

Wireless Remote Display

AD-8931

INSTRUCTION MANUAL



This Manual and Marks

All safety messages are identified by the following, "WARNING" or "CAUTION", of ANSI Z535.4 (American National Standard Institute: Product Safety Signs and Labels). The meanings are as follows:

 WARNING	A potentially hazardous situation which, if not avoided, could result in death or serious injury.
 CAUTION	A potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

 This is a hazard alert mark.

WARNING

Repairs

Do not disassemble the device. Contact your local A&D dealer if your device needs service or repair.

Troubleshooting

If a problem has occurred and you cannot clear it, stop using the device, place a notice on the device and request service from the store where you purchased the device or from your local A&D dealer.

CAUTION

Conditions for use and Ambient Temperature

- The device is a precision instrument. Avoid installing the device in direct sunlight, excessive dust, high humidity, high temperature, large temperature fluctuations or magnetic fields, which may cause problems or malfunctions.
- Use the device range of the -10°C to 40°C , with less than 85% R.H.

Operation

- Avoid mechanical shock to the device. That could cause damage.
- The device is not waterproof type. Water invading into the device may cause damage.
- If the device is not to be used for a long period of time, remove all batteries from the battery compartment to avoid battery leakage.
- Do not mix batteries made by different manufactures, or mix old and new batteries.
Replace all of the batteries at one time.

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1. Compliance

1.1. Compliance with FCC Rules

This device contains transmitter module FCC ID: 2A6NFEC2832

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.

FCC Caution

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

The antenna used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

This product is certified as type of the portable device with FCC Rules. To maintain compliance with RF Exposure requirement, please use within specification of this product.

Note :

Please note that this equipment generates, uses and can radiate radio frequency energy.

This equipment has been tested and has been found to comply with the limits of Class A digital devices pursuant to Part 15 of FCC rules.

These rules are designed to provide reasonable protection against interference when equipment is operated in a commercial environment. If this unit is operated in a residential area, it may cause some interference and under these circumstances the user would be required to take, at his own expense, whatever measures are necessary to eliminate the interference.

(FCC = Federal Communications Commission in the U.S.A.)

1.2. IC

IC RADIATION EXPOSURE STATEMENT FOR CANADA

This device contains transmitter module IC: 28568-EC2832

This device complies with Innovation, Science and Economic Development Canada license-exempt RSS standards. Operation is subject to the following two conditions:

- (1) This device may not cause interference.
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

- (1) l'appareil ne doit pas produire de brouillage;
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

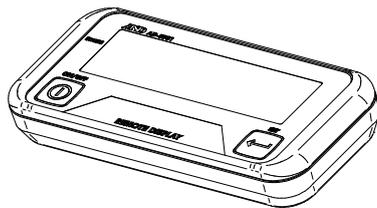
2. Outline and Features

The AD-8931 is an external display that performs wireless communication with A&D weighing instruments. Please read this manual thoroughly before using and use this device correctly after understanding the contents.

- Streamed weighing data from the weighing device is displayed.
- The power supply can use four "AAA" batteries (R03/LR03) (sold separately) or USB power supply.
- Pairing with a weighing device is required to start communication (refer to "6.1. [Bluetooth®](#) Pairing".)
- The display can be angled using the stands on its back side.
- The display can be hung on a wall by the wall-mount hole on its back side.

3. Unpacking

Check whether all of the following items are included:

