



KONICA MINOLTA

DIRECT DIGITIZER

AeroDR SYSTEM 2

AeroDR Battery Charging Unit

Operation Manual



CE 0197



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EN 04

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Introduction

Introduction

This operation manual provides instructions on the basic functions for operation of the AeroDR Battery Charging Unit. Those operating the AeroDR Battery Charging Unit for the first time should read this manual beforehand. Also, store this manual close to the AeroDR Battery Charging Unit after reading it through, so it can be used as a guide to allow optimum operating conditions.

* If the pages of the operation manual are smudged and illegible, replace it with a new one. (There is a fee for this service.)



- The AeroDR Battery Charging Unit can be used in both AeroDR SYSTEM and AeroDR SYSTEM 2.
- This operation manual describes only the operation methods of the AeroDR Battery Charging Unit.
Read the operation manual of AeroDR SYSTEM/AeroDR SYSTEM 2 and image processing controller before performing the operation, and understand the basic functions as well as cautions for handling the AeroDR SYSTEM/AeroDR SYSTEM 2 and image processing controller.

Term description

The meanings of terms used in this operation manual are as follows:

Terms	Explanation
AeroDR Detector	Collective term indicating AeroDR 1417HQ, AeroDR 1417S, AeroDR 1717HQ, AeroDR 1012HQ, AeroDR 2 1417HQ, and AeroDR 2 1417S.
Image processing controller	The image processing workstation (CS-7 or ImagePilot) is referred to as the image processing controller.

Chapter 1

Safety Precautions & Warnings

This chapter describes precautions and warnings to ensure safe use of the AeroDR Battery Charging Unit.

1.1 • Symbols relating to safety

1.1.1 Safety Alert Symbol



This is a "safety alert symbol". This symbol alerts you to matters and/or operation potentially hazardous to yourself and other people. Read these messages and follow the instructions carefully.

1.1.2 Warning Notice (signal words)

Signal words indicate the degree of potential hazards in the use of the product.

Signal words include the following three types, which are used according to risk of damage caused by danger and the severity of damage.

DANGER

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury. It may also be used to indicate hazardous situation where only physical damage is likely to occur.

1.1.3 Description of graphic symbols



Shows the position when the main power supply to the device is off.



Shows the position when the main power supply to the device is on.

This CE mark on this product indicates that this product is in conformity with the applicable requirements set out in the Directive 93/42/EEC (Medical Device Directive) and in Directive 2011/65/EU (RoHS Directive).

CE 0197 0197 indicates the identification number of the notified body responsible only for implementation of the Directive 93/42/EEC (Medical Device Directive).

EC Directive 93/42/EEC does not cover animal use. So, the notified body whose identification number is 0197 is not responsible for animal use.

1.2 • Safety precautions

Read all safety precautions thoroughly before using the AeroDR Battery Charging Unit.

Be sure to observe the safety precautions described in this section.



CAUTION

Before using the AeroDR Battery Charging Unit, read the "Safety Precautions and Warnings" section of the AeroDR SYSTEM/AeroDR SYSTEM 2 Operation Manual carefully and be well-informed about the precautions to be taken while using the AeroDR Battery Charging Unit.

1.2.1 Precautions before usage



CAUTION

- The operators (hospitals and clinics) hold responsibility for the usage and maintenance of the AeroDR Battery Charging Unit. Do not use this device unless you are a physician or certified person under law.
- The AeroDR Battery Charging Unit is suitable for use outside the patient environment.
- Confirm that the AeroDR Battery Charging Unit is operating normally before using.
- When a problem occurs with the AeroDR Battery Charging Unit, turn the power off, attach an appropriate sign, such as "malfunction", on this device, and contact Konica Minolta technical representatives.
- The AeroDR Battery Charging Unit is not explosion-proof, so do not use any flammable or explosive gas near this device.
- If you dispose the AeroDR Battery Charging unit, its accessories, options, consumables, storage media and their packing materials, follow the applicable Waste Management Law (the Waste Disposal and Public Cleaning Law) and ask an authorized industrial waste disposal contractor for their disposal. For the disposal method, follow the applicable regulations and rules of local government.



This symbol means: Do not dispose of this product together with your household waste!

Please refer to the information of your local community or contact our dealers regarding the proper handling of end-of-life electric and electronic equipments.

Recycling of this product will help to conserve natural resources and prevent potential negative consequences for the environment and human health caused by inappropriate waste handling.

1.2.2 Precautions for usage



WARNING

- Take note of the following when using the AeroDR Battery Charging Unit:
 - Do not subject it to strong shocks or excessive loads by dropping it, etc.
 - Do not disassemble or modify this device.
 - Do not connect any devices that were not purchased from Konica Minolta.
 - Do not turn the power switch off or pull out the power cable while the system is operating.
 - Be careful not to drop AeroDR Detector on any part of a person's body due to tripping over AeroDR I/F Cable2.
 - Do not use AeroDR Detector for filming while its charging.
 - Do not connect the power cable with moisture on it to the wall outlet.
- AeroDR I/F Cable2 is connected to AeroDR Detector by using the magnetic power. Always move the AeroDR Detector by through its operation, and not through the cable. Do not pull the AeroDR Detector with force.
- If there is any smoke, odor, or abnormal sound, it may cause a fire if use is continued, so immediately turn the power switch off, unplug the power plug from the wall outlet, and contact Konica Minolta technical representatives.
- Take note of the following to reduce the risk of fire, electric shock, or electrical leakage:
 - Use specified cables for the power cable, etc.
 - Use a wall outlet with the correct rating as a power source.
 - Confirm that the power plug is connected to the wall outlet properly without any slack.
 - If you do not plan to use this device for an extended period of time, unplug the power plug.
 - The supplied power cable and AC adapter are dedicated for the AeroDR Battery Charging Unit, so do not use it elsewhere.
 - Avoid exposure to liquids such as water.
 - Make sure that foreign material, such as pieces of metal or wire, does not get inside.
 - Do not handle the power plug with wet hands.
 - Do not let soil or dust accumulate on the power plug and AeroDR I/F Cable2.
 - Do not use extension cords.
 - Do not connect many plugs to a single electrical outlet.
 - Do not damage the power cable. Also, do not use damaged cables.



