

# DIGITAL VORTEX-GENIE® 2

## FOR APPLIED BIOSYSTEMS

### OPERATING INSTRUCTIONS

Models SI-A536 through SI-A596



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The DIGITAL VORTEX-GENIE® 2 for Applied Biosystems is a specially configured mixer for Applied Biosystems' Microplate Protocols ONLY. This is an enhanced version of the **ORIGINAL VORTEX-GENIE®** Mixer produced by Scientific Industries. VORTEX-GENIE mixers are the "Gold Standard" for laboratory mixers. 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.

## APPLICATIONS

The Microplate Adaptor for Applied Biosystems' Microplate Protocols, securely holds Applied Biosystems' 96-well plates and 384-well plates. To review Applied Biosystems' protocols please visit their website at [www.appliedbiosystems.com/gameoverblobs](http://www.appliedbiosystems.com/gameoverblobs).

The 3-inch Platform part no. 0K-0500-902 (not supplied) may be purchased separately for use with single or multiple test tubes, beakers and various flasks.

The Pop-off Cup part no. 146-3011-00 (not supplied) may be purchased separately for use with virtually any size or shaped tube, from microtubes to those up to 40mm in diameter and 200mm in length.

## OPERATING INSTRUCTIONS

1.0 - Plug the line cord into a properly grounded electrical outlet.

**(120 VAC for the SI-A536 model; 230 VAC for the SI-A546 model; 100 VAC for the SI-A586 model).** Illuminated numbers will appear in the **TIME** and **SPEED** windows indicating that the unit is ON and ready for use.

2.0 - The DIGITAL VORTEX-GENIE 2 Mixer has the following modes of operation:

2.1 - "TT" (**TIMED TOUCH - 1 to 99 seconds**)

*This mode can only be used with the optional 3-inch Platform or Pop-off Cup.*

For procedures that require **short duration vortex mixing** from 1 to 99 seconds.

Or, for procedures that require **accurate and repetitive vortex mixing sequences** of 1 to 99 seconds each.

To initiate the "TT" mode, press the **MODE** button until **SEC** is illuminated beneath the word **TOUCH**. Press the UP/DOWN arrow buttons beneath the **TIME** window to set the desired mixing time. Next, set the speed control by pressing the UP/DOWN arrow buttons beneath the **SPEED** window. When you touch a tube or other vessel to the 3-inch Platform or Pop-off Cup, the mixer will start and run for 1 to 99 seconds, depending on the **TIME** setting. The mixer will automatically turn off at the end of the 1 to 99 second cycle. Releasing the pressure on the 3-inch Platform or Pop-off Cup and then re-applying the pressure will initiate another 1 to 99 second cycle. The mixing cycles will be precisely timed and you may initiate as many mixing cycles as you wish.

2.2 - "CT" (**CONTINUOUS TOUCH**)

*This mode can only be used with the optional 3-inch Platform or Pop-off Cup.*

The "CT" mode allows for operation that will continue indefinitely until you release pressure on the 3-inch Platform or Pop-off Cup.

To initiate the "CT" mode, press the **MODE** button until **SEC** is illuminated above the **START/STOP** text. Next, press and hold the DOWN arrow button beneath the **TIME** window until the illuminated display reaches "0". Upon releasing the button, the display will have two dash marks (--), indicating that **no time limit** is set. Set the speed by pressing the UP/DOWN arrow buttons beneath the **SPEED** window. Apply pressure to the 3-inch Platform or Pop-off Cup to initiate mixer. Release pressure to stop mixer.

2.3 - "FT" (**HANDS FREE TIMED - 1 to 99 minutes**)

The "FT" mode allows for unattended operation that is timed from 1 to 99 minutes.

In this mode, you may use any of the accessory attachments that are available for the

DIGITAL VORTEX-GENIE® 2 Mixer. Review instruction 3.0 before attempting to change attachments.

To initiate the "FT" mode, press the **MODE** button until **MIN** is illuminated above the **START/STOP** text. Next, press the UP/DOWN arrow buttons beneath the **TIME** window to set the desired mixing time. Next, set the speed control by pressing the UP/DOWN arrow buttons beneath the **SPEED** window. Press the **START/STOP** button to begin the mixing action. The mixer will run until the set time has elapsed. To stop the cycle before the set time has elapsed, press the **START/STOP** button. To initiate a new timed cycle, press the **START/STOP** button again.

2.4 - "FC" (**HANDS FREE CONTINUOUS**)

The "FC" mode allows for unattended operation that will continue indefinitely until you stop the cycle by pressing the **START/STOP** button. In this mode, you may also use any of the accessory attachments available for the DIGITAL VORTEX-GENIE 2 Mixer.

