Dear FAST® System Owner

Congratulations! You have a FAST® (Fixed Activated Sludge Treatment) wastewater treatment system installed on your property.

At the forefront of green technology, the FAST® System by Biobiotics meets the highest industry treatment standards. Based on environmentally sound and simple scientific principles, the FAST® process is our continued commitment to improve small onsite treatment capabilities. You can take pride in knowing that, with the FAST® system, you will help ensure a clean environment for future generations.

Please take time to read this FAST® Owner’s Manual, you will learn important safety precautions, review essential information on proper use and care of your system. Designed for minimal operator attention, the FAST® System contains only one moving part — the blower. By consistently following a maintenance schedule and being mindful of what can go wrong, your system can provide years of dependable service.

Two things you can do to prolong the life of your system:

1. Have the FAST® system inspected and tank pumped as necessary.
2. Keep track of the substances entering your system, please review the list of Do’s & Don’ts in the section for each property.
3. Keep the FAST® System operating - do not turn off the blower.
4. Care for your drain field or irrigation system (if incorporated into your FAST® System).

If you should desire any further assistance, please contact BioBiotics at sales@biobiotics.com or call us at 800-753-FAST (3278).

Thank you again for using FAST®

Sincerely,

Biobiotics Team

OWNER’S MANUAL

GENERAL INFORMATION

All FAST® products are ETL certified for safety (electrical, environmental, etc.). One or more of the following patents protect this process: 2,969,359; 3,666,008; 3,972,580; 3,106,742. Certified by NSF International, the MicroFAST® /NitrFAST®'s, and the MiniFAST®'s Standard 40, Class 1 and Class 2 Standard 452 for wastewater treatment devices. If you have questions regarding any BioBiotics products, please contact us:

1-800-753-FAST (3278) or +1-913-422-0707
email: onsite@biobiotics.com

About FAST®

The FAST® System is a low oxygen activated sludge treatment system using naturally occurring bacteria (biomass) to treat swage for dispersion into the environment. This continuous process provides the biomass with waste (food) and air in a suitable environment. Dead bacteria and non-biodegradable waste settle and accumulate in the bottom of the tank for periodic removal. The FAST® process consists of the treatment module and blower. The biomass is carried in the water through the air supplied to the system. The air supply operates a draft tube to create an air lift. The air lift moves oxygen and waste throughout the media inside the tank. Bacteria grow on the media and digest the waste. A vent pipe expels harmful vapors created by the process.

INTRODUCING SUBSTANCES INTO THE SYSTEM: While the FAST® wastewater treatment system will process most waste produced by the average household, introducing large amounts of substances into the system may reduce the efficiency of the system or the treatment process by degrading the biomass. These substances can be grouped as organics, phosphorus compounds and limited-use substances. Please refer to the "DO'S AND DON'TS" section for a list with What You Can Put Down the Drain to maximize the system's efficiency and reduce the impact between substances.

IN GENERAL: If a substance is harmful to humans or is anti-biotic in nature, it should not be put into any septic system — including FAST®.

If you have a question regarding the effect of a particular substance on the FAST® system, call your BioBiotics service technician.

SYSTEM COMPONENTS

The FAST® wastewater treatment system typically includes the following components:

GENERAL LAYOUT

- A. Blower & Housing
- B. Control Panel
- C. Air Piping
- D. Ventilation and Observation Port
- E. Access
- F. FAST® Unit
- G. Tank
- H. Outlet to Drain

- WARNING: Adequate outlet pipe must be provided for primary and secondary zones. These may be ancillary equipment associated with your system: pump(s), before and after the FAST® unit, a distribution box, an irrigation system, an irrigation alarm, or a low oil detector.

DO NOT ENTER THE SEPTIC TANK:

- Not to enter a septic tank at all. All operations must be conducted while wearing rubber boots or using protective clothing. Avoid entering the septic tank while wearing rubber boots or using protective clothing. Do not enter the septic tank unless proper clothing and equipment are used.

