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MN007868A01-AE Portable Two-Way Radios

MOTOROLA SOLUTIONS MN007868A01-AE Portable Two Way Radios User Guide

Contents

MOTOROLA SOLUTIONS MN007868A01-AE Portable Two-Way Radios

Product Information

Specifications

- **Product Name:** MOTOTRBOTM R7 Portable Two-Way Radios
- **Device Type:** Land Mobile Radio (LMR)
- **Activation Requirement:** One-time activation for software features and services
- **Connectivity:** Wi-Fi for access point setup
- **Software Tools:** RadioCentral Server, Radio Management (RM), Customer Programming Software (CPS) 2.0

Product Usage Instructions

Activation Overview

MOTOTRBOTM R7 is an advanced cloud-ready Land Mobile Radio (LMR) device. It requires a one-time activation to enable the software features and services purchased with the radio.

Initial Activation Process

1. Set up Wi-Fi Access Point: Follow the instructions provided to connect the radio to a Wi-Fi network for initial setup.
2. Activation and Firmware Update: Activate the device to obtain specific software features and settings from the RadioCentral Server. Ensure that the radio downloads the latest firmware for updated software features and security patches.
    - Best Practices: Refer to the user manual for best practices during the activation and firmware update process.

Troubleshooting

If you encounter any issues during the activation process or while using the device, refer to the troubleshooting section in the user manual for guidance on resolving common problems.

Frequently Asked Questions

Q: What should I do if my device fails to activate?

A: If your device fails to activate, ensure that you have a stable internet connection and follow the activation steps carefully. If issues persist, contact Motorola Solutions support for assistance.

Q: Can I use the radio without activating it?

A: The radio needs to be activated to access software features and services. Failure to activate may limit the functionality of the device.

Q: How can I update the firmware of MOTOTRBOTM R7?

A: The firmware updates are automatically downloaded during the activation process. Ensure your device is connected to a reliable Wi-Fi network to receive the latest firmware updates.

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Disclaimer

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

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 RadioCentral Server which is a cloud-based application to obtain the specific software features and settings for a particular model and region (regional codeplug). 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 software upgradable options 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)
Recommended download speed per radio	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 columns 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
(Motorola Solutions launch screen)	LED: Solid Green Tone: Power Up	Radio powers on and shows the Motorola Solutions launch screen.
Unprogrammed Zones Contacts	LED: - Tone: Continuous Unprogrammed	Radio is in the unprogrammed state.

Radio Display (FKP only)	LED and Tone Indication (FKP and NKP)	Status
Connecting... MOTOTRBO	LED: Blinking Yellow Tone: Momentary Valid	Radio connects to a Wi-Fi network. **Icon** / **Description** (Wi-Fi connected icon) Radio is connected to a Wi-Fi network. (Wi-Fi unavailable icon) 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
Checking for Updates...	LED: Blinking Yellow Tone: Momentary Valid	Radio connects to the server and check for radio updates. 📝 NOTE: Ensure the Wi-Fi icon shows that the Wi-Fi is connected.
Downloading Updates...	LED: Blinking Yellow Tone: Momentary Valid	Radio downloads the packages from the server if there are updates required. 📝 NOTE: • If the software in the radio has the latest version, the radio only downloads the regional information. • If the software in the radio is not the latest, the radio upgrades and download the regional information.

Radio Display (FKP only)	LED and Tone Indication (FKP and NKP)	Status
Unpacking Updates...	LED: Blinking Yellow Tone: 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
Do Not Power Off	**LED :** Solid Yellow **Tone :** Momentary Valid	Radio must be on during the installation process. **NOTE:** Turning off radio at this stage can cause update failures.
Update In Progress	**LED :** Solid Yellow **Tone :** Momentary Valid	Radio is updating.

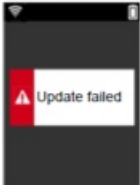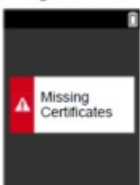| Radio Display (FKP only)	LED and Tone Indication (FKP and NKP)	Status
Update Completed	**LED :** - **Tone :** Momentary Update Complete	The update is complete.

