



RA-7120

RFID Scanner

User Guide



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Revision History

Changes to the user manual are listed below:

Version	Date (Y/M/D)	Description	Page #
Draft	2020/4/17		

About this Manual

This manual explains how to install, operate and maintain the RA-7120 UHF RFID scanner.

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Argox global website address: www.argo.com

Regulatory Compliance Statements

FCC Warning Statement

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.

CAUTION:

Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment.

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.

RF exposure warning

The product complies with the FCC portable RF exposure limit set forth for an uncontrolled environment and are safe for intended operation as described in this manual. The further RF exposure reduction can be achieved if the product can be kept as far as possible from the user body or set the device to lower output power if such function is available.

These requirements set a SAR limit of 1.6 W/kg averaged over one gram of tissue. The highest SAR value reported under this standard during product certification for use when properly worn on the body is 0.632 W/kg.

Information for the OEMs and Integrators

The following statement must be included with all versions of this document supplied to an OEM or integrator, but should not be distributed to the end user.

- 1) This device is intended for OEM integrators only.
- 2) Please see the full Grant of Equipment document for other restrictions.

Canadian Compliance Statement

This Class B Digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe B respecte les exigences du Règlement sur le matériel brouilleur du Canada.

European Conformity Statement

Declaration of Conformity with Regard to the R&TTE 1999/5/EC and EMC 89/336/ EEC directives.

RoHS Statement

This device conforms to RoHS (Reduction Of Hazardous Substances) European Union regulations that set maximum concentration limits on hazardous materials used in electrical and electronic equipment.

TaiwanNCC Warning Statement

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Laser Information

The Argox RA-7120 is certified in the U.S. to conform to the requirements of DHHS/CDRH 21CFR Subchapter J and to the requirements of IEC 825-1. Class II and Class 2 products are not considered to be hazardous. The device contains internally a Visible Laser Diode (VLD) whose emissions do not exceed the maximum limits as set forth in the above regulations. Its scanner is designed so that there is no human access to harmful laser light during normal operation, user maintenance or during prescribed service operations.

CAUTION!

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous laser light. Use of optical instruments with the scanner will increase eye hazard. Optical instruments include binoculars, microscopes, and magnifying glasses. This does not include eyeglasses worn by the user.

IMPORTANT NOTE

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 1.5cm between the radiator and the user's body.

Battery Notices

The Argox RA-7120 is equipped with a Lithium-Ion Battery Pack. However, because the RA-7120 may not start without an external power source due to battery discharge after extended storage periods to charge the battery to full capacity, connect the RA-7120 to an external power source with a USB charging cable. Initially charge the RA-7120 for at least 12 hours.

NOTE: For the first time use, determine that the main battery pack is loaded into the new RA-7120, and then connect the unit to the external power source.

The length of time that a battery power lasts depends on the battery type and how the device is used. Conserve the battery life through the following:

- ✓ Avoid frequent full discharges because this places additional strain on the battery. Several partial discharges with frequent recharges are better than a deep one. Recharging a partially charged lithium-Ion battery does not cause harm because there is no memory.
- ✓ Keep the lithium-Ion battery cool. Avoid a hot car. For prolonged storage, keep the battery at a 40% charge level.
- ✓ Do not leave the lithium-Ion battery discharged and unused for an extended period because the battery will wear out and the longevity of the battery will be at least shorter than half of the one with frequent recharges.

Battery Charge Notice

It is important to consider the environment temperature when charging the Lithium-Ion Battery Pack. Charging is most efficient at room temperature or in a slightly cooler environment. It is essential that batteries are charged within the temperature ranges of 32° F - 104°F (0°C - 40°C). Charging batteries outside of the specified temperature range could damage the batteries and shorten their charging life cycle.

CAUTION!

Do not charge batteries at a temperature lower than 0°C, which will increase the internal resistance to cause heat and make the batteries unstable and unsafe. Please use a battery temperature detecting device for a charger to ensure a safe charging temperature range.

Battery Storage and Safety Notice

Although charged Lithium-Ion batteries may be left unused for several months, their capacity may deplete due to buildup of internal resistance. But the batteries may deplete more rapidly at the warmer end of this range. It is recommended to store batteries at room temperature.

