ATTENTION!

Before using the product, read the RF Energy Exposure and Product Safety Guide that ships with the radio which contains instructions for safe usage and RF energy awareness and control for compliance with applicable standards and regulations.

Package Contents

- Frequency Chart
- Features and Specifications
- 8 PMR Channels
- 121 Sub-Codes (38 CTCSS Codes & 83 DCS codes)
- Up to 10 km Range*
- Internal VOX Circuitry
- LED Torch
- 10 ... Power Source: NiMH battery Pack / 4 AAA Alkaline batteries

*Range may vary depending on environmental and/or topographical conditions.

Ch. Freq. (MHz) Ch. Freq. (MHz) Ch. Freq. (MHz)
1 446.00625 4 446.04375 7 446.08125
2 446.01875 5 446.05625 8 446.09375
3 446.03125 6 446.06875

Package Contents

- T80 T80
- T80 Extreme
- T80 Quad
- T81 Hunter
- Radio 2 2 4 1
- Belt clip 2 2 4 1
- 2-slot charging cradle 1 1 2 1
- AC adaptor 1 1 - 1
- AC- Y-adaptor - - 1 -
- Battery support 2242
- Rechargeable NiMH battery pack 2242
- Headset - 2 4 1
- Landyard - 2 4 1
- Owner's manual 1 1 1 1
- Car Charger - - - 1

Frequency Chart

- Ch. Freq. (MHz)
- Ch. Freq. (MHz)
- Ch. Freq. (MHz)
- Ch. Freq. (MHz)
- Ch. Freq. (MHz)
- Ch. Freq. (MHz)
- Ch. Freq. (MHz)
- Ch. Freq. (MHz)
- Ch. Freq. (MHz)

Features and Specifications

- Features:
  - Expandable with up to 121 sub codes
  - VOX Circuitry
  - LED Torch
  - 10 Hours of Talk Time
  - Power Source: NiMH battery Pack / 4 AAA Alkaline batteries
- Specifications:
  - Frequency: 446 MHz
  - Transmission Power: 1 W
  - Range: Up to 10 km
  - Operating Temperature: -10°C to 50°C
  - Battery Life: 16 Hours (under typical use conditions)

*Range may vary depending on environmental and/or topographical conditions.
Installing the Battery

1. Make sure your radio is turned OFF.

2. For T80: To remove the battery compartment door, press the tab at the bottom of the compartment door. For T80 Extreme and T81 Hunter: To remove the battery compartment door, use a coin to wedge the battery door open.

3. Install the NiMH batteries into the battery compartment.

4. Replace the battery compartment door.

Caution: Risk of explosion if battery is replaced by an incorrect type. Dispose used batteries according to the instructions.

Battery Level and Low Battery Alert

1. Charge the batteries at least once every 3 months when not in use.

2. Remove the battery from the radio after using for storage purpose.

3. Store the batteries in temperatures between -20°C to 35°C and in low humidity. Avoid damp conditions and corrosive materials.

Charging the Radio

1. Make sure your radio is turned OFF.

2. Connect the charger to the radio.

3. The battery level meter indicates that the battery is fully charged.

4. Blinks when battery is low; charge the radio or replace batteries immediately. (The alert tone sounds every 5 seconds for 30 seconds when the battery is low.)

5. Silent Indicator
6. Transmit Indicator
7. Receive Indicator
8. Dual Watch Indicator
9. Auto Power Off Indicator
10. Key Lock Indicator
11. Scan Indicator
12. Channel Indicator
13. Group Indicator
14. VOX/Room Monitor Indicator
15. Call Indicator
16. Sub-code (Group ID/Code) Indicator
17. Colon (for Up Timer)
2. Connect the AC adapter to the radio's DC IN 9V. Connect the other end of the AC adapter to a vehicle accessory power outlet.

3. Charge the battery pack for 14 hours.

Using the Charging Cradle:

1. Make sure your radio is turned OFF.
2. Connect the AC adapter to the DC IN 9V of the charging cradle.
3. Place the charging cradle on a stable surface.
4. Place the radio in the charging cradle with the keypad facing forward.
5. LED indicator will illuminate and remain illuminated as long as the radio is in the charger.