Troubleshooting

This section explains the basic troubleshooting process.

NOTE:

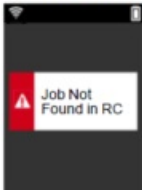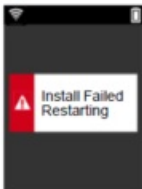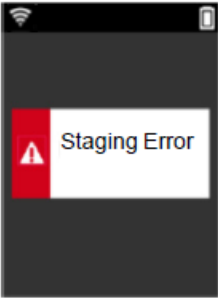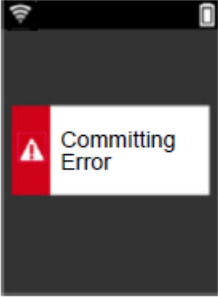- You are recommended to start the troubleshooting steps with a full keypad radio.
- The maximum number of concurrent radios supported depends on the number of active clients that your access point supports but it is recommended to troubleshoot 20 radios at a time.
- In case of a power failure, the radio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

Problem	LED and Tone Indication	Solution
Radio is unable to connect to Wi-Fi 	**LED:** Blinking Yellow **Tone:** -	Perform one of the following actions: 1. Verify that the Wi-Fi feature is enabled. 📝 NOTE: You are recommended to use a Wi-Fi modem or router.

Icon	Description
📶	Your radio is connected to a Wi-Fi network.
📵	Wi-Fi network is not available.

2. Check if the access point is configured correctly:

Item	Description
SSID	MOTOTRBO
Password	Radio Management
Security Type	WPA2-PSK

3. 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.

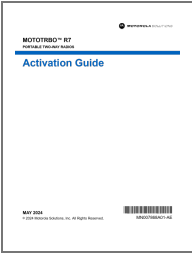| Problem	LED and Tone Indication	Solution
		4. Check the distance of the radio and the access point. Check the signal of the SSID by using a smartphone. 📝 NOTE: Ensure that the sleep feature is turned off for iPhone access point. Enable maximum compatibility.

Radio remains in Unprogrammed channel
 	
	LED:
	-
	Tone:
	Continuous Unprogrammed
		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 tone
		  wait 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.

Problem	LED and Tone Indication	Solution
		• If no job is found, power cycle the radio.
		NOTE: If the issues persist, contact Motorola Customer Service.
Update Not Available 	LED: Blinking Red Tone: Continuous Unprogrammed	Perform the following actions: 1. Verify that the Wi-Fi is connected by pressing the 3-Dot Programmable Feature button. 2. Check the router firewall configuration. 3. To retry the activation process, power cycle the radio. NOTE: If the Wi-Fi is connected, contact Motorola Customer Service.
Update Failed 	LED: Blinking Red Tone: Continuous Unprogrammed	Perform the following actions: 1. Verify that the Wi-Fi is connected by pressing the 3-Dot Programmable Feature button. 2. If there is a low battery alert tone, charge the radio and continue until the tone stops. 3. Power cycle the radio and redo the whole process. NOTE: If the issues persist, contact Motorola Customer Service.
Missing Certificates 	LED: Solid Red Tone: Continuous Unprogrammed	Contact Motorola Customer Service. NOTE: If the radio connects to the Wi-Fi before receiving the error message, the radio shows the Wi-Fi icon. If you receive the error message before connecting to the Wi-Fi, the radio does not show the Wi-Fi icon.
Device Not Found in RC	LED: Solid Red Tone:	Contact Motorola Customer Service.

Problem	LED and Tone Indication	Solution
	Continuous Unprogrammed	
Job Not Found in RC 	LED: Solid Red Tone: Continuous Unprogrammed	Contact Motorola Customer Service.
Install Failed Restarting 	LED: Flashing Red Tone: Momentary Invalid	Wait for the radio to power cycle.
Staging Error	LED: Solid Red Tone: Continuous Unprogrammed	Contact Motorola Customer Service.

Problem	LED and Tone Indication	Solution
Staging Error		
Committing Error	LED: Solid Red Tone: Continuous Un-programmed	Contact Motorola Customer Service.

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Documents / Resources

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References

- **User Manual**