I**  
Connect to this jack when using an optional speaker (e.g. EMS-9, EME-12, etc.)

**PTT I**  
Press and hold this switch to talk. Release to listen.

**MONITOR I**  
Press this switch to unmute the preset squelch and monitor weak signals. Press and hold the F-key and press this key to lock/unlock the keys to avoid unintended key entries. ("L" is displayed during the keylock.)

**Function (F) I**  
Press and hold this key and press another key to activate the secondary function.

**▼ DOWN/TONE I**  
Press this key to change channel downwards. You and your partner must have the same number to talk with each other. Pressing down this key for a few seconds starts scanning downwards.  
- If your partner has a radio with the interference eliminator (or CTCSS/PL decoder), you should set the CTCSS encoder tone of the DJ-S46 as follows: (1) While pressing the Function key, press this ▼ key; (2) Press the ▼ key alone to set the tone same as that of the interference eliminator code\*; (3) while pressing the Function key, press the ▼ key to display **■** in the display. (4) Press PTT to exit. Repeat the same steps skipping the step (2) to erase **■** and disable the tone encoder. \*The tone code is often referred as follows: A = 77.0, B = 88.5, C = 97.4, D = 107.2, E = 118.8, F = 127.3, G = 136.5, φ = Not coded.  
- Pressing the ▲ or ▼ key while transmitting will emit 1750Hz or the alerting ring to raise the attention of your partner. The sound can be toggled between 1750Hz tone and the alerting ring as follows: While pressing the CALL key, turn ON the power.

**▲ UP I**  
Press this key to change channel upwards. Press down this key for a few seconds to start scanning upwards.  
- While pressing the PTT key, press this ▲ key to emit the alert ring or the 1750Hz tone.

**Microphone I**

**Speaker I**

## ■ QUICK REFERENCE CHART

Condition	Pressed alone	Pressed while F is pressed	Press and hold and turn the power on
MONI	unmutes squelch	keylock/unlock	beep on/off
PTT	transmits		
▲ UP	channel up (scans if pressed a while) (If pressed with PTT, emits alert ring or 1750Hz tone.)		courtesy beep ON
▼ DOWN/TONE	channel down (scans if pressed a while) (If pressed with PTT, emits alert ring or 1750Hz tone.)	CTCSS tone encoder programming. (see text)	courtesy beep OFF
SCAN/BELL	scan starts. power toggles Hi/Lo when pressed while PTT is pressed.	alarm on/off	toggles between the alert ring and 1750Hz tone.
LAMP/APO	lamp on/off	Auto Power Off	change lamp mode

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## ■ OPTIONS

- Headset with VOX ..... EME-12 (Earpad type)  
EME-13 (Earphone type)
- Tie-pin mic. and earphone with VOX... EME-15
- Speaker Microphone..... EMS-9Z
- Earphone Mic. .... EME-4
- Soft Case ..... ESC-27
- Car lighter DC cable with voltage conversion to 5.5V DC..... EDH-18
- Mobile bracket ..... EBC-6
- Wall Charger..... EDC-78

\*Specifications and information found in this document are subject to change without notice.  
Choice of NiCd battery is at user's risk.  
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## ■ SPECIFICATIONS:

### < General >

- Frequency range / FRS CH 1 ~ CH 14 (462MHz ~ 467MHz)
- Modulation / F3E • DC power source / 3.6 ~ 4.5V (internal battery), 5.5V (external regulated source) • Current TX / approx. 260mA @ 4.5V DC, RX / approx. 33mA (squelched) • Dimensions / 55(W) × 100(H) × 28(D)mm without projections • Weight / approx. 185g (with three AA drycells)

### < Transmitter >

- Output Power / approx. 300mW @ 4.5V DC • Modulator / Variable reactance • Max. deviation / ± 2.5KHz

### < Receiver >

- Configuration / Double conversion superheterodyne • I.F. / 1st: 23.05MHz / 2nd: 450kHz • Sensitivity / better than - 15dBμ (12dB SINAD) • AF output / not less than 100mW (10% distort. @ 8Ω)

## ALINCO, INC. U.S.A. ALINCO BRANCH


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PS0260  
Printed in Japan

### I Power switch and Volume

Turning this knob clockwise will click and turns the power on. Turning further clockwise increases the volume.