Note: Charge the battery pack for 14 hours.

Using the Battery Support Bracket:

1. Remove the rechargeable NiMH battery pack from the radio.
2. Place the battery support bracket into the charging cradle.
3. Install the NiMH battery pack into the charging cradle. Ensure that the charging contacts are correctly aligned.
4. LED indicator will illuminate and remain illuminated as long as the radio is in the charger.

Note: Charge the battery pack for 14 hours.

Basic Radio Operations

Read this reference guide completely before attempting to operate the unit.

Turning your Radio On/Off

To turn your radio ON, turn the rotary knob clockwise.
To turn your radio OFF, turn the rotary knob counterclockwise.

Adjusting the Volume

Increase volume by turning the rotary knob clockwise.
To decrease volume, turn the rotary knob counterclockwise.

Adjusting the Sound (Key Beeps)

Your radio emits a beep each time one of the buttons is pressed (except the PTT and button).
Press and hold the button while turning the radio ON to switch the sound ON/OFF.

Navigating through the Menu

Your radios has two Menu functions: Select Menu and Common Menu.
1. To enter the Select Menu, press the button.
2. To enter the Common Menu, press the button.
3. Additional presses of the button advance you through the Menu.
4. To exit the Select Menu, press the button.
5. To exit the Common Menu, press the button.

Note: Charge the battery pack for 14 hours.

Talking on Your Radio

1. Hold your radio 5–8 cm from your mouth.
2. Press and hold the PTT button while speaking. The icon appears on the display.
3. When you are done talking, release the PTT button. The icon appears on the display. To respond, repeat procedure from step 1.

Note: Your radio will beep when you continue to transmit for 60 seconds.

Entering a Channel and a Sub-Code

In order to speak to someone, both your radios must be set to the same channel and Sub-Code. Follow the "Entering a Channel and a Sub-Code" section.
Selecting a Channel and a Sub-Code

To select a Channel:
1. Press SEL/ button to enter Select Menu. Advance until the Channel indicator blinks.
2. or to the required channel.

To select a Sub-code:
1. Press SEL/ button to enter Select Menu. Advance until the Sub-code indicator blinks.
2. or to the required Sub-code.
3. Exit the Select Menu.

Select Menu

Your radio navigates through the Select Menu as follows:

Voice Operated Transmission (VOX)
Transmission is initiated by speaking into the microphone of your radio instead of pushing the PTT button. To select the VOX level:
1. Press MENU/GRP button to enter Common Menu. Advance and select "VOX".
2. or to select.
3. or to the desired VOX sensitivity level.
4. Exit the Select Menu.

Note: Level "N" (OFF) disables VOX. Levels 1-5 set the sensitivity of the VOX circuit. Use level 1 in quiet environments, and use level 5 in very noisy environments. You can find the appropriate sensitivity level by speaking into the microphone. If the flashes, your voice is accepted.

Transmitting a Call Tone
Your radio is equipped with 10 selectable call tones. To select a call tone:
1. Press MENU/GRP button to enter Common Menu. Advance to "TONE".
2. or to select.
3. or to the desired call tone.
4. Exit the Common Menu.

To transmit the selected call tone:
1. Press PTT to transmit the selected call tone. The selected tone will automatically be transmitted for a fixed length of time.
2. Press PTT to cancel Call Tone.

Auto Power Off
Auto Power Off feature allows you to set the time that your radio will automatically turn off. To set the Auto Power Off:
1. Press MENU/GRP button to enter Common Menu. Advance until "PWR" is the selected menu option.
2. or to select.
3. or to select the time from ON, 1H, 2H, and 3H.
4. Exit the Menu.

Normal Channel Sub-code

1 - 8
0 - 121
Common Menu
Your radio navigates through Common Menu as follows:

1. Press and hold MENU/GRP to enter GROUP MENU.
2. or to proceed to each menu (GRP/CODE/RING/ID).
3. SEL/ to select.
4. or to proceed to desired condition or number.
5. SEL/ to select.
6. MENU/GRP to exit.

Set Group Mode
1. Press and hold MENU/GRP to enter GROUP MENU.
2. SEL/ to control Group Mode.
3. or to "Y".
4. SEL/ to go to Group Menu and Group Code Setting.
5. or to "N".
6. SEL/ to exit from Group Menu.

