



Eco-Safe Digester

Start-Up Manual

For E1 and E2 Series Digesters

Version 5.0.0 | Published: 06-16-2016



Eco-Safe Digester Start-Up Manual

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Preface

1. Document Revision History

Table 1. Revision History

Version	Date	Comments
5.0.0	June 16, 2016	Initial release of new manual supporting Generation 3 touchscreen technology.

2. Intended Audience

This manual provides information on start-up your Eco-Safe Digester high volume organic waste decomposition system.

This manual is for the E1 and E2 series of Eco-Safe Digesters. Please contact BioHiTech if you are unsure of which series Digester you have.

This manual is intended for individual operations personnel who support the machine on a day-to-day basis.

Note

Please be sure to read all sections of this manual prior to installing, operating, or repairing the Eco-Safe Digester.

3. Errors and Omissions

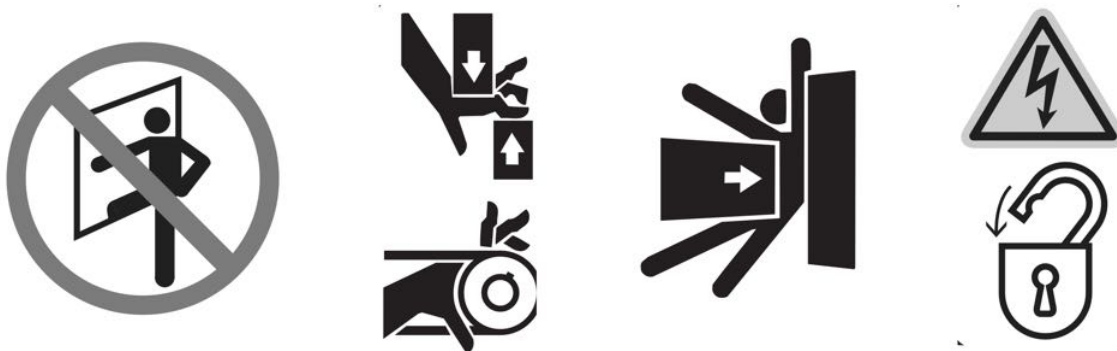
Please report any errors, omissions, or corrections to BioHiTech America.

BioHiTech America
80 Red Schoolhouse Road
Suite 101
Chestnut Ridge, NY 10977
Phone: 888.876.9300
Email: support@biohitech.com

For more information about contacting BioHiTech America, see Appendix A, *Contacting BioHiTech Support*.

Chapter 1. Introduction

1. Important Safety Notices



Moving parts can cause serious injury or death. Before attempting repairs, follow proper shutdown procedures and remove power before commencement of service.

Safety is of primary concern when installing, operating, or repairing the Eco-Safe Digester. If you are unsure of how to proceed with a repair or adjustment, consult this manual, a qualified maintenance technician, your local distributor, or BioHiTech customer support. For more information about contacting BioHiTech America, see Appendix A, *Contacting BioHiTech Support*.

Only trained and experienced personnel should attempt installation, maintenance, or repair work on this equipment. Follow all safety procedures including lock-out/tag-out procedures carefully. Ensure that any loose fitting clothing or jewelry is tucked in or not worn to avoid being pulled into the machine.

Before attempting repairs, follow proper shutdown procedures and remove power before commencement of service. Never attempt to clean or service any area of the machine without removing power at the main disconnect. Read, follow, and obey these safety rules!

2. The Eco-Safe Digester

The Eco-Safe Digester® is a high-volume organic waste disposal solution that breaks down food waste into greywater that can be safely discharged into standard wastewater disposal systems. The Digester uses a highly refined formula of microorganisms to decompose carbon-based food waste in a short period of time, without odor or pests.



The Eco-Safe Digester

The capacity of the machine refers to the average weight of food waste processed in a 24-hour period. It is important to note that while each Eco-Safe Digester model has a standardized maximum capacity specification, capacity can vary based on usage trends and waste content.

