



**MN007868A01  
Portable Two Way  
Radios**



# MOTOROLA SOLUTIONS MN007868A01 Portable Two Way Radios User Guide

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**MOTOROLA SOLUTIONS MN007868A01 Portable Two Way Radios**



## Product Information

MOTOTRBOTM R7 is an advanced cloud-ready Land Mobile Radio (LMR) device that requires a one-time activation to enable the software features and services purchased with the radio. The radio connects to the RadioCentral Server, a cloud-based application, to obtain specific software features and settings for a particular model and region (regional code plug). Additionally, the radio downloads the latest firmware (if available) to ensure that it has the latest software features and security patches. After activation, the radio can be configured using Radio Management (RM) or Customer Programming Software (CPS) 2.0.

## Product Specifications

- **Product Name:** MOTOTRBOTM R7 Portable Two-Way Radios
- **Activation Guide:** May 2024
- **Model Number:** MN007868A01-AE

## Product Usage Instructions

### Chapter 1: Activation Overview

MOTOTRBOTM R7 is designed to connect to the RadioCentral Server for activation. The activation process involves enabling software features and services purchased with the radio. Additionally, the radio downloads the latest firmware during activation.

### Chapter 2: Initial Activation Process

Follow these steps for the initial activation process:

1. Set up Wi-Fi access point for connectivity.
2. Initiate the activation process and firmware update.
  - Refer to best practices for a smooth activation process.

### Chapter 3: Troubleshooting

If you encounter any issues during activation or usage, refer to the troubleshooting section in the user manual for assistance.

## Frequently Asked Questions (FAQ)

- **Q: What should I do if my radio fails to activate?**

A: If your radio fails to activate, ensure that the Wi-Fi access point is set up correctly and try initiating the activation process again. If issues persist, refer to the troubleshooting section in the user manual or contact Motorola Solutions support for assistance.

- **Q: Can I activate and configure the radio using third-party software?**

A: After the one-time activation, you can activate and configure the radio using Radio Management (RM) or Customer Programming Software (CPS) 2.0 provided by Motorola Solutions. The use of third-party software may not be supported and could result in compatibility issues.

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Please note that certain features, facilities, and capabilities described in this document may not be applicable to or licensed for use on a specific system, or may be dependent upon the characteristics of a specific mobile subscriber unit or configuration of certain parameters. Please refer to your Motorola Solutions contact for further information.

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## Activation Overview

- MOTOTRBO™ R7 is an advanced cloud-ready Land Mobile Radio (LMR) device.
- R7 requires a one-time activation to enable the software features and services purchased with the radio. The radio connects to the RadioCentral Server which is a cloud-based application to obtain the specific software features and settings for a particular model and region (regional code plug). The radio also downloads the latest firmware (if available) to ensure that your radio has the latest software features and security patches.
- After the one-time activation, your radio can be activated and configured with Radio Management (RM) or Customer Programming Software (CPS) 2.0 software.

### Wi-Fi Access Point Setup

Your radio connects to the secure cloud application through Wi-Fi. All radios come with Wi-Fi as standard or as a software upgradable option and are capable of connecting to Wi-Fi for this initial download.

**Table 1: Requirements for Preconfigured Wi-Fi Access Point**

#### Item/Description

- SSID MOTOTRBO
- Password Radio Management
- Security type WPA2-PSK
- Frequency 2.4 GHz and 5 GHz
- Channel 1 to 11 (2.4 GHz)
- The recommended download speed per radio is 7 Mbps

### Activation and Firmware Update

The section explains the typical package size and the duration of the activation process.

**Table 2: Activation**

#### Item/Description

- Typical package size 0.5 MB
- Activation process time Two to three minutes

**Table 3: Activation and Firmware Upgrade**

**Item/Description**

- Typical package size 30 MB
- Activation process time Eight to ten minutes

**Best Practices**

- Motorola Solutions offers best practices for the security and operation of the Wi-Fi network for your radio.
- For more information, refer to the MOTOTRBO™ Best Practices for Device Activation, MN008921A01 at <https://learning.motorolasolutions.com>.