WARNING

- If there is any abnormality in appearance such as deformation of the housing or a crack, stop using the device immediately and contact Konica Minolta technical representatives.
- Register the AeroDR Detector with the AeroDR Battery Charging Unit corresponding to the image processing controller used. Or, register it using the AeroDR Interface Unit, AeroDR Interface Unit2, AeroDR Battery Charger and AeroDR Battery Charger2 connected to image processing controller used. If the wrong device is registered, the AeroDR Detector may be selected from a different CS-7.
- Do not leave the device in places where the temperature is high, such as in a car parked in scorching sunlight.



CAUTION

- Take note of the following when using the AeroDR Battery Charging Unit:
 - Do not use devices that emit electromagnetic waves such as high-frequency therapy equipment, mobile phones, or pocket pagers, close to this device.
 - Take note of the reception status for radios and TVs near this device, since interference may occur in them when this device is in use.
 - Use under the specified environmental conditions. Failure to do so may result in degradation of performance or malfunction.
- Take note of the following when installing AeroDR I/F Cable2:
 - Remove it by using connector housing.
 - Do not wedge it between doors or put heavy objects on it.
 - Ensure that there is no extreme bending or pulling.
 - Confirm that it is connected to the AeroDR Detector without any slack.
 - Do not connect the connector housing in a reverse way.

1.2.3 Precautions regarding electromagnetic waves

● EMC Statement

The AeroDR Battery Charging Unit (called This Device) has been tested and found to comply with the IEC 60601-1-2: 2007 Standard.

These limits are designed to provide reasonable protection against harmful interference in a typical medical installation. The device generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to other devices in its vicinity. However, there is no guarantee that interference will not occur in a particular installation.

Whether this device does cause harmful interference to other devices can be determined by turning this device off and on. If it causes harmful interference, the user is encouraged to try to correct the interference by 1 or more of the following measures:

- Reorient or relocate the receiving device.
- Increase the separation between the devices.
- Connect this device into a wall outlet on a circuit different from that to which the other devices are connected.
- Contact Konica Minolta technical representatives.

● Supplementary information regarding IEC 60601-1-2: 2007

- (1) Take precautions against this device especially regarding EMC. Install and put into service according to the electromagnetic compatibility (EMC) information provided in the manual (Table 1 - Table 4).
- (2) Do not use mobile phones or pocket pagers in the vicinity of this device. Use of mobile phones or pocket pagers near this device can cause errors in operation due to electromagnetic wave interference, so such devices should be turned off in the vicinity of this device.
- (3) Cable list
 - Power cable (3 m/2-Wire/Without shield)
 - Ethernet cable (max 5 m/With shield)
 - AeroDR I/F Cable2
- (4) The use of accessories, transducers and cables other than those sold by Konica Minolta, Inc. as internal components, may result in increased emissions or decreased electromagnetic immunity of this device.
- (5) Do not use this device adjacent to or stacked with other devices. If adjacent or stacked use is necessary, confirm normal operation in the configuration in which this device will be used.

Table 1

Guidelines and manufacture's declaration - electromagnetic emissions		
This device is intended for use in the electromagnetic environment specified below. The customer or the user of this device should assure that it is used in such an environment.		
Emissions test	Compliance	Electromagnetic environment - guidelines
RF emissions CISPR 11	Group 1	The device uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR 11	Class B	This device is suitable for use in all establishments including the following: Domestic establishments and those directly connected to the public lowvoltage power supply network that supplies buildings for domestic purposes.
Harmonic emissions IEC 61000-3-2	Class A	
Voltage fluctuations/ flicker emissions IEC 61000-3-3	Complies	

Table 2

Guidelines and manufacturer's declaration - electromagnetic immunity			
This device is intended for use in the electromagnetic environment specified below. The customer or the user of this device should assure that it is used in such an environment.			
Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment - guidelines
Electrostatic discharge (ESD) IEC 61000-4-2	± 6 kV contact	± 6 kV contact	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%. Mains power quality should be that of a typical commercial or hospital environment.
	± 8 kV air	± 8 kV air	
Electrical fast transient/ burst IEC 61000-4-4	± 2 kV for power supply lines	± 2 kV for power supply lines	Mains power quality should be that of a typical commercial or hospital environment.
	± 1 kV for input/output lines	± 1 kV for input/output lines	
Surge IEC 61000-4-5	± 1 kV differential mode	± 1 kV differential mode	Mains power quality should be that of a typical commercial or hospital environment.
	± 2 kV common mode	± 2 kV common mode	
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	<5% U_T (>95% dip in U_T) for 0.5 cycle	<5% U_T (>95% dip in U_T) for 0.5 cycle	Mains power quality should be that of a typical commercial or hospital environment. If the user of the device requires continued operation during power mains interruptions, it is recommended that the device be powered from an uninterrupted power supply or a battery.
	40% U_T (60% dip in U_T) for 5 cycles	40% U_T (60% dip in U_T) for 5 cycles	
	70% U_T (30% dip in U_T) for 25 cycles	70% U_T (30% dip in U_T) for 25 cycles	
	<5% U_T (<95% dip in U_T) for 5 sec	<5% U_T (<95% dip in U_T) for 5 sec	
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	3 A/m	3 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.
[NOTE] U_T is the AC mains voltage prior to application of the test level.			