Table 1.1. Eco-Safe Digester 24-Hour Capacity

Model	Eco-Safe 4	Eco-Safe 8	Eco-Safe 12
Capacity	800 lbs.	1,600 lbs.	2,400 lbs.

2.1. Key Machine Components

The Eco-Safe Digester is comprised of several key components:

Agitator - The agitator is used to aerate the food mixture inside the mixing chamber so that food digestion is effectively maintained. Aerating the food mixture also provides the microorganisms ample amounts of oxygen for optimum performance.

Tower Lamp - The tower lamp provides an easy-to-under stand visual indicator for the status of the machine. For example, when the lamp is lit green, the machine has capacity available for more food. When the tower lamp is lit red, the machine is at full capacity.

Load Cells – A series of four high-resolution load cells continuously weigh the Digester and its contents. Weight tracking allows the machine to monitor its available capacity and is used for weight tracking purposes.

Touchscreen - A friendly, easy-to-use touchscreen allows operators to operate, configure, and monitor the Eco-Safe Digester.

Deodorizer Pump and Mist Nozzles - The deodorizer pump and mist nozzles are used to spray the deodorizer that is stored in the deodorizer tank. A deodorizing mist is activated each time the door is opened or closed. This system is designed to neutralize odor. In addition, it can be set to periodically spray during operation.

High Pressure Washing Pump - There are a series of high pressure washing pump nozzles within the drain discharge area that remove washing oil and fat residues to help prevent blockages in the perforated bottom of the mixing chamber.

Electric Solenoid Valves - These valves regulate the flow of water to various functions of the machine.

Trace Heater - The trace heater controls the temperature of the main chamber. In addition, it heats up the bottom of the machine to prevent oil coagulation.

Integrated Computer System - Each Digester is controlled by a state of the art computer that controls the configuration and operation of the Digester to create the ideal environment for microorganism performance.

Internet Ready - Finally, each Digester is internet-capable, allowing the machine to send and receive data from BioHiTech Cloud to deliver real-time reporting and remote operational capabilities for end-users.

Chapter 2. Start Up

1. Start-Up

The following procedure can be used to turn on and set-up the Eco-Safe Digester for the first time.

1. Make sure all breakers inside the Digester are in the *on* position. They are located inside the electrical box, on the left-hand side.



Power Breaker

2. Use the Power key next to the touchscreen and turn the key to the *on* position.



Power Lock

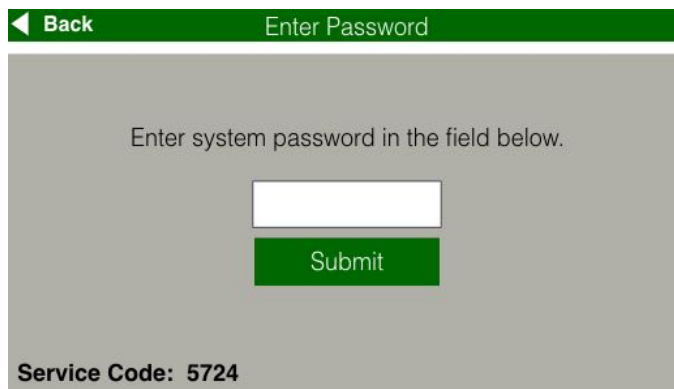
3. After the Digester has been powered on, the touchscreen should be displaying the **Dashboard Screen** as shown below. Note that it may take up to two minutes for the touchscreen to fully power on and become operational.