- WARNING: Only qualified service personnel should service a septic tank, open access doors or open access panels on a septic tank, and remove sludge or any additional tank services that are required by local regulations.

WARNING: Avoid pumping down a tank for periods of heavy rain or when the ground water level is below the level of the cover plate in the tank. Pumping the tank under these conditions could cause the tank to fail and become damaged. The system is designed to allow a limited amount of rainwater to enter the system. The technician should check the system with a water flow meter to determine the capacity of rainwater that the system can accommodate.

As the FAST® system processes the raw domestic waste (producing sludge and sludge gas) and discharges the clarified water and non-biodegradable waste and settles and accumulate in the bottom of the septic tank for periodic removal. The periodic removal interval will change depending on the size of the system and varying local conditions

TANK PUMPING PROCEDURE: As Required by Measurement of Sludge Depth To determine if the tank needs pumping, the access port(s) to the primary zone (sealing compartment), insert a plastic measuring instrument, and take a reading of sludge depth. If sludge depth is in the range of 75% to 85% of the area below the port or if the area above the port is more than 75% of the area below the port, the connecting settling compartment to secondary zone (which contains the FAST® system) have the tank pumped out. All stricker, applicable regulations supervise these operational details.

Also, check the sludge depth of the secondary zone. Open the access port(s) to the secondary zone and measure sludge depth. If sludge depth in the secondary zone is greater than 15” (15”), it is necessary to pump the bio-solid(s) out.

- WARNING: Always pump out both zones of the system whenever one zone requires it.

1. Open the access port(s) and insert the hose. Be sure to pump out both settling chamber maintenance.

2. Once the unit has been pumped out, immediately refill the tank with clean water to reduce the risk of tank floating and to minimize the impact on treatment. Close the access port(s) after making sure it is watertight.

3. Property disposal of the solids in compliance with local and state regulations.

SEASONAL INTERMITTENT USE PROPERTIES: FAST® wastewater treatment system will function normally during short periods of inactivity, even if there is no wastewater flowing to the system. The power to the system should be left on during this time. Systems in periods of extended intermittent use and suggested operational procedures:

- Summer use (shut down all winter) - Blower should be turned off at end of summer and restarted upon return.
- Weekend property (used at least once every three weeks) - maintain normal operation.
- Vacation FAST®'s - Blower times feature on control panel. Consult your service provider and local regulations prior to any system changes.

Check with local regulations before attempting. If property is seldom used and blower is shut down completely for an extended period of time (i.e. summer use only), we suggest a monthly "blower cycle" through your local service provider resetting the blower a week or two prior to returning to the property.

WARNING:

- Introductory mixing or damaging substances into the FAST® system may void the warranty.

LIMITED WARRANTY

BioBiotics, Inc. warrants every new residential FAST® system against defects in materials and workmanship for a period of ten years after installation or (at the option of the consumer) for the remainder of the first owner's life. During the warranty period, BioBiotics, Inc. will repair or replace, at no charge to the owner, any part that is found to be defective in materials or workmanship. This warranty applies to the original owner and any subsequent owner. This warranty is void if the equipment has been altered in any way. This warranty is non-transferable and may not be assigned.

During the warranty period, if a part is defective or fails to perform as specified when operating at design conditions, or if the equipment has been installed in accordance with the instructions, repaired and maintained in accordance with the instructions, and a claim is filed within the time limits set forth below, this warranty will be effective. This warranty specifically excludes the cost of labor and materials for installation of parts furnished under this warranty and necessary manuals such as filters or baskets shall be borne by the owner. This warranty does not cover general system repairs, service storms which have been damaged by flooding or any components that have been disassembled by unauthorized persons, improperly installed or damaged due to altered or unapproved wiring or ventilation system. This warranty applies to systems that have been installed and accepted as per instructions. The equipment as delivered by BioBiotics, Inc. will be in good working order. The equipment as delivered will have the ability to perform as designed to the extent it is delivered in accordance with the specifications. This warranty is conditioned upon the equipment being properly installed, repaired or replaced, if necessary, by an authorized service technician. BioBiotics, Inc. reserves the right to make changes, modify or recall any construction and/or design of the FAST® tank or FAST® system, if necessary during the warranty period. This warranty applies only to new tank for a period of ten years, subject to the limitations described above. The warranty applies to components which have been identified by BioBiotics, Inc. as being warranted during the warranty period. This warranty does not apply to repairs or modifications which are not covered or paid for by the owner.