1.2 Safety precautions

Table 3


Guidelines and manufacturer's declaration - electromagnetic immunity			
This device is intended for use in the electromagnetic environment specified below. The customer or the user of this device should assure that it is used in such an environment.			
Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment - guidelines
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	[3] V	<p>Portable and mobile RF communications equipment should be used no closer to any part of this device, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.</p> <p>Recommended separation distance $d = [1.2] \sqrt{P}$ $d = [1.2] \sqrt{P}$ 80 MHz to 800 MHz $d = [2.3] \sqrt{P}$ 800 MHz to 2.5 GHz</p> <p>where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in meters (m).</p> <p>Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey^a, should be less than the compliance level in each frequency range^b.</p> <p>Interference may occur in the vicinity of equipment marked with the following symbol:</p> 
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2.5 GHz	[3] V/m	
<p>[NOTE] At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.</p> <p>[NOTE] These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.</p>			
<p>a Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which this device is used exceeds the applicable RF compliance level above, this device should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating this device.</p> <p>b Over the frequency range 150 kHz to 80 MHz, field strength should be less than [3] V/m.</p>			

Table 4

Recommended separation distance between portable and mobile RF communications equipment and the device			
This device is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of this device can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and this device as recommended below, according to the maximum output power of the communications equipment.			
Rated maximum output power of the transmitter W	Separation distance according to frequency of transmitter m		
	150 kHz to 80 MHz $d=[1.2] \sqrt{P}$	80 MHz to 800 MHz $d=[1.2] \sqrt{P}$	800 MHz to 2.5 GHz $d=[2.3] \sqrt{P}$
0.01	0.12	0.12	0.23
0.1	0.38	0.38	0.73
1	1.2	1.2	2.3
10	3.8	3.8	8
100	12	12	23
For transmitters rated at a maximum output power not listed above, the recommended separation distance d in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.			
[NOTE] At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.			
[NOTE] These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.			

1.2.4 Precautions for installing, moving, and storing

 **CAUTION**

- Contact Konica Minolta or dealers specified by Konica Minolta to install or move the AeroDR Battery Charging Unit.
- Take note of the following when installing or storing the AeroDR Battery Charging Unit:
 - Install and maintain the device within the scope of maintenance and usage environment conditions.
 - Do not install or store in a location where it may be adversely affected by atmospheric pressure, temperature, humidity, ventilation, sunlight, dust, salt-air, or air containing sulfur.
 - Do not install or store in a location where it is not stable, ventilation is insufficient, the difference in light-dark is great, electromagnetic waves are generated, or where subject to vibration or shock.
 - Do not install or store in a location where chemical agents are used or stored.
 - Do not install it face up or upside down.
- Take note of the following when using the AeroDR Battery Charging Unit or when storing and transporting it in the carrying case:
 - Treat it as a precision instrument during transport even while it is stored in the carrying case.
 - Transport or use within storage and usage environment conditions.
 - Do not leave in vehicles or outdoors during midsummer or midwinter.
 - Do not use outdoors during midsummer or midwinter.
 - When moving it from outdoors to indoors during midsummer or midwinter, make sure condensation does not occur when opening the carrying case.

1.2.5 Precautions regarding maintenance

 **WARNING**

- Perform the maintenance and inspection periodically. In addition to the user periodical maintenance that needs to be performed, periodical maintenance by a service engineer is also required.
- If there are stains such as body fluids, clean and disinfect.

 **CAUTION**

- Based on the warranty, parts that are no longer under warranty (1 year) can be replaced for a fee.
- Turn off the power and disconnect the power plug from the wall outlet before cleaning or maintaining the AeroDR Battery Charging Unit.
- Securely connect the power cable and AC adapter, after cleaning and inspection.
- Take care regarding the following when disinfecting the AeroDR Battery Charging Unit:
 - Use ethanol for disinfection, isopropanol for disinfection, or commercial chlorine bleach, or 0.5% hypochlorite (10-fold dilution of household bleach) when disinfecting. However, bleach and hypochlorite are corrosive, so wash the bleach off well to avoid corrosion.
 - Dampen a lint-free, soft cloth with disinfecting solution, and use after wringing it thoroughly. Do not apply disinfecting solution onto the wired connection connector and LED when cleaning.
 - Disinfecting solution is a chemical agent, so follow the precautions of the manufacturer.

