

SkyCell MR Logger Manual

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v1.0



Safe. Secure. Sustainable.

Bahnhofplatz, 6300 Zug

Switzerland

www.skycell.ch

1. INTRODUCTION

This manual provides detailed installation, activation, and troubleshooting instructions for the SkyCell MR Logger models MR 810, MR 812, MR 813, MR 814, MR 815, and MR 816. These loggers are designed for seamless tracking and monitoring in logistics applications, ensuring accurate and reliable data collection. Additionally, this manual includes compliance details necessary for airline approval.

This document does not supersede any SOPs that govern the installation and usage of SkyCell MR loggers in specific use cases.

2. PACKAGE CONTENTS

Each package includes:

- SkyCell MR Logger
- Installation Guide
- Mounting Brackets or Holders (for certain models)

3. HARDWARE OVERVIEW

Each MR Logger is fully pre-configured for plug-and-play functionality. They include an LED indicator, activation button, designated installation capabilities, and wireless communication capabilities.

3.1 LED FEEDBACK GUIDE

-  Green: Logger is activated and transmitting data
-  Purple: Logger is in shelf mode (inactive)
-  Blue: Ongoing transmission in progress
-  Red: Low battery or error state

3.2 WIRELESS COMMUNICATION

- Wireless Connection: LoRa, BLE, 2.4 GHz
- Max TX Power: 12.5 dBm/ 17.8 mW
- Low-powered emissions (EIRP < 100 mW, does not interfere with aircraft systems)

3.3 ACTIVATING THE LOGGERS

- Press and hold the button for a minimum of 5 sec. but a maximum of 15 sec. (please note that the logger will not activate if the duration falls outside this range)
- Release the button and check the LED feedback:
 1. ● Green: Successfully activated
 2. ● Purple: Logger remains in shelf mode; repeat activation if necessary

3.4 INSTALLING THE LOGGERS

Please make sure that the SkyCell MR Loggers are intact and correctly activated before proceeding with installation. Please install the SkyCell MR Loggers as per the customer-specific and/or use-case-specific SOP.

MR 810, MR 812, MR 813

- Install the logger in the designated slot of the SkyCell container in accordance with the respective SOP
- Only applicable to SkyCell containers and solely executed by SkyCell-trained personnel in SkyCell Service Stations

MR 814

- Install the Logger on the asset as per the customer-specific SOP
- Only applicable to ULD pallets and installation solely executed by trained personnel according to customer-specific SOP

MR 815

- Install the Logger on the asset as per the customer-specific SOP
- If applicable, install the logger holder first in the designated area on the asset as per the customer-specific SOP and push until you hear a "click" indicating it is secured

MR 816

- Install the Logger on the pharmaceutical payload as per the customer-specific SOP

4. PAIRING THE LOGGER

Please pair the logger as per the customer-specific SOP with the asset and/or payload to monitor. There are multiple possibilities and solutions to establish this pairing.

- SkyCell applications (SkyMind, SkyTrack, etc.)
- Customer-specific applications

Generally, it is recommended to establish the pairing through scanning the QR code on the SkyCell Loggers:

- Scan the Logger QR code or enter the Logger ID manually
- Enter or scan the corresponding pallet/container/asset number
- Confirm the pairing in the app or via checklist

5. TROUBLESHOOTING

Issue	Possible Cause	Solution
Logger blinks purple	Logger is still in shelf mode	Wait 10 seconds and retry activation.
Logger blinks red	Battery low or error state	Contact support@skymind.com .
Logger does not blink at all	Empty battery or physical damage	Do not install. Use a replacement Logger.
Logger is damaged	Physical damage	Do not install. Use a replacement Logger.
Other problem	Other cause	Contact support@skymind.com .

6. REMOVING THE LOGGER

6.1 UNPAIRING FROM PALLET/ASSET/CONTAINER

Please unpair the logger as per the customer-specific SOP with the asset and/or payload after monitoring has been completed. As with the pairing, there are multiple possibilities and solutions available.

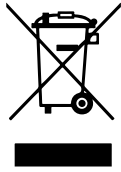
6.2 REMOVAL

Please carefully remove the logger as per the customer-specific SOP to guarantee that the monitored goods are not damaged.

- MR 810, MR 812, MR 813, MR 815, MR 816: No tools required for removal
- MR 814: Tools required for removal from ULD tracks (solely executed by trained personnel)

6.3 DISPOSAL

Please return the device to the next SkyCell representative for refurbishing or recycling.



Dispose of the product at the end of its service life cycle must occur in accordance with applicable laws. Batteries shall be removed prior to disposal and discarded according to local laws and procedures.

Correct disposal of this product will help save valuable resources and prevent any potential negative effects to human health or the environment, which could arise from inappropriate waste handling.

7. BATTERY

- Battery Type: Lithium Coin Cell (UL 1642 Certified)
- Model-Specific Power Supply:
 1. MR 810, 812, 813, 815: CR2477N (3V, 950 mAh)
 2. MR 814: 4x CR1632 (3V, 548 mAh)
 3. MR 816: CR2430 (3V, 285 mAh)
- Maximum Lithium Content:
 1. MR 810, 812, 813, 815: 270 mg
 2. MR 814: 156 mg
 3. MR 816: 80 mg

8. APPROVALS

- Approved by major airlines as cargo tracking device, complies with
 - EASA, AMC1 CAT.GEN.MPA.140, 2019
 - FAA, AC 91.21 - 1D, 2017, p. 91
- Conformity: CE, FCC
- Standards
 - EN 301 489-1 V2.2.3 (EMC)
 - EN 301 489-17 V3.2.4 (EMC)
 - EN 300 328 V2.2.2 (Radio)
 - EN 62368-1:2014+A11:2017 (Electrical Safety)
 - EN 50663:2017 (RF Exposure)
 - EN 63000:2018 (RoHS)
 - FCC Part 15 C : 15.203 (Radio)
 - FCC Part 15 C : 15.205 (Radio)

- FCC Part 15 C : 15.207 (EMC)
- FCC Part 15 C : 15.209 (EMC)
- FCC Part 15 C : 15.247 (Radio)
- 47 CFR Part 2.1091 (RF Exposure)
- RTCA DO-160, Section 21, Category H (RF radiated emissions)
- UN38.3 (Battery)
- UL 1642 (Battery)

9. FCC COMPLIANCE STATEMENT

FCC ID: 2A2SN-SKYCELL810, 2A2SN-SKYCELL814

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

CAUTION: The grantee is not responsible for any changes or modifications not expressly approved by the party responsible for compliance. Such modifications could void the user's authority to operate the equipment.

NOTE: 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 instructions, 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.

9.1 FCC RF EXPOSURE STATEMENT

This equipment complies with the FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20cm between the radiator and any part of your body.

10.SUPPORT

For additional assistance, contact support@skymind.com or visit skycell.ch.

This manual ensures a seamless installation and operation experience for your SkyCell MR Logger. Follow these guidelines to maintain accurate tracking and data integrity.