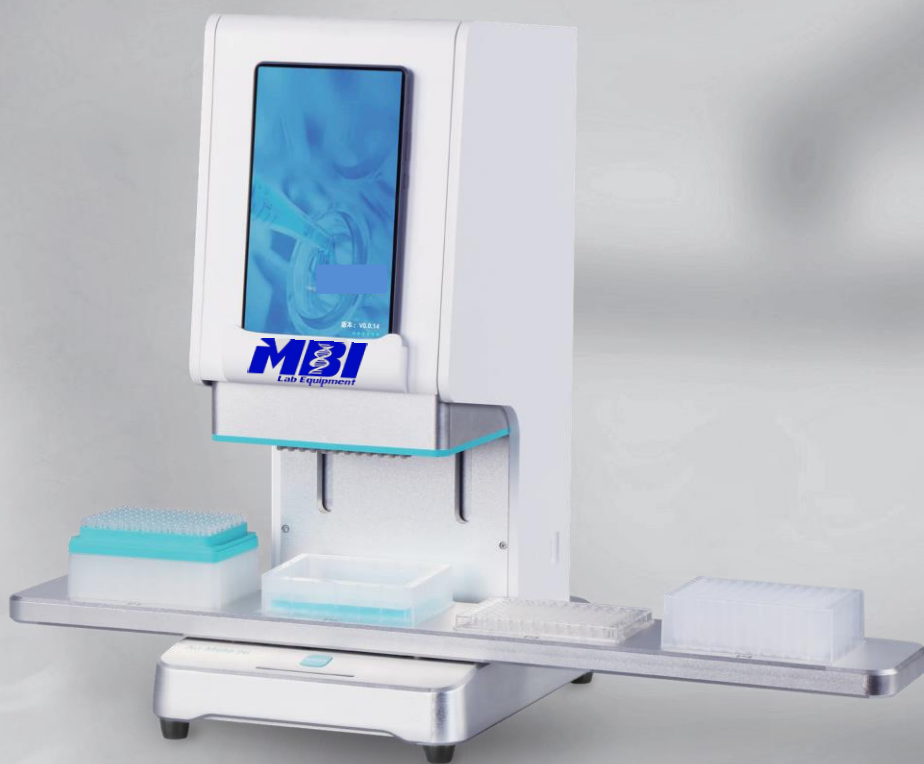# MBI SELMA 96 Series

## Liquid Handling Workstation



**Simply, Easy and Efficient**

# MBI SELMA 96 Series

# Liquid Handling Workstation

For complex experimental procedures and precise pipetting operations, MBI Selma 96 series liquid handling workstation can bring you unlimited imagination. Through the external tablet computer, you can easily set up, save and operate the experi- mental process. Through the software control, the difference between aspirating and dispensing is truly eliminated, which improves the repeatability of pipetting.

The simple and easy-to-operate software system controls the process of loading and unloading pipetting heads, aspirating and dispensing liquid, so as to complete complex multi-step experiments. A large amount of repetitive work can be completed in a short time, thereby reducing most of the manual pipetting burden, and significantly improving the sample processing speed and repeatability.

From simple routine tasks to complex pipetting patterns: with the liquid handling workstation, you will discover a new level of pipetting efficiency.



MBI SELMA 96B4

**1 Operation interface**
Support Android Tablet PC, compatible with both wired and wireless

**2 Workstation**
2/3/4/6 plate positions can be customized

**3 In basic mode:**
For aspirating & dispensing
**In advanced mode:**
Emergency stop button

**4 Compact design**
Small size, suitable for working on a clean bench

**5 Pipetting head replacement technology**
Quick loading and unloading of pipetting heads without assistance

# Feature

## ● Small Size and Saving Space

The MBI SELMA 96 with 2 plate positions has a compact structure. It only takes up a very little space on the laboratory table, and is easy to install in the clean bench, safety cabinet, and fume hood so that you can work in narrow spaces. Lots of repetitive work can be easily completed by switching the pipetting positions on the mobile table.



