



VHF/UHF FM TWIN BAND HANDHELD TRANSCEIVER

DJ-580T/E

INSTRUCTION MANUAL

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1. INTRODUCTION

We at Alinco would like to thank you for purchasing the ALINCO DJ-580T (US Model)/(DJ-580E (European Model). Radios and other products made by ALINCO rank as some of the finest in the world. Your DJ-580T/E has been manufactured and tested very carefully at the factory and will give you satisfactory operation for many years. We are confident that you will be very satisfied with your choice of this fine ALINCO radio.

1-1 STANDARD ACCESSORIES

When you unpack your ALINCO transceiver, you will find the standard accessories which include:

- 1. Ni-Cd Battery Pack (7.2V @ 700mAh) EBP-20N
- 2. AC Wall Charger for EBP-20N EDC-24 (120V) DJ-580T
EDC-25 (220V/240V) DJ-580E
- 3. Belt Clip
- 4. Hand Strap
- 5. Dual Band Rubber Flex Antenna
- 6. Schematic Diagram
- 7. Instruction Manual
- 8. Warranty registration card

1-2 OPTIONAL ACCESSORIES

To enhance your DJ-580 radio further, optional accessories are available. At ALINCO, we strongly recommend that you purchase appropriate accessories to get full features and performance from your radio.

- 1. Ni-Cd Battery Pack (7.2V @ 700mAh) EBP-20N
- 2. Ni-Cd Battery Pack (12V @ 700mAh) EBP-22N
- 3. Quick Ni-Cd battery charger EDC-34 (120V), EDC-35 (220V/240V)
- 4. Mobile DC Power Cable/Charger
with Noise Filter EDC-36
w/o EDC-43
- 5. Earphone EME-6
- 6. DC cable for power supply EDC-37
- 7. Earphone/Earphone EME-6
- 8. Earphone/Microphone with PTT EME-11
- 9. Speaker/Microphone EMS-22
- 10. Remote Control Speaker/Microphone EMS-82
- 11. Headset with PTT/VOX EME-10K
- 12. Soft Case ESC-17
- 13. Tone Squelch Unit EJ-12U

2. SPECIFICATIONS

The specifications outlined for this product are for use in the amateur bands only. No guarantee or warranty, either specific or implied, will apply to any function or specification outside the amateur bands. Individual radios may experience different performance and/or specification levels. All specifications and features are subject to change without notice or obligation.

2-1 GENERAL SPECIFICATIONS

- Channel Spacing:** 5, 10, 12.5, 15, 20, 25 kHz steps
- Memory Channels:** 42 Channels (40 total combination of VHF and UHF)
1 VHF Call Channel
1 UHF Call Channel
- Antenna Impedance:** 50 Ohms unbalanced
- Microphone Input Impedance:** 2K Ohms
- Signal Type:** F3E (FM)
- Power Supply Requirements:** 13.8 Volts DC
- Dimensions (Radio Only):** Height = 140mm
Width = 58mm
Depth = 33mm
- Weight:** Approximately 410g
- DTMF:** 16 Button Key Pad
- Subaudible Tones:** Encode and Decode installed

2-2 U.S. FREQUENCY COVERAGE

The frequency coverage listed as follows applies to the DJ-580T.

- VHF Band:** 144.000 – 147.995 MHz (TX)
110.000 – 142.995 MHz (RX) * Only after Modification
- UHF Band:** 130.000 – 173.995 MHz (RX)
440.000 – 449.995 MHz (TX)
420.000 – 479.995 MHz (RX)

2-3 EUROPEAN FREQUENCY COVERAGE

The frequency coverage listed as follows applies to the DJ-580E.

- VHF Band:** 144.000 – 145.995 MHz (TX/RX)
- UHF Band:** 430.000 – 439.995 MHz (TX/RX)

2-4 TRANSMITTER SPECIFICATIONS

- Output Power:** Approx. 2 Watts with Standard EBP-20N Battery
Approx. 5 Watts with Optional EBP-22N Battery
- Modulation System:** Variable reactance FM
- Max. Freq. Deviation:** +/- 5kHz
- Spurious Emission:** Less than 60db below carrier

3. QUICK REFERENCE

Tone Frequency:

67.0 to 250.3 Hz (38 selections)
DJ-580T (Subaudible Encoding Tone)
DJ-580E (1,750 Hz Tone Burst)
Electret Condenser

**Microphone:
Operating Mode:**

Simplex:
Duplex: 5kHz steps minimum between 0-15.995 MHz from receiver frequency.
Built-in and included as standard for DJ-580T
Built-in and included as standard for DJ-580T

**CTCSS Encoder:
CTCSS Decoder:**

2-5 RECEIVER SPECIFICATIONS

Receiver System:

Superheterodyne, Dual Conversion
12dB SINAD less than -15dB per microvolt
VHF — 1st IF 55.05 MHz
2nd IF 455 kHz
UHF — 1st IF 30.875 MHz
2nd IF 455 kHz
250 mW (10% Total Harmonic Distortion)
8 Ohms

**Sensitivity:
Intermediate Frequency:**

**Audio Power Output:
Speaker Impedance:**

3-1 RECEIVE

POWER ON

Connect this radio to a DC source of 13.8 volts DC. Rotate power knob clockwise.

VFO MODE

Press the **[VFO]** or **[VHF]** key.

VFO FREQUENCY

Use the keypad and enter the frequency. Enter all 6 digits, even if the last digit is zero.

3-2 TRANSMIT

SIMPLEX

[FUNC] + **[SHIFT]** **[T]** KEY repeatedly until the display DOESN'T show a " **[T]** " or " **[S]** " or star symbol.