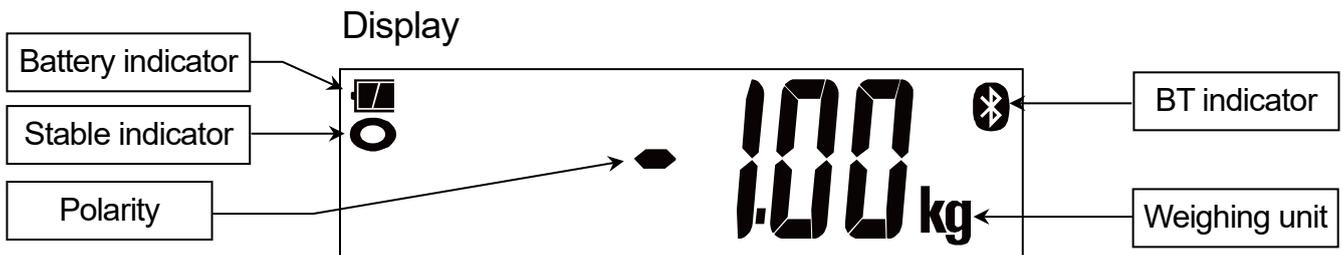
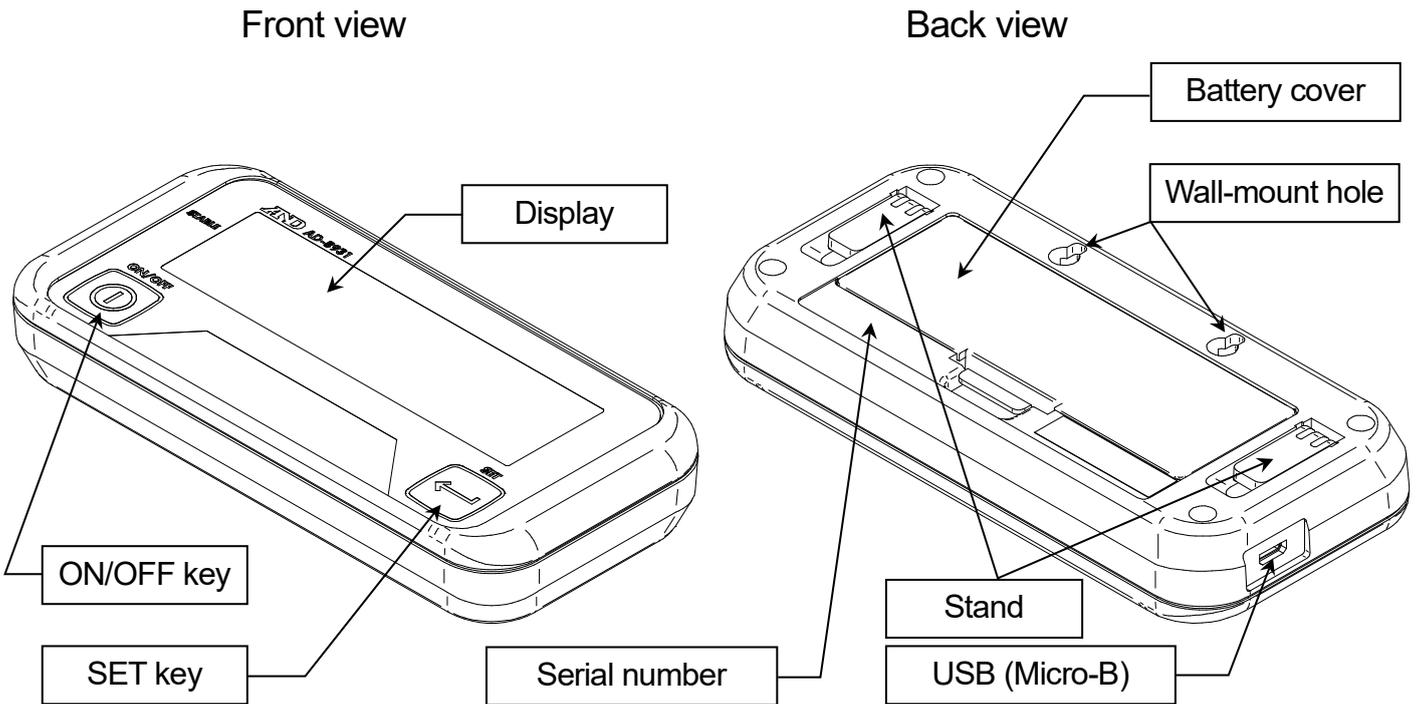


Main unit



Instruction manual

4. Names



Battery indicator		The battery indicator changes as the battery capacity decrease as shown below:
Stable indicator		Displaying weighing data : Turns on when the measurement value is stable. Internal Settings : Indicates the current setting.
BT indicator		Indicates the connection with the measuring instrument. Blinking : Indicates during pairing. Turn on : Connected to the measuring instrument. Turn off : The instrument is not connected to the measuring instrument.
Weighing unit		Turn on ► : Except for the displayable weighing unit.

