

# Accuracy Dose II

## User Manual



# Accuracy Dose II User Manual

**Revision Date: December 2, 2025**

## **i. Statement**

This manual serves as the user guide for Accuracy Dose II (hereinafter referred to as “AD-II”). It is intended to assist users in the proper operation of the product, ensuring optimal performance and safe usage. The manual should be kept with the device for convenient reference at all times.

AD-II is intended solely for the applications explicitly specified in this manual and the accompanying documentation. Any unauthorized or unspecified use is strictly prohibited. Users must comply fully with the operational guidelines and safety precautions outlined in this manual. Use beyond the specified scope will result in automatic revocation of authorization and may pose potential risks.

## **ii. Product Information**

- **Product Name:** Accuracy Dose II
- **Model:** AD-II
- **Production Date:** Refer to the product label
- **Expected Lifespan:** 5 years

## **iii. Registration Information**

- **Registrant:** Guangzhou Raydose Medical Technology Co., Ltd.
- **Registered Address:** Room 506, Building B, No. 19 Nanxiang 3rd Road, Huangpu District, Guangzhou, Guangdong Province, China
- **Manufacturer:** Guangzhou Raydose Medical Technology Co., Ltd.
- **Supplier:** Guangzhou Raydose Medical Technology Co., Ltd.
- **Distributor:** Guangzhou Raydose Medical Technology Co., Ltd.
- **After-sales Service Provider:** Guangzhou Raydose Medical Technology Co., Ltd.
- **Production Address:** Room 506, Building B, No. 19 Nanxiang 3rd Road, Huangpu District, Guangzhou, Guangdong Province, China
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# **1. Introduction**

## **1.1. Product Description**

The AD-II is a high-precision electrometer specifically designed for radiation dose measurement in radiotherapy. When connected to a compatible ionization chamber, it enables real-time measurement of radiation dose and dose rate. It is widely used for output dose assessment, dose consistency verification, and routine quality assurance of LINAC systems.

## **1.2. Intended Use**

The AD-II is primarily used for measuring radiation dose and dose rate in radiotherapy. It is suitable for verifying the output dose of LINAC, and can also be used for dose monitoring and routine quality assurance.

## **1.3. Intended User**

Personnel operating the AD-II must receive training based on this manual and possess professional knowledge in the relevant field of radiotherapy.

## **1.4. Contraindications**

The AD-II is intended solely for measuring radiation dose and dose rate, and must not be used directly on patients. Its measurement results are intended only for assessing the output performance of the LINAC and must not be used to directly control the equipment.

## **1.5. Copyright Notice**

- This manual and all accompanying documents (including electronic and printed versions) are the proprietary property of Guangzhou Raydose Medical Technology Co., Ltd. (hereinafter referred to as "Raydose") and its suppliers, and are protected by intellectual property laws.
- Without written permission from Raydose, modification, translation, or reproduction of this document is prohibited, except for limited internal reference within the same department.
- Raydose retains ultimate ownership of this manual and its accompanying documents. Any infringement will be subject to legal action.

## **1.6. Technical Support**

For technical support, please contact your local distributor or sales, or reach out to Raydose's after-sales team through the following channels:

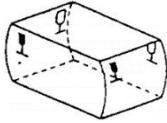
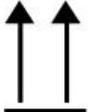
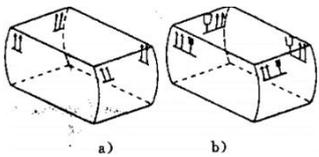
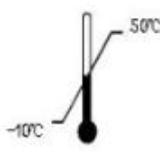
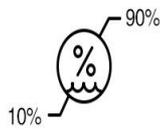
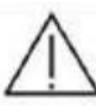
- Website: <https://www.raydose.com/>
- Email: [service@raydose.com](mailto:service@raydose.com)

## 2. Health and Safety Information

### 2.1. Overview

This chapter outlines potential hazards associated with the device. Before installation, operation, or maintenance, all personnel must carefully read and fully understand the contents of this chapter. It is essential to strictly follow all signs, prompts, and warnings and operate the device correctly according to the instructions in this manual to prevent accidents.

