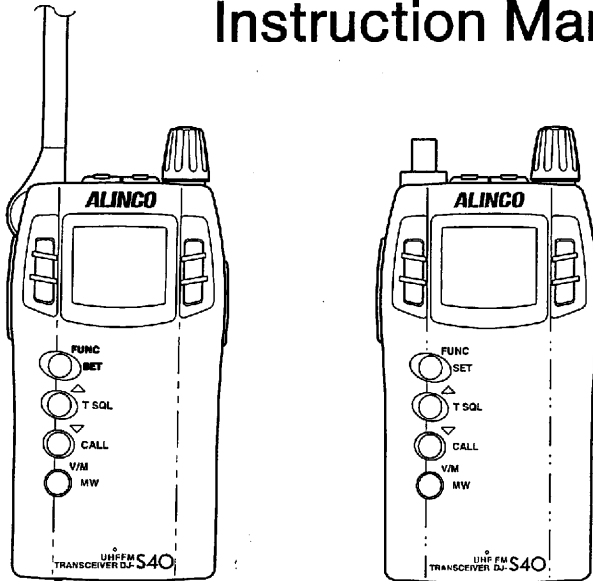# ALINCO

UHF FM TRANSCEIVER

DJ-S40

Instruction Manual

Thank you for purchasing this ALINCO FM transceiver.

This instruction manual contains important safety and operating instructions.

Please read it carefully before using the transceiver and be sure to keep it.

ALINCO INC.

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NOTICE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception. which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- *Reorient or relocate the receiving antenna.*
- *Increase the separation between the equipment and receiver.*
- *Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.*
- *Consult the dealer or an experienced radio/TV technician for help.*

FC Tested to Comply
With FCC Standards

FOR HOME OR OFFICE USE

C E Conformity Informetion

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://wwww.alinco.com/usa.html

⚠ Caution 1

In order to avoid charging non-rechargeable dry cell batteries, the charger mode is set OFF as a default setting.

Please read page 18 and 19 on the instruction manual and change the parameter accordingly to charge optional rechargeable battey packs.

Please use Alinco's genuine optional battery packs for your safty and proper function of the unit. Don't change this parameter if you use normal dry cell batteries.

⚠ Caution 2

The use of transceiver in the following places is prohibited.
· Aboard aircraft · In airports · In ports · Within or near the operating area of business wireless stations or their relay stations

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

■ Points to Note for Using an External Power Supply

· Use a 4.5V-16.0 DC power supply as an external power supply.
· When connecting the power supply to the transceiver, use an optional DC cable for base station (EDC-37). Connect the cable to the DC jack on the side of the transceiver.
· When the power is supplied from a cigarette socket of a car, use the cigarette lighter cable (EDC-43) or the cigarette lighter cable with filter (EDC-36). Use the cigarette lighter cable with filter (EDC-36) during mobile operation to prevent noise.
· Turn the power off when connecting or disconnecting the DC cable.
· When using a commercial external antenna, install the antenna ground not to become common with the ground of the external power supply.

1.Functions and Features

■ The transmission output level is 1W with a small lightweight body

■ 38 different Tone Squelch functions(CTCSS)

■ TOT （Time Out Timer） function

■ Tone Call function （ALT、1750、2100、1000、1450Hz）

■ Reception Bell function

■ 3 types of Scan functions

■ Cloning

■ Theft Alarm function

1 − 1 Standard Accessories

· Battery Case EDH-31

· Antenna

· Belt Clip

· Hand Strap

· Instruction Manual

The accessories may vary slightly depending on the version you have purchased.

2. Accessories

2-1 Attaching and Detaching Accessories

2-1-1 Antenna

1. Hold the antenna by its base and turn it clockwise until it stops.

   Check if the antenna is securely connected.

2. Turn the antenna counter-clockwise to detach the antenna.
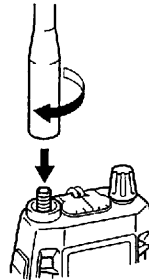
> (Note) If you have purchased the pivot-antenna-version, please refer page 39 for instructions.

2-1-2 Hand Strap

Hand Strap

1. Attach the hand strap in the upper backside hole as shown in the illustration.

2. Turn the screw clockwise until it stops.

   Check if the clip is securely connected.

3. Turn the screw counter-clockwise to detach the Belt Clip.

Belt Clip

3
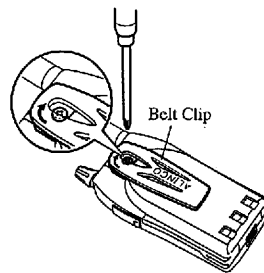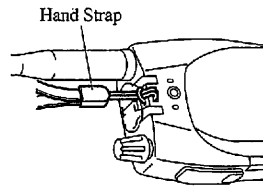
2

2-1-4 Battery Pack (Option)

1. Attaching the battery pack:

Align the grooves on the battery pack with the rib on the transceiver, and push to the direction of the arrow until it clicks.
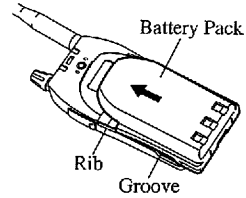
2. Detaching the battery pack:

Push down the catches at the bottom of the transceiver, and slide the battery pack out in the direction of the arrow.
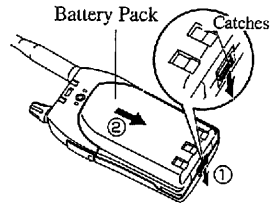
⚠ Caution