1.2.6 Precautions on service life



CAUTION

Service Life

Name	Service Life
AeroDR Battery Charging Unit	6 years

- The above service life is valid only if the product has been properly operated while following the precautions for use and performing the specified maintenance. (By self certification <our data>)
- The service life may differ depending on usage conditions and environment.
- Some component parts of this device are commercially available parts that have a short cycle of model changes, therefore, it might not be possible to supply service parts even within the service life. In addition, related component parts may need to be replaced to maintain compatibility at the time of model change.

Chapter 2

Product Overview

This section gives an overview of the AeroDR Battery Charging Unit.

2.1 • Overview of AeroDR Battery Charging Unit

This section describes the functions of AeroDR Battery Charging Unit as well as a system configuration.

2.1.1 Functions

The AeroDR Battery Charging Unit charges the AeroDR Detector, and registers the AeroDR Detector to be used for exposure.

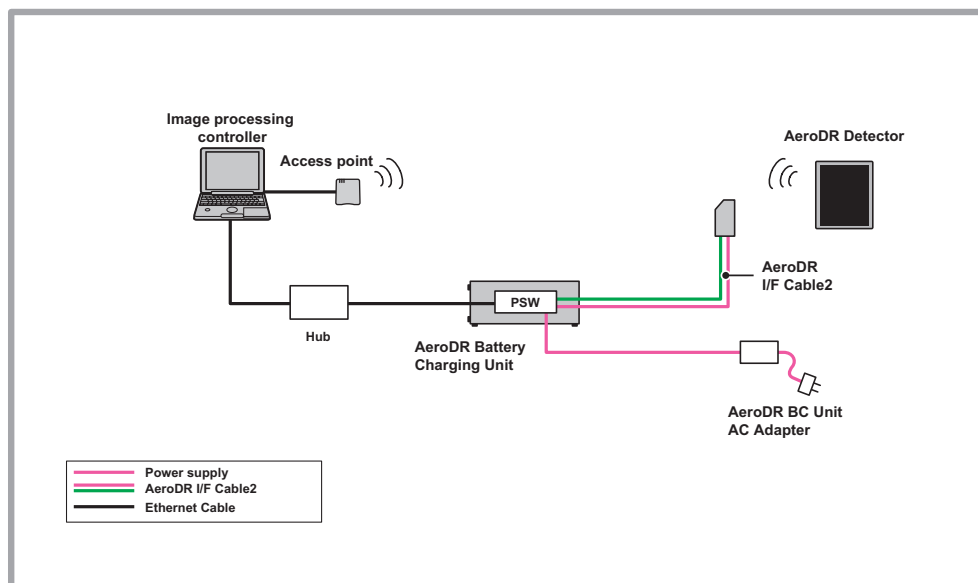
2.1.2 System configuration

The system configuration and connection examples are as follows.

• Basic configuration examples

Number	Name	Functions
(1)	AeroDR Battery Charging Unit	Charges the AeroDR Detector. It also has the registration function for the AeroDR Detector.
(2)	AeroDR I/F Cable2	Used to charge and register the AeroDR Detector.
(3)	AeroDR BC Unit AC Adapter	Used to supply power to the AeroDR Battery Charging Unit.

• Connection example



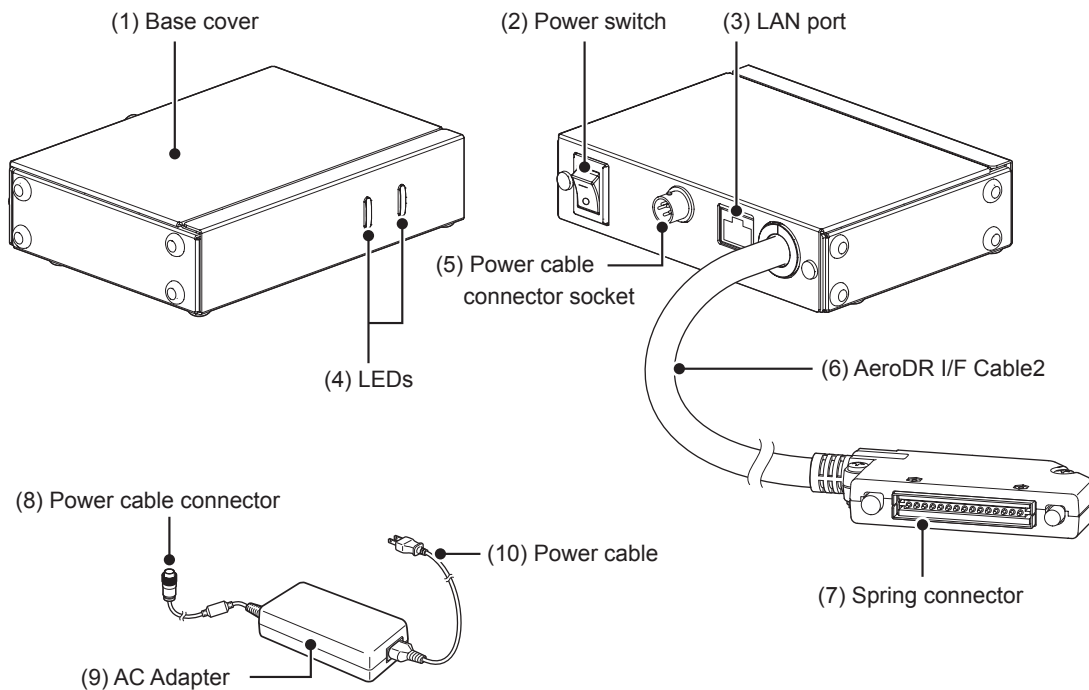
HINT

- When performing only charging, connection to the image processing controller is not required.