### 2.2. Symbols and Labels

No.	Name	Graphic	Meaning	Examples
1	Fragile Items		The package contains fragile items; handle with care.	
2	This Side Up		The package must be kept upright, with the arrows pointing upwards.	
3	Keep Dry		Protect the package from rain or exposure to a humid environment.	/
4	Do Not Roll		The package must not be rolled during transportation.	/
5	Do Not Stack		Do not stack packages; no items should be placed on top.	/
6	Temperature Limit		Suitable transportation temperature range: -10°C~55°C.	/
7	Humidity Limit		Suitable transportation humidity range: 10%~90%.	/
8	Warning		Alerts users to important warnings in the user manual to prevent accidents.	/

9	AC Power		Indicates alternating current (AC).	
10	Special Disposal		The product must not be disposed of as regular waste and requires special disposal handling.	/
11	Refer to Instructions		Users should refer to the manual for operational guidance and information.	/
12	Serial Number		Identifies the manufacturer's serial number for tracking specific medical devices.	/
13	Manufacturer		Indicates information about the manufacturer.	/
14	Non-Ionizing Radiation		Indicates that the device emits or involves non-ionizing radiation.	/
15	Grounding		Indicates that the device must be connected to protective grounding for safe operation.	/

### 2.3. Responsibility

- **General Liability**

Raydose shall not be liable for any incidental or consequential damages arising from improper operation or other factors during device usage, including but not limited to data loss, revenue loss, or business interruption.

- **Operational Liability**

This device is intended to be operated only by personnel with specialized knowledge in radiotherapy, such as medical physicists or engineers. All users must have received appropriate training and hold the necessary qualifications. Operation by unauthorized personnel is strictly prohibited.

- **Safety Liability**

Users must strictly adhere to all safety warnings and precautions outlined in this manual. Failure to comply may result in personal injury or equipment damage, for which Raydose assumes no liability.

## 2.4. Assembly, Maintenance, and Accessories

- Only Raydose or Raydose-authorized personnel with adequate qualifications are permitted to perform device assembly, expansion, modification, or maintenance.
- During maintenance, only Raydose-provided or Raydose-approved spare parts may be used. The use of unauthorized components may compromise operator safety, measurement accuracy, and cause operational stability. Any violation of this provision will result in the voiding of the product warranty.
- Raydose shall not be liable for any hazards or malfunctions resulting from the use of accessories or consumables not supplied or approved by Raydose.

## 2.5. Electromagnetic Compatibility

### **Note:**

- This device complies with the electromagnetic compatibility requirements of YY 9706.102-2021 standard.
- Users shall install and operate the device according to the EMC information provided in the accompanying documents.
- Portable and mobile RF communications equipment may affect device performance. Avoid strong electromagnetic interference during use (e.g., proximity to mobile phones, microwave ovens, etc.).
- Guidelines and manufacturer's declaration details are provided in the attachment.

### **Warning:**

- Even if other equipment meets emission requirements of relevant national standards, this device may still be subject to interference from them.
- This device should not be used adjacent to or stacked with other equipment. If co-location or stacking is necessary, verification must be conducted to ensure proper operation under the given configuration.
- Class A equipment is primarily designed for industrial environments. Ensuring electromagnetic compatibility in non-industrial environments may be challenging due to potential conducted and radiated emissions.
- Using unauthorized accessories or cables other than those sold by the manufacturer of this system as internal component replacements may increase emissions or reduce immunity of the device.
- Cable Specifications:

No.	Name	Cable Length (m)	Shielded(Yes/No)
1	Power Cable	1.5	No
2	USB Cable	1.0	No
3	Extension Cable	20.0	Yes

Note: Cables include external connection lines for the product (such as power cables, adapter cables, port connection wires, terminal wires, etc.) as well as interconnections wires between product components.

### 2.5.1. Electromagnetic Emissions

The operator of the device should ensure its use under the following electromagnetic environmental conditions.

Emissions Test	Compliance	Electromagnetic Environment Guidelines
RF Emissions GB4824	Group 1	This device is used only for internal functions and generates minimal RF energy, causing negligible interference to surrounding electronic equipment.
RF Emissions GB4824	Class A	The device is suitable for use in all establishments other than domestic and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Harmonic Emissions GB17625.1	Not applicable	
Voltage Fluctuations/ Flicker Emissions GB17625.2	Not applicable	

### 2.5.2. Electromagnetic Immunity

The operator of the device should ensure its use under the following electromagnetic environmental conditions.