· The battery pack is not charged when shipped. It must be charged before using.
· It takes about maximum of 10 hours to charge the battery pack with the EDC-93 (120V) / EDC-94 (230V) (EBP-52N / EBP-53N) and about 30 hours with the EBP-54.
· Charging should be conducted in a temperature range of 0 to 40℃. (32-104° F)
· Do not convert, dismantle and throw the battery pack into the fire or water. It is dangerous.
· Never short-circuit the battery pack terminals, as this can cause damage to the equipment or lead to heating of the battery which may cause burns.
· Unnecessary prolonged charging (overcharging) can deteriorate battery performance.
· The battery pack should be stored in a dry place where temperature is from -20 ℃ to -45℃. (-4° F — +113° F)
  Temperatures outside this range can cause the battery liquid leakage. Exposure to prolonged high humidity can cause corrosion of metal components.
· Normally, the battery pack can be charged up to 500 times. However, the battery pack can be considered dead if the period of usage drops off markedly despite that the pack is being charged for the aforementioned charging time. When this happens, a new pack should be used.
· For the purpose of environmental protection, do not dump the used battery pack improperly. Check with your local solid waste officials for details on recycling the battery pack or proper disposal in your area.
· To charge the battery pack, mount it on the transceiver, connect 13.8VDC to the DC power supply jack and set the unit's battery charging function ON in the Setting mode.

4

2-2 Battery Level Indicator

· Battery consumption level may change depending on the surrounding temperature or the frequency of use.

· Even if the battery mark appears to indicate the necessity of charging, it can be used further if the usage is only for low output transmission or reception.

· Modify the battery type setting in the Setting mode when the battery pack type is changed.
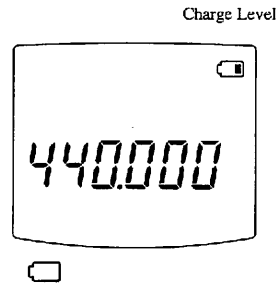
Charge Level

When the charge level becomes low, the battery icon appears. Charge the battery.

2-3 Loading Batteries

1. Load three (3) commercially available AA alkaline batteries in the battery case (EDH-31).
   Set the batteries in the battery case in the + / − orientation marked at the bottom of the case.
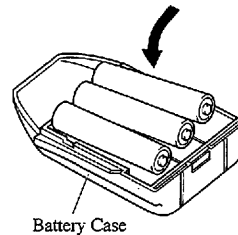
2. Attach the battery case in the same method of the battery pack. (Refer to page4 "2-1-4 Battery Pack")

Battery Case

⚠ Caution

· Manganese batteries are not recommended based on its characteristic to decrease the transmission output level.

· Be careful of the setting orientation of the batteries (+ −).

· Switch off the battery charge function of the transceiver when the dry cell batteries are used.

3. Control Functions
3-1 Name and Operation of the Transceiver

■ Top and Front Views
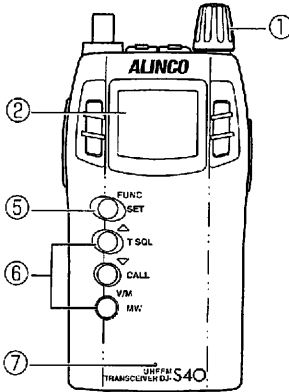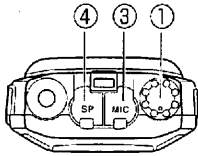
No.	Name	Functions
①	Power Switch	For switching power ON / OFF.
	Volume	For adjusting the audio volume.
②	Display (LCD)	Refer to "Display" in this manual. (Page10)
③	MIC Connector	For connection of the optional external microphone (2k Ω) with 2.5 Φ stereo plug.
④	SP Connector	For connection of the optional external speaker (8 Ω) with 3.5 Φ monophonic plug.
⑤	FUNC key	Use this key in combination with other keys to access various functions of the transceiver. Holding this key for 3 seconds activates the Setting mode where various settings are possible.
⑥	Key pad	Refer to "Key Operations". (Page8)
⑦	Microphone	Speak into microphone from a distance of approx. 5 cm.

■ Side View

Antenna Side   Volume Side

No.	Name	Functions
⑧	SMA Antenna Connector	For connection of the included antenna. Choose an antenna which has low SWR (Standing Wave Ratio) if you buy one.
⑨	PTT (press to talk) key	While this key is held down, the transceiver transmits. When the key is released, the transceiver waits to receive.
⑩	MONI key	When this key is pressed, the squelch is unmuted and you can hear the received signal. The squelch is also unmuted when the tone squelch is set. If this key is pressed while FUNC appears, the Key Lock function is activated. Pressing this key while the PTT key is pressed and held transmits the tone call signal.
⑪	DC-IN	Terminal for connecting an external power supply. Connect the optional cigarette lighter cable with filter EDC-36, and you can use it in the car. The center of a pin is + pole and the outside is - pole in jack polarity. Use stable power supply with DC4.5 ~ DC16.0V, 1 A or over.

