MIKO Drip IV Monitoring System User Manual

MIKO Drip IV Monitoring System User Manual

Contents

Specifications

- **Company Name:** Mikotek Information Inc.
- **Company Address:** 3F., No.20, Aly. 18, Ln. 478, Ruiguang Rd., Neihu Dist., Taipei City 114, **Taiwan(ROC)**
- **Product Name:** Miko Drip
- **Trade Name:** MIKO
- **Model Number:** MK-D1010
- **Serial Models:** MK-D1000
- **Power Supply:** 3V 4pics/ AA
- **Protocol:** Bluetooth
- **Modulation GFSK**
- **RF bandwidth 220** kHz (-3 db), 1 MHz (-20 db)
- **RF band 2.4** GHz ISM band (2.4 GHz ~ 2.4835 GHz)
- **Range:** 0 2500g

Product Description / Specifications

Miko Drip is an intravenous drip monitoring system, which has been developed for hospital and facility use. The system monitors real-time weight of IV drips, and enables the ability of remote visibility. Different from legacy walk around checks, caregivers now can receive abnormal events and IV status notifications with mobile app in the distance

Expected usage:

Miko Drip monitors intravenous drip status, and transports alert message and information instantly to medical staff when IV drip will be empty or abnormal.

Environment:

- **Temperature:** 5℃~40℃
- **Humidity:** less than 80%RH
- **Atmospheric pressure:** 86kPa~106kPa

Storage Conditions:

- **Transport temperature:** -20℃~+55℃

- **Humidity:** less than 93%RH
- **Manufacturer:** Mikotek Information Inc.
- **Manufacturer:** 3F., No.22, Aly. 18, Ln. 478, Ruiguang Rd., Neihu Dist., Taipei City 114, Taiwan(ROC)

Before Use

Precautions:

- In order to ensure the security of the operating system and data, before installing this system software please make sure that you have installed the appropriate anti-virus software and firewall.
- Before use the Miko Drip Management system, please confirm the capacity of device licenses and due date.
- You should read the instructions before using the equipment.
- When the equipment shows abnormal warnings or behaviors, please reboot the default settings. If reboot the default settings cannot make the equipment work, please stop use equipment and contact the original manufacturer or distributor to repair or update. Please do not disassemble or replace parts by yourself; otherwise, it may cause electric shock or accidental injury.
- Before using the equipment, please confirm whether the batteries are placed correctly.
- Do not dismantle or modify any electronic parts or wires. If the device is in need for repair or maintenance, contact the original manufacturer or distributor.
- Depending on the frequency of use, the operator should regularly contact the original manufacturer or distributor for machine calibration to ensure the accuracy of the weight measured.
- Please do weight calibration regularly.
- When the drip monitoring management system is crashed, the alarm mechanism only shows by the light and sound the equipment.
- Be sure the pairing of equipment and bed number is correct.
- Set the correct weight of infusion set to avoid false alarms.
- Please remind patients don’t adjust the equipment settings to avoid false alarms.
- Please use the correct software version when using the equipment.
- Do not uninstall the software arbitrarily to avoid failure of monitoring.
- In order to ensure the accuracy of the weight monitoring, please hang the IV drip on the equipment. Be sure that the hanging method is correct.
- Do not hang other heavy objects with IV Drip on the equipment at the same time.
- Use the equipment in the acceptable environment temperature.
- Do not hang heavy objects exceeding 2500g, because it may cause the weight sensing mechanism fail.
- When you see battery warning on the system, please replace the batteries immediately.
- The operator should not touch the patient and the equipment at the same time, especially when changing batteries.
- Dropping or improperly usage may cause damage of equipment. Please do not take a hammer or other items to hammer blow, or throw device and trampling, falls, and fall causing a strong impact, heavy blow, etc.
- Notice : The changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment.
- **IMPORTANT NOTE:** To comply with the FCC RF exposure compliance requirements, no change to the antenna or the device is permitted. Any change to the antenna or the device could result in the device exceeding the RF exposure requirements and void user’s authority to operate the device.

FCC INFORMATION

The Federal Communication Commission Radio
Frequency Interference. Statement includes the following paragraph:
The 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 instruction, may cause harmful interference to radio communication. However, there is no grantee that interference will not occur in a particular installation. If this equipment dose 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.

Concept of operations

Miko Drip IV Monitoring System is used in monitoring the weight of intravenous drip. Miko Drip system calculates the remanding time and flow rate by measuring the weight.

Hanging correctly

- Please hang the equipment on the IV drip stand (as left picture), and hang the IV drip bag on the equipment's hook correctly.
- Be sure not handing other object on the equipment and IV drip at the same time.