Immunity Test	IEC60601 Test Level	Compliance Levels	Electromagnetic Environment Guidelines
Electrostatic discharge (ESD) GB/T 17626.2	±6kV contact ±8kV air	±6kV contact ±8kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%.
Electrical fast transient/burst GB/T 17626.4	±2kV for power supply lines ±1kV for input/output lines	±2kV for power supply lines ±1kV for input/output lines	Mains power should have the quality typically used in commercial or hospital environments.
Surge GB/T 17626.5	±1kV Differential Mode Voltage ±2kV Common Mode Voltage	±1kV Differential Mode Voltage ±2kV Common Mode Voltage	Mains power should have the quality typically used in commercial or hospital environments.
Voltage dips, short interruptions, and voltage variations on the power supply input	<5% $U_T$ , for 0.5 cycles (>95% voltage dip on $U_T$ )	<5% $U_T$ , for 0.5 cycles (>95% voltage dip on $U_T$ )	Mains power should have the quality typically used in commercial or hospital environments. If continuous operation is required during power interruptions, it is

lines GB/T 17626.11	40% U <sub>T</sub> , for 5 cycles (60% voltage dip on U <sub>T</sub> ) 70% U <sub>T</sub> , for 25 cycles (30% voltage dip on U <sub>T</sub> ) <5% U <sub>T</sub> , for 5 seconds (>95% voltage dip on U <sub>T</sub> )	40% U <sub>T</sub> , for 5 cycles (60% voltage dip on U <sub>T</sub> ) 70% U <sub>T</sub> , for 25 cycles (30% voltage dip on U <sub>T</sub> ) <5% U <sub>T</sub> , for 5 seconds (>95% voltage dip on U <sub>T</sub> )	recommended that the device use an uninterruptible power supply (UPS) or battery power.
Power frequency magnetic field (50/60Hz) GB/T 17626.8	3A/m	3A/m	The power frequency magnetic field should at typical levels found in commercial or hospital environments.
Note: U <sub>T</sub> refers to the AC mains voltage before applying the test voltage.			
Conducted RF GB/T 17625.6	3Vrms 150kHz to 80MHz	3 Vrms	<p>Portable and mobile RF communication devices should not be used closer to any part of the equipment, including cables, than the recommended separation distance. This distance should be calculated using the corresponding formula for the transmitter's frequency.</p> <p>Recommended separation distance:</p> $d = 1.2\sqrt{P}$ $d = 1.2\sqrt{P} \quad 80\text{MHz} - 800\text{MHz}$ $d = 2.3\sqrt{P} \quad 800\text{MHz} - 2.5\text{GHz}$ <p>Where P is the maximum output rated power of the transmitter, as provided by the manufacturer, in watts (W), and d is the recommended separation distance, in meters (m).</p> <p>The field strength of fixed RF transmitters is determined by conducting an electromagnetic site survey.<sup>a</sup> In each frequency range, the field strength should be below the compliance level.<sup>b</sup></p> <p>Interference may occur near devices marked</p>  <p>with the following symbols:</p>
Radiated RF GB/T 17626.3	3V/m 80MHz to 2.5GHz	3 V/m	

Note 1: For frequencies of 80 MHz and 800 MHz, use the formula for the higher frequency range.

Note 2: These guidelines may not be suitable for all situations, as electromagnetic propagation is influenced by building structures, objects, and the absorption and reflection from the human body.

a. Fixed RF transmitters, such as wireless (cellular/cordless) phones, ground-based mobile radio stations, amateur radio, AM (Amplitude Modulation) and FM (Frequency Modulation) radio broadcasting, and television broadcasting, may have field strengths that cannot be accurately predicted theoretically. To assess the electromagnetic environment of a fixed RF transmitter, an electromagnetic site survey should be considered. If the field strength at the location where the device is used exceeds the RF compliance levels mentioned above, the device should be observed to ensure proper operation. If abnormal performance is observed, additional measures may be necessary, such as realigning or repositioning the device.

b. For the frequency range of 150 kHz to 80 MHz, the field strength should be below 3 V/m.

### 2.5.3. Recommended Separation Distances

The device is intended for use in the electromagnetic environment where radiated RF disturbances are controlled. Based on the maximum rated output power of communication equipment, the user of the device can prevent electromagnetic interference by maintaining the minimum distance between portable and mobile RF communications equipment (transmitters) and this device, as recommended below.

Maximum Rated Output Power of Transmitter (W)	Corresponding Separation Distance for Different Frequencies		
	150kHz~80MHz $d=1.2\sqrt{P}$	80MHz~800MHz $d=1.2\sqrt{P}$	800MHz~2.5GHz $d=2.3\sqrt{P}$
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	7.3
100	12	12	23

For transmitters with a maximum rated output power not listed in the above table, the recommended separation distance  $d$ , in meters (m), can be determined using the formula from the corresponding transmitter frequency section. Here,  $P$  is the maximum rated output power provided by the transmitter manufacturer, in watts (W).

Note 1: For frequencies of 80 MHz and 800 MHz, use the formula for the higher frequency range.