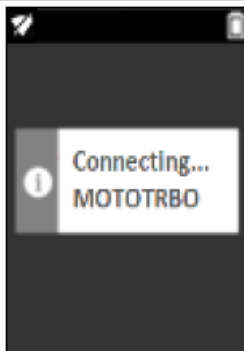






**Initial Activation Process**

The radio connects automatically to the preconfigured Wi-Fi access point and activates after the radio is turned on.






**NOTE:**

- For full keypad (FKP), you can refer to the Radio Display as well as the LED and Tone Indication column in the following tables.
- For non-keypad (NKP), you can refer to the LED and Tone Indication column in the following tables. You can also check the Wi-Fi status announcement by pressing the 3-Dot Programmable Feature button.

**Stage 1: Wi-Fi Connection**





Radio Display (FKP only)	LED and Tone Indication (FKP and NKP)	Status						
	<b>LED :</b> Solid Green  <b>Tone :</b> Power Up	Radio powers on and shows the Motorola Solutions launch screen.						
	<b>LED :</b> -  <b>Tone :</b> Continuous Unprogrammed	Radio is in the unprogrammed state.						
Radio Display (FKP only)	LED and Tone Indication (FKP and NKP)	Status						
	<b>LED :</b> Blinking Yellow  <b>Tone :</b> Momentary Valid	Radio connects to a Wi-Fi network. <table><thead><tr><th>Icon</th><th>Description</th></tr></thead><tbody><tr><td></td><td>Radio is connected to a Wi-Fi network.</td></tr><tr><td></td><td>Wi-Fi network is not available.</td></tr></tbody></table>	Icon	Description		Radio is connected to a Wi-Fi network.		Wi-Fi network is not available.
Icon	Description							
	Radio is connected to a Wi-Fi network.							
	Wi-Fi network is not available.							

## Stage 2: Radio Connects to Server for Package Download

Radio Display (FKP only)	LED and Tone Indication (FKP and NKP)	Status
	<b>LED :</b> Blinking Yellow  <b>Tone :</b> Momentary Valid	Radio connects to the server and check for radio updates.   <b>NOTE:</b> Ensure the Wi-Fi icon shows that the Wi-Fi is connected.
	<b>LED :</b> Blinking Yellow  <b>Tone :</b> Momentary Valid	Radio downloads the packages from the server if there are updates required.   <b>NOTE:</b> <ul style="list-style-type: none"> <li>• If the software in the radio has the latest version, the radio only downloads the regional information.</li> <li>• If the software in the radio is not the latest, the radio upgrades and download the regional information.</li> </ul>
Radio Display (FKP only)	LED and Tone Indication (FKP and NKP)	Status
	<b>LED :</b> Blinking Yellow  <b>Tone :</b> Momentary Valid	Radio unpacks the downloaded updates.

- **NOTE:** Your radio restarts after the server update process is complete.
- **IMPORTANT:** Ensure a stable network connection at all times.

### Stage 3: Installation

Radio Display (FKP only)	LED and Tone Indication (FKP and NKP)	Status
	<b>LED :</b> Solid Yellow  <b>Tone :</b> Momentary Valid	Radio must be on during the installation process.   <b>NOTE:</b> Turning off radio at this stage can cause update failures.
	<b>LED :</b> Solid Yellow  <b>Tone :</b> Momentary Valid	Radio is updating.
	<b>LED :</b> -  <b>Tone :</b> Momentary Update Complete	The update is complete.

## Troubleshooting










This section explains the basic troubleshooting process.

### NOTE:

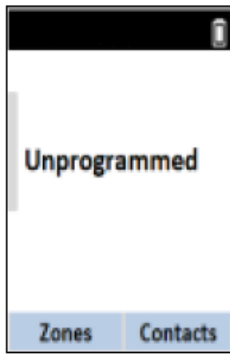
- You are recommended to start the troubleshooting steps with a full keypad radio.
- The maximum number of concurrent radios supported depends on the number of active clients that your access point supports but it is recommended to troubleshoot 20 radios at a time.
- In case of a power failure, the radio resumes at the previous stage.