3-2 Key Operations
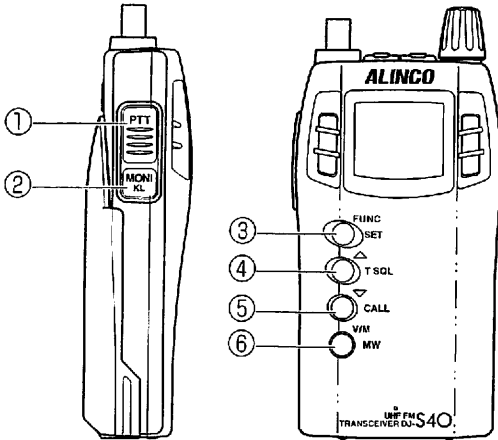
No.	Name	Independent operation	After pressing FUNC key
①	PTT	Completes the setting in the setting mode.	—
②	MONI	Activates the monitoring function.	Switches the key lock ON/OFF (page 24)
③	FUNC/SET	Accesses Various functions.	Sets the frequency per 1MHz unit. (Page 12)
④	▲ /T SQ	Increases the frequency and memory channels.	Sets the tone squelch function.
⑤	▼ /CALL	Decreases the frequency and memory channels.	Activates the Call mode. (Page 15)
⑥	V/M /MW	Switches VFO/Memory modes.	Programs a memory channel. (Page 13)

No.	Name	Pressed for a while	During transmission
①	PTT	Enables transmission while holding.	—
②	MONI	—	Transmits tone call signal (page 24)
③	FUNC/SET	Activates the Setting mode (page 18)	—
④	▲/T SQ	Starts upward scanning (page 23)	Sets the transmission output level HIGH (page 17).
⑤	▼/CALL	Starts downward scanning (page 21).	Sets the transmission output level LOW (page 17).
⑥	V/M /MW	—	—

3

9

3-3 Display

3
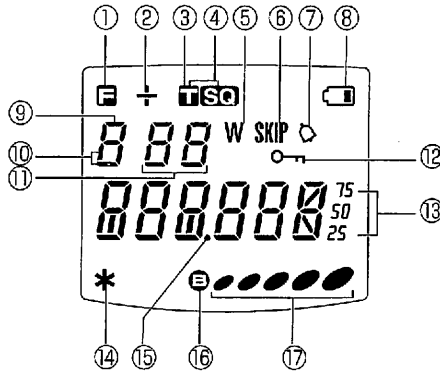
No.	Display	Indication
①	🔲	Appears when the FUNC key is pressed.
②	÷	Indicates the shift (-/+) direction.
③	T	Appears when a tone frequency is encoded.
④	TSQ	Appears when setting the tone squelch.
⑤	W	Blinks during memory writing mode.
⑥	SKIP	Appears in the scan skip channel.
⑦	◇	Appears when the Bell Function is on.
⑧	⊂▯	Appears when the charge level is low.
⑨	▬	Appears when the Mosquito Repellent Signal（MRS）is ON.
⑩	L	Appears when transmission output level is LOW.
⑪	88	Indicates memory No. in the Memory mode and setting No. in the Setting mode.
⑫	o—n	Appears when keys are locked.
⑬	888888	Indicates the frequency and various setting status.
⑭	✱	Appears when the Theft Alarm is ON.
⑮	•	Divides MHz and kHz of the frequency. Blinks during scanning operation.
⑯	⊖	Appears when the squelch is unmuted.
⑰	▰▰▰▰▰ (S Meter)	Indicates the receiving level and the transmission output.

4. Basic Operations

4-1 Turning the Power ON

Power switch

Hold the POWER switch down for a second to turn the power ON. To turn the power OFF, hold the power switch down again for a second.
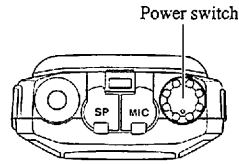
4-2 Adjusting the Audio Volume

To increase : Rotate the volume dial clockwise.

To decrease : Rotate the volume dial counter-clockwise.

When a voice cannot be heard due to the squelch settings, press and hold the MONI key and adjust the volume to hear it.

Audio volume decreases   Audio volume increases

4

Volume dial
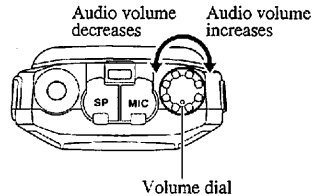
Reference : Squelch level can be adjusted in the Setting mode

4-3 VFO Mode

The factory setting for the DJ-S40 is the VFO mode.

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4-3-1 Frequency Setting

When ▲/▼ keys are pressed, frequency increases and decreases in tuning steps.

VFO mode

■ Adjusting the Frequency in 1MHz Steps

Press the FUNC key twice, then 1's MHz figure of the display blinks. Press ▲/▼ keys while the figure is blinking to adjust the frequency in 1MHz increments.
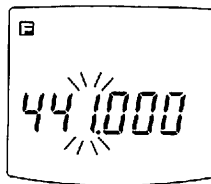
4-4 Memory Mode

The Memory mode is used to call up and operate on a previously programmed frequency. This transceiver has 99 memory channels (1 ~ 9 9 CH), 1 call channel (C), and 1 alarm channel (SC).

4-4-1 Selecting a Memory Channel

Memory channel No.

1. Press the V/M key to activate the Memory mode.

   Pressing the V/M key switches the operating mode to the VFO/Memory modes.

   Memory mode :

   The memory channel No. appears on the display.

Memory mode

The Memory mode is not activated if there is no pre-set program in the memory channels.

By pressing ▲/▼ keys, memory No. increases and decreases in every 1 channel.
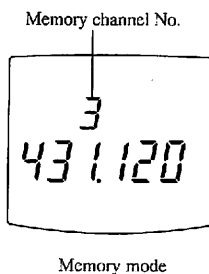
4-4-2 Memory Channel Programming

1. Return to the VFO mode by pressing the V/M key.

```
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```
VFO mode

2. Select the desired frequency to set the function.

3. Press the FUNC key and then press the V/M key while "F" icon appears. The memory channel No. and "W" blinks.