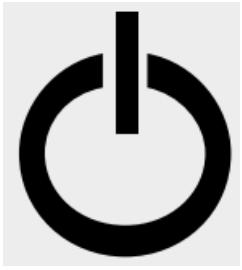
About Equipment

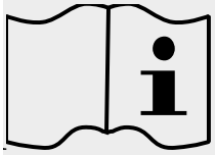
Components

Category	Material	Number	Function Description
Cases	Abs	1	Protect inside
Button	Abs	1	Provide
Circuit board	PCB	1	Processor
Indicator Light	PCB	1	Show alert message
Switch	Abs	1	Power on the device
V Type Hanger	Stainless steel	1	Hanging to the IV drip stand
Drip Hook	Stainless steel	2	Holding the load cell
Load cell	Metal	1	Weight sensor
Battery connector	Stainless steel	6	Connect betteries
Battery	Battery	4	Provide power
Battery cover	Abs	1	Protect battery
Screws	Stainless steel	5	Screw all parts M2 * 6mm x1 M2 * 8mm x2 M2 * 12mm x2

Marking label

No.	Mark	Description

1		Power on / Power off
2	Start / End ▷	Long press To start monitoring
3	Mod.1 / Type	Long press Switch mode 1 / Short click Hear the sound “Bee”, ”Bee Bee”, or ”Bee Bee Bee” to recognize mode1, mode2, or mode3.
4	Mod.2 / Vol. △	Long press Switch mode 2/ Short click Turn up the volume
5	Mod.3 / Vol. ▽	Long press Switch mode 3 / Short click Turn down the volume
6	+ AA −	Direction of charging battery

7	Precautions 	• It is recommended to use a manufacturer approved battery. • Make sure put the(+)(-) terminals in the correct direction. • When a device is not in use, remove batteries Store batteries in a low humidity, low temperature environment. • Do not place the battery near a fire source, or high temperature enviro nments greater than 80 ℃ . • When using the device, please be sure that the hanging method is corr ectly vertical to the ground. Otherwise, put the device horizontal to the ground may cause the incorrect weight and false alarms.
	Method of cleaning	• Please wipe the product with water or 75% alcohol. • Do not place the product in water for washing.
8	Waste disposal 	When the equipment and batteries need to be discarded, you should follo w the recycling policy in local countries.
9	Storage and transport C onditions:	• It is recommended to use the ambient temperature at indoor temperat ure between 15°C and 40°C • Do not drop or shake heavily, and handle the equipment with care. • Do not store this product in the following environment • High temperature, high humidity, dusty, humid, and direct sunlight. an environment with chemicals or corrosive gases.
10	Instruction 	Before use, please read user manual.

