

With prolonged use, the Digital Multi-MicroPlate Genie® mixer may become warm to the touch. The motor (UL Listed) will radiate a certain amount of heat that will be dissipated by the fan in the bottom of the unit.

Heat will not be transferred to your microplates. The fan (located in the bottom of the unit) directs air downward and out of the unit. As a result, room air is constantly drawn into the unit underneath the tray that holds the microplates, insuring that samples will not be heated.



DIGITAL MULTI-MICROPLATE GENIE®

TIMED MICROPLATE MIXER

OPERATING INSTRUCTIONS

Models SI-4000A through SI-4006A



CAUTION! Do not lift the Digital Multi-MicroPlate Genie by the tray.

CAUTION! Failure to follow these operating instructions can compromise the user's safety.

Care and Handling

The Digital Multi-MicroPlate Genie® mixer should be given the care normally required for any electrical appliance. Avoid wetting or unnecessary exposure to fumes. The finish can be washed with water (after unplugging) and soap or detergents, using a cloth or sponge. Keep the unit clean by immediately blotting any spills. Replacement parts are available through most laboratory equipment distributors or directly from Scientific Industries.

CAUTION! Unplug from power before cleaning. Do not immerse.

CAUTION! Do not use the Digital Multi-MicroPlate Genie in hazardous atmospheres or with hazardous materials.

CAUTION! Do not use the Digital Multi-MicroPlate Genie to mix flammable materials.



SPECIFICATIONS

The Digital MicroPlate Genie mixer is classified as "Installation Category 2"
Environmental: 0°C - 38°C (32°F-100°F), 95% Humidity max.

MODEL	POWER REQ'D	AMPS
SI-4000A	120V	0.65
SI-4001A	230V, No Plug	0.5
SI-4002A	230V, Euro Plug	0.5
SI-4003A	230V, British Plug	0.5
SI-4004A	230V, Swiss Plug	0.5
SI-4005A	100V/50-60Hz	1.0
SI-4006A	240V, Aust. Plug	0.5

Speed: 500-3000 RPM (60Hz)
500-2850 RPM (50Hz)

Time: 1 - 99 minutes or continuous

Weight: 3.0 Kg (6.6 lbs)

Vortexing Orbit: 1.0mm diameter

Maximum Load: 0.5 Kg (1.1 lbs)

Dimensions : 335x 240 x 165 mm
(D x W x H) (13.2 x 9.4 x 6.5 in)



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The Digital Multi-MicroPlate Genie® mixer is a version of the **ORIGINAL** VORTEX-GENIE® mixer produced by Scientific Industries. The Digital Multi-MicroPlate Genie has been optimized for use with almost any microplate, regardless of material or construction. The orbit of motion and the speed have been changed to achieve consistent mixing within all microplate wells. The quality and reliability, that you have come to know so well, are characteristics that are, by design, an integral part of all "GENIE™" products.

OPERATING INSTRUCTIONS

We recommend you retain the original packaging for 90 days in case you need to return the product for any reason to your distributor or Scientific Industries. Please refer to your warranty card for warranty details.

1.0 - Plug the line cord into a properly grounded electrical outlet. (120 VAC for the SI-0400A model; 230/240 VAC for the SI-0401A through SI-0404A models and SI-0406A; 100 VAC for the SI-0405A models)

Illuminated numbers will appear in the **TIME** and **SPEED** windows indicating that the unit is ON and ready for use.

2.0 - Place a microplate into the Digital Multi-MicroPlate Genie®. Tip the microplate slightly down to the left and back, and bank the corner into the two rubber bumpers. It is not necessary to tilt the plate excessively. Push the plate the rest of the way down onto the top of the Digital Multi-MicroPlate Genie® and release. The right side of the microplate will be held in place by the beveled edge on the right side.

3.0 - The Digital Multi-MicroPlate Genie® mixer has the following modes of operation:

3.1 - TIMED VORTEXING- (1 to 99 minutes)

The left display is time (in minutes) until automatic stopping of the unit. The right display is the set speed. "UP" represents the top end speed of the mixer. To activate the "UP" speed setting, press the UP arrow button beneath the **SPEED** window until maximum speed is displayed (3000 RPM for 60 hz, 2850 RPM for 50 hz.). Release the UP arrow button and press it again. "UP" will appear in the display window.

Press the **START/STOP** button to initiate a mixing cycle.

Press "START/STOP" button to start the unit.

When the unit is running, actual speed will be displayed.