2.2 • Component names and functions

2.2.1 AeroDR Battery Charging Unit

The names and functions of the components of AeroDR Battery Charging Unit are as follows.



Number	Name	Functions
(1)	Base cover	Protects the internal parts.
(2)	Power switch	Turns the AeroDR Battery Charging Unit on/off.
(3)	LAN port	Connects to the Ethernet cable.
(4)	LEDs	Displays the status of the AeroDR Battery Charging Unit. <div style="border: 1px solid black; padding: 2px; display: inline-block;"> Reference </div> <ul style="list-style-type: none"> For the display patterns and status of the LEDs, refer to "Chapter 4 Status (LED) Display".
(5)	Power cable connector socket	Connects to the power cable connector.
(6)	AeroDR I/F Cable2	Used to charge and register the AeroDR Detector.
(7)	Spring connector	Connects to the wired connection connector of the AeroDR Detector.
(8)	Power cable connector	Connects to the power cable socket of the AeroDR Battery Charging Unit.
(9)	AC Adapter	Used to supply power to the AeroDR Battery Charging Unit.
(10)	Power cable	

Chapter 3

General Operations

This chapter describes general operation methods
of AeroDR Battery Charging Unit.

3.1 • Startup and shutdown

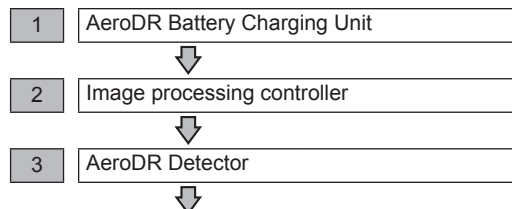
Operate the startup/shutdown as follows.

Reference

- Refer to the "AeroDR SYSTEM/AeroDR SYSTEM 2 Operation Manual" regarding on/off for the AeroDR Detector.
- Refer to the "Operation Manual" of the image processing controller regarding on/off for the image processing controller.

3.1.1 Startup sequence of respective devices

The startup sequence of respective devices is as follows.

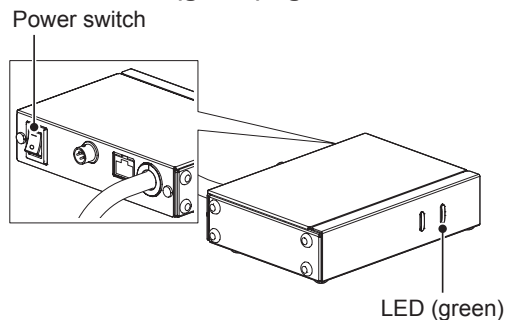


Confirm that the AeroDR Detector is ready for use on the image processing controller.

3.1.2 Startup

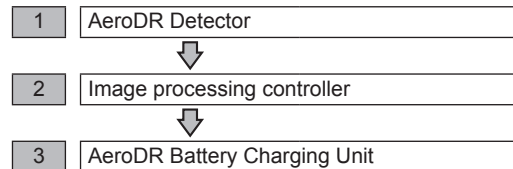
The startup methods of the AeroDR Battery Charging Unit are as follows.

- 1 **Connect the power cable of AeroDR Battery Charging Unit to the wall outlet.**
- 2 **Turn the power switch of the AeroDR Battery Charging Unit on, and confirm that the LED (green) lights.**



3.1.3 Shutdown sequence of respective devices

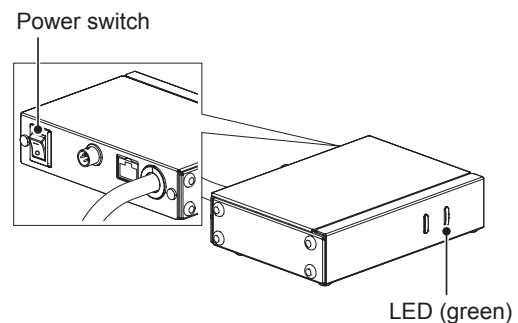
The shutdown sequence of respective devices is as follows.



3.1.4 Shutdown

The shutdown methods of the AeroDR Battery Charging Unit are as follows.

- 1 **Turn the power switch of the AeroDR Battery Charging Unit off, and confirm that the LED (green) is turned off.**

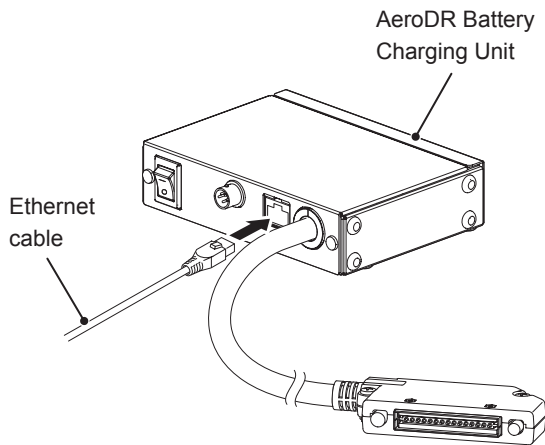


- 2 **Remove the power cable of AeroDR Battery Charging Unit from the wall outlet.**

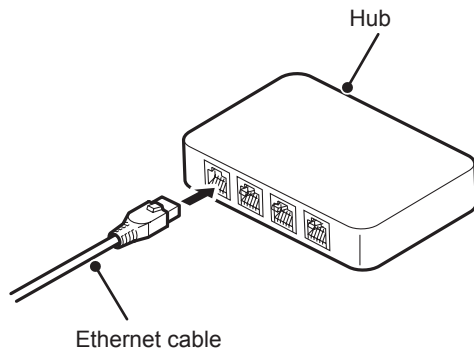
3.2 • Connection with the image processing controller

To connect the AeroDR Battery Charging Unit to the image processing controller, follow the procedure below.