This warranty is in lieu of all other WARRANTIES EXPRESS OR IMPLIED. BIOBiotics SPECIFICALLY DISCLAIMS ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. NO OTHER WARRANTY, EXPRESSED OR IMPLIED, IS IMPLIED OR IMPLIED, APPLIES TO THIS PRODUCT OR ANY OTHER WARRANTY OR TO ASSEMBLE FOR BIOBIOTICS, INC. ANY LIABILITY IN CONNECTION WITH THE SALE OF THIS PRODUCTS.

Contact your local distributor for parts and service.

EXTENDED SERVICE AFTER THE FIRST TWO YEARS

In the event you require service beyond the ten year period of this limited warranty, please contact your local service technician. The extended service warranty shall provide the same service checks to the initial FAST® service warranty provided in the first ten years of this limited warranty. The service technician shall perform any additional service required by local regulations. Consented service to NSF certified systems should be performed twice per year.
Do’s & Don’ts

OUTSIDE

DO’S & DON'TS YARD SAFETY

Regular Maintenance should be performed by a qualified service company for ensuring the long life of your system.

BLOWING OPERATION

Do not turn off blower. Notify your maintenance provider if you detect problems with the blower or if you are leaving the property for an extended period (>3 weeks).

ALARM

If alarm sounds, press the “RESET” button on the front of the panel. Contact your service provider (info should be on the control panel and/or the blower) or contact Bio-Microbics (913-422-0707) as soon as possible.

DOWNSPOUTS

Avoid placing downspouts over any part of your septic system; as this may cause damage.

TRAFFIC / LANDSCAPING

Do not drive over any portion of your system (tank, piping, drain field) except for normal yard traffic, i.e. lawn mowers, etc. Tanks (H>20) can be made for under roadways, driveways. If possible, design the traffic by using a fence or create a landscaped area with shallow root plants (ornamentals, bushes, decorative grasses, and/or flowers). Don’t plant trees near any portion of your system (within 30’).

STRUCTURES

Do not build patios, carpentries, or other structures over any part of your septic system; as this may cause damage.

VENTS / ODORS / INTAKES

Keep vent and blower housing clear of debris, such as leaves and snow. Contact your service provider if you detect septic odors, as this may indicate a problem with the system.

BIO SOLIDS (SLUDGE) REMOVAL

To determine when pump out is required, a maintenance provider should measure the biosolids level(s) in the tank(s) on a regular basis. Please see the service manual for specific procedures.

DON’T PUT THESE ITEMS DOWN THE DRAIN

FOOD WASTES

• Animal bones / egg shells
• Coffee grounds / corn cobs
• Melon rinds / fruit peels
• Skin / home brewery waste

PERSONAL CARE PRODUCTS

• Bandages / condoms
• Disposables diapers
• Sanitary napkins / wet wipes

CHEMICALS / TOXINS

• Automotive fluids
• Caustic cleaners
• Harsh detergents
• Floor stripper
• Herbicides / pesticides
• Medications / drugs
• Paints - oil-based
• Quaternary ammonia
• Solvents / thinners

OTHER PRODUCTS

• Cat litter
• Cigarette butts
• Cloth towels / rags
• Film developing waste
• Metal / plastic objects
• Modeling clay
• Paper towels / scrap
• Plastic bags
• RV waste
• String / yarn / nylon
• Sticks / yard waste

Refer to this list to help keep your system functioning properly.