MBI SELMA

## ● Easy to Replace Pipetting Heads

Quick replacement of 3 types of pipetting heads without assistance



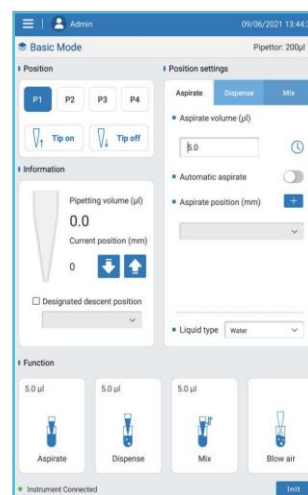| Push the mobile board up | Pull out the front skirt | Release the handles on both sides | Pull out the pipetting head |

## ● Multiple Plate Positions and High Automation

▪ You can choose 2/4 plate positions, or you can customize 3/6 plate positions, which can move automatically.

▪ The pipetting heads and plate positions can run automatically.



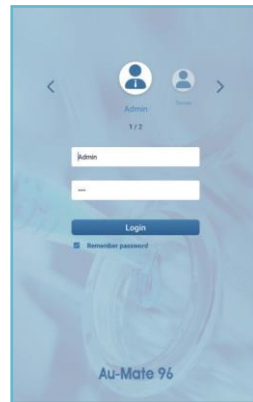## ● High Flexibility of the Software Brings Multiple Pipetting Functions

▪ Integrate a variety of pipetting functions: aspirating, dispensing, blowing air, continuous blowing air, column-separated aspiration, stepper pipette, mixing, dilution, reverse aspiration

▪ Movement speed can be adjustable: liquid aspirating and dispensing speed can be adjustable, to meet the requirements of different liquid physical properties for pipetting speed

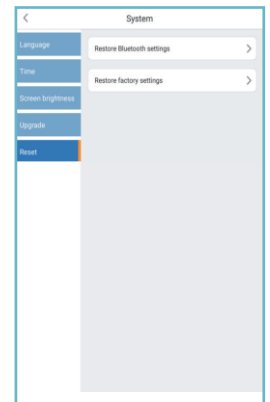Graphical and powerful software pipetting functions

## Intuitive Program Setting Interface

Graphical software interface, which is easy to be understood and edited. Through the standard 8-inch Android tablet, users can experience free process editing. The instrument has a built-in user management system to facilitate the management of the experimental program.

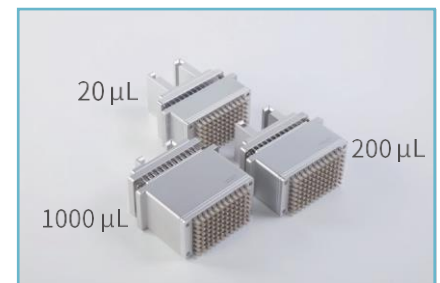## Support Wired Operation and Wireless Bluetooth Control

For some experimental environments with special requirements, the instrument can be placed in fume hoods, clean benches, etc. Using Bluetooth wireless control of the instrument, which not only reduces the interference to the experiment, but also ensures the safety of the experimenters.

## Replaceable Design of Multi-standard Pipetting Heads

A series of 20 µL and 200 µL pipetting heads can be freely replaceable for corresponding volume pipetting

B series adds a 1000 µL pipetting head on the basis of A, which is conve-nient for large-volume pipetting

## MBI SELMA 96 Series Can Achieve the Following Functions

| Application | 1-20 µL | 5-200 µL | 100-1000 µL |
|---|---|---|---|
| PCR/qPCR | √ | √ | - |
| Cell lysis | - | √ | √ |
| Elisa | - | √ | √ |
| DNA sequencing | √ | √ | - |
| RNA transcription | √ | √ | √ |
| Protein crystallization | √ | √ | - |
| Liquid chip | √ | √ | - |
| Drug compound screening | √ | √ | - |
| Sequencing sample preparation | - | √ | √ |
| Sequencing sample purification | - | √ | √ |
| Routine enzyme experiment | √ | √ | √ |
| Cell culture | - | √ | √ |
| siRNA treatment of cell culture | √ | √ | - |

- **Liquid Aspirating & Dispensing Function**

  Mainly used for liquid transfer between liquid tank, micro-well plate and deep-well plate, sample addition of 96-well plate, sample transfer between 96-well plate and 384-well plate, etc. It is commonly used in processes such as PCR set-up, enzyme-linked immunoassay, cell culture, and purification and preparation of sequencing samples. In addition, the instrument can be equipped with pipetting and mixing, which helps to fully mix the samples and reagents and improve the uniformity of results.