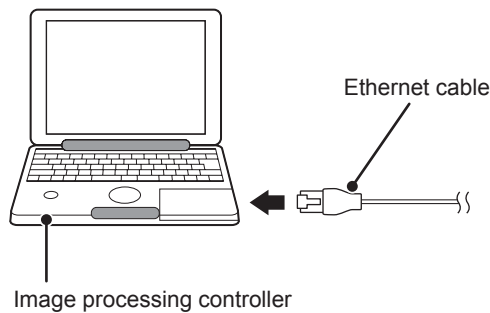
- 1 **Connect the Ethernet cable to AeroDR Battery Charging Unit.**



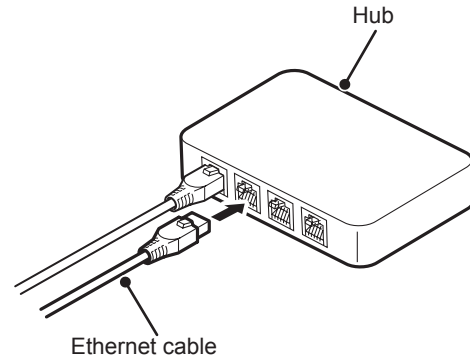
- 2 **Connect the Ethernet cable connected to AeroDR Battery Charging Unit to the Hub.**



- 3 **Connect the Ethernet cable to the image processing controller.**



- 4 **Connect the Ethernet cable connected to image processing controller to the Hub.**



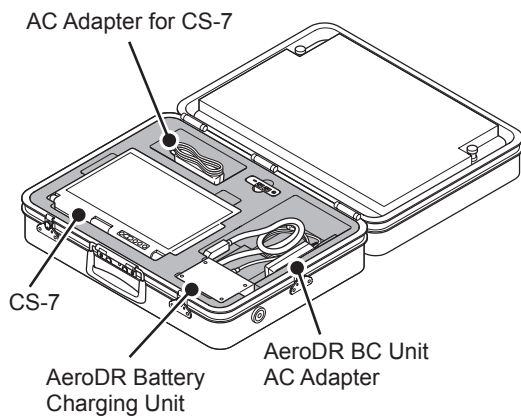
3.3 • Example of insertion in carrying case

The shape or insertion method of carrying case is one example.

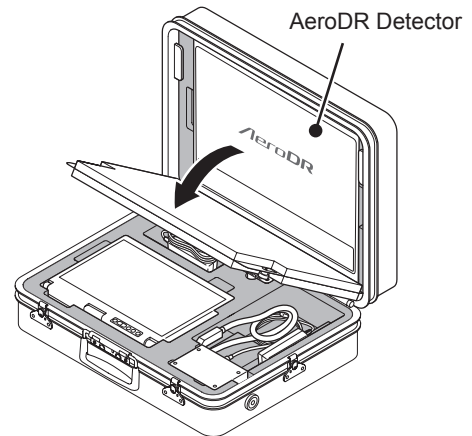
IMPORTANT

- Take note of the following when using the AeroDR Battery Charging Unit or when storing and transporting it in the carrying case:
 - Treat it as a precision instrument during transport even while it is stored in the carrying case.
 - Transport or use within storage and usage environment conditions.
 - Do not leave in vehicles or outdoors during midsummer or midwinter.
 - Do not use outdoors during midsummer or midwinter.
 - When moving it from outdoors to indoors during midsummer or midwinter, make sure condensation does not occur when opening the carrying case.
 - Make sure that the carrying case is not placed upside down before opening the lid.

3.3.1 Main body side



3.3.2 Back of the lid



3.4 • Charging and registration of AeroDR Detector

To charge/register the AeroDR Detector with AeroDR I/F Cable2, follow the procedure below.

IMPORTANT

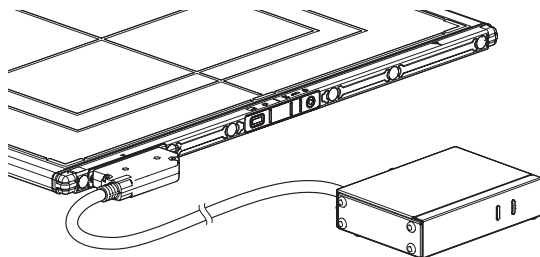
- Never perform exposure during charging/registration of the AeroDR Detector.
- During charging, if the AeroDR Detector should become hot, stop charging immediately.
- If charging errors occur repeatedly, contact Konica Minolta technical representatives.

HINT

- The AeroDR Detector can be charged when the power is either on or off.
- The AeroDR Detector can be used while stopping charging in progress.

3.4.1 Charging of AeroDR Detector

- 1 Confirm that the LED (green) of the AeroDR Battery Charging Unit lights.
- 2 Securely connect the AeroDR I/F Cable2 to the wired connection connector on the AeroDR Detector. Once it is connected, the AeroDR Detector will start charging.