OFFSET

[FUNC] + **[SHIFT]** **[T]** KEY repeatedly until the display indicates either a " **[T]** " or " **[S]** " symbol.

SPLIT

[FUNC] + **[SHIFT]** **[T]** KEY repeatedly until the star symbol is shown on the indicator. Store input frequency into any memory channel. Enter output frequency into VFO.

STONE ENCODE

[FUNC] + **[TONE]** KEY once. Rotate main tuning knob for desired tone. **[FUNC]** + **[SET]** KEY repeatedly until the " **[T]** " indicator displays.

STONE DECODE

[FUNC] + **[SET]** KEY once. Rotate main tuning knob for desired tone. **[FUNC]** + **[TONE]** KEY repeatedly until the " **[T]** " indicator displays.

3-3 PROGRAMMING

MEMORY MODE

Press the **[M]** KEY.

MEMORY SCROLL

Enter MEMORY MODE, rotate the main tuning knob or use **[E]** or **[D]** keys.

MEMORY WRITE

Press **[M]** KEY, rotate main tuning knob and select memory channel, enter frequency, press **[FUNC]** + **[M]** KEY.

MEMORY SKIP

Enter MEMORY MODE. Rotate the main tuning knob to the channel you desire to skip. Press the **[M]** KEY.

MEMORY TO VFO COPY

Enter VFO MODE, press **[M]** KEY, rotate main tuning knob and select a memory channel, press **[FUNC]** + **[M]** KEY.

FREE MEMORY CHANNELS

Press **[FUNC]** + **[E]** KEY, **[FUNC]** + **[D]** KEY. Rotate main tuning knob until the desired memory channels you desire for each band is shown. Press **[FUNC]** + **[M]** KEY 4 times until " **[FL/PL]** " isn't shown on the display.

CALL CHANNEL

Press the **[CALL]** KEY.

CALL WRITE

Press the **[CALL]** KEY, enter frequency, press **[FUNC]** + **[CALL]** KEY.

3-4 SCANNING

SCAN VFO

Enter VFO MODE, press the **[SCAN]** KEY.

SCAN MEMORY

Enter MEMORY MODE, press the **[SCAN]** KEY.

SCAN DIRECTION

During SCAN rotate the main tuning knob counter clockwise to decrease frequency and clockwise to increase frequency. You may use up or down arrow keys to obtain the same results.

STOP SCAN

Press the **[STOP]** KEY.

BUSY SCAN

Stops at a busy channel until clear. This is the radio default. If a black block with a white " **[B]** " appears on the LCD display, press

[FUNK] + **[B]** KEY until it disappears from the display.

TIMED SCAN

Stops at a busy channel and resumes after 5 seconds. Press **[FUNK]** + **[B]** KEY until a black block with a white "P" appears on the LCD display.

DUAL BAND SCAN

Enter VFO frequency, select a memory channel in memory mode, press the **[FUNK]** + **[B]** key.

RANGE SCAN

Enter VFO MODE, enter a lower frequency range, press **[FUNK]** KEY, rotate main tuning knob until "P1" appears, press **[FUNK]** + **[B]** KEY. Rotate the main tuning knob until "P2" appears. Enter the upper frequency range, press **[FUNK]** + **[B]** KEY. Press **[FUNK]** + **[B]** KEY.

3-5 PRIORITY

VFO PRI

VFO received for 4 seconds and MEMORY channel for 1/2 second. Enter VFO MODE, enter frequency, press **[FUNK]** KEY, select memory channel, return to VFO MODE, press the **[A]** KEY.

MEMORY PRI

MEMORY channel received for 5 seconds and VFO for 2 seconds. Enter VFO MODE, enter frequency, press **[FUNK]** KEY, select memory channel, press the **[A]** KEY.

VFO/CALL PRI

VFO is scanned for 1/2 second and CALL channel for 4 seconds. Enter VFO MODE, enter frequency, press **[FUNK]** KEY, press **[A]** KEY.

MEM/CALL PRI

MEMORY is scanned for 1/2 second and CALL channel for 4 seconds. Enter MEMORY MODE, rotate main tuning knob to selected memory channel, press **[FUNK]** KEY, press **[A]** KEY.

3-6 AUTOPATCH

PGM AUTODIALER

Press **[FUNK]** + **[A]** KEY, rotate main tuning knob to either "C1", "C2" or "C3" autodial memory. Enter upto 16 numbers, letters or symbols. Press **[FUNK]** + **[A]** KEY. Press **[PT]** switch to transmit and press **[FUNK]** key during transmission to transmit autodial sequence.

DISABLE AUTODIALER

Press and hold **[FUNK]** KEY + **[A]** KEY + **[A]** KEY + **[A]** KEY.

3-7 DSQ SCHEME

DSQ REFERENCE

A-000 = First Group Code
B-000 = Second Group Code
P-000 = Your own Personal Code
y-000 = Other operators own Code
nn-00 = Digital Signal Message

PROGRAM DSQ

1. Enter VFO MODE, press **[FUNK]** + **[A]** KEY. Enter 3 digits into the first group code A-000.
2. Rotate main tuning knob until "b-000" appears on LCD, enter 3 digits into the second group code B-000.
3. Rotate main tuning knob until "P-000" appears on LCD, enter your unique 3 digit personal code into the P-000 field.
4. Rotate main tuning knob until "y-000" appears on LCD, enter the other operators unique 3 digit code into the Y-000 field.
5. Rotate main tuning knob until "nn-00" appears on LCD, enter a 2 digit code that would be meaningful to the receiving operator.
6. Enter VFO MODE to end DSQ programming.