Note 2: These guidelines may not be suitable for all situations, as electromagnetic propagation is influenced by building structures, objects, and the absorption and reflection from the human body.

### 2.6. Regulatory Requirements

Guangzhou Raydose Medical Technology Co., Ltd., as the manufacturer, complies with the quality management system standard YY/T 0287-2017 IDT ISO 13485:2016 “Medical Device Quality Management System — Requirements for Regulatory Purposes” for product manufacturing and management.

## **2.7. Safety Precautions**

### **2.7.1. Electrical Installation**

The electrical equipment must comply with relevant IEC regulations. The room housing the system and its connected equipment must adhere to corresponding electrical safety standards. The device is typically grounded through the power cord to ensure safe use.

### **2.7.2. Operators**

The device should only be operated by the following personnel:

- Professionals who are familiar with the device's radiation measurement limitations.
- Personnel who are capable of following the safety procedures for operating Co-60 or linear accelerators.
- Personnel who have the necessary ability to take safety precautions when using electrical or electronic equipment to avoid potential hazards.

Before using the device, operators must confirm that the device is properly connected and in normal working condition, and perform the following checks:

- Ensure that the device's routine functions are normal, and that all safety devices are functioning properly.
- Check the data cables and power cords to ensure they are intact and undamaged.

### **2.7.3. Operation Procedures**

- When handling the system and connected equipment, care should be taken to avoid any impacts, especially to prevent surface pressure or strong vibrations on the device. The maximum load capacity of the device is 25 g/cm<sup>2</sup>, and overload may cause damage.
- Do not operate the device with wet hands. Moisture may cause internal short circuits or damage to the device.
- The radiation field size must not exceed the irradiable area marked on the device to prevent radiation damage to internal circuits. In the event of an emergency or device malfunction, immediately stop using the device, and perform a thorough check before the next use to ensure the device is in normal working condition.
- The device is equipped with an exhaust vent; ensure that the vent is unobstructed during use. Avoid allowing liquids or other contaminants to enter the device to prevent damage or impact on its normal function.
- The device should be cleaned regularly to maintain good working condition. If the environment where the device is stored has significant dirt or dust accumulation, the cleaning frequency should be increased.

## 2.7.4. Transportation and Storage

### (1) Transportation Requirements

- The device packaging should use environmentally friendly, non-toxic materials and be equipped with shockproof and moisture-proof devices to ensure the safety of transportation and storage.
- During transportation, the device should be kept stable to avoid rolling, collisions, or severe shaking. Professional equipment should be used for loading and unloading, and operations must be performed according to regulations.
- For long-distance transportation or extreme environments, additional protections such as insulation, moisture-proofing, or reinforced packaging should be added to ensure the device remains intact and undamaged.

### (2) Storage Requirements

- The device should be stored in an environment free of corrosive gases, with good ventilation, and away from strong magnetic fields and radiation protection areas. It is not recommended to store the device in an accelerator room for extended periods to avoid radiation damage.
- When the device is not in use, the power plug should be unplugged. The device should be placed flat on its own with the front facing up, avoiding stacking or collisions to prevent damage.
- The device should be kept away from dust, liquids, or other contaminants. It is recommended to store it in a dedicated storage box.

### (3) Environment Requirements

The transportation and storage environment should meet the following requirements:

Temperature	10°C ~ 40°C
Pressure	760hPa ~ 1100hPa
Relative Humidity	20% ~ 80%

## 2.7.5. Operating Environment

- The device must be used in a clean, dry environment with an appropriate room temperature.
- The device should be kept away from low temperatures, high pressure, unnecessary moisture, solvents, or steam.
- If temperature fluctuations cause humidity changes, do not use the device directly until it is completely dry.
- The operating environment should meet the following requirements:

Temperature	10°C ~ 40°C
Pressure	760hPa ~ 1100hPa
Relative Humidity	20% ~ 80%

### 2.7.6. Emergency Measures

- When the device experiences external shocks, vibrations, or overload, first check for visible damage on the exterior to ensure there is no internal damage. If severe damage is found, immediately stop using the device, document its condition, and contact professional personnel for repairs or replacement.
- If the device shows signs of overheating, abnormal noise, or other malfunction symptoms during operation, immediately stop using it, disconnect the power, and then contact technical support for troubleshooting.
- If the device is submerged in water, immediately disconnect the power and wait for about one minute before making contact or performing any checks.
- When cleaning the device, if any components are loose or detached, immediately stop cleaning and check that all connections are secure. If there are issues, contact technical support for inspection and repair.
- If the device experiences a system failure or operational abnormality, perform a preliminary check to see if the device is affected by moisture or water, or if any parts show signs of obvious wear. For further diagnosis, please contact technical support.

