

GE Transducer Cleaning and Disinfection Guidelines

GE ultrasound transducers are designed for reliability and durability. By following the proper care and handling procedures, you can help maximize transducer performance and product life.



Transducer Cleaning:

These generalized cleaning instructions are indicated for use with all GE transducers. Cleaning is defined as the removal of all visible soil or contaminants from the transducer. All transducers must be cleaned after every use – this is an essential step before disinfection or sterilization is attempted.

1. After every exam, ensure the acoustic coupling gel is completely wiped off the transducer. Transducers should not be left soaking in gel.
2. Remove any transducer cover, biopsy guides, or protective devices from the transducer.
3. **Disconnect transducers from ultrasound system prior to cleaning or disinfecting.** However, when performing high level disinfection of GE ultrasound probes with the trophon® EPR, it is not necessary to disconnect the probe from the ultrasound system. The probe should then be inactive (not selected) during the disinfection cycle.
4. Use a moistened soft cloth or wipe to remove any remaining contaminants that remain on the transducer or cable. Do not re-use cloths or wipes. Soap, detergents or enzymatic cleaners should be used in accordance with the manufacturer's instructions. GE is not responsible for damage incurred during the cleaning process for products which no material compatibility evaluation has been conducted.
5. If rinsing is required, use caution not to expose the system connector to moisture or liquids.
6. Use a lint-free soft and clean dry cloth or wipe to thoroughly dry the transducer and cable.

Notes: Cleaning products should be as close to neutral pH as possible. Any gel, cleaning or disinfectant products containing surfactants, methanol, ethanol, benzyl or methyl alcohol, bleach, methyl or ethyl paraben, polyethylene glycol, mineral oil, lubricant oil, oil based lotions, acetone, ammonia, anhydrous ammonia, iodine, iodine compounds, acids with 5 pH or greater may damage or discolor your transducer. The use of any type of brush is not recommended as bristles may damage lens materials. Ultrasonic cleaning is not approved for GE transducers.

Choosing a disinfectant: When choosing a disinfectant, determine the required level of disinfection based on device classification. If the possibility of cross-contamination or exposure to unhealthy or non-intact skin exists, then high-level disinfection should be performed. Good hand-hygiene practice is highly recommended to help further reduce the risk of cross-contamination.

Warning: Disinfectant wipes and topical spray products are not FDA-cleared, high-level disinfectants. These products do not provide adequate protection should the transducer become cross-contaminated or in contact with unhealthy or non-intact skin.



Cleaning and disinfection of transducers should be done before use and between patient exams. Always refer to the disinfectant manufacturers guidelines, this website or your system Basic User Manual for information about approved disinfectants. If you need assistance locating a system Basic User Manual, you can access the website below:

<http://apps.gehealthcare.com/servlet/ClientServlet?REQ=RNEW&MODALITY=US>.

For additional information about cleaning and disinfection, refer to the recommendations of the Association for Professionals in Infection Control (APIC), the U.S. Food and Drug Administration (FDA), and the U.S. Centers for Disease Control (CDC). For country specific disinfection regulations, check with your local regulatory infection control authorities.

A validated high-level disinfection process combined with the use of a sterile gel and a transducer cover is an accepted method of infection control for ultrasound transducers. Adequate records or a logbook detailing the time, date, disinfection method, and verification of disinfectant effectiveness or test results are recommended. For more information about establishing an evidence-based disinfection protocol for your practice, refer to the FDA, CDC, HICPAC, APIC or the Joint Commission websites.

Note: Always consult this website or your ultrasound system Basic User Manual for a list of compatible disinfectants.