DSQ CALLING

DSQ CALLING includes DSQ, GROUP CALLING, PRIVATE CALLING IN A GROUP, PRIVATE CALLING.

DSQ CALLING

Press **[FUNK]** KEY repeatedly until "D.SQ" appears on LCD display.

GROUP CALLING

Press **[FUNK]** KEY repeatedly until "G D.SQ" appears on LCD display.

PRIVATE CALLING IN A GROUP

Press **[FUNK]** KEY repeatedly until "G D.SQ" appears on LCD display.

PRIVATE CALLING

Press **[FUNK]** KEY repeatedly until "P D.SQ" appears on LCD display.

3-8 CROSSBAND REPEATER

ACTIVATE

Set squelch threshold and then advance slightly. Turn volume controls fully counter clockwise. Press **[FUNK]** + **[A]** KEY. With "FL" indicator on press the following keys: **[B]**, **[B]**, **[B]** and **[B]**.

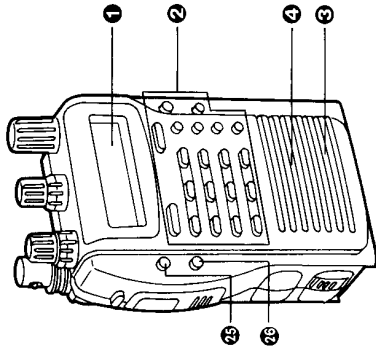
DEACTIVATE

Press **[FUNK]** + **[A]** KEY repeatedly until the "FL / PL" indicators have disappeared from the LCD display.

4. DESCRIPTIONS

This section will discuss what the function or control is and how to use it. The sub-sections are broken down into smaller sections for easy access.

4-1 FRONT PANEL CONTROLS/FUNCTIONS



The following descriptions are those functions necessary to utilize full functionality of the DJ-580T/E.

1 LCD DISPLAY PANEL

Refer to Section for further details on the LCD display panel.

2 CONTROL KEYPAD

The control pad includes 16 multi-functional command keys that control and execute various operations for the DJ-580T/E. It also serves as a DTMF keypad.

3 MICROPHONE

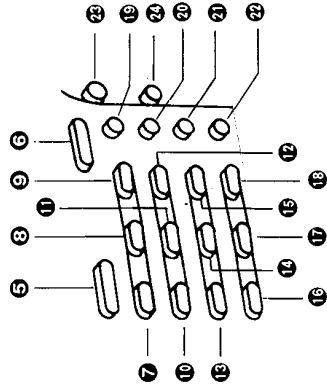
An electret condenser microphone is built into the front panel. When transmitting, speak directly into the microphone from a distance of approximately 5 inches. The microphone connectors are labeled as follows:

Smaller Jack (MIC JACK):

Tip: PTT Line/Transmit Audio
Ring: 5V DC (for EME-10K Optional acy)
Sleeve: Signal Ground

Larger Jack (SPEAKER JACK):

Tip: Receive Audio
Ring: Remote Control (for EMS-8 Optional acy)
Sleeve: Signal Ground



4 SPEAKER

The speaker is located below the key pad on the front panel. It's rated at 8 ohms and not in operation when an external speaker is used.

5 VHF BAND KEY

Pressing this key allows for operation on the 2 meter VHF band.

6 UHF BAND KEY

Pressing this key allows for operation on the 70 cm UHF band.

7 SHIFT KEY

The SHIFT KEY is used to change frequency offset and shift.

The symbols "M" , "S" and "C" are used to indicate shifts.

1. Press and hold the TUNE key, then press the SHIFT key repeatedly until the desired shift appears on the LCD display.

The "M" symbol indicates that the transmitter will subtract the offset with the transmitted frequency.

The "S" symbol indicates that the transmitter will add the offset with the transmitted frequency.

The "C" symbol indicates a split offset.

Simplex operation is active when neither the "M" or "S" or "C" symbol is displayed on the LCD display. If "OFF" appears in place of the frequency during transmit, the selected frequency is out-of-band.

2. Select the Main Band by pressing the VHF or UHF key. The LCD display returns to frequency.

NOTE

For larger incremental frequency changes press the TUNE key then rotate the Main Tuning dial. This increments the 1MHz digit.

Amateur radio repeaters utilize separate transmitter and receiver sections. The transmitter frequency may be offset either above or below the receive frequency according to repeater coordination conventions. The standard offset for the 2 meter band is 600 kHz. Offset for the 70cm band is 5 MHz. Offset direction varies according to established band plans.

EXAMPLE: SHIFT

1. Select the Main Band by pressing the VHF or UHF key.

2. Press and hold the TUNE key, then press the SHIFT key. An offset will be displayed on the LCD display.

3. Rotate the Main Tuning dial or press either arrow key to select the desired offset. For larger incremental frequency changes, press the TUNE key then rotate the Main Tuning dial.

4. Select the Main Band by pressing the VHF or UHF key or PTT key to complete offset procedure.

DJ-580T

DJ-580E

VHF: 600 kHz (0.60)

VHF: 600 kHz (0.60)

UHF: 5 MHz (5.00)

UHF: 7.6 MHz (7.60)

8 STEP KEY

The STEP function is used to select desired incremental changes of receive/transmit frequencies, in steps of 5, 10, 12.5, 15, 20 or 25kHz. Get more information on "GETTING STARTED" in section.

1. Select the Main Band by pressing the VHF or UHF key.

2. Press and hold the TUNE key, then press the STEP key. The channel step will change each time the STEP key is pressed. You

can also change the channel step by using the Main Tuning dial, M or S keys. Select the Main Band by pressing the VHF or UHF key to set channel step and return to operating frequency.