### 2.8. User Suggestions and Complaint Handling

Users can provide feedback through the following channels:

- **Email:** [service@raydose.com](mailto:service@raydose.com)
- **Feedback via Agents:** Users can also directly report device issues or file complaints with Raydose's authorized agents.

We will respond to your feedback as soon as possible and provide you with full support and solutions.

### 3. Product Description

#### 3.1. Composition

Name	Quantity	Type
AD-II	1	Standard
FC65-GX Ionization Chamber	1	
Extension Cable	1	
Small Water Phantom	1	Optional

**Note:** The actual delivered accessories are subject to the configuration specified in the customer's order.

#### 3.2. Interface Description

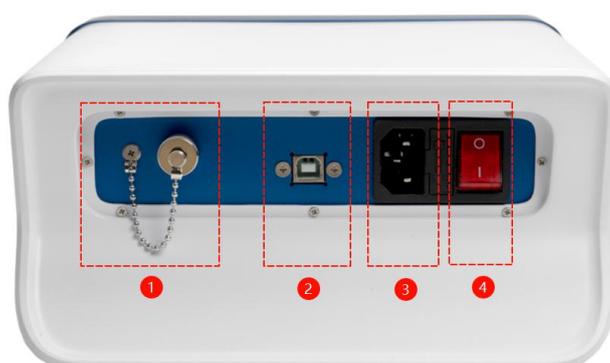


Figure 1. Interface Overview

- ① Ionization Chamber Port: Used to connect the ionization chamber for acquiring radiation signals.
- ② USB Port: Used to connect a USB cable for data transfer and firmware upgrades.
- ③ Power Port: Used to connect the power adapter to supply operating power to the device.
- ④ Power Switch: Used to turn the device on or off.

#### 3.3. Technical Parameters

AD-II	
Dimension (L×W×H)	290.5mm × 227.7mm × 113mm
Weight	2.55 kg
Charge (Dose)	2nC-20mC, Resolution: 0.1pC
Current (Dose Rate)	2pA-200nA, Resolution: 0.1pA
Timer Range	0-9999 seconds
Polarizing Voltage	±400V
Power Input	AC100-240V, 50/60Hz
Repeatability	± 0.2%

Leakage Current	$\leq \pm 10 \text{ fA}$ , Typical: 1 fA
Non-linearity	$< \pm 0.2\%$
Stability	$< \pm 0.3\%$
Display Size	7.84 inches
Zero Drift	Automatic, within 100 seconds
Maximum Stored Ionization Chambers	20
Maximum Stored Measurement Data	200
<b>Small Water Phantom</b>	
Dimension (L×W×H)	30mm × 30mm × 31mm
Material	PMMA

### 3.4. Maintenance and Cleaning

#### 3.4.1. Routine Maintenance

- Handle the device with care to avoid drops or impacts.
- When not in use, store the device in a designated storage case and keep it away from radiation sources.
- Regularly inspect the power cord, plug, and battery to ensure they are not aged or damaged.
- Ensure the device casing remains intact and free from physical damage.

#### 3.4.2. Cleaning and Disinfection

- **Cleaning Tools:** Use a soft cloth, lint-free cloth, or cleaning sponge to wipe the device's surface. Avoid using abrasive materials to prevent scratches.
- **Cleaning Agents:** Use only neutral cleaning agents. Avoid corrosive or harsh chemicals.
- **Cleaning Procedure:**
  - Before cleaning, turn off the device and unplug the power cord.
  - Dampen a cloth with clean water, wring it out, and gently wipe the device's surface.
  - For stubborn stains, use a small amount of neutral detergent, then wipe dry with a clean cloth.
  - Ensure the device is completely dry before reuse.
- **Disinfection Procedure:** Regular disinfection is necessary to maintain hygiene. Use 75% medical-grade alcohol to wipe the device's surface.
- **Precautions:** Avoid letting any liquid seep into the device during cleaning and disinfection.

## 4. Interface Overview

### 4.1. Powering On

- Connect the AD-II to a power source using the power adapter, then press the power switch to turn on the device.
- After powering on, the device will automatically enter the warm up screen. The warm up process takes 30 seconds.



Figure 2. Powering On

### 4.2. Main Interface

After completing the warm-up process, AD-II will enter the main interface.