RECORD KEEPING

Keep copies of all system drawings/plans of the site/installed equipment/service records with all other home appliance documents. Record all applicable information.

LAUNDRY/WATER USAGE

Spread wash loads throughout the week. Instead of liquid fabric softener, dryer sheets should be used. Use a low-sud, biodegradable detergent, like the Mighty Mike® Laundry Detergent from Scienco/FAST (www.sciencofast.com).

LEAKY FIXTURES

Large quantities of water are added to your wastewater system when you have leaking fixtures. Timely detection and repair can help to maximize the life of your system, especially the drain field.

WATER SOFTENERS

The FAST® process may tolerate discharge from properly operating softeners that backwash as needed based on water usage (DRR) vs. timer operated systems. If allowed by your local regulatory authority. However, these discharges can possibly damage other parts of the septic system.

FOOD WASTES

Garbage disposal waste is acceptable - if allowed by your local regulatory authority. However, it may lead to more frequent removal of solids from your septic tank. For large quantities of food, please dispose of in the garbage.

FATS, OILS, & GREASE

Be aware too much grease (i.e. animal fats, vegetable oils, lard, etc) down the drain may overload or prevent the bacteria from fully breaking down the waste.

DISINFECTANTS / CLEANERS

Use citric acid, chlorine, and/or other biodegradable cleaners according to the manufacturer’s recommendations. Products containing quaternary ammonia or other oil-based cleaners should not be used. Use drain cleaners as a last resort to unblock pipes.

MEDICINES

DO NOT FLUSH THEM DOWN ANY DRAIN. All antibiotic medicines are harmful to treatment quality. Unused medications should be returned to the pharmacy, doctor, or thrown away in the trash.

NOTE: As the human body absorbs ≤3% of these medications, please notify your service provider of residues in the house. This could reduce troubleshooting efforts and possibly your maintenance bill.

PLEASE BE AWARE OF THE FOLLOWING:

• Only qualified service persons should access septic system.

• DO NOT connect any appliances/services to the septic tank. Contact your service provider before connecting.

• DO NOT flush anything that does not fit in your septic tank.

• DO NOT turn off blower.

• DO NOT add solvents or cleaning products.

• DO NOT dispose of trash in the septic tank.

• DO NOT add any oil-based products.

FLOOR DRAINS FROM GARAGE AND WORKROOMS

Should be diverted away from your septic system. Items like petroleum-based oils, gas, and saw dust should never enter the system.

SEPTIC TANK ADDITIVES / ENZYMES

The wastewater in the system contains all the required bacteria for proper operation. Additives are unnecessary, and may do more harm than good.

PAPER PRODUCTS

Use single-or double-ply, non-quilted, white toilet paper. Some color dyes in the paper cannot be eaten by natural bacteria. Non-bleached paper (brown in color) takes longer to break down and can therefore increase your biosolids pump out frequency. Avoid flushing paper towels, napkins, wipes, or other thicker paper material.

CHEMICALS / TOXINS

• Insecticides
• Pest control products
• Pet/animal care products
• Econo-leaf lawn treatment

OTHER PRODUCTS

• Cat litter
• Cigarette butts
• Cloth towels / rags
• Film developing waste
• Metal / plastic objects
• Modeling clay
• Paper towels / scrap
• Plastic bags
• RV waste
• String / yarn / nylon
• Sticks / yard waste

Please contact personal physician(s). Wastewater in the system contains all the required bacteria for proper operation. Additives are unnecessary, and may do more harm than good.

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• Animal bones / egg shells
• Coffee grounds / corn cobs
• Melon rinds / fruit peels
• Skin / home brewery waste

PERSONAL CARE PRODUCTS

• Bandages / condoms
• Disposables diapers
• Sanitary napkins / wet wipes

CHEMICALS / TOXINS

• Automotive fluids
• Caustic cleaners
• Harsh detergents
• Floor stripper
• Herbicides / pesticides
• Medications / drugs
• Paints - oil-based
• Quaternary ammonia
• Solvents / thinners

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