

Single Channel Electronic Pipettes

MPA

Series



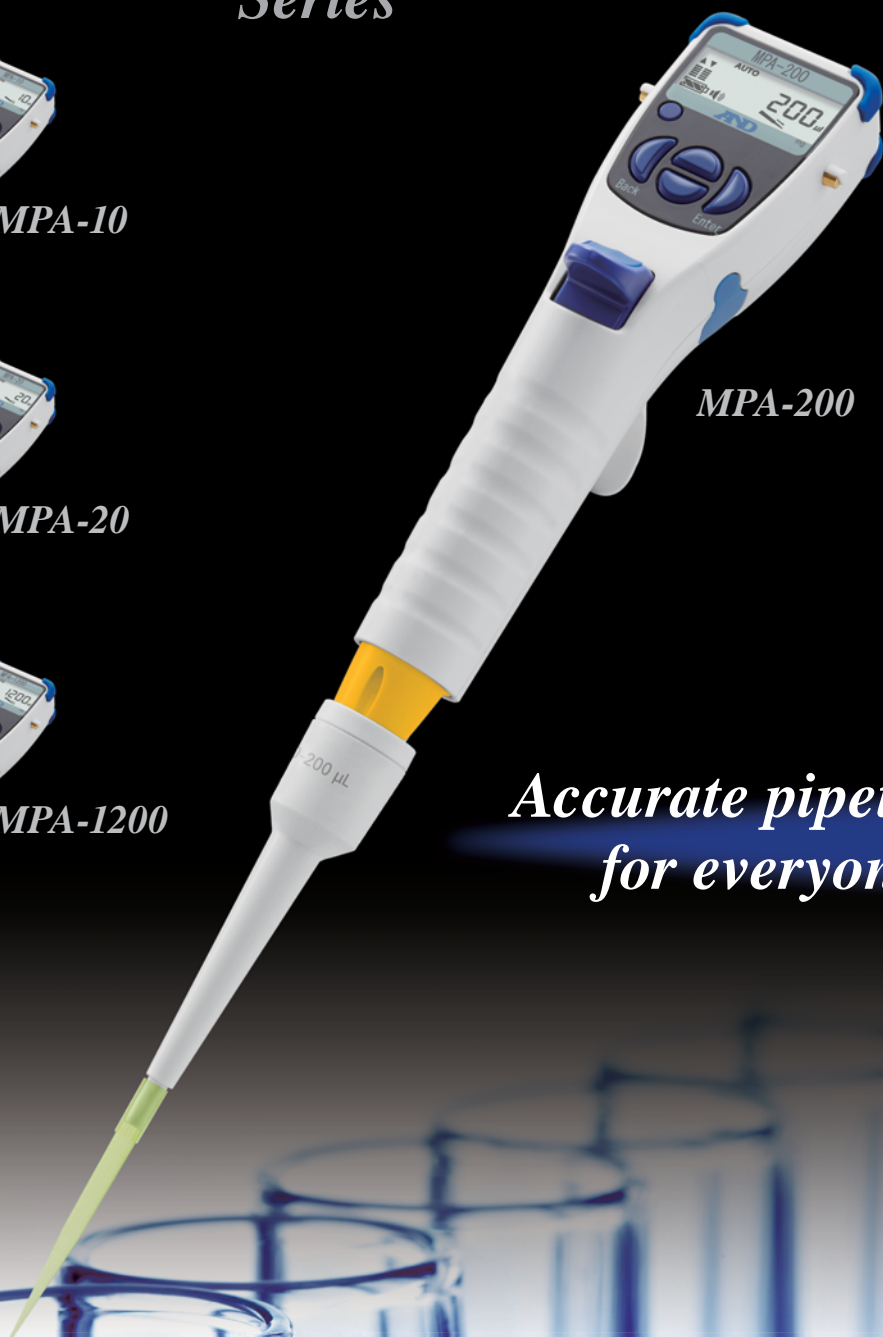
MPA-10



MPA-20



MPA-1200



MPA-200

*Accurate pipetting
for everyone*



AND ...Clearly a Better Value
A&D Company, Limited
<http://www.aandd.jp>

*If you still think manual pipettes are good enough, it's time to **THINK AGAIN***

Now take a moment to consider the facts presented here. You will then realize why A&D's new and original electronic pipettes, the MPA series, should be your future choice in pipettes!

Advantages of Using an Electronic Pipette

High precision assured for everyone at all times

Unlike the manual pipette, dispensed quantities will not vary with each individual, which makes the results of analyses always reliable. If necessary, you can concentrate on other tasks while leaving pipetting work to others.

Reduced physical strain with light and short key strokes

Have you ever suffered a repetitive strain injury (RSI) on the thumb after long hours of work with a manual pipette? The key operation of an electronic pipette requires the minimum amount of force, and keeps strain on your hand to the lowest degree possible.

Compared with the manual pipette, the level of fatigue will be less than 1/100.*¹ You can therefore avoid a decrease in efficiency due to fatigue as well as workplace injuries.

**1 Calculation based on the pushing force required and distance displaced.*

Various useful pipetting modes

Apart from normal automatic aspirating and dispensing (AUTO mode), the following functions help greatly reduce time, stress and error associated with certain pipetting tasks:

■ Multiple dispensing (MD) mode

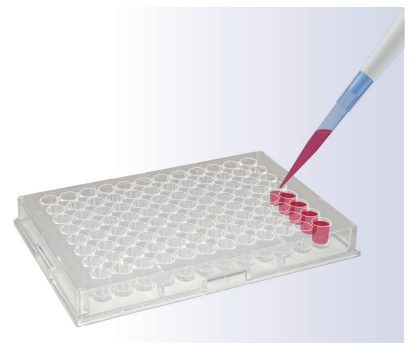
The MD mode lets you dispense one aspirated volume (e.g. 1200 μ L) by multiple installments of a smaller volume (e.g. 100 μ L \times 12 times), which greatly helps when you need to repeatedly deliver the same amount of sample into a microplate, etc.