### I SCAN/BELL

Press this key to scan. Press PTT, UP or DOWN key to stop scanning. Press and hold the F-key and press this key to turn on/off the alarm function; the function alarms you with an electronic sound when a signal is received. (  appears on the display.)

Pressing this key while transmitting toggles the output power high and low. Press and hold this key and turn the power on to toggle the sound between 1750Hz and the ringing tone, emitted by pressing the DOWN/TONE key while transmitting.

### I DISPLAY

### I LAMP/APO

Press this key to illuminate the display for 5 seconds. Press and hold the F-key and press this key to toggle the APO (auto-power-off); Use the UP/DOWN keys to change the automatic power off (APO) timer from OFF to 120 min. in 30 min. step. The APO will turn off the DJ-S46 if no operation is done for the set amount of time. Morse-code-like beep sounds when shutting down by the APO. Press and hold this key and turn the power on, then the 5 second illumination timer is disabled and the lamp is toggled on/off with the key regardless of the time passed. Repeat the same procedure to return to 5 second illumination.

## U.S.A. ALINCO BRANCH LIMITED WARRANTY

### Alinco Radios and Accessories

#### 1) Basic Warranty Program:

U.S.A. Alinco Branch will repair or exchange parts for your Alinco Radio Product FREE of charge in the U.S.A. in the event of a defect in materials or workmanship, as follows:

#### Parts:

New or comparable rebuilt parts in exchange for defective parts for one (01) calendar year from the date of original purchase of new equipment.

#### Labor:

Performed by Authorized Alinco Service Center FREE of charge for one (01) calendar year from the date of original purchase of new equipment.

Warranty Service can be obtained during the warranty period by Walk-In, Mail, or Other Common Carrier at the Authorized Alinco Service Center. Alinco will return all Warranty Service items via normal ground transport to the original shipping party in the U.S.A.

**WARRANTY OR REPAIR AUTHORIZATION NOT REQUIRED BEFORE SHIPPING.**

This warranty is extended ONLY to the original purchaser of equipment sold as new, by an Authorized Alinco Dealer in the U.S.A. This warranty covers failures due to defects in materials or workmanship which occurs during normal use. It does not cover failures due to damage which occurs in shipment or failures which are caused by unauthorized services, modifications, or other maintenance not supplied by the Authorized Alinco Service Center. Failures which result from accident, misuse, abuse, neglect, misapplication, alteration, faulty installation, or damaging environments will result in voiding this warranty.

#### 2) Extended Coverage Plan:

U.S.A. Alinco Branch will offer purchasers of Alinco Radio Products in the U.S.A. the option to purchase extended warranty coverage for one additional calendar year from the date the "Basic Warranty Program" expires.

The additional coverage will be available at a charge of \$40.00 and must be purchased within 15 days from the date of original purchase. This must be purchased directly from the Authorized Alinco Dealer where the original equipment was purchased.

Terms and conditions relating to Parts and Labor of the Extended Coverage Plan will be the same as the Basic Warranty Program described above.

## U.S.A. ALINCO BRANCH WARRANTY REGISTRATION

Please Print or Type

Name of Purchaser: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone: \_\_\_\_\_

Model: **DJ-S46** Date of Purchase: \_\_\_\_\_

Dealer: \_\_\_\_\_ Serial Number: \_\_\_\_\_

Comments: \_\_\_\_\_

## U.S.A. ALINCO BRANCH WARRANTY SERVICE INSTRUCTIONS

1. To insure proper and prompt warranty service, it is necessary that the warranty card be filled out correctly and returned to U.S.A. Alinco Branch.

2. If you have difficulty with your equipment it may be returned to U.S.A. Alinco Branch, 438 Amapola Ave., Ste # 130, Torrance, CA 90501. Equipment must be returned fully insured and all shipping and handling charges prepaid.

3. It is recommended that a copy of the original purchase receipt and a brief note describing the problem you are experiencing be enclosed with the unit, along with the shipper's name address and phone number.

4. Equipment should be sent in the original carton, if available.

5. Prior authorization is NOT required to return products for Warranty Service. In order to qualify for warranty service, proof of purchase in the U.S.A. showing original purchase date is required.

6. If the requested repairs or service are beyond the terms of the warranty, or if there is no means to provide the required proof of purchase, service, parts, and freight costs will be charged.