- Prior to disinfection, transducers should be clean and dry
- If a manual disinfection process is utilized, ensure that all staff is properly trained and disinfectant instructions for use are followed precisely
- Where possible, GE recommends the use of an automated system for disinfection of ultrasound transducers that is FDA-cleared and provides a consistent disinfection process and minimizes the risk of exposure to disinfectants. Visit GE Accessories & Supplies for transducer disinfection solutions at: http://www3.gehealthcare.com/en/Products/Categories/Accessories_and_Supplies

Note: GE does not substantiate the effectiveness of recommended disinfectant or sterilization products. Questions regarding efficacy, instructions for use, and proper handling should be directed to the disinfectant manufacturer. GE publishes a list of material compatible disinfectants. Do not use non-GE approved disinfectants or products that have not been evaluated by GE for material compatibility. Damages linked to the use of disapproved chemicals are not covered under product warranty or service contract.

Care and Handling:

The following recommendations mentioned below help to reduce preventable transducer damage to help support a long life of service for your GE transducers. **WARNING: Failure to follow these precautions can result in serious injury and/or equipment damage.**

DO:

- Handle all transducers with extreme care
- Ensure that connected transducers are placed in the probe holder yoke when not in use
- Utilize wall-mounted transducer holders with lens facing up
- Visually inspect transducers and cables for damage prior to connecting to ultrasound system. If a transducer appears to be damaged, discontinue use and notify your GE Customer Service Representative. Possible damage may include, but is not limited to:
 - Bent or broken probe pins
 - Cable cuts or splitting
 - Surface cracks
 - Exposed wires or shielding
 - Fluid leaks
- **Disconnect transducers from ultrasound system prior to cleaning or disinfecting.** However, when performing high-level disinfection of GE ultrasound probes with the trophon EPR, it is not necessary to disconnect the probe from the ultrasound system. The probe should then be inactive (not selected) during the disinfection cycle
- Clean and disinfect all transducers following procedures contained in the system Basic User Manual
- Ensure you follow the chemical manufacturer recommendations regarding use and handling of the chemical
- Always use bite guards with Transesophageal (TEE) probes

DO NOT:

- Do not drop or knock the transducer or transducer lens. Impacting the probe lens face can cause fractures of the crystal elements leading to failure
- Do not leave transducers in places where they are subjected to being knocked over or dropped
- Ultrasonic cleaning is not approved for GE transducers
- Do not drop transducers into holders or disinfectant containers with lens face down
- Do not let transducer cables dangle loosely from the ultrasound system where they might be caught in the casters while moving
- Do not immerse transducers deeper than permissible levels. Never immerse the connector or adapter into any liquid
- Do not apply excessive bending or pulling force to the transducer cable
- Do not kink, tightly coil, or apply excessive force on the probe cable or TEE endoscope shaft. Insulation failure may result

Transducer Management

Connection:

Before connecting GE transducers, read the following:

Caution: Connect and disconnect transducers only if at least one of the following conditions is effective:

- Ultrasound system power is either Off or in Stand-by mode
- The ultrasound system is in Freeze mode!

To connect a transducer, position the connector as shown in the Basic User Manual. Insert the connector into one of the receptacles and turn the locking lever clockwise.

Important: Do not turn locking lever if resistance is felt. If this is the case, remove the transducer connector and check for misaligned or damaged pins. Probes with damaged connector pins should be taken out of service immediately.

Storage/Transportation:

Each transducer should be supported in its own probe holder on the console. Currently there are no provisions to store additional transducers on the system. If a carrying case is provided with your transducer, always use the carrying case to transport the transducer from one site to another.

Warning: Placing a dirty or contaminated transducer in a carrying case or shipping carton will contaminate the foam insert.

If possible, use a rigid container with a lid that secures the system connector in place so as not to damage the transducer head or lens. Place a soft cloth in the bottom of container to prevent movement during transport.

For TEE transducers: Do not coil the flexible shaft too tightly. Coil should be one foot or greater in diameter.

For a list of products offered through GE for care, storage and handling of probes visit the GE Accessories and Supplies online at: http://www3.gehealthcare.com/en/Products/Categories/Accessories_and_Supplies

Imagination at work

www.gehealthcare.com. Product may not be available in all countries and regions. Contact a GE Healthcare Representative for more information.

Data subject to change.

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