11	FCC	2A24Q-MKD1010

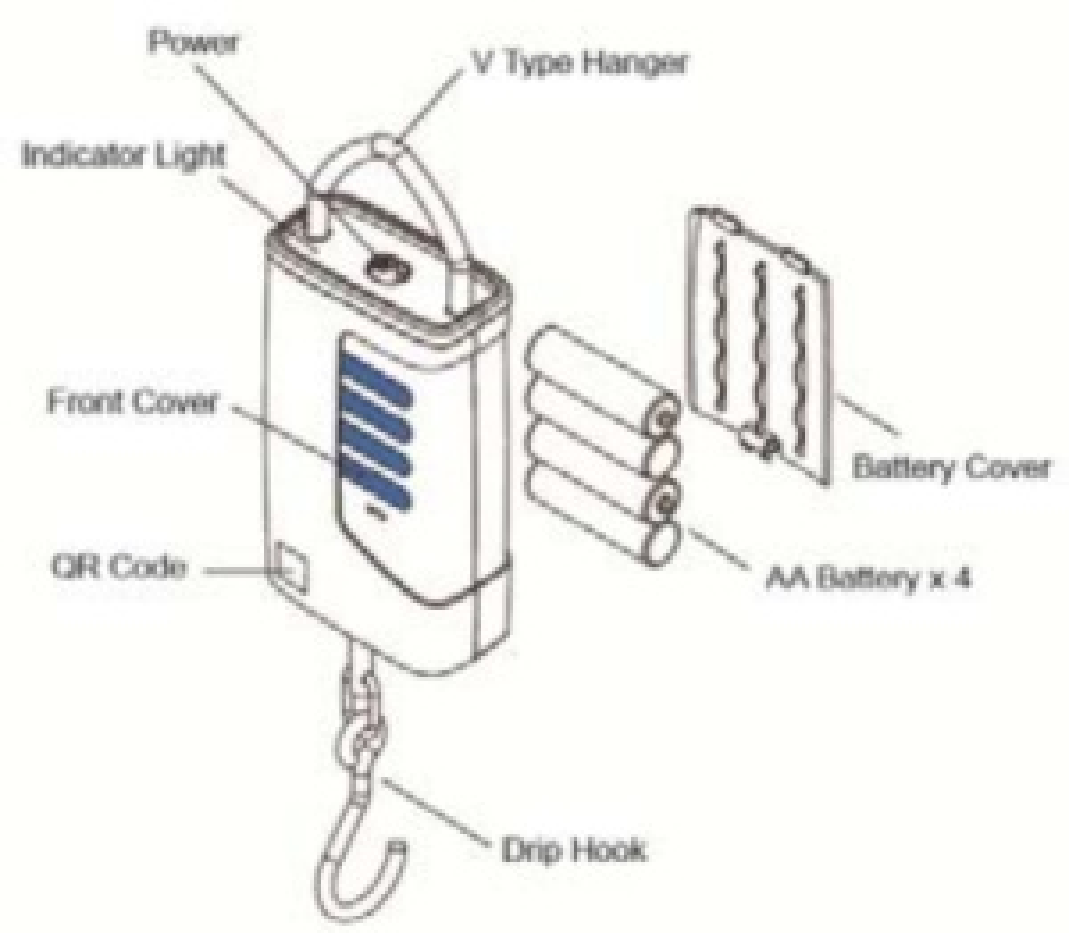
Specifications

No.	Category	Description
1	Model	MK-D1010
2	Connectivity	Bluetooth Low Energy (Bluetooth 4.0)
3	Battery	4x battery AA(LR6) 1.5V
4	Load capacity	0g to 2500g
5	Notification	Tri-color LED and speaker
6	Sound intensity	82~0 dB(decibel)
7	Function key	3x Configurable monitoring mode button 1x Start/End button 2x Volume up and Volume down
8	Power-on switch	1 switch button
9	Dimension	68mm(W)x212mm(H)x33mm(D)

Replacement battery

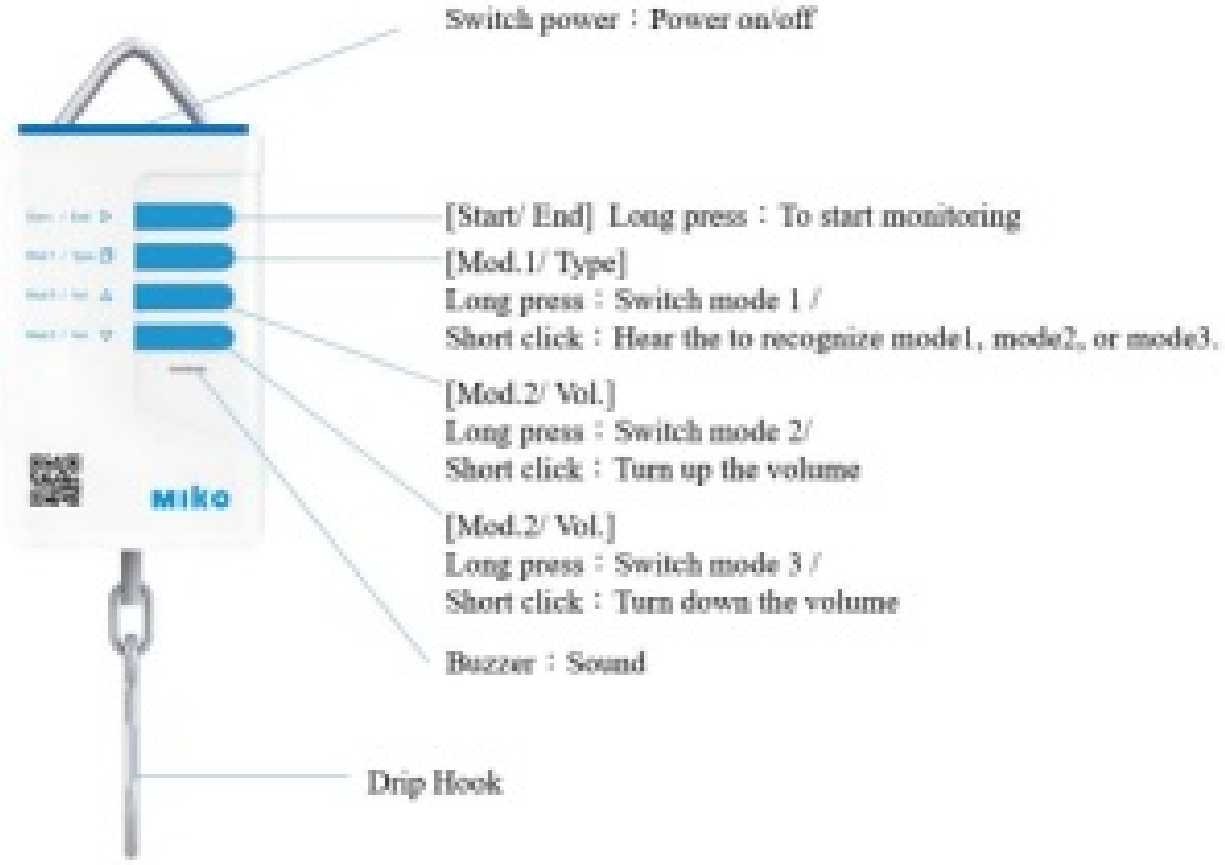
- Open the battery cover on the back.
- Make sure put the(+)(-) terminals in the correct direction.
- Put four AA batteries.