3. After channel step is set, the receive/transmit frequency will increase or decrease by the value selected when you turn the Main Tuning dial.

When the transmit frequency extends beyond permissible limits, "OFF" will be displayed on the LCD display. The transmitter will not transmit when "OFF" is displayed.

Refer to the following OFFSET frequency chart (TABLE 1) before you actually transmit. The transmitting frequency may differ from the frequency that appears on the LCD display.

LCD DISPLAY FREQUENCY	ACTUAL FREQUENCY
***02.5 kHz	***00.0 kHz
***07.5 kHz	***05.0 kHz
***17.5 kHz	***15.0 kHz
***22.5 kHz	***20.0 kHz
***27.5 kHz	***25.0 kHz
***32.5 kHz	***30.0 kHz
***42.5 kHz	***40.0 kHz
***47.5 kHz	***45.0 kHz
***52.5 kHz	***50.0 kHz
***57.5 kHz	***55.0 kHz
***67.5 kHz	***65.0 kHz
***72.5 kHz	***70.0 kHz
***77.5 kHz	***75.0 kHz
***82.5 kHz	***80.0 kHz
***92.5 kHz	***90.0 kHz
***97.5 kHz	***95.0 kHz

TABLE 1 Offset Frequency Chart

9 REV KEY

In some areas there may be repeaters operating on repeater frequency pairs, the exact reverse of another repeater in the area. That is, the input of one repeater is the output frequency of the other and vice versa. To avoid the inconvenience of reprogramming every time both repeaters are in range, the REV key allows instant reversal of the input and output frequencies and the offset direction. The REV function is also useful to check the repeater input to determine if another station is heard directly so you can go simplex. To activate the REV function:

1. Press and hold the **(TUNE)** key, then press the **(REV)** key. The repeater input frequency and opposite SHIFT indicator will appear on the LCD display panel.
2. Press and hold the **(TUNE)** key, then press the **(REV)** key again to cancel the REV function.
If the frequency, as a result of the **(REV)** key being activated, is out of band, the beep will sound and no change will take place. The beep won't be heard through the speaker if it has been turned off.

10 TONE KEY

The Tone Encoder and Tone (Decoder) Squelch function is standard on the DJ-580T. Tone Encode and Decode work on the Main Band only. The DJ-580T has 38 settings from 67.0 Hz to 250.3 Hz (TABLE 2). Utilize the **(TONE)** key to access these settings. Access to an increasing number of repeaters is restricted by requiring that a sub-audible tone be transmitted with the input signal to open the repeater. To select the needed tone, perform the following:

1. Press and hold the **(TUNE)** key, then press the **(TONE)** key. A tone frequency will appear in the LCD display.
2. Rotate the Main Tuning dial or either the **(VHF)** or **(UHF)** key to the desired tone frequency.
3. Select the Main Band by pressing the **VHF** or **UHF** key.
4. The tone has now been selected, now you need to enable it. Press the **(REV)** key.

Refer to section for more information.

67.0	71.9	74.4	77.0	79.7	82.5
85.4	88.5	91.5	94.8	97.4	100.0
103.5	107.2	110.9	114.8	118.8	123.0
127.3	131.8	136.5	141.3	146.2	151.4
156.7	162.2	167.9	173.8	179.9	186.2
192.8	203.5	210.7	218.1	225.7	233.6
241.8	250.3				

TABLE 2 Sub-Audible Tones

11 PO KEY

Change power output levels by performing the following.

1. Press and hold the **(TUNE)** key, then press the **(REV)** key repeatedly to obtain the desired output power.
When "H" is displayed it means that the output power is at maximum/high for battery rating. When "M" is displayed it means that the output power is at mid range for battery rating. When "L" is displayed it means that the output power is at the lowest range for battery rating.

WARNING

It is possible to cause UHF receive interference while transmitting on VHF. To avoid this from happening, make sure that the VHF frequency x 3 does not equal the frequency on UHF. For example, if VHF transmit frequency is 146.190MHz the UHF frequency should not be set at 438.570MHz.

12 T.SQL KEY

The Tone Encoder and Tone (Decoder) Squelch function is standard on the DJ-580T. Tone Encode and Decode work on the Main Band only. The DJ-580T has 38 settings from 67.0 Hz to 250.3 Hz (TABLE 3). Utilize the **(TONE)** key to access these settings. Access to an increasing number of repeaters is restricted by requiring that a sub-audible tone be transmitted with the input signal to open the repeater. To select the needed tone, perform the following:

1. Press and hold the **(TUNE)** key, then press the **(TONE)** key. A tone frequency will appear in the LCD display.
2. Rotate the Main Tuning dial or either the **(VHF)** or **(UHF)** key to the desired tone frequency.
3. Select the Main Band by pressing the **(VHF)** or **(UHF)** key.
4. Press and hold the **(TUNE)** key, then press the **(TONE)** key to display "H" and enable subaudible tone encoding. If "M" and "SQL" display, then tone squelch or tone decoding is enabled.

The tone frequency is now stored and will be transmitted with the repeater input frequency.

67.0	71.9	74.4	77.0	79.7	82.5
85.4	88.5	91.5	94.8	97.4	100.0
103.5	107.2	110.9	114.8	118.8	123.0
127.3	131.8	136.5	141.3	146.2	151.4
156.7	162.2	167.9	173.8	179.9	186.2
192.8	203.5	210.7	218.1	225.7	233.6
241.8	250.3				

TABLE 3 Sub-Audible Tones

13 BEEP KEY

When the BEEP is on, each key pressed will sound a BEEP.

Press and hold the **(TUNE)** key, then press the **(BEEP)** key. Each time the BEEP key is pressed the speaker will emit a high or low pitch tone. If the tone is high pitch, the BEEP is disabled, if low it is enabled.