```
445.040
```
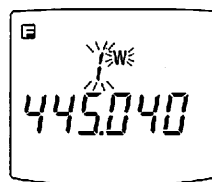
4. Select a memory channel to program by pressing the ▲/▼ keys. A blinking memory channel No. indicates that the channel is not programmed yet.

5. Press the MW key while "W" blinks. A beep is heard and the selected VFO frequency is programmed to the memory channel.

```
445.040
```

Caution

· Please be sure to set the frequency for alarms in CH-SC (the channel for alarms). (Page 28).

· Selecting and programming again overwrites a programmed memory channel.

· CALL channel can also be overwritten.

13

4-4-3 Clearing a Memory Channel

1. Press the FUNC key and then press the V/M key while "F" icon appears. Memory channel No. lights and "W" blinks on the display.
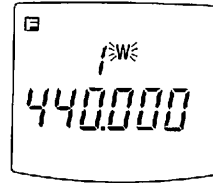
2. Select a memory channel you wish to clear by pressing the ▲ / ▼ keys. On a programmed channel, "memory channel No." is displayed steadily (without blinking).

3. Press the FUNC key again and then press the MW key while "F" icon appears.
A beep is heard and the pre-set frequency is cleared.
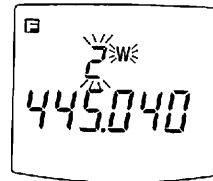
4-4-4 Contents of Memory Programming

The following contents are stored in the memory channel 1 - 99, SC and CALL channels.

· Frequency
· Offset Frequency
· Shift Direction
· Tone Frequency
· Tone Encoder / Decoder Settings
· Skip CH Setting
· Busy Channel Lock Out (BCLO)

4-5 CALL Mode

The Call mode is used when you are receiving or transmitting on the CALL
channel. The DJ-S40 has one CALL channel.

The default setting is 445,000MHz.

4-5-1 Selecting the CALL Channel

1. Press the FUNC key and then press the
   CALL key while "F" icon appears.
   "C" appears on the display when the
   CALL channel is selected.

```
  C
445.000
```
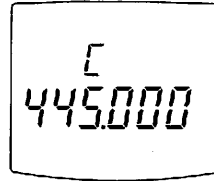
2. Press the V/M key to return to the VFO
   mode or the Memory mode.

> **Caution** : Scanning cannot be performed in the CALL mode.
> In the CALL mode, frequency and memory No. cannot be
> changed by rotating the Dial.

4-5-2 Programming a CALL Channel

CALL channel is one of the memory channels where the frequency and other
settings can be programmed by selecting the memory channel "C" in the VFO
mode. (page 13).

> **Caution** : CALL channel can be programmed but cannot be cleared.

4-6 Receiving

1. Turn the power ON.

2. Rotate the volume dial to set the audio volume.

3. Eliminate the noise by setting the squelch in the setting mode.

4. Adjust to the desired frequency.
   When a signal is received on the selected frequency, "B" appears on the display and the receiving signal is heard. S meter indicates the receiving level.