Key operation

ON/OFF key	Turning the power ON/OFF
SET key	Press and hold (for about 3 seconds) to go to pairing mode. If the connection is disconnected, press the switch once. Attempt to connect again.
SET + ON/OFF key	Enter the internal setting mode. (Refer to "7. Function".)

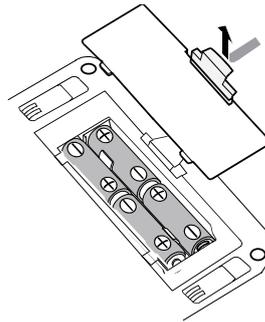
5. Preparation

5.1. Installing or Replacing Batteries

⚠ CAUTION

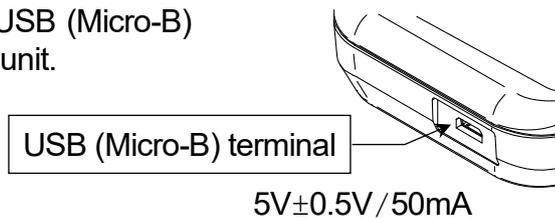
- Batteries are not included. Please purchase them separately.
- Insert the batteries in the correct polarity (+/-) as shown the battery compartment.
- Replace all four batteries at the same time.
- Be sure to install the battery cover when using the product.
- Do not mix different types of batteries and new and old batteries.
- Battery life depends on operating conditions and ambient temperature.
- Remove the battery if it is not used for a long period of time or if it is used only for USB power supply.

1. Remove the battery cover.
2. Remove all old batteries.
3. Note the polarity of the four new AAA batteries when inserting them.
4. Install the battery cover.



5.2. USB Power Supply

Connect the USB cable to the USB (Micro-B) terminal on the side of the main unit.



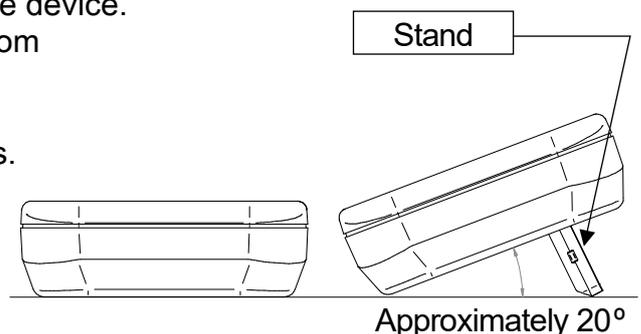
⚠ CAUTION

- The USB cable is not included.
- Data transfer from the USB terminal is not possible.
- Operation is not guaranteed with of all power supply units.
- Check the specifications of the power supply unit.
- Do not connect to a device other than a power supply.
Connecting to other devices may cause damage.
- When connecting a USB cable, check the direction of the connection and insert it straight.

5.3. Precautions for Use

⚠ CAUTION

- The stands should be extender fully or not at all.
Do not use the product with the stands halfway out.
- Be sure to extend both stands when standing the device.
- Prevent foreign matter such as liquid or metal from getting into the body.
- Do not handle the product with wet hands.
- Do not press the keys with hard or sharp objects.
- Do not install or store the product in an unstable location.
- Be careful that the product does not fall or is impacted.



6. How to Operate

6.1. Bluetooth® Pairing

⚠ CAUTION

To start communication, pairing between the product and the measuring instrument is necessary.

- One compatible weighing unit can be connected to one unit of this product.
- When pairing, turn off the power supply of devices other than the measuring instrument to be paired.

1. Turn on the measuring instrument to be paired.

2. Press the **ON/OFF** key of this product to turn on the power.

3. After all the segments turn on, **-----** is displayed.

4. Press and hold **SET** key (for approximately 3 seconds) until the BT indicator (upper right of the display) starts flashing.