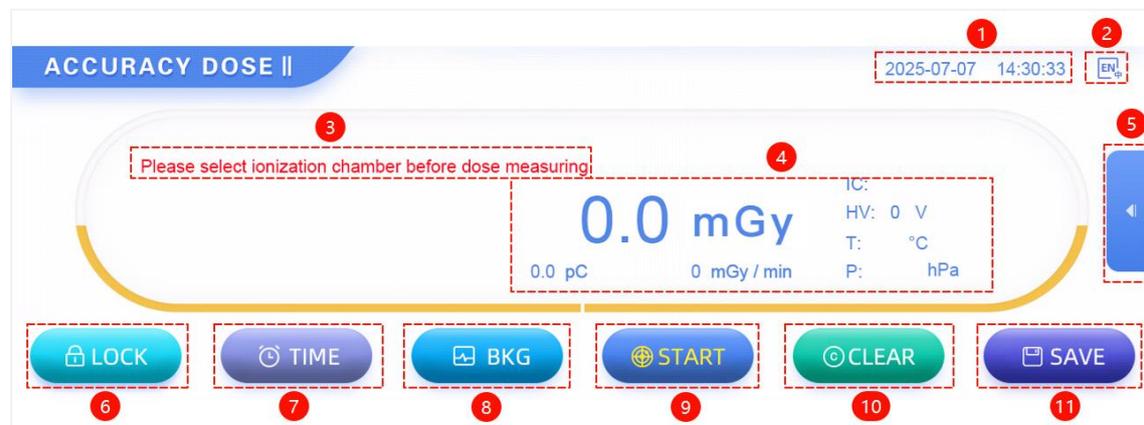


Figure 3. Main Interface

- ① **Date and Time:** Tap this area to bring up the virtual keyboard and manually modify the date and time information. Tap  to discard changes and return to the main interface, or tap  to save changes and return to the main interface.



Figure 4. Main Interface\_Date and Time

- ② **Language Switch Button:** Tap this button to toggle the interface language (Chinese/English).
- ③ **Status Indicator Area:** This area displays the current operating status and guides users through subsequent steps. During measurement, it shows the elapsed measurement time in seconds (s) in real time.
- ④ **Measurement Results Display Area:** Displays current measurement results and environmental parameters, including:

Parameter	Description
0.0 mGy	Accumulated dose
0.0 pC	Charge
0 mGy/min	Dose rate
IC	Selected ionization chamber model
HV	Currently set high voltage value
T	Currently set temperature
P	Currently set atmospheric pressure

- ⑤ **Setting Button:** Tap this button to open the measurement settings window to configure current measurement parameters. For detailed instructions, see Section 4.3 “Settings.”
- ⑥ **Lock Button:** In the default state, each time  is tapped to start a new measurement, the AD-II will automatically clear the previous measurement results and start a new measurement. The measurement data will not be saved automatically. However, if  is tapped first and then , the device will enter the locked state, and the button will change to the locked icon . In this state, each new measurement will continue accumulating based on the previous measurement results.
- ⑦ **Timer Button:** Used to set the timed measurement mode.
  - Enable Timer Mode: After tapping , an on-screen keyboard will appear for entering the desired duration (in seconds by default). Tap  to confirm the input, and the device will enter timer mode, with the button changing to . In this mode, tapping  will start dose measurement based on the set duration. After the measurement ends, tapping  again will repeat the measurement using the same timing.
  - Exit Timer Mode: Tap  to exit the timed measurement mode.

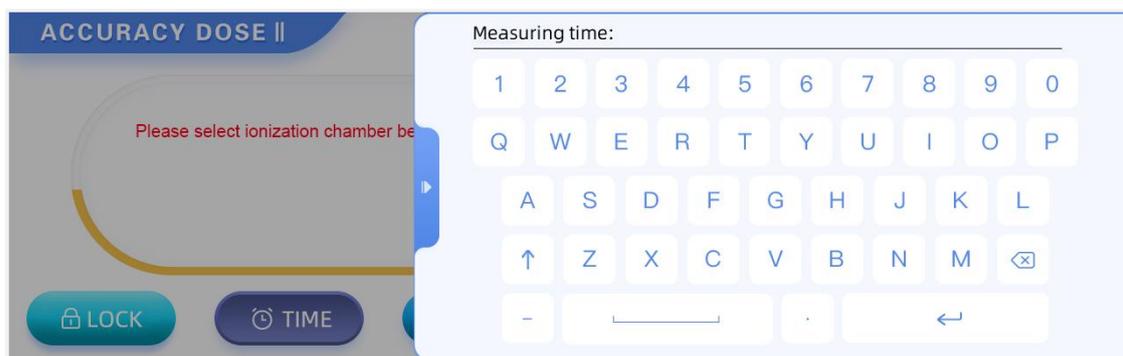


Figure 5. Main Interface\_Timer

- ⑧ **Background Button:** Used to perform background measurement.
- Before starting a background measurement, ensure that the ionization chamber model, high voltage, temperature, pressure, and other relevant parameters have been properly configured.
  - After tapping , the device will begin background measurement. The default duration is 100 seconds, and the countdown will be displayed on the left side of the screen.
  - Once the background measurement is complete, regular measurement operations can be performed.
  - Note: A new background measurement must be performed each time the ionization chamber is changed or the high voltage setting is modified, to ensure the accuracy of subsequent measurement data.