MODEL **DJ-S46** DATE OF PURCHASE \_\_\_\_\_

SERIAL NUMBER \_\_\_\_\_

DEALER \_\_\_\_\_

## Rules

Before operating this radio, you have to be familiar with the four (4) essential FRS rules.

### Rule 1 — Eligibility and responsibility

Anyone of any age may use FRS unless he/she represents a foreign government. NO license will be issued. The operator is responsible for all communications; must share each channel with other users; and may not claim any channel for private or exclusive use.

### Rule 2 — Authorized locations

If the operator complies with the FRS rules, he/she may operate FRS anywhere in the FCC's jurisdiction.

### Rule 3 — Types of communications

FRS may transmit two-way voice communications and one-way message to establish communications, send an emergency message, provide traveler assistance, make a voice page, or conduct a brief test.

### Rule 4 — FRS units

No internal modification is allowed. Nothing may be attached to the FRS unit that was not FCC certified as part for that unit. Internal modification or external, non-certified attachments to the FRS radio cancels the FCC certification of the radio and voids authorization for operating the radio.

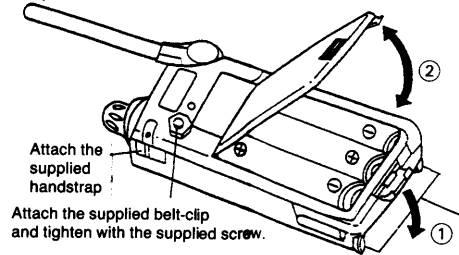
## CAUTION

- Your DJ-S46 is strictly designed for the FRS (Family Radio Service), therefore, you must not modify your radio. Modifying is a violation of the FCC (Federal Communications Commissions) rules and will void all warranties with your radio.
- High RF environments can cause severe damage to your unit. Ensure that you are not in a High RF environment when operating your DJ-S46.
- When using optional audio accessories, do not operate the DJ-S46 at high volume levels. Continuous high volume operation is not advisable. Reduce the volume level or discontinue use if you experience a ringing in your ears. Make sure the DJ-S46 is turned off before plugging audio accessories to the DJ-S46.

Warning: Do not operate the DJ-S46 in hazardous environments, as an explosion or fire may result. Do not operate the DJ-S46 near unshielded electrical blasting caps. Radios can interfere with blasting operations and can cause an explosion. Turn your radio OFF to prevent accidental transmission when in a "blasting area" or in areas posted "Turn off two-way radio".

## Battery Installation

Lift the bottom tab and lift the battery-case cover. Insert three AA drycells or NiCd battery cells; close, and lock with the bottom tab.



Be careful not to touch with metals/conductives.

## Terms Used in This Manual

**Squelch** means a function that mutes or silences the noise out of the speaker when signals are not received.

**Scan** means a function that checks each channel sequentially until a channel with signal is found. The scan function in the DJ-S46 is a timed-scan; that is, when a signal is received the scan stops for a maximum of 5 seconds to receive, and then resumes scanning.

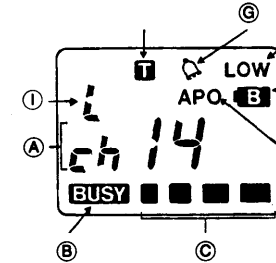
**CTCSS Encoder** superimposes a continuous tone on your transmitting audio, such a tone being almost inaudible by the receiving party. The tone can be useful if the receiving transceiver is equipped and programmed with a *CTCSS (PL) Decoder* that allows the audio out only if the received signal has the same tone encoded. In some cases the CTCSS is called the Interference Eliminator Code.

**1750Hz Tone** is a high pitch tone, different from the CTCSS Encoder tone, and is used to notify the receiving party that you are transmitting, much like whistling.

## OTHER FUNCTIONS

- Courtesy Beep:** A short beep is emitted on your transmitting signal upon each release of the PTT key, to let the other party "goahead" and talk. To toggle on this function, press and hold the ▲ key and turn on the power. To toggle off, do the same with the ▼ key.
- Key Stroke Beep Sound:** The beep heard with each stroke of keys can be toggled on/off, by pressing and holding the MONITOR key and turning the power on.

## DISPLAY



- A Channel number  
The decimal point flashes while scanning.
- B "BUSY" appears upon receiving a signal.
- C S-meter/RF output power meter
- D Auto Power Off enabled
- E Low Battery Indicator (Flashes when needs replacement or charge)
- F Low Power Output mode indicator
- G Alarm function ON
- H CTCSS tone encoder ON
- I "L" appears when the key-lock function is activated.