To initiate the "FC" mode, press the **MODE** button until **MIN** is illuminated above the **START/STOP** text. Next, press the DOWN arrow beneath the **TIME** window until the illuminated display reaches "0". Upon releasing the button, the display will have two dash marks (--), indicating that **no time limit** is set. Next, set the speed control by pressing the UP/DOWN arrow buttons beneath the **SPEED** window. Upon pressing the **START/STOP** button, the mixer will start and continue to run, unattended, until you once again press the **START/STOP** button. To restart the cycle, press the **START/STOP** button again.

2.5 - "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 and the **SEC** or **MIN** illuminated display will blink. 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.**

3.0 - To change accessory mixing attachments, the following sequence is to be followed explicitly.

3.1 - Turn the power OFF by unplugging the unit from the outlet.

3.2 - Grasp the installed attachment and pull straight up until it releases from the shaft. A technique of lifting the attachment with your finger tips while using your knuckles as a fulcrum will give you the leverage to remove the installed attachment component smoothly.

3.3 - Hold the part you wish to install so the "flat" part of the shaft is aligned with the "flat" of the receptacle in the attachment component. Alternatively, you may place the attachment component on the shaft and turn it until you feel the "flats" aligning.

3.4 - Press attachment component firmly downward until it "snaps" into place. The DIGITAL VORTEX-GENIE 2 Mixer is now ready to use with the newly installed accessory attachment. Plug the unit back into the electrical outlet. Follow instructions 1.0 through 2.5 for proper use of the mixer.

**Note: When installing the Microplate Adaptor press firmly down on the areas indicated on the adaptor base. DO NOT press down on sidewalls as this may bend the attachment.**

4.0 - With prolonged use, your DIGITAL VORTEX-GENIE 2 Mixer may become warm to the touch. It should not get HOT to the touch. The motor will radiate a certain amount of heat that will be dissipated by the cast zinc case.

**⚠ CAUTION! Do not lift your DIGITAL VORTEX-GENIE® 2 Mixer by its attachments.**  
All attachments are removable. They will pop off easily if you lift them, and snap back on again just as easily by aligning the flats and pressing down firmly.

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

### CARE AND HANDLING

Your DIGITAL VORTEX-GENIE 2 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. Refer to "Parts Assembly List" and enclosed multi-fold brochure.

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

### SPECIFICATIONS

The DIGITAL VORTEX-GENIE 2 Mixer is classified as "Installation Category 2"  
Environmental: 0°C - 38°C (32°F-100°F), 95% Humidity max.

MODEL	POWER REQUIRED	AMPS
SI-A536	120V/60Hz	0.65
SI-A546	230V/50Hz	0.5
SI-A586	100V/50-60Hz	1.0



Weight: 4 Kg (8.8 lb) - Zinc casting with shock absorbing feet.  
Base Dimensions: (DxWxH) 165x122x165mm (6.5x4.8x6.5in)

### PARTS ASSEMBLY LIST

#### To order parts for the Digital Vortex-Genie 2 for Applied Biosystems:

Contact your local distributor or visit [www.scientificindustries.com](http://www.scientificindustries.com). Please specify Part No., quantity and electric voltage.

Indicator No.	Part No.	Description
1	0K-0236-902	Bearing Retainer Kit
2	0K-0236-903	Eccentric Clamp
3A	318-0510-02	120V Line Cord
3B	0K-0246-901	230V Line Cord, without Plug
3C	0K-0256-901	230V Line Cord, European Plug
3D	0K-0266-901	230V Line Cord, British Plug
3E	0K-0276-901	230V Line Cord, Swiss Plug
3F	0K-0286-901	100V Line Cord
3G	ECP0021	Australian Plug (only)
4	EL-A236-575	Control Panel
5	ESP0005	Micro Switch
6	EBP0002	Digital Timer Board
7	0K-0236-904	Eccentric with Clamp Assembly
8	0M-0236-210	Bottom Closure
9A	0K-A236-915	Motor 120V Assembly
9B	0K-A246-915	Motor 230V Assembly
9C	0K-A286-915	Motor 100V Assembly
10	566-0028-00	Spring, Extension, Eccentric
11	SCP0056	Screws, Bottom Closure (4)
12	0K-0236-900	Shock Absorbing Feet with Screws (4)
13	SI-0513	Microplate Adaptor for Applied Biosystems
14	0K-0513-900	Replacement Elastic Bands (2)

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