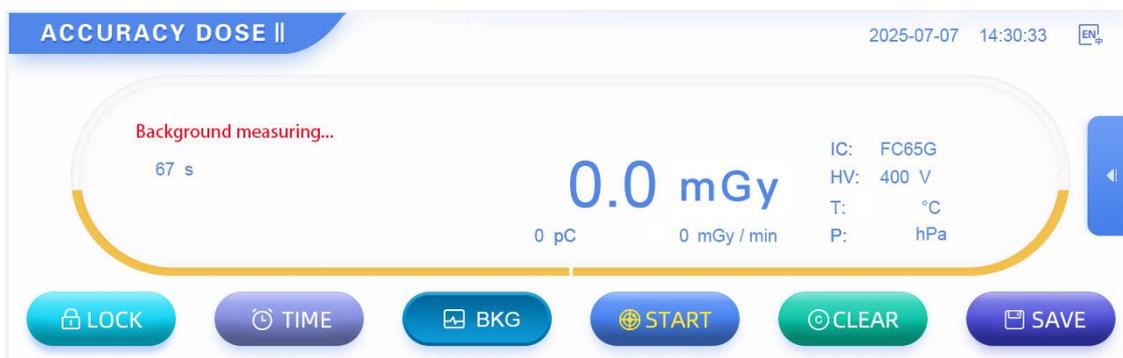


Figure 6. Main interface\_Background Measurement

- ⑨ **Measurement Button:** Used to start or stop the measurement process.
- Tap  to begin measurement; the button icon will change to , and the interface will display real-time measurement results. Tapping  will immediately stop the current measurement.
  - In Timer Mode: Tapping  will start a dose measurement based on the preset duration. If the AD-II is in the unlocked state, previous data will be cleared at the start of each new measurement. If the AD-II is in the locked state, each measurement result will automatically accumulate.
- ⑩ **Clear Button:** Used to clear the current measurement data.
- Tap  to delete the current results, including dose, charge, and dose rate. However, the measurement settings such as ionization chamber model, high voltage, temperature, and pressure will remain unchanged.

⑪ **Save Button:** The AD-II does not automatically save measurement data. After measurement is complete, tap  to manually save the current results to the system. Please save promptly after measurement to avoid data loss.

### 4.3. Settings

- Tap  to open the settings window, where all necessary measurement conditions can be configured.
- The settings on this interface must be completed before performing background or actual measurements.

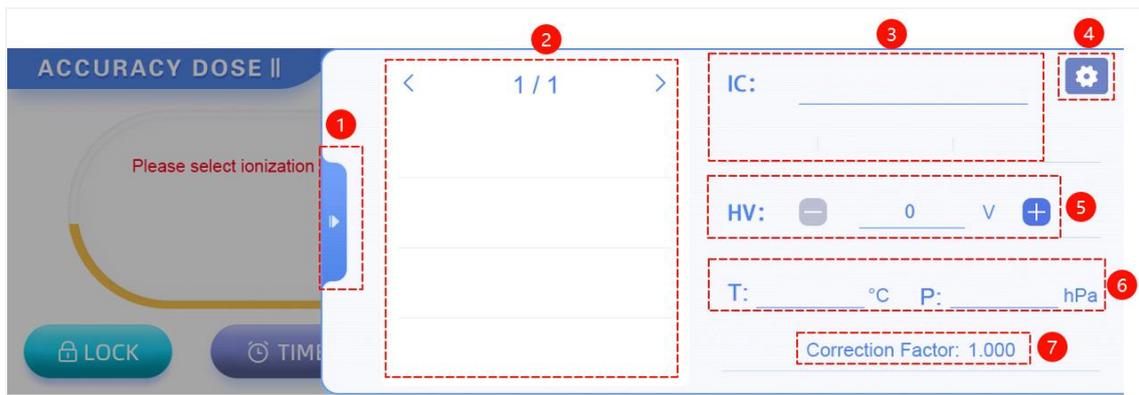


Figure 7. Settings

- ① Tap this button to return to the main interface.
- ② Ionization Chamber Selection Area:
  - This area displays the ionization chamber models already saved in the system. After selecting a model, the corresponding details will automatically populate the
- ③ Ionization Chamber Information Area.
  - Note: Each time the ionization chamber model is changed, a new background measurement must be performed.