## TROUBLE SHOOTING (> : Possible cause, → : Remedy)

### Radio does not turn ON:

- > The battery is low → Install new batteries, or re-charge if you are using rechargeable Ni-Cd batteries.
- > One or more battery-cells are inserted reversed. → Check the direction and polarity for each battery-cell.

### No Sound:

- > The speaker is disabled if you have an optional audio accessory attached → Pull out the accessory from the speaker jack.
- > The radio is automatically squelched when there is no signal, so that you don't hear the noise while waiting. → To temporarily disable the squelch, press the MONITOR key.
- > The volume is set too low → Turn the volume knob clockwise while pressing the MONITOR key to a desired level.

### Cannot hear your partner:

- > Make sure your partner is on the same channel → Press ▼ or ▲ to display the same channel number as your partner's.
- > Your partner is too far, or, there are too many objects in-between blocking the radio-wave → Try to move to line-of-sight with each other, also try press and holding the MONITOR key.
- > If you are too close to other radio antennae, the other radio could be blocking your partner's signal → Try to move away from other radio antennae.

### Your partner cannot hear you:

- > PTT is not pressed → Make sure to press the PTT key alone while you talk. If you are using an optional microphone, press the PTT key of the microphone.
- > If your partner has a Tone-Squelch (PL, interference-eliminator, CTCSS) → set the right tone code. See text under ▼ DOWN/TONE.
- > Your output power is low → While pressing the PTT key, press the SCAN key to erase the LOW indication in the display. Also make sure the antenna is flipped up.

### Radio does not accept key input:

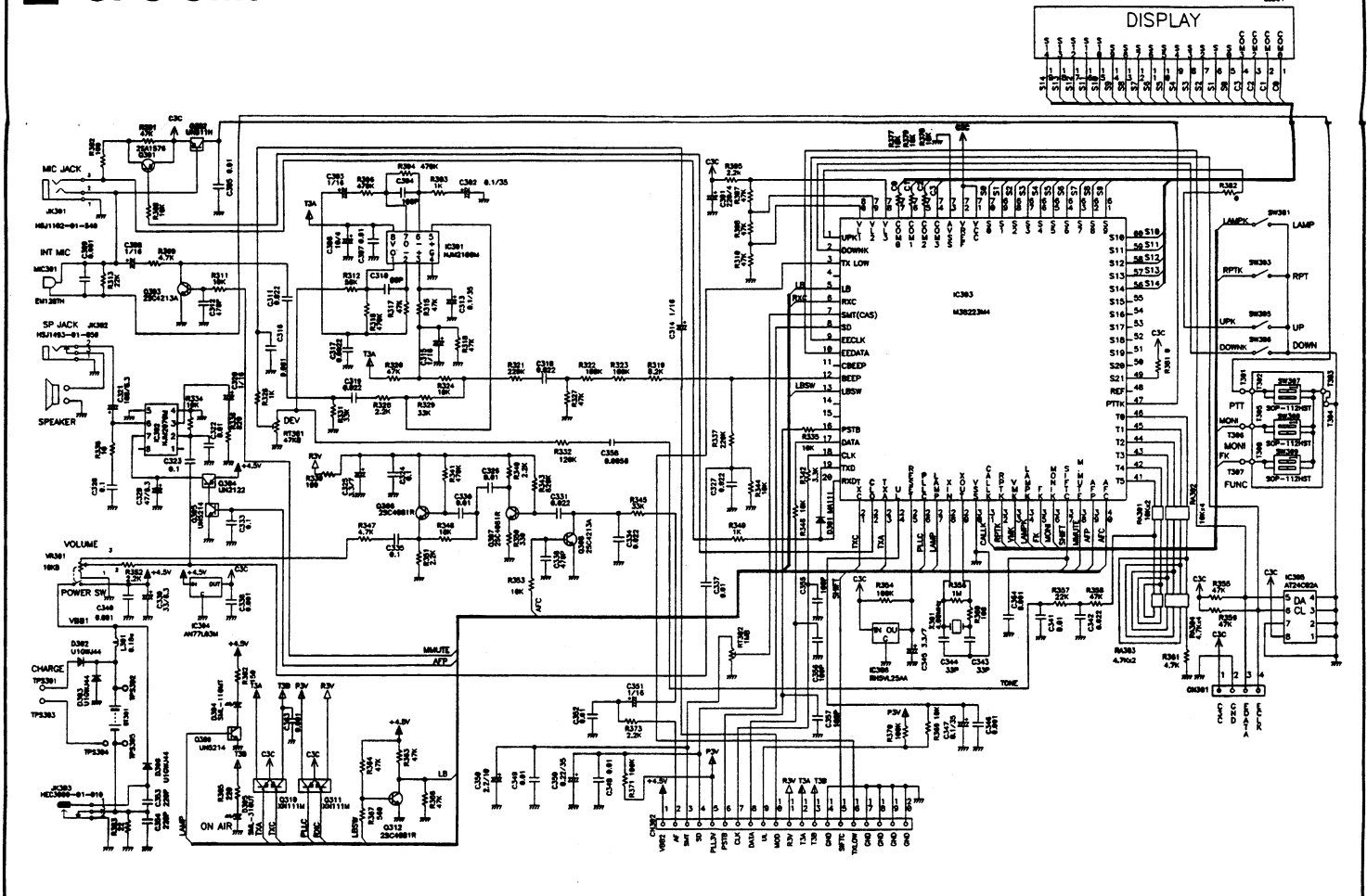
- > If "L" is displayed in the upper-left part of the display, your radio is key-locked → While pressing the F key, press the MONITOR key to erase the L.