3.2 - CONTINUOUS VORTEXING

Set time to "0" for continuous (non-timed) operation. Display will read "--". Press the **START/STOP** button to begin the mixing action. The mixer will run continuously. To stop the cycle, press the **START/STOP** button. To initiate a new continuous cycle, press the **START/STOP** button again.

3.3 – PULSED VORTEXING

The PULSED VORTEXING will work in CONTINUOUS or TIMED modes. To initiate the PULSE "ON" mode, press the **PULSE** button until **ON** is illuminated beneath the word **PULSE**. The **TIME** and **SPEED** displays will begin flashing. When display is flashing, you are setting the Pulse "RUN" time (left display) and the Pulse "STOP" time (right display). The **TIME** setting can range from 1/10th of a second to 99 minutes. When the rightmost decimal point is displayed, the setting is in

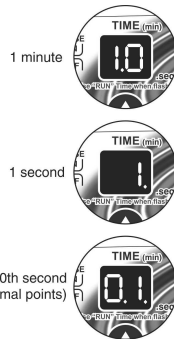
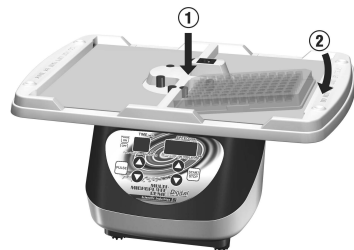


Fig. 1

seconds. When the rightmost decimal point is **not** displayed, the setting is in minutes. A setting of 0-1 second is adjusted in 1/10th of a second increments; 1-60 seconds are adjusted in 1 second increments; 1-10 minutes are adjusted in .5 minute (30 second) increments; 10-99 minutes are adjusted in 1 minute increments. (See Figure 1 for display readouts and corresponding time settings).

Set the desired PULSE "RUN" time. Next set the desired PULSE "STOP" time. Wait for the **TIME** and **SPEED** displays to stop blinking.

It is recommended to set the **SPEED** to "UP" when using the **PULSE** mode with "RUN" times of less than 5 seconds (all speeds will work, however time/speed regulation is best at the "UP" setting). "UP" represents the top end speed of the mixer. To activate the "UP" speed setting, press the UP arrow button beneath the **SPEED** window until maximum speed is displayed (3000 RPM for 60 hz, 2850 RPM for 50 hz.). Release the UP arrow button and press it again. "UP" will appear in the display window. Press the **START/STOP** button to initiate a mixing cycle.

Important note: When using the PULSE mode with "RUN" times of less than 5 seconds, SET speed will be displayed when the unit is running, instead of actual speed (Five seconds is required to display a stable speed).

3.4 - "SLEEP"

The mixer will automatically go into a "SLEEP" mode if the mixer is plugged in but not used for 10 minutes. The **TIME** and **SPEED** illuminated displays will go blank. Press the **START/STOP** button to "WAKE UP" the mixer.

Note: The speed control can be adjusted up or down during the mixing cycle, however, the TIME can only be adjusted before the cycle begins.

ACCESSORIES

The Digital Multi-MicroPlate Genie® ACCESSORY TRAY is a removable tray that attaches to the top of the Digital Multi-Microplate Genie. It attaches with the twist of a simple fastener, and instantly doubles the mixing capacity.

Parts Assembly List

To order parts for the Digital Multi-MicroPlate Genie® Mixer: Contact your local distributor or visit www.scientificindustries.com. Please specify Part No., quantity and electric voltage.

No.	Part No.	Description
1	EL-0400A-575	Digital Overlay
2	EB-0400A-500	Digital Timer Board
3A	OK-0400A-905	Motor 120V Assembly, Digital
3B	OK-0401A-905	Motor 230V Assembly, Digital
3C	OK-0405A-905	Motor 100V Assembly, Digital
4	OM-0400-201	Weight Block
5	PP-0400-400	Housing Top/Bottom
6	OM-4000-200	External Weight
7	OK-4000-900	Rubber Feet (4)
8	HWP0045	Bumper (1)
9	OM-0400-201	Mat (1)
10	ESP0011	Optical Sensor
11A	318-0510-02	120V Line Cord
11B	OK-0246-901	230V Line Cord, without Plug
11C	OK-0256-901	230V line cord, European Plug
11D	OK-0266-901	230V Line cord, British Plug
11E	OK-0276-901	230V Line cord, Swiss Plug
11F	OK-0286-901	100V Line cord
11G	ECP0021	Australian Plug (only)