- **Gradient Dilution**

  It is mainly used for the equal-ratio dilution of liquids to realize the regular dilution of liquids between different rows or plates. Commonly used in Elisa reaction, sample dilution and other processes.

- **Stepper Pipette**

  Mainly used in the continuous and equal pipetting of liquids, that is, the process of one aspirating and multiple dispensing. Commonly used in reagent pipetting, reaction solution addition, etc.

- **Program Linkage**

  The open software design enables the instrument to realize complex liquid transfer methods between different plates in the form of program linkage.

## Instrument Performance Parameter

| Model | MBI SELMA 96A2 | MBI SELMA 96A4 | MBI SELMA 96B2 | MBI SELMA 96B4 |
|---|---|---|---|---|
| Plate number | 2 | 4 | 2 | 4 |
| Adapted pipetting head | Adapt to MBI-Pipet N20 & N200 heads | | Adapt to MBI-Pipet N20, N200 & N1000 heads | |
| Software control mode | Basic mode | Basic & advanced mode | Basic mode | Basic & advanced mode |
| Channel | 8/96 channel | 8/96 channel | 8/96 channel | 8/96 channel |
| Technical principle | Air displacement | | | |
| Available well plate | SBS standard 24/96/384 deep and shallow well plates | | | |
| Consumables | Matching MBI Tip | | | |
| System | Standard 8-inch Android tablet, software adaptive to mainstream size tablet | | | |
| Communication method | CAN communication | | | |
| Power supply | 100~240 V, 50~60 Hz | | | |
| Power | 100 W | 100 W | 100 W | 100 W |
| Wireless control | The instrument has a built-in Bluetooth module, which can be connected wirelessly | | | |
| N.W. (kg) | 26 | 30 | 29 | 33 |
| Size (W×D×H) mm | 475×343×535 | 690×343×535 | 475×350×673 | 690×350×673 |

- The instrument is divided into A and B series: A series can be equipped with two kinds of pipetting heads (20 µL, 200 µL); B series can be equipped with three kinds of pipetting heads (20 µL, 200 µL, 1000 µL), so the B series instruments are higher than the A series.

# Pipetting Head Specification

| Model | MBI-Pipet N20 | MBI-Pipet N200 | MBI-Pipet N1000 |
|---|---|---|---|
| Pipetting channel | 96 | | |
| Pipetting range | 1~20 µL | 5~200 µL | 100~1000 µL |
| Minimum increment | 0.1 µL | 0.2 µL | 1 µL |
| Accuracy | ≤±12 % at 1 µL<br>≤±12 % at 2 µL<br>≤±8 % at 10 µL<br>≤±1 % at 20 µL | ≤±5 % at 5 µL<br>≤±2 % at 20 µL<br>≤±1 % at 100 µL<br>≤±1 % at 200 µL | ≤±2 % at 100 µL<br>≤±1 % at 500 µL<br>≤±1 % at 1000 µL |
| Precision | ≤10 % at 1 µL<br>≤5 % at 2 µL<br>≤1 % at 10 µL<br>≤0.8 % at 20 µL | ≤3.5 % at 5 µL<br>≤1.5 % at 20 µL<br>≤0.8 % at 100 µL<br>≤0.4 % at 200 µL | ≤1 % at 100 µL<br>≤0.4 % at 500 µL<br>≤0.4 % at 1000 µL |
| Data | The pipetting calibration data is stored on the QR code. Users can directly scan and enter the calibration data through the tablet computer | | |
| Automatic identification | The instrument automatically recognizes the models | | |

# Ordering Information

| Code | Description |
|---|---|
| ZR-11909-99 | MBI Selma 96A2 liquid handling workstation, 2 types of pipetting heads available, 100-24 VAC, 100 W |
| ZR-11929-99 | MBI Selma 96A4 liquid handling workstation, 2 types of pipetting heads available, 100-24 VAC, 100 W |
| ZR-11949-99 | MBI Selma 96B2 liquid handling workstation, 3 types of pipetting heads available, 100-24 VAC, 100 W |
| ZR-11969-99 | MBI Selma 96B4 liquid handling workstation, 3 types of pipetting heads available, 100-24 VAC, 100 W |