## NOTICE

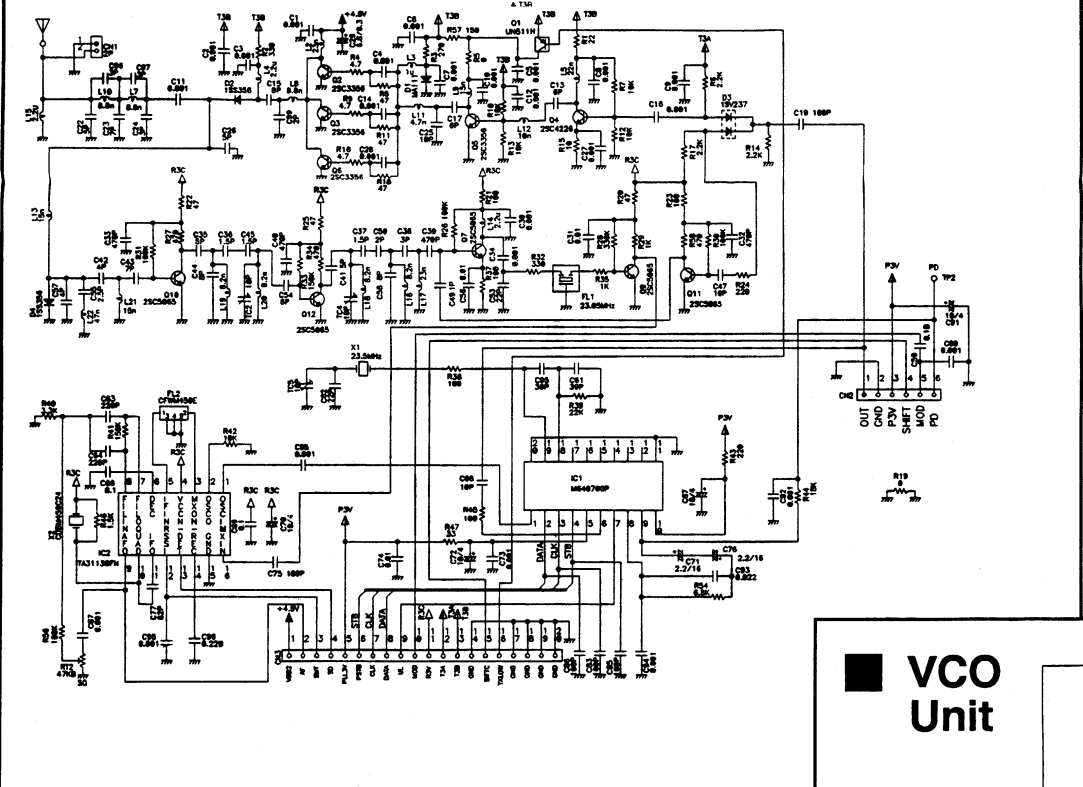
This equipment has been tested and found to comply with the limits pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, 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 which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

# CPU Unit



# RF Unit



**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.

# VCO Unit

