

# IDP Intelligent Digital Pipette – User Manual

This manual provides an overview of the key features and basic operating instructions for the COEVOS IDP Series Intelligent Digital Pipette (hereinafter referred to as "IDP Pipette").

## Scope of Application

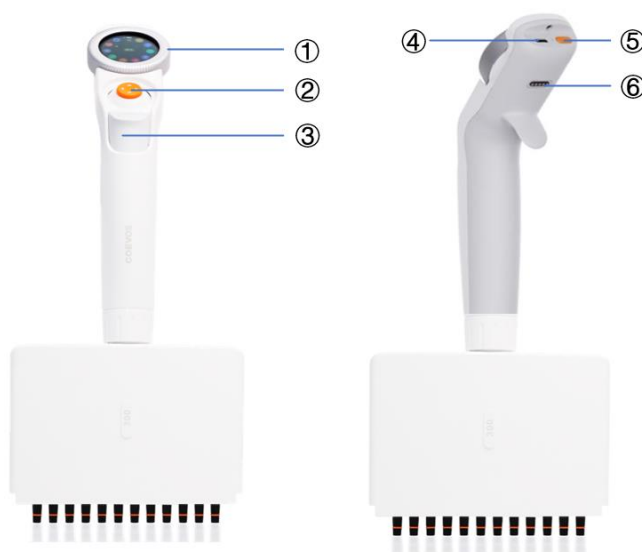
The IDP Pipette is equipped with OTA (Over-the-Air) firmware upgrades, intelligent voice interaction, and a closed-loop pipetting record system.

It is designed for aspirating and dispensing liquid volumes ranging from 0.2  $\mu\text{L}$  to 5 mL.

This manual applies to the following models:

- IDP S Series, IDP E Series (single-channel pipettes)
- IDP S8 Series, IDP E8 Series (8-channel pipettes)
- IDP S12 Series, IDP E12 Series (12-channel pipettes)
- IDP SA Series, IDP EA Series (adjustable-spacing pipettes)
- IDP SD Series, IDP ED Series (2-in-1 pipettes)

## Quick Start Guide



### ① Adjustment Ring

Rotate to adjust the volume setting

### ② Joystick

Move up/down/left/right or press to navigate settings or perform aspiration/dispensing

### ③ Tip Eject Button

Press to eject pipette tips

### ④ Type-C Charging Port

Insert Type-C cable to charge

### ⑤ Magnetic Charging Port

Attach to ICS3000 rotating magnetic charging stand

### ⑥ Power Button

Press and hold for 3 seconds to turn the device on or off

## Charging

The IDP Pipette supports two charging methods: Type-C USB charging and Magnetic charging.

## Mode Selection

After powering on, the IDP Pipette enters the main menu.

From the main menu, you can navigate using the joystick (up, down, left, right) to select the desired mode or function. Press the joystick vertically to enter a selected mode. To return to the main menu from any mode, press the joystick again.

| Mode                                                                                                      | Description                                                                              |
|-----------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
|  Pipetting               | Transfers liquid by aspirating and dispensing equal volumes.                             |
|  Mixing                | Transfers a defined volume of liquid, then performs automatic or manual mixing           |
|  Manual Pipetting      | Real-time control of aspiration and dispensing, mimicking mechanical pipette experience. |
|  Aliquot Dispensing    | Repeated dispensing of equal volumes.                                                    |
|  Reverse Pipetting     | Retains a residual volume after dispensing the preset amount                             |
|  Advanced Functions    | Includes sequential dispensing, dilution, and pipetting programs                         |
|  Co-Link               | Quickly connects to the Co-Link network                                                  |
|  Settings              | Configure Co-Link, device ID, beeping sound, language, and restore factory settings      |
|  Service               | Access serial number, firmware version, calibration date, upgrade tools, etc             |
|  Information           | Displays model, volume range, Co-Link network info, firmware version                     |
|  Sequential Dispensing | Dispenses multiple volumes of varying amounts                                            |

|                                                                                                  |                                                                                                                          |
|--------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
|  Dilution       | Aspirate two different liquids in sequence with an air gap in between. After dispensing all liquids, mixing will follow. |
|  Pipetting Plan | Customize pipetting programs by combining multiple pipetting modes freely.                                               |

## Pipetting Operation

- (1) Aspiration: Immerse the tip into the liquid and tilt the joystick upward to aspirate the preset volume.
- (2) Dispensing: Move the tip above the target container and tilt the joystick downward to dispense.
- (3) Automatic Blow-Out: If enabled, the device will automatically blow out remaining liquid after dispensing.
- (4) Manual Blow-Out: After dispensing, tilt the joystick downward again to manually blow out.