Dashboard Screen

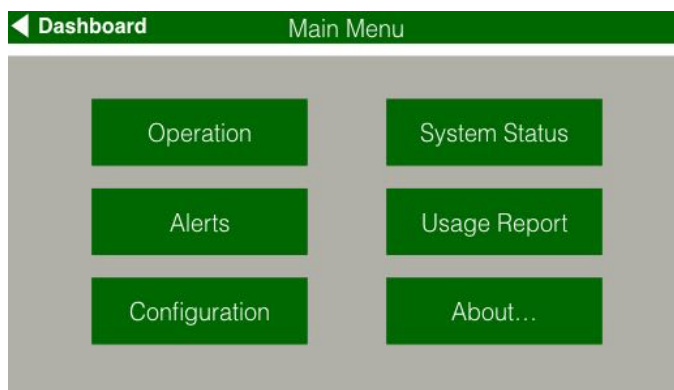
Touch the **Main Menu** button on the upper-right corner of the touchscreen to access the main menu.

4. You will be first prompted to enter your Digester password. For new machines, this password is **4150**. If this password does not work, please contact BioHiTech for assistance.



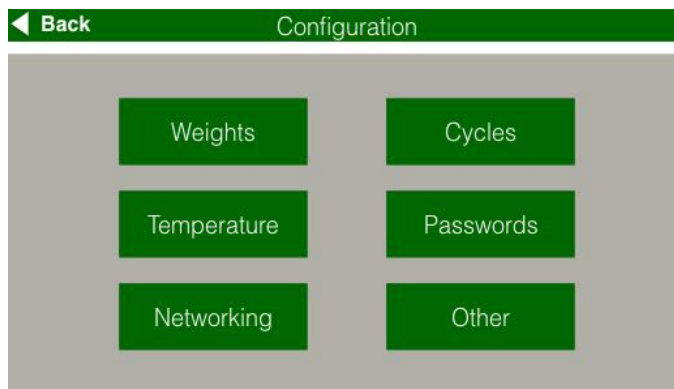
Enter Your Password

5. After entering your password, the *Main Menu* will be displayed as shown below.



Main Menu

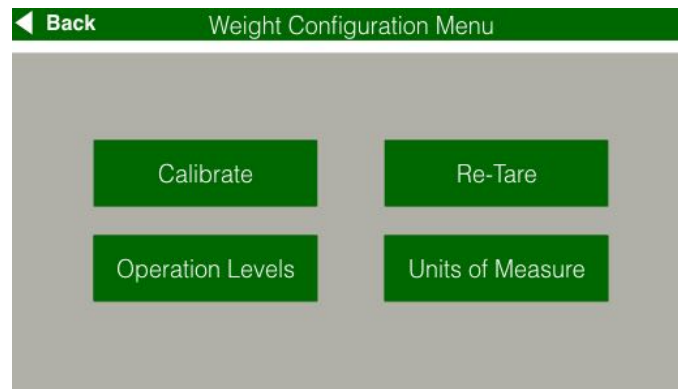
From the **Main Menu**, touch the **Configuration Menu** button to show the *Configuration Menu* as shown below.



Configuration Menu

6. From the **Configuration Menu**, press the **Weights** button and perform the following actions:
 - a. Weight Calibration
 - b. Configuration of Operational Levels
 - c. Setting the Weight Unit of Measure

For more information on weight calibration and configuration, see the Eco-Safe Digester Operations Manual.



Weight Configuration Menu

7. Optionally, from the *Configuration Menu*, press the **Cycles** to review and manage the agitation, deodorizer, and water cycles.

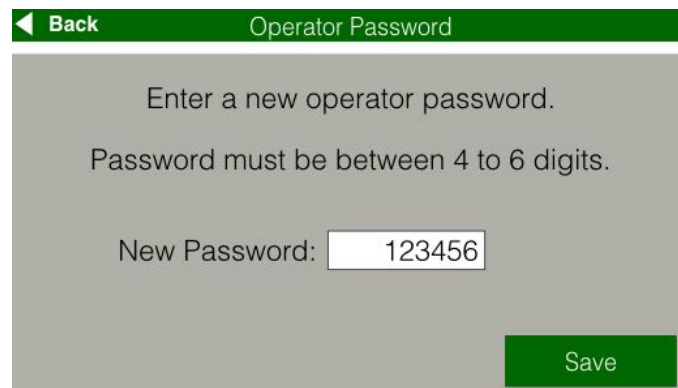
For more information on cycles configuration, see the Eco-Safe Digester Operations Manual.