**IMPORTANT:** Ensure a stable network connection at all times.



Problem	LED and Tone Indication	Solution														
<b>Radio is unable to connect to Wi-Fi</b> 	<b>LED:</b> Blinking Yellow <b>Tone:</b> -	Perform one of the following actions: <ol style="list-style-type: none"><li>Verify that the Wi-Fi feature is enabled. <div> <b>NOTE:</b> You are recommended to use a Wi-Fi modem or router.</div><table><tr><th>Icon</th><th>Description</th></tr><tr><td></td><td>Your radio is connected to a Wi-Fi network.</td></tr><tr><td></td><td>Wi-Fi network is not available.</td></tr></table></li><li>Check if the access point is configured correctly:<table><tr><th>Item</th><th>Description</th></tr><tr><td>SSID</td><td>MOTOTRBO</td></tr><tr><td>Password</td><td>Radio Management</td></tr><tr><td>Security Type</td><td>WPA2-PSK</td></tr></table></li><li>Ensure that the radio is powered on within the range of the access point. You can verify by connecting to the MOTOTRBO access point by using a smartphone.</li></ol>	Icon	Description		Your radio is connected to a Wi-Fi network.		Wi-Fi network is not available.	Item	Description	SSID	MOTOTRBO	Password	Radio Management	Security Type	WPA2-PSK
Icon	Description															
	Your radio is connected to a Wi-Fi network.															
	Wi-Fi network is not available.															
Item	Description															
SSID	MOTOTRBO															
Password	Radio Management															
Security Type	WPA2-PSK															
		<ol style="list-style-type: none"><li>Check the distance of the radio and the access point. Check the signal of the SSID by using a smartphone. <div> <b>NOTE:</b> Ensure that the sleep feature is turned off for iPhone access point. Enable maximum compatibility.</div></li></ol>														

**Radio remains in Un-programmed channel**




**LED:**

-

**Tone:**




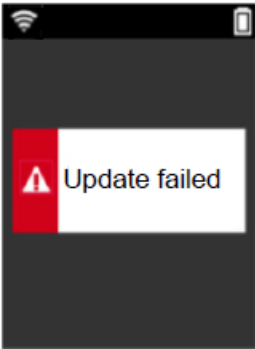

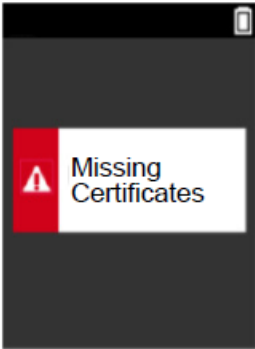

Continuous Un-programmed

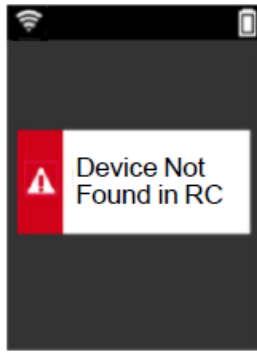
Perform one of the following actions:

1. If the Wi-Fi is connected, check if the access point has internet connection.
2. Connect to the access point by using a smartphone.
  - a. If the Wi-Fi is connected, check the Wi-Fi icon  in an unprogrammed channel. If the Wi-Fi signal has more than three bars, connect to the SSID by using a smartphone. Go to <https://www.motorolasolutions.com/>
  - b. If <https://www.motorolasolutions.com/> is not accessible through your smartphone, contact your network administrator. This process requires an internet connection.
3. If the radio shows *Connecting*, and eventually shows *Unprogrammed*, perform the following actions:
  - a. Check the access point and password.
  - b. If the Wi-Fi is unavailable, use your smartphone to connect to the SSID using the password stated.
4. If the radio shows *Checking for Updates*, and eventually shows *Unprogrammed*, perform the following actions:
  - a. If the Wi-Fi is connected, test the internet connectivity by using a smartphone.
  - b. If the internet connection is working properly, power cycle the radio to restart the provisioning process.
5. If you hear these tones:
  - Continuous unprogrammed tone
  - Momentarily valid tonewait for one to two minutes for the radio to find the Update Job and perform one of the following actions:
  - If a job is found, the radio proceeds to the provisioning process.