The BEEP function will be set and activated on both bands at the same time. The BEEP will sound only if the BEEP function is on.

The radio comes preset with a low/soft beep audio level. If you would like to increase this level to high, perform the following.

1. Press and hold the **(TUNE)** key, then press the **(BEEP)** key. The LCD will display "FL".
2. Press and hold the **(TUNE)** key, then press the **(BEEP)** key. The display will indicate "BEEP", for beep tone high level audio.
3. Press and hold the **(TUNE)** key, then press the **(BEEP)** key. The display will indicate "BEEP", for beep tone low level audio.
4. Press and hold the **(TUNE)** key, then press the **(FL / PL)** from the display and exit beep tone level mode.

14 TMS/VCS KEY

This key is used to select 1 of 3 scan modes. Refer to section for more information.

15 APO KEY

This **(APO)** key is used to **Automatically Power Off** the radio. The APO function prevents inadvertent waste of battery power when the radio is left ON unintentionally. Here's how to use it.

1. Press and hold the **(TUNE)** key, then press the **(APO)** key. You will see "APO" displayed.
2. The time of 30 minutes is preset from the

factory. The time duration can be selected by rotating the Main Tuning Dial. The time is adjustable from 5 to 60 minutes.

3. Press and hold the **(TUNE)** key, then press the **(APO)** key. "APO" is displayed on the LCD.

If no activity, a beep is emitted after this time and 30 seconds later the LCD display becomes blank. Battery power has now been removed from the radio. To re-initialize APO, turn the radio off and back on again.

4. Exit the APO function, select the Main Band by pressing the **(VHF)** or **(UHF)** key. The "APO" indicator should still be displayed on the LCD.

5. To cancel APO, press and hold the **(TUNE)** key, then press the **(BEEP)** key 2 times. The APO indication should now disappear from the display. Exit the APO function, select the Main Band by pressing the **(VHF)** or **(UHF)** key.

Any signal received during the APO time period, APO resets back to the beginning.

16 DOWN ARROW AND FL/PL KEY

The **(DOWN ARROW)** toggles different values depending on what task you are utilizing. It is often used to decrease VFO frequency value. If this key is held down, the value will decrease continuously. "FL" stands for **Frequency Lock**. In this mode the main keypad, **(VHF)** and **(UHF)** keys are locked and don't function.

"PL" stands for **Push To Talk Lock**. In this mode both bands are locked from the Push to Talk switch. Frequencies can still be entered and stored.

These are useful features to prevent unauthorized functioning while the radio is in unattended monitoring mode. Here's how to use these features.

1. Press and hold the **(TUNE)** key, then press the **(DOWN ARROW)** key. Each time you press the key, you will toggle the field which will be displayed as follows: "FL", "PL", then "FL" and "PL" and finally both functions disabled.

17 DUAL KEY

This function is used to monitor two particular channels. The possibilities are:
• VFO and MEMORY channels
• VFO and CALL channels

- VFO and VFO channels
- CALL and MEMORY channels

In other words, dual channel monitoring will listen to two channels. Here's how to make it happen for VFO and MEMORY. You can incorporate the same procedure with the other possibilities of

DUAL WATCH.

1. Select the Main Band by pressing the **UHF** or **VHF** key.
2. Press the **MR** key. Select the desired memory channel by using the Main Tuning Dial.
3. The 2 digit memory channel number will blink if it hasn't been programmed. **More on memory channel programming can be found in section .**
4. Return to VFO Mode and enter a VFO frequency.
5. Press and hold the **CALL** key, then press the **MR** key. The "PRI" indicator will now blink on and off on the display. The radio will cycle alternately between VFO frequency and Memory frequency for 1/2 second.
6. When a signal is received, the signal is held for 5 seconds.
7. To release the DUAL/WATCH function, press the **CALL** or chosen VFO key.

UP ARROW AND MESS KEY

The **UP** toggles different values depending on what task you are utilizing. It is often used to increase VFO frequency value. If this key is held down, the value will increase continuously. This **MESS** key is used for Digital Signal messages. **Refer to section .**

PRIDIAL M KEY

"PRI" stands for Priority. When the **PR** key is pressed the priority function is active. The **CALL** key is used for storing and automatically transmit a sequence of numbers/codes. This would be commonly used for autopatch use. **Refer to section for more information.**

GP DSQ/DSQS KEY

This key is used in conjunction with DTMF squelch control. **More information can be found in section .**

SKIP/M TO V KEY

The **SKIP** key is used to skip selected memory channels during a memory scan.

The **M to V** function of this key is used to copy information from a memory location into the VFO.

MR/MW KEY

MR stands for Memory Read. This function is used to examine what information is in a memory channel.

MW stands for Memory Write. This function is used to write/store frequencies and features into a memory channel. Refer to section on for more information.

1. Press the **CALL** key to put the Main Band into Memory Channel mode. A 2 digit memory channel number (0-19) will appear. These 2 digits will flash if nothing has been programmed into the memory channel.
2. Pressing the **MR** key will increment each programmed memory channel one at a time. Use the Main Tuning Dial to either increment or decrement scanning.

SCN/PS KEY

The **SCN** key is used to continually scan frequencies in VFO or memory mode. Press the key down for approximately one second and scan will begin. Scan is active by virtue of the flashing decimal point, just right of the 1 megahertz digit. To cease scan, press the SCN key once again. **PS** stands for **Programmable Scan**. This is used when you want to scan a range of frequencies. You may scan a range of frequencies on VHF and perform the same for UHF at the same time. Here is how it works.