```
 _____
|                        |
|    434.000             |
|                        |
|    ⊖ ● ● ●             |
|_____|
          |
        S meter
```
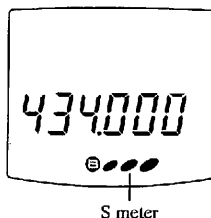
4-6-1 Monitor Function

· While the MONI key is pressed, squelch is unmuted and sound is heard from the speaker regardless of the squelch setting. "B" appears on the display.

· Weak signals under the threshold level can be heard by this function.

· Monitoring can be performed even if the tone squelch is set.

4-7 Transmitting

1. Select the desired frequency.

2. Press and hold the PTT key, speak into microphone with average tone.
S meter indicates the transmitting status.
Speak into microphone from a distance of approx. 5cm.

3. Release the PTT key to stop transmitting and to return to the receiving status.

®Reference : Tone call signal is transmitted by pressing and holding the PTT key and pressing the MONI key. (There are five tone call signals that is selectable in the Setting mode).
If the PTT key is pressed when the frequency is outside of the transmitting range, "OFF" appears on the display. You cannot transmit in this status.

4-7-1 Switching of Transmission Output Level

Transmission power can be changed to HI/LOW by pressing the ▲/▼ keys while transmitting.
"L" appears on the display when the transmitting power is LOW.
Initial setting is HI.

LOW   HIGH

5. Parameter Setting Mode

In setting mode, you can set various functions of the DJ-S40.

5-1 Mode Setting Items

The ITEM No. increases when the FUNC key is pressed, and it decreases when the MONI key is pressed.

	ITEM NO.	Display	Functions (set with ▲/▼ keys)
↑ FUNC key	01	CHG-oF	Switches the battery charging On and Off.
	02	Sql-07	Sets the squelch level.
	03	StP-5	Sets the tuning steps.
	04	SFd-oF	Sets the shift direction.
	05	5.000	Sets the offset frequency.
	06	bEP-on	Switches the beeper On and Off.
	07	ALt	Selects the call tone sound.
	08	to-oFF	Switches On/Off and sets the time of Timeout Timer (TOT).
	09	AP-oFF	Switches On/Off and sets the time of Auto Power Off (APO).
	10	bS-on	Switches the battery save function On and Off.
	11	bEL-oF	Switches the bell function On and Off.
	12	Stb-oF	Switches the stand-by-beep On and Off.
	13	bCL-oF	Switches the Busy Channel Lockout function (BCLO) MONI key
MONI key ↓	14	StYP-t	Switches the scanning mode timed/ busy channel.
	15	m**-oF	Sets the scan skip function of memory channels.
	16	bAt-2	Sets the battery type.
	17	SCr-oF	Switches On/Off and sets the sound of the theft alarm function.
	18	mrS-oF	Switches the mosquito repellent signal On and Off.
	19	EPo-oF	Switches the external terminal controlling On and Off.

(Note) 03 Tuning steps can be set only in the VFO mode.

15 Memory skip can be set only in the Memory mode.

5-2 Selecting the Setting Mode

1. Hold the FUNC key down for 3 seconds.
   The display changes to indicate that the Setting mode is activated.

$$\begin{array}{c} \mathit{0}\ \mathit{I} \\ \mathit{CHG\text{-}oF} \end{array}$$

2. Select a menu you wish to set by pressing the MONI key or FUNC key.

3. Set the mode by pressing the ▲/▼

4. Press the PTT key or V / M key.
   The setting completes and returns to the VFO mode.

$$\begin{array}{c} \mathit{0}\ \mathit{I} \\ \mathit{CHG\text{-}on} \end{array}$$
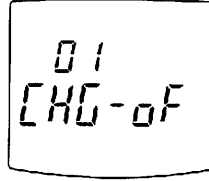
Switching the battery charging "01" On.

Reference :

- In the offset frequency setting mode "05", MHz frequency is adjusted by pressing the V/M key.
- The last menu operated appears when the Setting mode is activated next time.
- Monitoring cannot be performed in the Setting mode.

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5

Please cut off this Mode Settings Chart for your convenience.

No.	Display	Functions
01	CHG-oF	Battery charging ON/OFF
02	Sql-07	Squelch level setting
03	StP-5	Tuning steps setting
04	SFd-oF	Shift direction setting
05	5.000	Offset frequency setting
06	bEP-on	Beeper ON/OFF
07	Alt	Call tone setting
08	to-oFF	TOT setting (seconds)
09	AP-oFF	APO setting (minutes)
10	bS-on	Battery saving ON/OFF
11	bEL-oF	Bell ON/OFF
12	Stb-oF	End PEE ON/OFF
13	bCI.-oF	BCI.O ON/OFF
14	StYP-t	Scan (timed/busy channel) switching
15	m**-oF	Scan skip setting
16	bAt-2	Battery type setting
17	SCr-oF	Security ON/OFF
18	mrS-oF	Mosquito repellent signal ON/OFF
19	EPo-oF	External terminal controlling ON/OFF

Mode Settings Chart

6. Advanced Operations
6-1 Scanning

The frequency of a signal that you wish to receive can be automatically searched by the scan function.

When a signal is received, scanning will stop, and resume after a while depending on the settings of scanning mode.

■ Scanning Modes

Timed Scan :