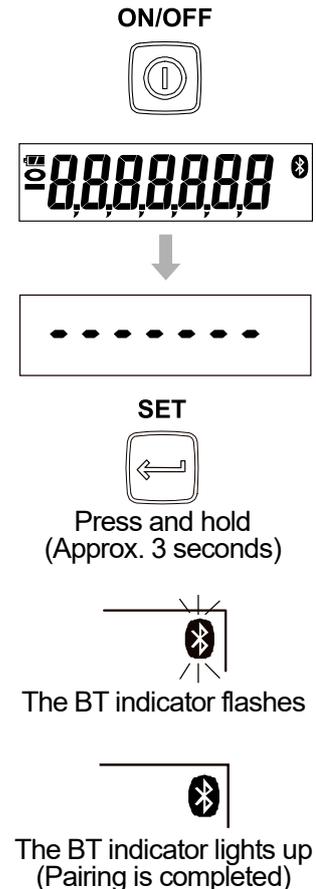
5. The BT indicator flashes, and pairing starts.

6. When pairing is completed, the BT indicator lights up.
If the measuring device is not found (if the BT indicator does not light up), the power turned off after about 1 minute.
Repeat from step 1.

7. The product is connected to the measuring device. If the measuring device's power is disconnected or the connection is lost for some reason, the BT indicator turns off.

8. The received measurement data is displayed. (Refer to "6.2. Display".)

- If the BT indicator does not light up, turn off the power of the product and the measuring device once, and then repeat the above procedure again.
- After pairing, the paired measuring device is detected and automatically connected, it is not necessary to perform the connection operation each time.
- In the following cases, perform pairing again.
 - When connection to the measuring device becomes impossible.
 - You do not know what device the product is paired with.
 - To communicate with another measuring device.



6.2. Display

Set the data output mode of the measuring instrument to stream mode.

- Refer to the operation instruction manual of the measuring device for how to change the data output mode of the measuring instrument.

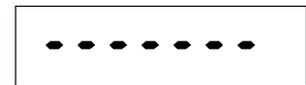
1. Turn on the paired measuring device. If pairing has not been performed, perform pairing. (Refer to "6.1. Bluetooth® Pairing".)

2. Press the ON/OFF key of this product to turn on the power.

ON/OFF



3. After all the segments turn on, ----- is displayed. If the device paired with is not found, the power turns off after approximately 1 minute.



4. Confirm that the BT indicator (upper right of the display) lights up. If the BT indicator does not light up, turn off the product and the measuring instrument and turn them on again.



The BT indicator lights up (Pairing is completed)

5. Displays the received measurement data. If the measuring device's power is disconnected or the connection is lost for some reason, ----- is displayed, and the BT indicator turns off.



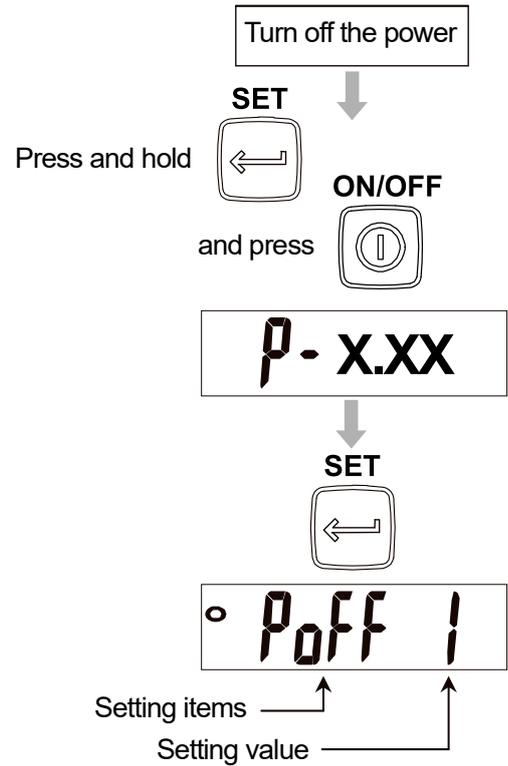
The measurement data is displayed

- If the measurement data is not received, ----- is displayed.
- If the display does not change from ----- while the connection mark is lit, check that the data output mode of the measuring instrument is stream mode.
- When the measurement range is exceeded, E or -E is displayed.
- When the auto power-off function is activated when operating by batteries, the power turns off when the stable indicator is on and no operation is performed for approximately 5 minutes. (Refer to "7. Function".)