1. Select the Main Band by pressing the **UHF** or **VHF** key.
2. Now enter the lower range frequency via the keypad.
3. Press the **MR** key. Rotate the Main Tuning Dial and select memory channel "P1".
4. Press and hold the **CALL** key, then press the **MR** key. A beep will sound from the speaker and memory channel "P1" will stop blinking. P1 has been successfully programmed with the lower frequency.
5. Now enter the higher range frequency via the keypad.
6. Press the **MR** key. Rotate the Main Tuning Dial and select memory channel "P2".
7. Press and hold the **CALL** key, then press

the **CALL** key. A beep will sound from the speaker and memory channel "P2" will stop blinking. P2 has been successfully programmed with the upper frequency.

8. Select the Main VFO band as you did in step 1.
9. Press and hold the **CALL** key, then press the **MR** key. The display will show scanning of ranges programmed between P1 and P2. The **P** indicator should begin to blink on the LCD display.
10. Exit programmable scan, select the Main Band by pressing the **UHF** or **VHF** key or **CALL** key.

CALL/CALL.W KEY

Each band has 1 Call channel which is immediately accessible by pressing the **CALL** key. An often used frequency of interest such as a preferred local repeater, is usually programmed into the Call channel.

The **CALL** key is used to gain access to the CALL channel.
The **CALL** key is used to write information into the CALL channel.

Refer to section for more information.

LAMP KEY

1. Press the **LAMP** key to illuminate the LCD display. The lamp goes out automatically after five seconds.
2. If you wish for the lamp to remain on, press and hold the **CALL** key, then press the **LAMP** key.

MONI/BS KEY

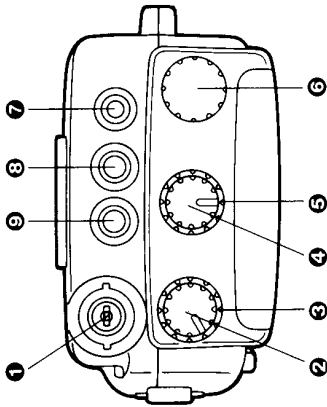
"MONI" is short for the word **MONITOR** or **SQUELCH OPEN**. Activate this feature as follows:

1. Press and hold the **MONI** key to override the squelch on the band selected. In this mode, weak signals below the squelch threshold may be heard.
- "BS" is short for **Battery Saver**. The battery saver feature reduces unnecessary battery drain by alternating between listening and the Battery Saver mode. If there is no operation for a period of 5 seconds the BS mode will listen for a signal for approximately 130 ms then Battery Save for approximately 390 ms. This cycle is repeated continuously. Perform the following to activate or deactivate Battery

Save feature. You can set this function in VHF or UHF or both bands together.

1. To **activate** battery save feature, press and hold the **MONI** key, then press the **BS** key until the symbol "BS" is displayed.
2. To **deactivate** battery save feature, press and hold the **MONI** key, then press the **BS** key until the "BS" disappears.

4-2 TOP PANEL CONTROLS/FUNCTIONS



1 BNC ANTENNA CONNECTOR

You should attach a suitable Dual-Band antenna that will yield a low SWR. The antenna connected should satisfy both the 2 meter and 70 cm (440MHz) band.

2 VHF VOLUME CONTROL

Adjusts the VHF audio level. Rotate control clockwise to increase volume, and counter clockwise to decrease.

3 VHF SQUELCH

Start by turning the knob fully counter clockwise, then rotate the knob back clockwise until background noise is silent.

4 POWER ON/OFF AND UHF VOLUME CONTROL

Power is not applied to the radio when the POWER knob is fully counter clockwise. When the POWER knob is rotated clockwise, power is applied to the radio and volume for the UHF band may be adjusted.

5 UHF SQUELCH

Start by turning the knob fully counter clockwise, then rotate the knob back clockwise until background noise is silent.

6 MAIN TUNING DIAL

Press the VHF or UHF key to select the Main Band. The Main Tuning dial may be rotated in either direction to select transmit and receive

frequencies, frequency steps, sub-audible tones and transmit frequency offsets. The frequency will increase/decrease by one MHz depending on the direction of the tuning dial rotation.

7 MIC JACK

An external microphone may be plugged into this jack.

8 SPEAKER JACK

An external speaker rated at 8 ohms may be plugged into this jack. The built-in speaker is disabled when an external speaker is plugged into this jack.

9 V/U SPEAKER JACK

The DJ-5807/E features an external stereo speaker jack that makes accessible the audio supplied from each band (UHF/VHF). When a stereo headset is used, each band is heard separately, in each earphone. Separate external speakers may be plugged into this jack by using a mini dual stereo adapter plug. Volume from the VHF band will be heard on the Left channel and UHF will be heard on the Right channel.

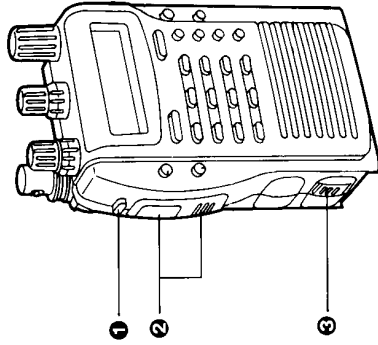
CAUTION

Inserting a standard mono plug into this jack will short circuit the UHF channel. USE STEREO PLUGS ONLY!

NOTE

When this jack is in use, the audio jack located on the top of the radio will be disabled.

4-3 LEFT SIDE CONTROLS/FUNCTIONS



The following controls are located on the left side of the radio as viewed with front panel facing the operator.