The MPA series can automatically correct error in the first installment that is inherent in electronic pipettes*, and thereby realize highly precise multiple dispensing.

★ Patent pending

■ Mixing (MIX) mode

In MIX mode the pipette executes a set number of aspirating-dispensing cycles to mix and homogenize the solution in the receiving vessel. With a manual pipette the same task will be very tiresome and also difficult to perform correctly when the mixing volume is small.



■ Reverse operation

If reverse operation is selected, the pipette first aspirates a volume larger than the set dispensing volume, and discards the excess volume after delivery. This function is recommended for a viscous sample liquid that tends to linger in the tip.

Unique Features of the MPA Series

*Easy calibration (adjustment) by yourself – User CAL function**

It would be expensive and difficult to use an outside calibration service frequently, wouldn't it. With the MPA series, you will be able to easily ensure your pipette accuracy (and consequently the precision of your analyses) by performing calibration at your own location whenever you want.*2 *3

★ Patent pending

This function can also correct error due to differences in tip characteristics, therefore allowing accurate pipetting with tips manufactured by other companies.*4

*2 For verification of dispensed volumes necessary for calibration, A&D's pipette accuracy testers are useful (see "A&D's pipette inspection devices" on the back page).

*3 A calibration report is provided for each unit at the time of shipping as well.

*4 A list of compatible tips is available.



Weight calibration using a balance

*Calibration and display in a unit of weight (mg)**

The MPA series enables you to calibrate and display the pipetting amount based on weight (mg) as well as volume (μL).

This will make it easier for you to ① handle liquids that need to be managed by weight, such as a diluted solution of a solid or powder; and ② control more precisely the dispensing amounts of high-viscosity liquids, which are prone to error with normal volume calibration.

★ Patent pending

Increased resistance to impacts from falls

Did you know that one of the most common repairs of electronic pipettes is for a broken LCD panel due to dropping? With padding set on the four corners of the head*, the LCD panel of the MPA series is designed to be protected from impacts from falls as much as possible.

★ Patent pending



Impact-absorbing pads



Operation
(plunger) key

User-friendly industrial design

The movement of the plunger can be controlled with the ball of the index finger instead of the thumb, while maintaining all fingers in a natural, effortless grip.

Specifications

Model	MPA-10		MPA-20		MPA-200		MPA-1200		
Capacity range	0.5 to 10.0 µL		2.0 to 20.0 µL		10 to 200 µL		100 to 1200 µL		
Performance *5 *6	Volume	1.0 µL	10.0 µL	2.0 µL	20.0 µL	10 µL	200 µL	100 µL	1200 µL
	Accuracy	±4.0%	±1.0%	±4.0%	±1.0%	±2.5%	±0.6%	±2.5%	±0.5%
	Repeatability (CV)	2.5%	0.4%	2.5%	0.4%	1.0%	0.15%	0.6%	0.15%
Operation mode	Standard mode (AUTO), Multiple dispensing mode (MD), Mixing mode (MIX), System setting mode (SYS)								
Program memory	9 programs								
Aspirating/dispensing speed	5 speeds								
Pipette drive method	High precision stepping motor								
Power saving function	Automatic power off after 10 minutes of inactivity								
Maximum number of pipetting cycles	1,800 (on a full charge) *5								
Charging time	Approx. 5 hours / 100%								
AC adapter	Input: AC 100 to 240V, Output: DC 5V / 1A, Plug shape: selectable								
Autoclave treatment	Possible for the lower part of the pipette (121°C, 2 atm, 20 minutes)								
Operating environment	15 to 30°C (59 to 86°F), 85%RH or less								
Battery	Lithium-ion battery 3.7V / 920 mAh								
Length	Approx. 280 mm								
Weight (including the battery)	Approx. 150 g				Approx. 160 g		Approx. 170 g		

*5 In standard mode with maximum aspirating and dispensing speeds

*6 For the MPA-10, specifications apply for volumes of 1.0 µL or above

Accessories / disposables

AX-BOX10/20/200 Tip box for the MPA-10/20/200*7

AX-BOX1200 Tip box for the MPA-1200*7

AX-CART-10/20 Tip cartridge for the MPA-10/20 (10 tip sets)*8

AX-CART-200 Tip cartridge for the MPA-200 (10 tip sets)*8

AX-CART-1200 Tip cartridge for the MPA-1200 (10 tip sets)*8

*7 Tips are not included

*8 One tip set includes 96 tips

A&D's pipette inspection devices

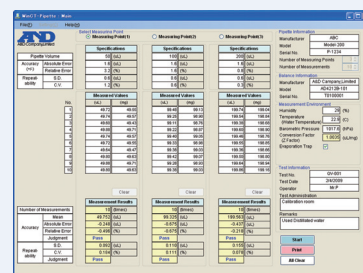
Using these devices, you can readily practice and record daily and periodic checks of your pipettes in-house, including calibration (allowing compliance with ISO8655).



AD-1690 leak tester



AD-4212B-PT pipette accuracy tester



WinCT-Pipette

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