7. Function

7.1. Entering the Function Settings

1. Turn off the power with the **ON/OFF** key.
2. Press and hold the **SET** key, and then press the **ON/OFF** key to display **P-X.XX**.
3. Release the keys.
4. Press the **SET** key to advance to the internal setting item and display **P_{OFF} ***.



7.2. Parameter Setting Procedure

- SET** key: Switches the function setting items.
- ON/OFF** key: Changes the set value of the function setting item.
- ON/OFF** key press and hold: Turn off the power.

Function setting items	Setting value	Description	
<i>P_{OFF}</i> Auto power off function	□	Deactivated	This is a function to turn off the power automatically when approximately 5 minutes elapse while the stable indicator is lit and there is no key operation.
	◆	Activated	
<i>L - it</i> Backlight operation	□	Always ON	If set to Auto, the backlight turns off after approximately 3 seconds elapse from the stable indicator lighting up. The backlight is always lit in function setting mode.
		Always OFF	
	◆ ?	Auto	
<i>[LrF]</i> Initialize		Returns the function settings to factory default	

◆: Factory default

When each function setting item is displayed, it is possible to change the individual setting values each setting value by pressing the **ON/OFF** key. The setting value displayed when "○" is lit is the currently stored setting value.

To store the change in the of setting value

After changing the setting value ("○" turns off), press the **SET** key. After **End** displays, the function setting item change is applied.

To end the function setting operation

Press and hold **ON/OFF** key. The power turns off.

How to initialize setting value

In the **[LrFn0]** display, press the **ON/OFF** key to display **[LrFu0]**. Press the **SET** key to return the function setting to the factory default after **End** displays.

8. Before Requesting Repair or Service

8.1. Check when a Malfunction is Suspected

State	Response
No display	<ul style="list-style-type: none"> • Check the battery or USB power supply. • Check the connection of the USB plug.
BT indicator does not light.	<ul style="list-style-type: none"> • Confirm that the measuring instrument supports wireless communications. • Confirm that you have paired with the measuring device. (Refer to "6.1. Bluetooth® Pairing".)
The measurement value is not displayed. ----- displayed. Measurement values do not change.	<ul style="list-style-type: none"> • Confirm that the BT indicator is lit. • Check the distance from the measuring instrument (maximum 10 m). • Check the data output mode of the measuring instrument (stream mode).
Lb0 displayed.	<ul style="list-style-type: none"> • The batteries are depleted. Replace with four new batteries.
Lb1, Hb1 displayed.	<ul style="list-style-type: none"> • Supply appropriate power by USB.

8.2. Error Code Table

Turn off the power and turn it on again when the following error is displayed.
If the error cannot be resolved, contact the nearest dealer.

Display	Content
Error 1	Connection error with communication module
Error 2	Memory (storage circuit) has failed.

9. Specification

Compatible communication devices	A&D weighing instruments equipped with Bluetooth #1
Display	7 segment LCD with backlight (Character height 26 mm)
Display update	Approximately 10 times per second #2
Weighing unit	g (Gram), kg (Kilogram), pcs (Counting), lb (Pound), oz (Ounce), ozt (Troy ounce), tl (Tael), t (Tola), N (Newton) In the case of weighing units other than the above ► displayed.
Ambient operating temperature and humidity	-10 to 40 °C, less than 85%RH (No condensation)
Power supply	4 x "AAA" batteries (R03/LR03) or AC adapter (5 V/50 mA)
Battery life #3	Approx. 200 hours (When using at 25°C, with backlight always off and using alkaline batteries) Approx. 100 hours (When using at 25°C, with backlight always on and using alkaline batteries)
Communication range	Up to 10 m
Wireless communication	Bluetooth 5.0 (Bluetooth Low Energy)
Dimensions	160 (W) x 74 (D) x 25 (H) mm
Mass	Approximately 160 g (Excluding batteries)
Accessories	Instruction manual

#1 Refer to the A&D website concerning applicable instruments equipped with Bluetooth.