Up Timer Mode
Select the Sensitivity (1-5):
- Normal
- SCAN
- 2CH (Dual Watch)
- VOX
- ROOM (Room Monitor)
- TONE (Call Tone)
- SLNT (Silent)
- TIME (Up Timer)
- PWR (Power)

Select the Channel and Sub-Code:
- Dual Watch Mode
- Off 1-5
- Scan Mode
- 1-10
- "N" or "Y"

Select the ON/1H/2H/3H:
- Room Monitor Mode
- Normal
- "GRP"
- CODE
- "RING"
- "ID"
- 0-121
- "N" or "Y"
- 1-10
- 1-16
- ID Number
- 1-4
- Characters
- "Y"
English

Set Group Code
1. or to choose the Group Code.
2. SEL/ to complete Group Code setting.
3. The radio enters “Ring Tone Setting Menu”.

Set Ring Tone
The user can select a Ring Tone for a Direct Call. Ring Tones are the same as Call Tones.
1. or to select a Ring Tone.
2. The selected Ring Tone sounds.

Set ID
Each radio in the group needs to be set with an ID. The user can set an ID name of up to four (4) characters.
1. or to select an ID number.
2. If the ID is already taken, USED is seen. If USED is not shown, then the ID is available.
3. SEL/ to advance to setting ID Name.

Set ID Name
The ID Name appears on the other radio’s display when you make an All Call or a Direct Call. The ID Name will also appear on the other radio’s display when they are placing a Direct Call. When no ID name is set, the unit number appears.
1. or to select a character that will blink on the display.
2. SEL/ to select and move to the next character.
3. SEL/ to register the ID number and ID Name.

Note: The radio cancels the selected ID Number and entered ID Name, then exits from Group Menu when MENU/GRP button is pressed.

Channel Setting in Group Mode
To set Auto Channel Change in Group Mode:
1. MENU/GRP to enter Group Mode.
2. SEL/ to enter Channel Setting.
3. or to “Auto Channel Change Setting”.
4. SEL/ to select.
5. or to select the channel.
6. SEL/ or to transmit Auto Channel Change command.
7. MENU/GRP to return to Channel Setting in Group Mode.

To set Manual Channel in Group Mode:
1. MENU/GRP to enter Group Mode.
2. SEL/ to enter Channel Setting.
3. or to “Manual Channel Setting”.
4. SEL/ to select.
5. or to select the channel manually.
6. SEL/ to exit from Manual Channel setting.
7. MENU/GRP to return to Channel Setting in Group Mode.

Set All Call
1. MENU/GRP to enter Group Mode.
2. to enter All/ Direct Call Setting.
3. or to select All Call Transmission. “SYNC” is seen.
4. SEL/ or to exit this setting, and transmit All Call.
5. All Call Tone sounds. and blinks while transmitting.
6. MENU/GRP to exit.
Set Direct Call

1. Press MENU/GRP to enter Group Mode.
2. Press SELECT/DIRECT to enter All/Direct Call setting.
4. Press SEL/DIRECT to transmit Direct Call Command.
   The selected Call Tone sounds.
   The display shows TX icon and CALL icon while transmitting.
5. Press MENU/GRP to go back to All/Direct Call setting.

Features on Your Radio

Channel Scan Mode

Enables your radio to scan for active channels. When activity is detected, your radio lands (stays) on that channel for 2 seconds (5 seconds for VOX ON without headset). To transmit on that channel, press the PTT button. When activity on the landed channel ends, your radio continues scanning other channels.

To turn the channel scan ON:
1. Press MENU/GRP to enter Common Menu. Advance to "SCAN".
2. Press SELECT/DIRECT to turn ON channel scan.
3. Press MENU/GRP or PTT to turn OFF Scan mode.

Dual Watch Mode

Enables your radio to scan the current channel and another channel alternately.

To set another channel and start Dual Watch:
1. Press MENU/GRP to enter Common Menu. Advance to "2CH".
   2. Press [1] or [2] to select the channel, then press SELECT/DIRECT.
   4. The radio starts to Dual Watch.
   Note: If you set the same channel and Sub-code as the current channel, Dual Watch doesn’t work.