After stopped on a busy channel, scanning resumes when the signal ceases. Scanning also resumes five seconds later even if the channel remains busy.

Busy Channel Scan :

Scanning resumes only when the signal ceases and the receiving status moves to the next channel.

Scanning direction can be changed by pressing the ▲/▼ keys during the operation.

6

Reference : When the tone squelch is set, signals transmitting the tone squelch frequency to which your DJ-S40 is programmed to receive will unmute the squelch and be heard after your transceiver receives it and stops scanning. If the signal does not match the tone frequency, the squelch is not unmuted and scanning will resume.

6-1-1 VFO Scan

Scans the entire band in the VFO mode.

1. Press the V ／ M key to activate the VFO mode.

2. Press and hold the ▲／▼ keys for 1 to 2 seconds to start scanning.
   The decimal point blinks during the scan.
   Scanning direction goes upward by pressing the ▲ key, and downward by pressing the ▼ key.

3. To stop scanning, press the PTT key, the FUNC key or the V ／ M key.
   While MONI key is being pressed, scanning stops temporarily and monitor function is activated. When the key is released, scanning restarts.

6-1-2 Memory Scan

Scans only the programmed memory channels.

1. Press the V ／ M key to activate the Memory mode.

2. Press and hold the ▲／▼ keys for 1 to 2 seconds to start scanning.
   The decimal point blinks during the scan.
   The operation is same with the VFO scan.

443.000

VFO Mode

433.000

Memory No.

3
445.000

Memory Mode

3
445.000
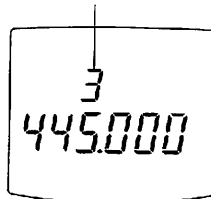
6-1-3 Skip Channel Setting

Memory channels where a memory skip is programmed are out of target for scanning in the memory scanning. In the memory channel where a memory skip is programmed, "SKIP" appears on the display. CALL channel is a skip channel.

6-1-4 Tone Scan

It is a function to find the tone signal frequency of the receiving tone signal.

1. Press and hold the ▲/▼ keys for 1 to 2 seconds in the tone squelch setting mode.

   Scanning starts and the decimal point blinks.

   38 kinds of Tone Frequencies are scanned in order.

   If the tone signal frequency is found, scanning stops and you can hear the received signal.

   Scanning will not resume until the ▲ /▼ keys are pressed again.

2. After scanning stops, the Scan mode is canceled by pressing the PTT key, the FUNC key or the V / M key.

6-2 Key Lock

It is a function that prevents wrong
operations when the keys are
accidentally pressed.

1. Press FUNC key, and press MONI
   key during "F" icon appears.
   "o̶ⁿ" appears to indicate the key lock
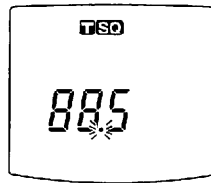   function is activated.
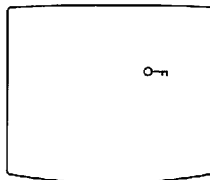
2. To cancel the key lock, press FUNC
   key again, and then press MONI key.

> **Reference** : When the key is locked, key operations except for the PTT
> and the MONI keys are impossible.
> Transmitting and monitor operation are possible, even the
> key lock function is activated.

6-3 Tone Call (Tone burst)

It is a function to call a partner by adding a tone signal to the transmitting radio
wave.
Tone signal is output while the MONI key is pressed down with the PTT key
pressed and held.
The call tone sound can be selected in the Setting mode.

> **Caution** : Tone call signal cannot be output with a tone ENC signal. During
> call tone output, tone ENC signal cannot be transmitted.

6-4 Lamp

The DJ-S40 has lamps to light its display which is useful when operating in a
dark place.
When any keys are pressed except the PTT and the MONI keys, the lamps keep
lighting for five seconds.
If turning the power on with the MONI key is pressed and held, the lamps
remain lit all the time.
To return to five-second-lighting, turn the power off, and then turn the power
on again with the MONI key being pressed and held.

7. Selective Communication

When communicating with a specific station, tone squelch (CTCSS) function is used.

Tone squelch is a function that enables to receive the partner's signal when the tone frequency matches to your station's tone frequency.

There are 38 different CTCSS tones as follows.

No.	Frequency	No.	Frequency	No.	Frequency	No.	Frequency
1	67.0	11	97.4	21	136.5	31	192.8
2	71.9	12	100.0	22	141.3	32	203.5
3	74.4	13	103.5	23	146.2	33	210.7
4	77.0	14	107.2	24	151.4	34	218.1
5	79.7	15	110.9	25	156.7	35	225.7
6	82.5	16	114.8	26	162.2	36	233.6
7	85.4	17	118.8	27	167.9	37	241.8
8	88.5	18	123.0	28	173.8	38	250.3
9	91.5	19	127.3	29	179.9		
10	94.8	20	131.8	30	186.2		

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7-1 Tone Squelch

1. Press the FUNC key, then the ▲ key while "F" icon appears.

   By repeating this process, the display rotates as shown in the right figure.