## Settings / Modify Parameters

- (1) Mode Settings: On the operation interface, push the joystick right to enter parameter settings.
- (2) Unlock Settings: Move joystick up/down to select a setting, then push right to unlock it.
- (3) Volume Settings: Move joystick left/right to move the cursor, up/down to change values, then press to save and return.
- (4) Other Settings: Move joystick up/down to adjust values, then push left to save and return.
- (5) Menu Settings: Move joystick up/down to choose an option, then press or push right to unlock. Adjust values, then push left to save and return.
- (6) Service Menu: Move joystick up/down to view service items (upgrade, calibration, contact info). Use press or push right to enter, push left to return.

## Volume Adjustment via Control Ring

- (1) Unlock Volume: Rotate the ring continuously until the progress bar is full to unlock volume adjustment.
- (2) Adjust Volume: Use the joystick up/down/left/right for coarse adjustment, and rotate the ring for fine tuning.
- (3) Lock Volume: Press the joystick, or leave it idle for 5 seconds to lock the volume.

## Maintenance

(1) Cleaning: Wipe off surface contaminants using a damp cloth and mild detergent.

(2) Disinfection:

Use alcohol wipes to disinfect external surfaces.

The entire IDP pipette supports UV disinfection.

The lower end of the pipette supports autoclave sterilization.

(3) Warning:

Do not use spray-type cleaners on the upper part of the pipette. Liquid may penetrate internal components and cause damage or safety hazards.

## Technical Specifications

|                                |                                   |
|--------------------------------|-----------------------------------|
| Input Voltage                  | 5V                                |
| Input Current                  | 1A                                |
| Power Consumption              | 5W                                |
| Operating Environment          | Indoor use only                   |
| Operating Temperature          | 15°C-30°C                         |
| Maximum Altitude               | 2000 meters                       |
| Device Weight (excluding tips) | Single-channel pipette: Max. 209g |
|                                | Multichannel pipette: Max. 386g   |



## Safety Information

Regardless of the instructions below, all local regulations and safety standards must be followed.

- (1) This product must be used in a secure and reliable network environment.
- (2) Only charge the IDP Pipette using charging devices recommended by COEVOS.
- (3) Do not use the pipette or charge it near flammable materials or in explosive environments.
- (4) Do not charge the pipette in confined or poorly ventilated spaces.
- (5) Avoid placing the pipette in hot areas ( $\geq 40^{\circ}\text{C}$ ) during charging.
- (6) Improper use of the pipette may lead to personal injury. Do not drop or subject the

pipette to mechanical stress or extreme temperatures. (Extreme is defined as: >40°C or <15°C)

(7) Do not immerse the product in liquid. Avoid using spray cleaners on the pipette.

(8) Always operate the pipette in accordance with this manual to avoid safety hazards



## Battery Charging

(1) Fully charge the battery before first use.

(2) Charge via Type-C port or with the ICS magnetic stand.

(3) If the pipette is unused, charge it at least once every 3 months to maintain battery health

(4) Only use power adapters that are certified in compliance with relevant European standards (e.g., CE certified) for charging.

## Manufacturer and Support

Beijing Coevos Technology Co., Ltd

Address: Room 404,4/F,Bldg 7,No.16 Xinya Street,Daxing District, Beijing

Customer Service: 400-778-0788



Online Service

## Applicable Models

|             |              |
|-------------|--------------|
| IDP Sa-xxxx | IDP Sbc-xxxx |
| IDP Ea-xxxx | IDP Ebc-xxxx |