# Adapted Pipetting Head and Holder

| Code | Description | Range | Optional instrument |
|---|---|---|---|
| ZR-11900-90 | MBI-Pipet N20 20 µL 96-channel pipetting head | 1~20 µL | A2/A4/B2/B4 |
| ZR-11900-91 | MBI-Pipet N200 200 µL 96-channel pipetting head | 5~200 µL | A2/A4/B2/B4 |
| ZR-11940-90 | MBI-Pipet N1000 1000 µL 96-channel pipetting head | 100~1000 µL | B2/B4 |
| ZR-11900-92 | 384 well adapter | | A2/A4/B2/B4 |

## Adapt to TIP Consumables

| Code | Packing | Volume | Description |
|------|---------|--------|-------------|
| ZR-SS-19-M | 96 pcs/box, 24 boxes/carton | 20 µL | MBI tip, transparent, boxed |
| ZR-SS-19-MK | 96 pcs/box, 24 boxes/carton | 20 µL | MBI tip, transparent, boxed, low adsorption |
| ZR-SS-19-MR | 96 pcs/box, 24 boxes/carton | 20 µL | MBI tip, transparent, boxed, sterile |
| ZR-SS-19-MRK | 96 pcs/box, 24 boxes/carton | 20 µL | MBI tip, transparent, boxed, sterile, low adsorption |
| ZR-SSE-19-MR | 96 pcs/box, 24 boxes/carton | 20 µL | MBI tip, transparent, boxed, sterile, filter element |
| ZR-SSE-19-MRK | 96 pcs/box, 24 boxes/carton | 20 µL | MBI tip, transparent, boxed, sterile, filter element,low adsorption |
| ZR-SS-199-M | 96 pcs/box, 24 boxes/carton | 200 µL | MBI tip, transparent, boxed |
| ZR-SS-199-MK | 96 pcs/box, 24 boxes/carton | 200 µL | MBI tip, transparent, boxed, low adsorption |
| ZR-SS-199-MR | 96 pcs/box, 24 boxes/carton | 200 µL | MBI tip, transparent, boxed, sterile |
| ZR-SS-199-MRK | 96 pcs/box, 24 boxes/carton | 200 µL | MBI tip, transparent, boxed, sterile, low adsorption |
| ZR-SSE-199-MR | 96 pcs/box, 24 boxes/carton | 200 µL | MBI tip, transparent, boxed, sterile, filter element |
| ZR-SSE-199-MRK | 96 pcs/box, 24 boxes/carton | 200 µL | MBI tip, transparent, boxed, sterile, filter element,low adsorption |
| ZR-SS-0999-M | 96 pcs/box, 16 boxes/carton | 1000 µL | MBI tip, transparent, boxed |
| ZR-SS-0999-MK | 96 pcs/box, 16 boxes/carton | 1000 µL | MBI tip, transparent, boxed |
| ZR-SS-0999-MR | 96 pcs/box, 16 boxes/carton | 1000 µL | MBI tip, transparent, boxed, sterile |
| ZR-SS-0999-MRK | 96 pcs/box, 16 boxes/carton | 1000 µL | MBI tip, transparent, boxed, sterile, low adsorption |
| ZR-SSE-0999-MR | 96 pcs/box, 16 boxes/carton | 1000 µL | MBI tip, transparent, boxed, sterile, filter element |
| ZR-SSE-0999-MRK | 96 pcs/box, 16 boxes/carton | 1000 µL | MBI tip, transparent, boxed, sterile, filter element,low adsorption |

## Adapt to Other Consumables

| Code | Type | Description |
|------|------|-------------|
| ZR-06950-91 | 2.2 mL reagent kit | 96 deepwell plate for MBI Selma 96/Mini/4800/S32 |
| ZR-06950-92 | 0.6 mL elution plate | Elution plate for MBI Selma 96 |
| ZR-06920-90 | 2.2 mL reagent kit | 96 deepwell plate for MBI Selma 32A |
| ZR-11901-190 | 1.6 mL 96 deepwell plate | |
| ZR-11901-191 | 2.0 mL 96 deepwell plate | |
| ZR-11901-192 | 96 V bottom reservoir | |