```
  ┌─→  T  ─→ TSQ ─→ OFF ─┐
  │    88.5   88.5        │
  └──────────────────────┘
```
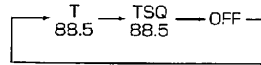
2. Change the Tone Frequency with ▲ / ▼ keys.

   When "T" is displayed, both tone ENC and tone squelch frequencies are changed simultaneously.

   When "TSQ" is displayed, only the tone squelch frequency is changed, so that different frequencies are set respectively to the tone ENC and the tone squelch.

3. Press the PTT key or the V/M key to complete the setting and return to the VFO mode.

Reference : Even during setting operation, monitoring can be performed by pressing the MONI key.

Caution : A high tone frequency setting leads to an error operation, which is occurred by the frequency element of voice. To decrease the error operation, be sure to use regular squelch together with tone squelch function.

8. Special Functions
8-1 Theft Alarm

DJ-S40 has the theft alarm function that generates alarm sound from the speaker when the unit is about to be stolen.

This function is useful when installing the unit in a remote place or in a car.

Steering Wheel

Wiring Cable for Alarm

Speaker Terminal Jack

Alarm Cable Connection Illustration

Connect the central part with GND part.
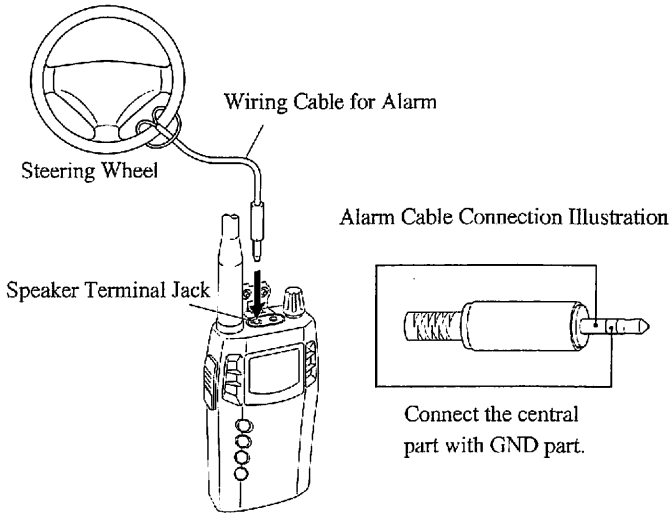
⚠ Caution

The wiring cable A and B for alarm attached to DR-135/435 of our products cannot be used in this unit (the wiring should be changed).

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8-1-1 Connecting and Setting

1. Insert the plug of the alarm cable into the speaker terminal jack.

Caution · Fix the alarm cable firmly so that it will not be detached.
· Program the CH-SC (for alarm) memory in advance to cancel the alarm (page 13).
· Set CH-SC (for alarm) in the state where the squelch is activated.

2. Select "SCr-on" in the Setting mode.
" * " appears on the display.
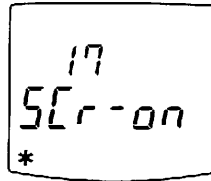
3. Turn OFF the power switch of the transceiver.
Alarm setting will turn ON.

4. To cancel the alarm setting, turn the power ON, and select "SCr-oF" in the Setting mode.

Caution · When setting the theft alarm function, connect the alarm cable before turning the power OFF.
· The alarm may start sounding if the plug is inserted after turning the power OFF.

8-1-2 Alarm

DJ-S40 Amateur radio versions (Default freq. 430−450MHz)

When the cable is pulled out or cut, alarm will start sounding.

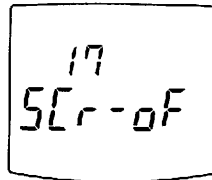While alarming, all key operation is disabled including power switch.

Other versions

In addition to the alarm sound, 5 second-receiving and 5 seconds-transmitting are operated automatically in rotation with the set frequency of CH-SC (alarm channel).

Caution : The wireless alarm feature will be enabled when the MARS modification is performed on DJ-S40T.Ask your dealer for the modification information with a copy of valid MARS license.

■ How to Stop the Alarm

When a signal is received and the squelch is unmuted during the alarm, the alarm is canceled and the unit returns to the receiving status (TSQ setting is also valid).

It is possible to cancel the alarm by the other transceiver even from a remote place.

1. To cancel the alarm, detach the battery pack.
2. To set the alarm again, attach the battery pack and turn the power OFF.

8

Caution : Use the battery pack when the alarm function is activated (if an external power supply is used, alarm will continue sounding).

8-1-3 Alarm Delay

When this function is set, the alarm
starts sounding after an interval.

1. Set the alarm function to "SCr-
dL" in the Setting mode "17".

2. Insert the plug of the alarm cable, and
turn the power of the transceiver
OFF.