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<https://www.motorolasolutions.com/>

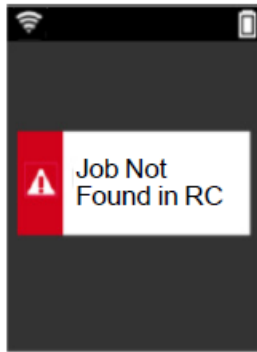
Problem	LED and Tone Indication	Solution
		<ul style="list-style-type: none"> <li>If no job is found, power cycle the radio.</li> </ul> <p> <b>NOTE:</b> If the issues persist, contact Motorola Customer Service.</p>
<b>Update Not Available</b> 	<b>LED:</b> Blinking Red <b>Tone:</b> Continuous Un-programmed	Perform the following actions: <ol style="list-style-type: none"> <li>1. Verify that the Wi-Fi is connected by pressing the 3-Dot Programmable Feature button.</li> <li>2. Check the router firewall configuration.</li> <li>3. To retry the activation process, power cycle the radio.</li> </ol> <p> <b>NOTE:</b> If the Wi-Fi is connected, contact Motorola Customer Service.</p>
<b>Update Failed</b> 	<b>LED:</b> Blinking Red <b>Tone:</b> Continuous Un-programmed	Perform the following actions: <ol style="list-style-type: none"> <li>1. Verify that the Wi-Fi is connected by pressing the 3-Dot Programmable Feature button.</li> <li>2. If there is a low battery alert tone, charge the radio and continue until the tone stops.</li> <li>3. Power cycle the radio and redo the whole process.</li> </ol> <p> <b>NOTE:</b> If the issues persist, contact Motorola Customer Service.</p>
<b>Missing Certificates</b> 	<b>LED:</b> Solid Red <b>Tone:</b> Continuous Un-programmed	Contact Motorola Customer Service. <p> <b>NOTE:</b> If the radio connects to the Wi-Fi before receiving the error message, the radio shows the Wi-Fi icon.</p> <p>If you receive the error message before connecting to the Wi-Fi, the radio does not show the Wi-Fi icon.</p>
<b>Device Not Found in RC</b>	<b>LED:</b> Solid Red <b>Tone:</b>	Contact Motorola Customer Service.



Continuous Un-programmed

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**Job Not Found in RC**



**LED:**

Contact Motorola Customer Service.

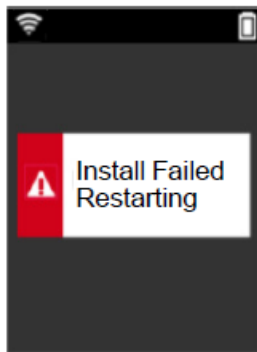
Solid Red

**Tone:**

Continuous Un-programmed

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**Install Failed Restarting**



**LED:**

Wait for the radio to power cycle.

Flashing Red

**Tone:**

Momentary Invalid

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**Staging Error**

**LED:**

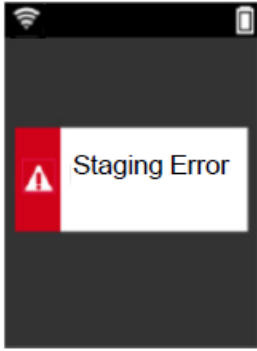
Contact Motorola Customer Service.

Solid Red

**Tone:**

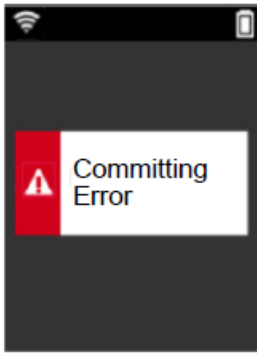
Continuous Un-programmed

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#### Committing Error



#### LED:

Solid Red

#### Tone:

Continuous Un-programmed

Contact Motorola Customer Service.

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## Documents / Resources

	<a href="#">MOTOROLA SOLUTIONS MN007868A01 Portable Two Way Radios</a> [pdf] User Guide MN007868A01 Portable Two Way Radios, MN007868A01, Portable Two Way Radios, Two Way Radios, Way Radios
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## References

- [User Manual](#)

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