1 FUNCTION KEY

Controls access to secondary functions. These secondary functions are those functions printed in green on the front panel. It is necessary to activate the Function key to access these secondary functions. While holding the **[FUNC]** key, press the desired command key.

2 PTT SWITCH

Press and hold this button to transmit. While holding the **[PTT]** SWITCH you may speak into the microphone.

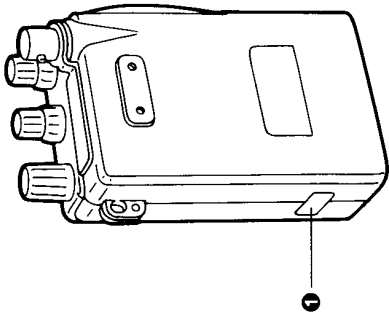
NOTE

On the DJ-580E the lower portion of the **[PTT]** SWITCH is used to transmit Tone Burst, and the upper portion is the **[PTT]** SWITCH. On the DJ-580T either button activates **[PTT]** SWITCH.

3 BATTERY LOCK BUTTON

The battery lock button releases the battery from the radio. The battery is keyed in order to avoid the battery from being inserted incorrectly. To attach the battery, slide battery in guides from left to right until the lock snaps battery into place. To remove battery, push and hold the lock button upwards and slide the battery to the left (from vantage point where radio front panel is facing you).

4-4 RIGHT SIDE CONTROLS/FUNCTIONS



The following controls are located on the right side of the radio as viewed with front panel facing the operator.

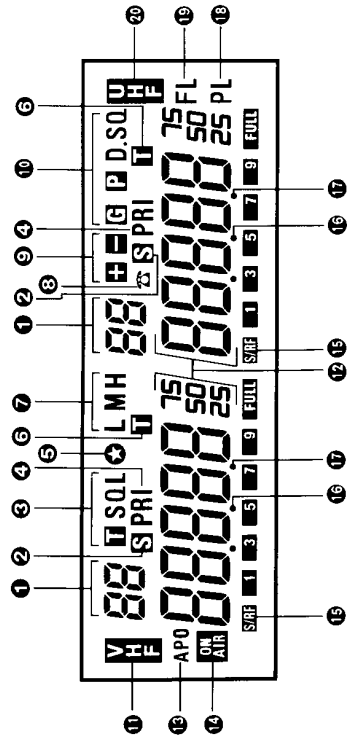
1 DC IN JACK

Utilizing this jack will provide maximum output power. Plug an external 13.8V DC power source into this jack.

CAUTION
Observe correct plug polarity. The tip of the connector is (+) and the sleeve is (-). When a voltage source is applied to this jack the battery is cutoff and no charging to the battery will take place.

The EDC-36 or EDC-37 is recommended as optional accessories. Refer to section for additional information on **OPTIONAL ACCESSORIES**.

4-5 LCD DISPLAY DESCRIPTIONS



1 MEMORY CHANNEL

This 2 digit indicator shows that the selected band is in memory mode and displays the memory channel number.

2 BATTERY SAVE

The symbol "S" appears while battery save function is activated.

3 TONE ENCODER/TONE SQUELCH

The symbol "T" appears when tone encoder is active and "SQL" when tone squelch (Decode) function is activated.

4 PRIORITY/DUAL WATCH

The symbol "PRI" appears when PRIORITY/DUAL WATCH function are activated.

5 SPLIT

The "S" symbol appears when the split function is activated.

6 TIMER SCAN

Another "T" symbol appears, to indicate that TIMER SCAN is activated. When the "T" symbol disappears, BUSY SCAN is activated.

7 OUTPUT POWER

When the symbol "L" is displayed, LOW power is active. The indicator "M" is for MID power and "H" for HIGH power.

8 DIALER

When the "D" symbol appears, the DIALER MEMORY is activated.

9 SHIFT

The symbols "+", "-", "E" are used by the shift function.

10 DSQ

When "P" or "G" and "DSQ" are displayed, DSQ functions are enabled. DSQ stands for DTMF squelch control.

11 VHF

The "V" symbol indicates that the VHF band has been selected.

12 FREQUENCY INDICATOR

Receive and transmit frequencies, offset and tone frequencies, channel steps, DSQ codes and dialer memory channel numbers are displayed in this area depending on the selected mode.

13 AUTO POWER OFF

"AP0" appears when AUTO POWER OFF is activated.

14 ON AIR

The symbol "Ath" appears when transmitting.

15 S/RF

In receive mode the "SRF" symbol and Signal/RF bars will be displayed to show signal strength. When transmitting occurs, the "Ath" symbol and Signal/RF bars indicate RF output power.

16 FREQUENCY DECIMAL POINT

When receive, transmit or offset frequencies are displayed on the LCD, the decimal point divides MHz and kHz.

17 TONE FREQUENCY DECIMAL POINT

When the Tone frequency is displayed, the decimal point divides Hz and 0.1 Hz.

18 PL

The "PL" symbol indicates that the PTT switch is locked. The radio will not transmit even if the PTT switch is pressed accidentally.

19 FL

"FL" stands for **FREQUENCY LOCK**. When FL is displayed, the command and control function keys are locked out. Utilizing this function prevents accidental use of command and control pad keys.

20 UHF

This symbol indicates that the "U" band has been selected.

5. GETTING STARTED (RECEIVING)

- Adjust the following switches and controls on the top of the radio.
POWER/UHF KNOB: OFF
VOLUME CONTROLS:
 Fully Counter Clockwise
SQUELCH CONTROLS:
 Fully Counter Clockwise
 - Connect a battery or external 13.8 Volt DC Power Supply to the radio.
 - Connect an antenna with the appropriate antenna connector to the top of the radio. The type of antenna fitting that is expected is a BNC type.
 - Rotate the **POWER** knob clockwise until power is applied to the radio.
 - Rotate the VHF volume control (left knob) and the UHF volume control (center knob) clockwise until a signal (or noise) is heard through the speaker. The display should be illuminated and indicate frequencies for both bands. The initial factory delivered settings for VHF are found in Table 4, UHF in Table 5.