```
 17
5Cr-dL
*
```
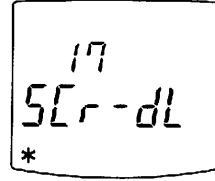
On this setting, beep will not ring for
10 seconds after the plug is detached.
Even if the cable is detached during
the alarm setting procedure, beep will
start sounding 10 seconds later.

Caution · It is recommended to use the tone squelch in the setting of
CH – SC (for alarm), since there is a considerable danger
that the alarm setting may be canceled by a general radio wave
reception.

· Set the alarm function off (SCr-oF) during regular
operation.

· If CH – SC (for alarm) memory is not programmed, stop
the alarm by sending a signal in the VFO mode.

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9. Cloning / Packet Operation

9-1 Cloning

In using the cloning function, all setting information (including memory data) of one DJ-S40 (master) can be transferred and copied to another DJ-S40 (slave) by connecting them with a cable.

■ Connecting the Transceivers

Connect the external speaker jacks on both the master and slave transceivers with commercially available Φ 3 . 5 stereo mini plug cord.

After connecting them, switch the both units' power ON.

Caution : Connect the cable in the state that the transceiver power is OFF.

Master   Slave
To SP jack on the   To SP jack on the
transceiver   transceiver

Φ 3 . 5 stereo mini plug cord

9
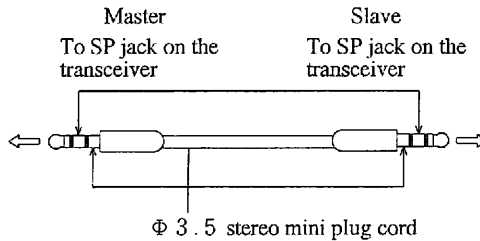
■ Transmitting the Master Data

1. Press and hold the MONI key and press the PTT key three times. "CLONE" appears on the display to indicate the Clone mode is activated.

$$\boxed{ELonE}$$

2. Press the PTT key. "Sd ✳ ✳ ✳ " is displayed and internal setting information is transferred into another transceiver.

$$\boxed{5d \ 078}$$
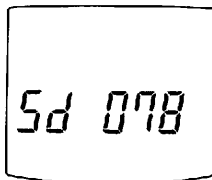
"PASS" appears when the cloning completes.

The same data is transmitted by pressing the PTT key while the "PASS" is displayed.

$$\boxed{PASS}$$

Cloning Complete

If the data is not transmitted correctly, "PASS" is not displayed. Repeat from process 1.

3. To cancel the Clone mode, switch the power off.

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Caution : If the cable is not connected correctly, "CHECK" appears on the display.
Check the cable connection again.

■ Receiving the Master Data

1. "Ld ✱ ✱ ✱ " appears on the slave transceiver's display when the master data is transmitted.

"Ld 078" remains to be displayed when the cloning completes.

Receiving side cannot recognize whether the data is transmitted correctly. Check by "PASS" display on the transmitting side.

$$Ld \; 078$$
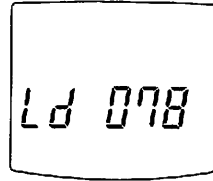
2. Switch the transceiver power OFF.

Caution · Do not disconnect the cable while cloning.
· All data in the slave transceiver will be updated to the master transceiver's data by the cloning operation. Be sure you want to change everything before cloning.

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9-2 Packet Operation

Packet operation is one of the data communication methods, which enables data transmission and reception with personal computer and TNC.

■ Packet Operation Connections

Power is supplied from internal 3V line through a 100 Ω resistor.
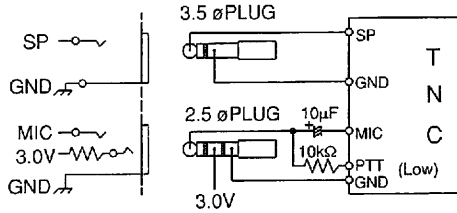
Connection figure of the packet operation with this unit is shown above.

Connect the packet communication TNC (Accessory : Terminal Node Controller) to the SP jack with 3.5 φ plug, and to MIC jack with 2.5 φ plug on the top of the transceiver.

· Input level adjustment : The transceiver has no MIC level adjustment circuit. Adjust the level on the TNC side.

· Output level adjustment : Use the volume dial on the top of the transceiver to control the output level from SP terminal.

> **Caution** · Refer to the TNC's instruction manual when connecting the TNC unit to other devices (personal computer, etc.).
> If the transceiver, TNC unit and connected personal computer are too close with each other, noise between them may cause interference.
> · Turn the battery save function off during packet operation.
> · Operate up to 1200 bps.

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10. Maintenance and Reference
10-1 Resetting

When you reset the transceiver, all settings are returned to the initial factory settings.

1. Turn the power ON while the FUNC key and V/M key are held down.

2. While all the display indications appear, release the FUNC key.

It turns to default VFO mode.

The Initial Factory Settings

DJ-S40	T.TA(Z)	E
VFO Frequency	445,000MHz	435,000MHz
CALL Frequency	445,000MHz	435,000MHz
Memory Channel 0~99	Unset	Unset
Shift Setting	...	...
Shift Frequency	5,000MHz	7.6MHz
Tuning Step	5kHz	12.5kHz
Tone Squelch Setting	...	...
Tone Frequency	88.5Hz	88.5Hz
Transmit Power	HI	HI
Key Lock Setting	OFF	OFF
Battery Saving	ON	ON
Squelch Level Setting	07	07
Tone Call	Alert	1750Hz

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10-2. Options

EBP-52N	Ni-MH Battery Pack(3.6V 500mAh)
EBP-53N	Ni-MH Battery Pack(6.0V 500mAh)
EBP-54N	Ni-MH Battery Pack(3.6V 1500mAh)
EDC-36	Cigarette Lighter Cable with Filter (DC12V)
EDC-37	DC Cable for Base Station (DC12V)
EDC-43	Ciger Lighter Cable for Recharging (DC12V)
EDC-93	Battery Charger (Wall Charger) 110V
EDC-94	Battery Charger (Wall Charger) 230V
EDC-104	Quick Charger (110V)
EDC-104E	Quick Charger (230V)
EDC-105	Charger Basket (Trickle Charger / EDC-93 or EDC-94 required)
EMS-9	Speaker Microphone
EMS-51	Speaker Microphone
EME-6	Earphone
EME-12	Head Set with VOX (Headphone Type)
EME-13	Head Set with VOX (Inner Type)
EME-15	Tie Pin Microphone with VOX
EME-16	Earphone Microphone
EME-17	Earphone Microphone
EME-20	Earphone Microphone
ESC-37	Softcase

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11. Specifications

General			
Frequency Range	T	E	TA(Z)
	TX;430~449.995MHz	TX;430~439.995MHz	TX;410~470.000MHz
	RX;410~470.000MHz	RX;430~439.995MHz	RX;410~470.000MHz
Modulation	F3E (FM)		
Tuning Steps	5, 10, 12.5, 15, 20, 25, 30, 50 kHz		
Memory Channel	100 Channels + 1 Call Channel		
Ant. Impedance	50 Ω		
Frequency Stability	±5ppm		
Mic. Impedance	2k Ω		
Supply Voltage	4.5~16.0VDC		
Current	Transmit	1.0W Output approx.600mA	
	Reception	approx.150mA (Max)	
		approx.40mA (Squelched)	
		Battery Save : 15mA	
Operating temperature	−10~+60℃		
Ground	Negative Grounding		
Dimension	56 (W) × 102 (H) × 30 (D) mm		
	(EBP-53N Inclusive) (2.20" × 4.01" × 1.18")		
Weight	Approx. 95g (without Battery)		
	Approx. 160g (EBP-53N Inclusive)		

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Transmitter	
Power Output (430-450MHz)T (430-440MHz)E	Approx. 1W　EBP − 53N Equipped Approx. 1.0W　External 13.8V Approx. 0.15W　LOW Approx. 700mW（AA　Alkaline Batteries Equipped）
Modulation	Variable Reactance
Spurious Emission	− 60dB or less
Max. Deviation	± 5kHz
Mic. Impedance	2k Ω
Receiver	
System	Double-Conversion Super Heterodyne
Sensitivity (430MHz ∼ 450MHz)	− 14.0dBu （0.2uV）or less
Intermediate Frequencies	1st IF : 21.7MHz 2nd IF : 450kHz
Selectivity	− 6dB : 12kHz or over − 60dB : 28kHz or less
AF Output	280mW or over (MAX) 200mW or over (10% Distortion factor 8 Ω)

· Specifications may be changed without a preliminary announcement in connection with technical development.

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Instruction Manual Supplement

This instruction gives you additional information regarding the difference between the Pivot-antenna version and others.

[A] Please refer page 2, 1-1 Standard Accessories of the original manual. This version does not include an antenna as listed and shown on the page2, but Pivot antenna is derectly attached onto the unit.

[B] Please refer page 3, 2-1 Attaching and Detaching Accessories, 2-1-1 Antenna.
This procedure is not required for this version. Just turn the Pivot antenna clock-wise to the point that the antenna stops and stays vertically when you start operating the unit to optimize its performance. Store it when the unit is not in use.

Other than the antenna-related instructions, the rest of the information in the original manual remains valid to this version. A modification from this version to others would involve replacements of chassis, antenna and other components as well as labor charge that a total may exceed the cost of the unit itself. We do not recommend you to request it to your Alinco dealer for it.
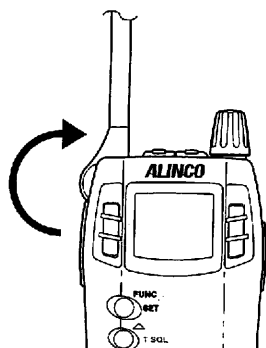
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