- 3 Once the AeroDR Detector is inserted correctly and charging starts, the LED (blue) on the AeroDR Battery Charging Unit will light.
- 4 Once the charging of the AeroDR Detector is higher than 10%, the LED (blue) on the AeroDR Detector will go out.

HINT

- Confirm completion of full charge and the level of battery power with the image processing controller.
- If there is any problem during charging, the LED (orange) on the AeroDR Detector will light. Also, charging will stop when an error occurs.

3.4.2 Charging time guide

To fully charge the AeroDR Detector requires the following charging time.

• AeroDR 1417HQ/AeroDR 1417S/ AeroDR 1717HQ

Charging status	Charging time of the AeroDR Detector when the power is off
Via wired cable	60 minutes or less

• AeroDR 1012HQ

Charging status	Charging time of the AeroDR Detector when the power is off
Via wired cable	30 minutes or less

• AeroDR 2 1417HQ

Charging status	Charging time of the AeroDR Detector when the power is off
Via wired cable	30 minutes or less

• AeroDR 2 1417S

Charging status	Charging time of the AeroDR Detector when the power is off
Via wired cable	17 minutes or less

IMPORTANT

- When the AeroDR Detector is on, the charging time will be slightly longer as it depends on the operation status.

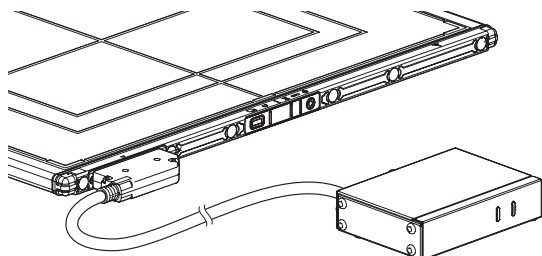
3.4.3 Registration of AeroDR Detector

IMPORTANT

- When registering the AeroDR Detector with AeroDR I/F Cable2, there must be a wired connection between AeroDR Battery Charging Unit and image processing controller.
-

1 Securely connect the AeroDR I/F Cable2 to the wired connection connector on the AeroDR Detector.

- Registration process will start.



2 Confirm that the AeroDR Detector icon is displayed on the image processing controller.

Chapter 4



Status (LED) Display

This chapter describes the LED display patterns and the status of the AeroDR Battery Charging Unit.

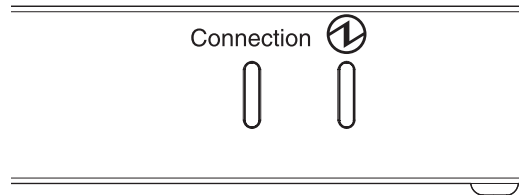
4.1 • LED display

Status of the AeroDR Battery Charging Unit can be confirmed with LEDs.
Check the status of the AeroDR Battery Charging Unit, referring to the "LED display pattern".



LED display pattern

Notation	Display pattern
	Off
	On



4.1.1 AeroDR Battery Charging Unit



①: Power LED (green)

Display pattern	Status
	Shutdown condition
	Operating

Connection: Connect LED (blue)

Display pattern	Status
	Shutdown condition or not connected to the AeroDR Detector
	Connected to the AeroDR Detector

Chapter 5

Troubleshooting

This chapter describes problems that may occur and error codes that may be displayed, and how to resolve each of them.

5.1 • Various problems and countermeasures

If the following problems occur with AeroDR Battery Charging Unit, consult the respective references for countermeasures.

IMPORTANT

- After performing countermeasures, if the problem does not go away, contact Konica Minolta technical representatives.

HINT

- When an error message has been displayed in the image processing controller, check the error description and countermeasures listed in the "Operation Manual" of the image processing controller.

5.1.1 AeroDR Battery Charging Unit

Status	Error description	Corrective actions
Power LED (green) does not light.	The AC adapter is disconnected.	Make sure that the AC adapter is connected correctly.
Connect LED (blue) does not light.	The AeroDR Detector and AeroDR I/F Cable2 are not properly connected.	Make sure that the AeroDR I/F Cable2 and AeroDR Detector are properly connected.
No communication between AeroDR Detector and image processing controller.	The image processing controller and AeroDR Battery Charging Unit are not connected by using the Ethernet cable.	Make sure that the Ethernet cable is connected correctly.
	The wired/wireless selector switch of the image processing controller is not on.	Turn on the wired/wireless selector switch of the image processing controller.
	The power to AeroDR Battery Charging Unit is not turned on.	Make sure that the AC adapter is connected correctly to the AeroDR Battery Charging Unit.
	Error is occurring in the AeroDR Detector.	Refer to the "AeroDR SYSTEM/AeroDR SYSTEM 2 Operation Manual", and restart the AeroDR Detector.
	AeroDR Detector battery level is low.	Refer to the "AeroDR SYSTEM/AeroDR SYSTEM 2 Operation Manual", and restart the AeroDR Detector.

Chapter 6

Maintenance

This chapter describes the items that require periodic maintenance.

6.1 • Maintenance and inspection items

This chapter describes the inspections and cleaning required in order to maintain the use of AeroDR Battery Charging Unit in an optimum condition.

6.1.1 Maintenance schedule

The maintenance and inspection items that the user should perform are as follows.