UHF	
VFO Freq. 580T:	445.000 MHz
VFO Freq. 580E:	433.000 MHz
Memory Channel:	1
Channel Step (580T):	5 kHz
Channel Step (580E):	12.5 kHz
Shift:	None
Tone Setting:	None
DSQ Setting:	None
Call Freq.(580T):	445.000 MHz
Call Freq.(580E):	433.000 MHz
Offset Freq.(580T):	5 MHz
Offset Freq.(580E):	7.6 MHz
Tone Frequency:	88.5 Hz
Transmitter Output:	Mid

TABLE 5 UHF Default Settings

- Rotate the Main Tuning dial, and select an open frequency on each band. Rotate the squelch control counter-clockwise for each band until the "SQUELCH" indicator disappears from each band on the LCD display.
- Select the desired band by pressing the VHF or UHF buttons. The VHF symbol will be displayed when VHF is enabled and UHF will be displayed when UHF is enabled.

NOTE

If external power source is connected, be sure to power off the radio before turning off the power supply.

5-1 KEY PAD DIRECT ENTRY

When frequency is selected by key pad direct entry, numbers will appear on the LCD display as they are entered on the key pad.

To enter frequency directly from the key pad perform the following. The following example will use the 2 meter frequency 146.52.

- Select the Main Band by pressing the **[VHF]** or **[UHF]** key.
 - Enter the 100MHz digit first. Example: 1—
 - Enter the 10MHz digit next. Example: 14—
 - Enter the 1MHz digit next. Example: 146—
 - Enter the 100kHz digit next. Example: 146.5—
 - Enter the 10kHz digit next. Example: 146.52—
 - Enter the 1kHz digit last. Example: 146.520
- If radio STEP is greater than 10kHz, the 10kHz digit will be the last digit to enter followed by a

VHF	
VFO Frequency:	145.000 MHz
Memory Frequency:	Empty
Channel Step (580T):	5 kHz
Channel Step (580E):	12.5 kHz
Shift:	None
Offset Frequency:	0.6 MHz
Memory Channel:	1
DSQ Setting:	None
Call Frequency:	145.000 MHz
Tone Setting:	None
Tone Frequency:	88.5
Transmitter Output:	Mid
Call Freq.(580T):	145.000 MHz
Call Freq.(580E):	145.000 MHz

TABLE 4 VHF Default Settings

higher pitch beep.

If radio STEP is set to 5kHz, enter the last digit.

5-2 STEP KEY

The STEP function is used to select desired incremental changes of receive/transmit frequencies, in steps of 5, 10, 12.5, 15, 20 or 25kHz. Use this feature as follows:

- Select the Main Band by pressing the **[VHF]** or **[UHF]** key.
- Press and hold the **[STEP]** key, then press the **[FREQ]** key. Change the channel step by using the Main Tuning dial, **[←]** or **[→]** keys.
- Select the Main Band by pressing the **[VHF]** or **[UHF]** key to set channel step and return to operating frequency.
- After channel step is set, the receive/transmit frequency will increase or decrease by the value selected when you turn the Main Tuning dial.

NOTE

The following rules apply to channel steps as indicated.

When 5 kHz channel step is selected, keys **[0]** and **[5]** are available for entry into the 1kHz digit.

When 10 kHz channel step is selected, keys **[0]**, **[1]**, **[2]**, **[3]**, **[4]**, **[5]**, **[6]**, **[7]**, **[8]** and **[9]** are available for entry into the 10kHz digit.

When 12.5 kHz channel step is selected, keys **[0]**, **[1]**, **[2]**, **[3]**, **[4]**, **[5]**, **[6]**, **[7]**, and **[8]** are available for entry into the 10kHz digit.

When 15 kHz channel step is selected, keys **[0]**, **[1]**, **[2]**, **[3]**, **[4]**, **[5]**, **[6]**, **[7]** and **[8]** are available for entry into the 10kHz digit.

When 20 kHz channel step is selected, keys **[0]**, **[2]**, **[4]**, **[6]**, and **[8]** are available for entry into the 10kHz digit.

When 25 kHz channel step is selected, keys **[0]**, **[2]**, **[4]**, **[6]** and **[8]** are available for entry into the 10kHz digit.

5-3 KEYPAD ENTRY

When frequency is selected by key pad direct entry, numbers will appear on the LCD display

as they are entered on the key pad.

- Select the Main Band by pressing the **[VHF]** or **[UHF]** key.
- Begin by entering the 100 MHz digit.
- Enter the 10 MHz digit.
- Enter the 1 MHz digit.
- Enter the 100 kHz digit.
- Enter the 10 kHz digit. If the radio is in 10 kHz or higher step, a beep will sound and the band indicator will stop flashing.
- Enter the 5 kHz digit if the radio is set for 5 kHz step.

5-4 CLEARING ENTRY

To clear an error during key pad entry, you may:

- Press the **[VHF]** or **[UHF]** band key, or
- Press the **[PTT]** key.

5-5 MONO BAND FUNCTION

If you only want to use one band without distraction from the other band, follow these steps for mono band.

- Switch off the radio.
- Press either the **[VHF]** or **[UHF]** key while powering on the radio.
 Restore dual band capability by pressing the inactive band key. If VHF is selected for mono band operation, press the **[UHF]** key to restore dual band operation.