#2 When the weighing device side transmits weighing data at 10 times/second.

#3 The battery life differs depending on manufacturer, usage and storage conditions.

10. Bluetooth Communication

The effective range of Bluetooth communication is 10 m or less in an unobstructed space. If there is an obstacle such as a wall between Bluetooth devices, the range of communication will be shorter. Interference may be caused near the following devices that use the 2.4 GHz frequency band, which is the same as for Bluetooth. Therefore, this device is not suited for uses that require reliability.

- Wireless LAN
- Bluetooth devices (such as mobile phones)
- Home appliances such as microwave ovens

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A&D Company, Limited

3-23-14 Higashi-Ikebukuro, Toshima-ku, Tokyo 170-0013, JAPAN

Telephone: [81] (3) 5391-6132

Fax: [81] (3) 5391-1566

A&D ENGINEERING, INC.

47747 Warm Springs Blvd, Fremont, California 94539, U.S.A.

Tel: [1] (800) 726-3364

Weighing Support:[1] (888) 726-5931

Inspection Support:[1] (855) 332-8815

A&D INSTRUMENTS LIMITED

Unit 24/26 Blacklands Way, Abingdon Business Park, Abingdon, Oxfordshire OX14 1DY United Kingdom

Telephone: [44] (1235) 550420

Fax: [44] (1235) 550485

A&D AUSTRALASIA PTY LTD

32 Dew Street, Thebarton, South Australia 5031, AUSTRALIA

Telephone: [61] (8) 8301-8100

Fax: [61] (8) 8352-7409

A&D KOREA Limited

한국에이.엔.디(주)

서울특별시 영등포구 국제금융로6길33 (여의도동) 맨하탄빌딩 817 우편 번호 07331

(817, Manhattan Bldg., 33. Gukjegeumyung-ro 6-gil, Yeongdeungpo-gu, Seoul, 07331 Korea)

전화: [82] (2) 780-4101

팩스: [82] (2) 782-4264

ООО A&D RUS

ООО "ЭЙ энд ДИ РУС"

Почтовый адрес:121357, Российская Федерация, г.Москва, ул. Верейская, дом 17

Юридический адрес: 117545, Российская Федерация, г. Москва, ул. Дорожная, д.3, корп.6, комн. 86

(121357, Russian Federation, Moscow, Vereyskaya Street 17)

тел.: [7] (495) 937-33-44

факс: [7] (495) 937-55-66

A&D Instruments India Private Limited

ऐ&डी इन्स्ट्रुमेंट्स इण्डिया प्रा० लिमिटेड

D-48, उद्योग विहार, फेस -5, गुडगांव - 122016, हरियाणा, भारत

(D-48, Udyog Vihar, Phase-V, Gurgaon - 122016, Haryana, India)

फोन : [91] (124) 4715555

फैक्स : [91] (124) 4715599

A&D SCIENTECH TAIWAN LIMITED. A&D台灣分公司 艾安得股份有限公司

台灣台北市中正區青島東路5號4樓

(4F No.5 Ching Tao East Road, Taipei Taiwan R.O.C.)

Tel : [886](02) 2322-4722

Fax : [886](02) 2392-1794

A&D INSTRUMENTS (THAILAND) LIMITED

บริษัท เอ แอนด์ ดี อินสตรูमेंท์ (ไทยแลนด์) จำกัด

168/16 หมู่ที่ 1 ตำบลรังสิต อำเภอธัญบุรี จังหวัดปทุมธานี 12110 ประเทศไทย

(168/16 Moo 1, Rangsit, Thanyaburi, Pathumthani 12110 Thailand)

Tel : [66] 20038911