Maintenance task	Maintenance interval
Checking and cleaning the surface of the AeroDR Battery Charging Unit	Weekly
Checking for external damage to the AeroDR Battery Charging Unit	Weekly
Cleaning the spring connectors of the AeroDR I/F Cable2	Weekly

IMPORTANT

- To ensure optimum use of AeroDR Battery Charging Unit, be sure to perform periodic maintenance.
- The above task intervals are estimates and vary according to usage.

6.1.2 Cleaning

The cleaning methods of the respective devices are as follows.

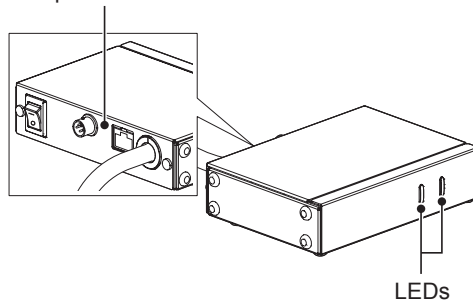
IMPORTANT

- Be careful not to apply any cleaning chemical or liquid onto the LEDs, respective cable connections, and spring connectors.
- Do not clean with sharp or hard metal objects. If you cannot remove stains, contact Konica Minolta technical representatives.

● AeroDR Battery Charging Unit

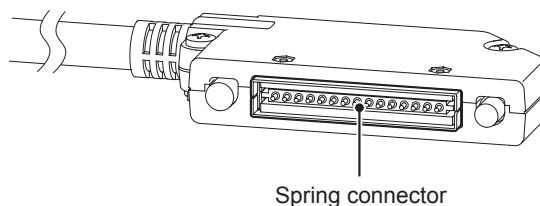
- Clean the dust on the AeroDR Battery Charging Unit with a soft cloth dampened with dehydrated alcohol or water.

Respective cable connections



● Spring connector

- If foreign material has adhered to the spring connectors of the AeroDR I/F Cable2, remove it with a commercial plastic brush.



6.1.3 Consumables

IMPORTANT

- Refer to each device's manual for information about periodic replacement parts and consumables for the image processing controller, etc.
- In particular, continued use of the battery may result in degradation and wear, and it may no longer exhibit proper functioning capabilities. For extended, safe use, it is necessary to replace parts which have become worn or degraded.

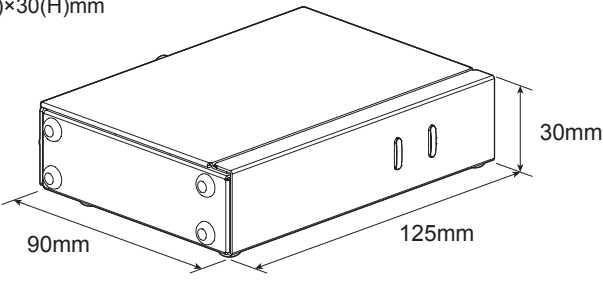
Chapter 7

Specifications

This chapter describes the specifications of respective devices.

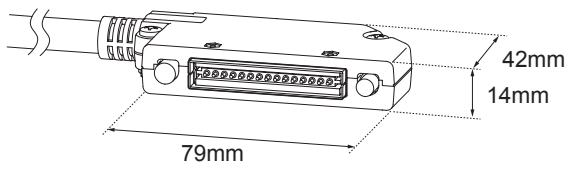
7.1 • Specifications

7.1.1 AeroDR Battery Charging Unit










Item	Description
Product name	AeroDR Battery Charging Unit
Power requirements	AC 100/110/115/120/200/220/230/240V ± 10%, single phase 50/60Hz
Power consumption	Approx. 168VA (100 to 240V)
External dimensions	90(W)×125(D)×30(H)mm 
Weight	0.38kg
AeroDR BC Unit AC Adapter Specifications	Product Name: AC Adapter (Model Number. Cincon Electronics Co.,Ltd. TR60M48) Dimensions: 132.0x58.0x30.5 mm (excluding cables) Weight: 345g INPUT: AC100-240V 1.5-0.7A 47-63Hz OUTPUT: DC48V 1.25A

- The above performance may vary depending on the usage environment and frequency of use.
(These are not to provide any guarantees.)

7.1.2 AeroDR I/F Cable2

Item	Description
Product name	AeroDR I/F Cable2
Cable length	1m
External dimensions	

7.1.3 General AeroDR Battery Charging Unit

Item	Description			
Recommended storage and usage environment conditions	When operating	Temperature 10 to 30°C 	Humidity 35 to 80% RH (ensure no water condensation) 	Atmospheric pressure 700 to 1060hPa 
	When not operating	Temperature -10 to 40°C 	Humidity 20 to 90% RH (ensure no water condensation) 	Atmospheric pressure 700 to 1060hPa 
	In storage/transport	Temperature -20 to 60°C*1 	Humidity 20 to 90% RH (ensure no water condensation) 	Atmospheric pressure 700 to 1060hPa 
*1 However, performance warranty period when storing at 60°C is 6 months after packing.				
Classification	Safety IEC60601-1 internally-powered equipment			

7.1.4 Product configuration

This device must be configured as shown below.

- **EU and EFTA countries and Turkey**

Product Name	Component name in this manual	Component name in Label
AeroDR SYSTEM 2	AeroDR Battery Charging Unit	AeroDR Battery Charging Unit
		AeroDR BC Unit AC Adapter
		AeroDR Battery Charging kit



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