Figure 8. Settings\_Ionization Chamber Selection

- ③ Ionization Chamber Information Area: Displays detailed information about the currently selected ionization chamber, including model name (IC), sensitive volume (SV), serial number (Sn), correction factor (Cf), and max high voltage (Max HV).
- ④ Ionization Chamber Parameter Settings

- Tap  to enter the ionization chamber model management interface, as shown below.
- Tap each input field to bring up the on-screen keyboard and enter the corresponding parameters. The maximum input for high voltage is limited to 400V.
- Tap  to cancel changes and return to the previous screen.
- Tap  to create a new ionization chamber model.
- Tap  to save the changes.
- To delete a chamber model: Clear the model name input field and tap .
- Note: The "Cf" here refers to the user-defined correction factor, which is different from ⑦ the air correction factor.

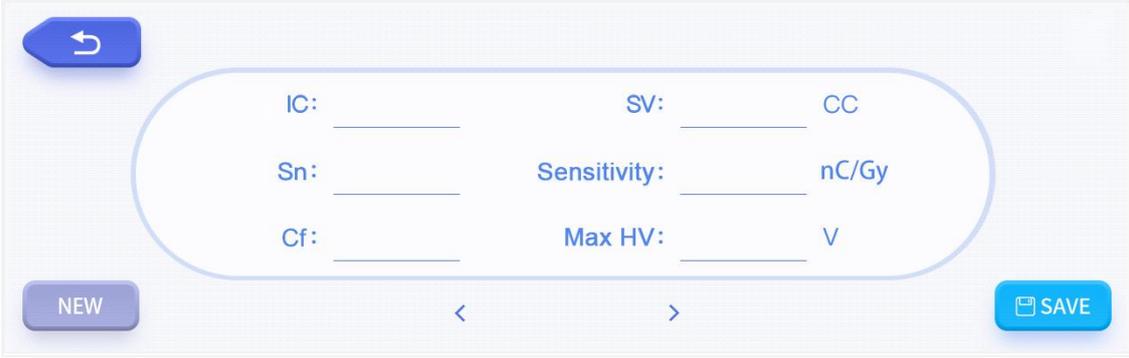


Figure 9. Settings\_Ionization Chamber Parameter Settings

- ⑤ After selecting an ionization chamber, you can set the measurement high voltage in this area.
  - Use  and  buttons to adjust the voltage in 5V steps. Long-press to adjust quickly.
  - The maximum supported high voltage is 400V, and must not exceed the "Maximum High Voltage" of the selected ionization chamber.
  - Note: Each time the high voltage is changed, a new background measurement must be performed.
- ⑥ Temperature and Pressure Settings
  - Tapping the temperature or pressure input field will activate the virtual keyboard.
  - Tap the temperature or pressure input fields to bring up the keyboard. Enter the current temperature (°C) and atmospheric pressure (hPa) manually.
  - After completing the input, tap  to save the changes.
- ⑦ Air Correction Factor
  - The AD-II automatically calculates the air correction factor based on the temperature and pressure values entered by the user. No manual input is required.

## 4.4. Data Analysis

Press and hold the  button for 3 seconds to enter the data analysis interface. This interface allows users to manage and analyze all measurement records that have been saved by tapping .



Figure 10. Data Analysis\_No Data

- **Select Data:** In the data table on the left, tap any row to select that data record. Tap again to deselect it. A maximum of 5 data records can be selected at a time.
- **Delete Data:** After selecting the desired data from the left table, tap Delete to delete the selected records. Please proceed with caution, this action is irreversible.
- **Generate/Update Analysis Graph:** After selecting data in the table, tap the icon located at the top right of the image area on the right side of the screen to generate or update the corresponding analysis graph.
- **Explanation of Graph Parameters:**

Parameter	Description
X-axis	Measurement time
Y-axis	Measurement value
LIN	Linearity
RSD	Repeatability

- **Baseline Explanation:** Each analysis graph must include one baseline. All other selected data sets will be compared against this baseline to calculate linearity and repeatability. The baseline is highlighted in red in the data table.
- **How to Set the Baseline:** By default, the first selected data set is automatically designated as the baseline. To change the baseline, tap the current baseline row to deselect it, then tap the desired data row. The system will automatically assign the new selection as the baseline.



Figure 11. Data Analysis\_With Data