To turn Dual Watch mode OFF:
1. Press MENU/GRP to turn the Dual Watch mode OFF.

Room Monitor

Enables your radio to detect voice/noises (according to the sensitivity level set) and transmit back to the listening radio without pushing the PTT button. The monitoring radio is not able to receive any transmissions in this mode.

To turn Room Monitor ON:
1. Press MENU/GRP to enter Common Menu. Advance to "ROOM".
2. Press SELECT/DIRECT to select.
   Note: Use level 1 in quiet environments. Use level 5 in very noisy environments.
4. Press SELECT/DIRECT to turn ON room monitor.

Silent Mode

Silent mode will mute all incoming calls. The backlight of the radio blinks when there’s an incoming call. If the call is not answered, the backlight turns off and blinks until there is no signal. The T80/T80 Extreme radio will vibrate when there is a missed call.

The silent mode will be disabled for 15 seconds when you transmit, receive or press any other buttons.

To turn silent mode ON:
1. Press MENU/GRP to enter Common Menu.
2. Select “SLNT.”
3. To turn Silent Mode ON. “Y” is displayed on the Channel Indicator, appears.
4. To turn Silent Mode OFF. “N” is displayed on the Channel Indicator, disappears.

Up Timer
Enables your radio to time up to 59 minutes 59 seconds. You can receive incoming calls in this mode.
To use up timer:
1. MENU / GRP to enter Common Menu. Advance to “TIME”.
2. SEL / to select the Up Timer.
3. SEL / to start the Timer.
4. SEL / to pause the Timer.
5. MENU / GRP or PTT to stop or reset up timer.
Note: If a call is received, the ID Name will be indicated and then the radio will return to timer mode and the Call Icon will blink.

Key Lock
Press and hold SEL / until “LOCK” appears to lock the keypad.
Press and hold SEL / until “UNLK” disappears to unlock the keypad.

Monitor Mode
Enables you to listen for weak signals on the current channel.
To turn the Monitor Mode ON:
1. Press the MON button for brief listening. The icon blinks.
2. Press and hold the MON button for 2 seconds for continuous listening. The icon continues to blink.

To turn the Monitor Mode OFF:
Press the MON, MENU/GRP or SEL / button to return to “Normal” mode. The icon stops blinking.

Roger Beep
Sounds to indicate the end of a PTT or VOX transmission. It cannot be heard through the speaker when Key Beep is turned off. 
Press and hold the SEL / button while turning the radio ON to turn Roger Beep ON. Repeat the step to turn Roger Beep OFF.

LED Torch
Your radio has a built-in LED Torch.
Press the LED Torch button and the LED Torch indicator will remain on until the button is released.

Approved Accessories
- NNTN8870_R Consumer Earbud
- NNTN8868_R Consumer Headset
- IXPN4011_ XTR Headset
- IXPN4016_ UK Adapter
- IXPN4017_ EU Adapter
- IXNN4002_ NiMH Battery
Warranty Information

The authorized Motorola Solutions dealer or retailer where you purchased your Motorola Solutions two-way radio and/or original accessories will honour a warranty claim and/or provide warranty service. You must return your radio to your dealer or retailer to claim your warranty service. Do not return your radio to Motorola Solutions.

In order to be eligible to receive warranty service, you must present your receipt of purchase or a comparable substitute proof of purchase bearing the date of purchase. The two-way radio should also clearly display the serial number. The warranty will not apply if the type or serial numbers on the product have been altered, deleted, removed, or made illegible.

What Is Not Covered By The Warranty

- Defects or damage resulting from use of the Product in other than its normal and customary manner or by not following the instructions in this user manual.
- Defects or damage from misuse, accident or neglect.
- Defects of damage from improper testing, operation, maintenance, adjustment, or any alteration or modification of the Product by any person other than a qualified service technician.
- Defects or damage from normal wear and tear.
- Defects or damage from exposure to moisture, liquid or spills.
- All plastic surfaces and all other externally exposed parts that are scratched or damaged due to normal use.
- Products rented on a temporary basis.
- Periodic maintenance and repair or replacement of parts due to normal usage, wear and tear.

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