- Close battery cover.
- The operator should not touch the patient and the equipment at the same time, especially when changing batteries.



Button and structure description

- Switch power key to standby the equipment and check the light in green quickly flashing.
- Long press the first button [Start/End] key to start monitor
- When light in blue quickly flashing means data clear or no IV bag.
- When light in green slow flashing means monitoring and not reaching the alarm value.
- When light in red quickly flashing means reaching the alarm value. It is time to change the IV bag.
- **Long press second, third and fourth button** You can switch the different alarm value.
- **Short click second button** Hear the to recognize
  - **mode1 "Bee",**
  - **mode2 "Bee",** "Bee"
  - **mode3 "Bee",** "Bee", "Bee"
- **Short third button** Turn up the volume.
- **Short fourth button** Turn down the volume.



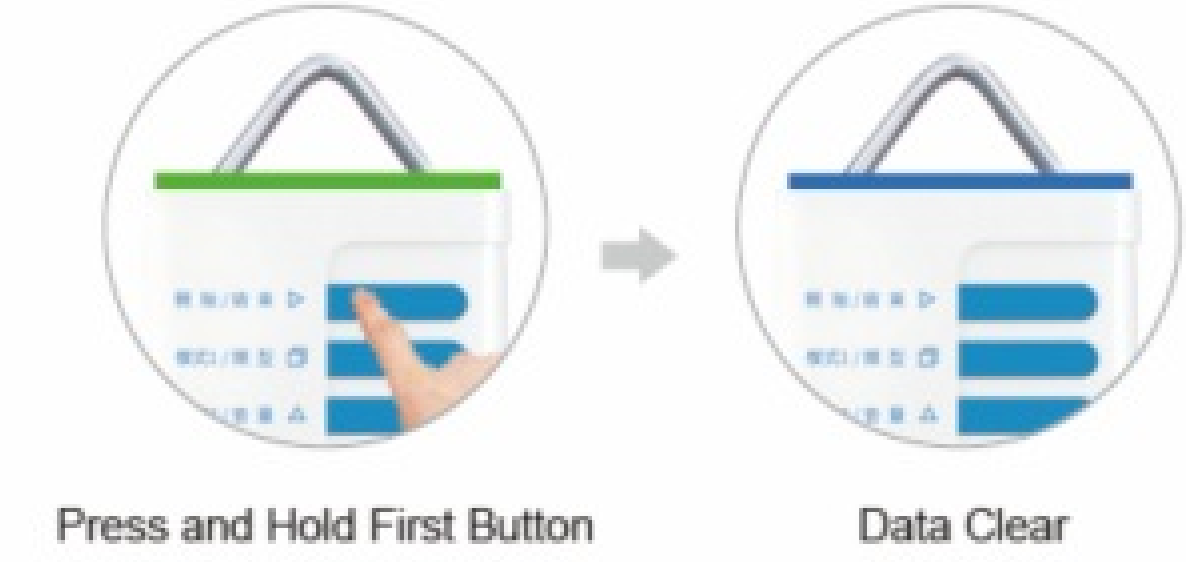
Start to Use

Miko Drip Instructions

1. Hang the Miko Drip on the drip stand, turn on the power, you will hear two beeps, and see the green fast flashing light indicating “standby”.

2. Press and hold the first key button until you hear “beep”, the light changes to blue fast flashing light to indicate miko drip ready to work. Blue light indicates data “clear”.

3. Select the desired mode and press and hold until you hear a beep, indicating that the setting is complete.



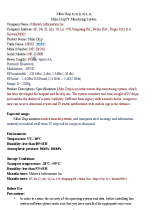
4. After the IV bag is hung on the hook for 30 seconds, the light will change to green and flash slowly to indicate “monitoring”

Correspond with System

Different colors represent different status of the equipment. The color correspond to the light of equipment.

- **Blue** Data clear or no IV bag.
- **Green** Monitoring and not reaching the alarm value.
- **Red** Reaching the alarm value. It is time to change the IV bag.
- **Grey** No Connection.

Documents / Resources

	MIKO Drip IV Monitoring System [pdf] User Manual MKD1010, 2A24QMKD1010, Drip IV, Monitoring System