Cycles Configuration Screen

8. Optionally, from the *Configuration Menu*, press the **Password** to change your touchscreen password.

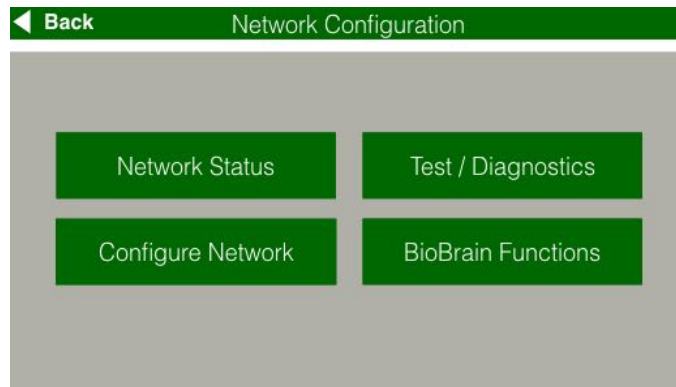
For more information on setting your touchscreen password, see the Eco-Safe Digester Operations Manual.



Password Configuration Screen

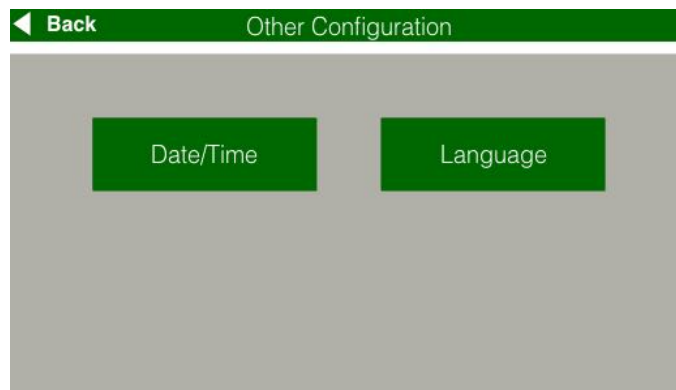
9. Optionally, from the *Configuration Menu*, press the **Networking** to configure your Eco-Safe Digester's network connection.

For more information on network configuration using the touchscreen, see the Eco-Safe Digester Operations Manual.



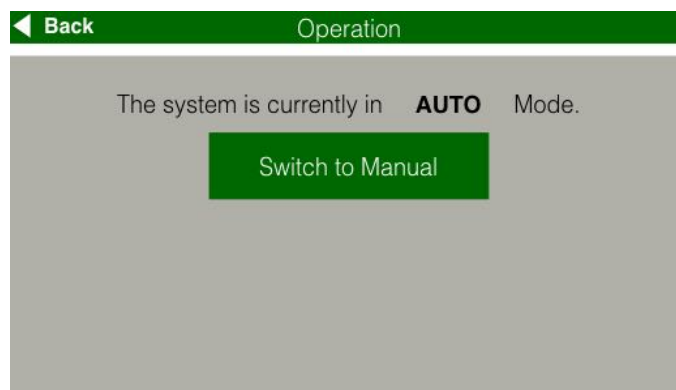
Network Configuration Menu

10. From the *Configuration Menu*, press the **Other** button and then press the **Date/Time** and **Language** buttons to set your Digester's date and time and preferred language settings.