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Introduction

The RA-7120 provides Radio Frequency Identification (UHF RFID), with optional bar code scanning functionality. The unit can be used stand alone or paired with a BT wireless technology enabled host device (such as Android devices).

NOTES: Some screens or windows shown in this guide may differ from the actual screens shown on the device. This guide refers to screens and features from the Argox UHF RFID mobile unit and Argox scanner control applications.

Unpacking

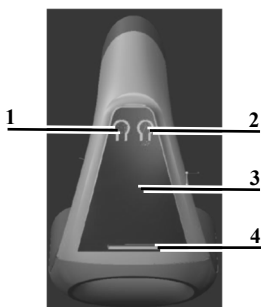
Carefully take all the items out of the packing box and save the shipping box for later storage and shipping. Verify the following items are in the box:

- ✓ RA-7120 reader
- ✓ 2600 mAh Lithium-ion battery (loaded into the terminal before shipped)
- ✓ USB cable
- ✓ Quick start guide

- ※ Inspect the items for damage. If any item is missing or damaged, contact the Argox Support Center immediately.

RA-7120 Features

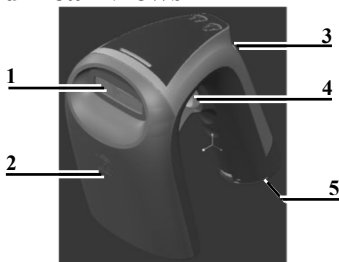
Top View



No.	Component	Description
1	Power Button / Power Indicator / RFID Power Switch	<ul style="list-style-type: none"> ➤ Power Button: Hold and press this button for at least 2 seconds to power on or off the reader. ➤ Power Indicator: The indicator stays solid green when the reader is powered ON, while the indicator stays solid orange when the reader is in the charging mode. ➤ RFID Power Switch: In the RFID mode, after the reader is powered ON, press this button to change a first user-defined RF power to a second user-defined RF power of the reader and vice versa.
2	Mode Switch / Mode Indicator	<ul style="list-style-type: none"> ➤ Mode Switch: <ul style="list-style-type: none"> ● Press to toggle between UHF RFID and barcode modes. The default mode is UHF RFID. This switch controls whether pressing the scan trigger button enables UHF RFID or barcode function. ● Press at least 2 seconds to turn on or off the BT discover function. ➤ BT Indicator: When the function is turned on, the LED lights up; when the function's off, the LED, off.

3	Barcode Scan Indicator	When the reader has a good read, its LED indicator blinks in green along with an optional vibration signal.
4	UHF RFID Indicator	UHF RFID reader emission power high (Green) / low (Red) LED indication

Front and Rear Views



No.	Component	Description
1	Imager Window	Scan/read window
2	UHF RFID Antenna	Houses UHF RFID antenna
3	USB Port	USB type-C port, designed for power charging and doing settings
4	Scan Trigger	Press to scan barcodes or read tags.
5	Battery Compartment	Houses a rechargeable Lithium-Ion battery pack

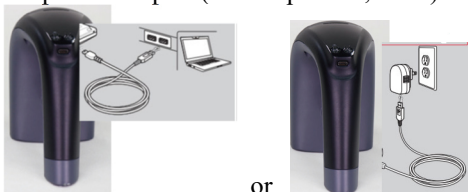
Setting up the RA-7120

To start using the RA-7120 for the first time, you need to implement the following steps:

1. Charging the RA-7120,
2. Powering on the RA-7120,
3. Installing the appropriate applications: Falcon Utility (for Microsoft Windows 8 or above), RFID Explorer (Android), Scanner Control (Android), ScanWrite Tool (Android), and Argox RFInventory (Android), and
4. Pairing the RA-7120 over Bluetooth with a mobile device.

Charging the Battery in the Reader

Before charging, ensure that you follow the guidelines for battery safety. Before using the RA-7120 for the first time, charge the battery until the LED indicator of the power button turns solid green. To charge the reader, connect the reader to a desktop PC or laptop PC with a USB cable or with an optional power adapter (DC output: 5V, 1.5A).



Charge the RA-7120 for at least 12 hours before initial use.