## Lithium battery parameters

| Item 项目                     | Specification 参数 | Remark 备注                            |
|-----------------------------|------------------|--------------------------------------|
| 4.1.1 Typical Capacity 标称容量 | 390mAh           | 0.5C charge                          |
| MinimumCapacity 最小容量        | 370mAh           | 0.5C discharge<br>0.5C 充电 0.5C 放电至终止 |
| 4.1.2 Nominal Voltage 标称电压  | 3.7V             |                                      |
| 4.1.3 End Voltage 放电截至电压    | 3.0V             |                                      |

|                                                      |                             |               |                                                   |
|------------------------------------------------------|-----------------------------|---------------|---------------------------------------------------|
| 4.1.4 Charging Current (Std) 标准充电电流                  |                             | 0.5CA=(195mA) | Ambient temperature 环境温度<br>0~+45°C               |
| 4.1.5 Charging Current (Max.) 最大充电电流                 |                             | 1CA=(390mA)   | Ambient temperature 环境温度<br>0~+45°C               |
| 4.1.6 Charging Voltage 充电电压                          |                             | 4.2V          |                                                   |
| 4.1.7 Charging Time(Std.) 标准充电时间                     |                             | 2.5~3.0 hours |                                                   |
| 4.1.8 Charging Time (Max.)<br>快速充电时间                 |                             | 1.5~2.0 hours |                                                   |
| 4.1.9 Discharging Current (Std.) 标准放电电流              |                             | 0.5CA=(195mA) | Ambient temperature 环境温度<br>-20~+50°C             |
| 4.1.10 Continuous Discharging Current (Max) 最大持续放电电流 |                             | 20CA=(7000mA) | Ambient temperature 环境温度 -<br>20~+50°C            |
| 4.1.11 Cell Internal Resistance 电芯内阻 (25°C)          |                             | <60mQ         | AC Impedance 交流内阻 1KHz                            |
| 4.1.12 Soft Pack Internal Resistance 成品内阻 (25°C)     |                             | ≤100mΩ        | AC Impedance 交流内阻<br>1KHz                         |
| 4.1.13 Temperature range for storage<br>储存温度范围       | less than 1 month<br>一个月以内  | -5~+45°C      | Percentage of recoverable capacity<br>恢复容量<br>80% |
|                                                      | less than 3 month 三<br>个月以内 | 0~+35°C       |                                                   |
|                                                      | less than 1 year 一年以<br>内   | 23±5°C        |                                                   |
| 4.1.14 Open Circuit Voltage 出货电压                     |                             | ≥3.9V         | Measure with voltmeter 使用电压表进行测量                  |

## Charger Parameters

输入特性/INPUT CHARACTERISTICS:

### 1. 输入电压/Input Voltage:

额定电压/Rated Voltage:100~240Vac

调整范围/Variation Range:90-264Vac

### 2. 输入频率/Input Frequency:

额定频率/ Rated Frequency: 50/60Hz.

调整频率/Variation Frequency:47-63Hz

### 3. 输入电流/Input Current:

当输入交流电压为额定值的下限电压负载满载时,最大输入交流电流 0.4 A.

0.4 Amps max At any input voltage and rated, DC output rated load.

### 输出特性/OUTPUT CHARACTERISTICS

| 输出<br>Output | 输出负载范围<br>Output Current Rated (A) |          | 输出电压范围/Output Voltage Rated (V)<br>(配 1.2 米长, 标准安规 22AWG 带 DC 头线测试) |            | 额定输出功率<br>Output Power |
|--------------|------------------------------------|----------|---------------------------------------------------------------------|------------|------------------------|
|              | Min Load                           | Max Load | Min Load                                                            | Max Load   | Max Power.             |
| 5.0V dc      | 0.0A                               | 2.0A     | 4.65-5.35V                                                          | 4.65-5.35V | 10.0W                  |
|              |                                    |          |                                                                     |            |                        |
|              |                                    |          |                                                                     |            |                        |

### 恒流恒压负载特性/Constant current constant voltage load characteristic

| 空载电压<br>No Load Voltage |      | 恒流电流 $V_o = V$<br>Constant Current $V_o = V$ |      | 指示灯/LED                     |
|-------------------------|------|----------------------------------------------|------|-----------------------------|
| Min.                    | Max. | Min.                                         | Max. | 转灯电流 /Turn the lamp current |
| +V                      | +V   | mA                                           | mA   | mA                          |

### FCC Warning

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is

no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and receiver.

- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

- Consult the dealer or an experienced radio/TV technician for help. MODIFICATION: Any changes or modifications not expressly approved by the grantee of this device could void the user' s authority to operate the device.