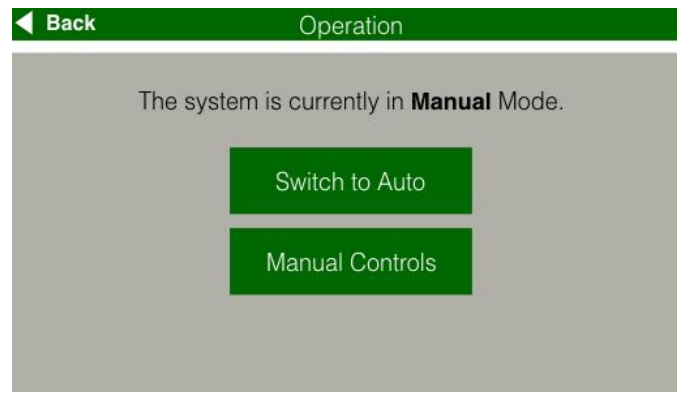
Date/Time and Language Configuration

11. From the *Main Menu*, press the **Operation** button and then press the **Switch to Manual**.



Operation Screen

12. Once the machine is in *Manual* mode, press the **Manual Controls** button so that the various machine components can be individually tested.



Operation Screen

13. From the **Manual Controls Screen**, test the individual components of the Digester. For more information about this screen, see the Eco-Safe Digester Operations Manual.



Operation Screen

- **Agitation** - Ensure that the agitator can properly run in forward and reverse.

Caution

Running the agitator while the food hatch door is open and is dangerous. Perform this test while the food hatch door is closed.

- **Shower** - Ensure that the shower function is operating. While the shower cycle is running, water should be spraying into the food chamber from the top.
- **Washing** - Ensure that the washing function is operating. While the washing cycle is running, water should be spraying into the drain pan. Water should be observed, exiting the drain pipe.
- **Discharge** - Ensure that the discharge function is operating. While the washing cycle is running, water should be exiting the drain pipe.
- **Deodorizer** - While the deodorizer is running, a fine mist should be spraying from the green nozzles located at the top of the food hatch area, inside of the feeding chamber.
- **Lamp Test** - Ensure that the tower lamp can cycle through all colors (green, yellow, and red).
- **Effluent Pump** - Ensure that the optionally installed effluent pump is operating. Not all units have an effluent pump.
- **pH Pump** - Ensure that the optionally installed pH pump is operating. Not all units have a pH pump..

14. Ensure that the Deodorizer tank is filled.

For more details about Deodorizer replenishment, see the Eco-Safe Digester Operations Manual.

15. Place BioMedia into the Digester.

For more details about BioMedia replenishment, see the Eco-Safe Digester Operations Manual.

16. Place Microorganisms into the Digester.

For more details about Microorganism replenishment, see the Eco-Safe Digester Operations Manual.

17. Ensure that the system is in *Auto* mode. Close the food door hatch on the Digester.

Congratulations!

The start-up process is now completed.

Within five minutes, the microorganisms will be thoroughly incorporated in the BioMedia and feedings can commence.

Appendix A. Contacting BioHiTech Support

If you need assistance with your Eco-Safe Digester, please contact BioHiTech. BioHiTech can be reached 24 hours per day, 7 days per week.

Customer Support can be used for:

- Replacement parts
- Ordering supplies
- Scheduling unplanned maintenance or service
- Scheduling clean outs
- Assistance with troubleshooting problem with your Digester

Note

Depending on warranty and support plans purchased, additional charges may apply.

Online Support

For optimal customer support, please submit a support request online at: biohitech.com. Customers should click the **CUSTOMER** button at the top of the web page.

Other benefits of using the Customer Portal include:

- Online bill payment
- Access to documentation
- Access to online training videos

Phone Support

Alternatively, BioHiTech America phone support can be reached at 888.876.9300, Press Option 2 at the prompt.

By Mail

Written correspondence may be directed to:

BioHiTech America
80 Red Schoolhouse Road
Suite 101
Chestnut Ridge NY 10977
888.876.9300

BioHiTech Europe
5th Floor
Greener House
66-68 Haymarket
London
SW1Y 4RF
+44 (0)203.553.8005

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