

901 Intelligent Magnetic Stirrer

Instruction Manual

1. Brief Introduction:

Thank you for purchasing Apera Instruments 901 intelligent magnetic stirrer. This product has the following features:

- With microprocessor chip design, the stirrer enables users to adjust and store rotation speed. By pressing RPM button, two rotation speeds can be used alternately.
- It adopts ABS plastic housing and transparent coping design, and meets IP54 waterproof and dustproof standards.
- Powered by either AA batteries or DC 9V adapter, making it great for portable use in field or incubators.
- Alarm for low battery level
- Equipped with specially designed electrode clip, which can freely rise and fall. Users can put various kinds of electrodes in the clip, and use it as a stirring electrode holder in titration analysis or electrode measurements.

2. Specifications:

- Rotation speed range: 0 to 2300 rpm/minute (empty load)
- Max. working current: 150 mA
- Max. power consumption: 0.9 W
- Diameter of working area: \varnothing 100 mm
- Max. stirring volume: 1000 ml
- Dimension of electrode clip socket: \varnothing 16 mm (2 sockets) and \varnothing 13mm (1 socket)
- Distance of electrode clip's rise and fall: 0 to 90 mm
- Power: DC9V power adaptor or 4 pcs AA batteries
- Dimension and weight: 100 x 146 x 48 mm, 340g

3. How to Use:

- 1) Take out the white rubber cap and insert DC9V power adaptor, or screw out the bottom cap and insert 4 AA batteries.
- 2) Put the beaker or test bottle that contains solution on the working area, and put stir bar of proper size into it. The container should be placed on the center of the working area according to the circle line in order to let the stir bar spin smoothly.
- 3) When the green light flickers after pressing **ON/OFF** button, the stirrer is powered on, but the rotation speed is zero: press \triangle or ∇ button to adjust rotation speed, press RPM button (the green light flickers), then the original speed (factory default speed) will appear and user can also customize this speed: press RPM button again (the green light disappeared), the speed which has already been adjusted will be restored. Therefore, two kinds of speed can be adopted alternately by pressing RPM button.
- 4) Setting the stored rotation speed: press **ON/OFF** button to power on: press \triangle or ∇ button to adjust to desired speed, long press RPM button for 3 seconds until the green light flickers and then release the button, the speed is then stored. Press **ON/OFF** button to power off. Next time after powered on, just press RPM button again, and the

previously stored rotation speed will be appearing.

- 5) The highest rotation speed for this stirrer is at level 100, meaning the Δ button can be pressed for 100 times to reach the highest speed. But if the Δ or ∇ button is long pressed or held, the rotation speed can be changed much more quickly.

4. Notes:

- 1) If powered by batteries, please carefully cover on the white rubber cap of the DV power outlet.
- 2) If the bottom of container is rough, the stirrer will be shaking when stirring or couldn't stir properly. So users should replace it with a qualified container.
- 3) When using batteries to power on, if the power of battery is lower than 5V, the red indicator under the panel will be lighted, indicating that the stored rotation speed will become slower. So it's time for users to replace new batteries. However the speed can also be increased when pressing the Δ button. If user doesn't really care the accuracy of the stored rotation speed, the stirrer can still be used even if the red indicator is flickering until power is completely consumed.
- 4) In the situation of zero rotation speed, please don't long press the RPM button, otherwise the stored speed will be set to zero—press RPM button, if the green light doesn't flicker, it means rotation speed is zero — under that situation, users only need to press Δ button and reset it.
- 5) This stirrer comes with B835 and B628 stir bars (one for each), which can meet most common requirements. If users need other kinds of stir bars, please buy accordingly.

5. Accessories:

1. \varnothing 10 mm Holder	1 pcs
2. 220V/DC9V Adapter	1 unit
3. AA Battery	4 pcs
4. Electrode clip	1 pcs
5. Stir bar	2 pcs

6. Warranty

We warrant this stirrer to be free from defects in material and workmanship and agrees to repair or replace free of charge, at option of APERA INSTRUMENTS (Europe) GmbH, any malfunctioned or damaged product attributable to responsibility of APERA INSTRUMENTS (Europe) GmbH for a period of **two years** from the delivery. This warranty does not apply to defects resulting from actions such as misuse (violation of the instructions in this manual or operations in the manner not specified in this manual), improper maintenance, and unauthorized repairs. Warranty period is the time limit to provide free service for the products purchased by customers, not the service life of the product.

APERA INSTRUMENTS (Europe) GmbH
Wilhelm-Muthmann-Straße 18
42329 Wuppertal, Germany
Contact: info@aperainst.de
Website: www.aperainst.de
Tel. +49 202 51988998