

Chapter 15

Maintenance

This chapter provides information and instructions for storing, transporting, cleaning, and disinfecting the probe.

Maintaining the Probe

Storing and Transport



CAUTIONS!

- Avoid storing the probe where the probe or its cable could be easily damaged.
 - Avoid transporting the probe unless it is well supported and secured. Secure the cable tightly to the probe when transporting it or carrying it. Avoid swinging the probe or supporting the probe solely from its cable.
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The probe should be stored in clean, dry, and moderate temperature conditions.

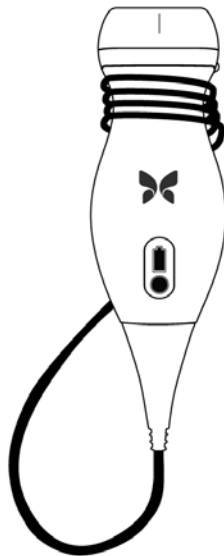
Follow these steps for daily storage and transport:

- When storing the probe, wrap the cable around the probe so that there is some slack at the bottom of the probe. See Figure 15-1 for reference.
- Avoid placing or storing in areas of excessive hot or cold temperatures or direct sunlight.
- Avoid placing or storing with other equipment or objects that may inadvertently damage the probe, particularly the face.
- Avoid contamination by:
 - Following the cleaning and disinfecting instructions. See “Cleaning and Disinfecting the Probe” on page 15-2.
 - Making sure the equipment is dry.
 - Carefully handling the probe to prevent damaging the equipment.

Note — Do not expose internal electronics temperature to temperatures exceeding 70°C.

For information on environmental operating conditions, including brief storage temperature conditions, see Table 18-4.

Figure 15-1 Wrapping the Cable



Cleaning and Disinfecting the Probe

This section provides information and instructions for properly cleaning and disinfecting the Butterfly iQ™ probe. Following these instructions will also help to avoid damaging the probe during cleaning and disinfection. After each exam, clean and disinfect the Butterfly iQ™.



CAUTION!

Only clean the probe with approved cleaning products and wipes. Improper cleaning or disinfection methods or using non-approved cleaning and disinfecting solutions may damage equipment.

Cleaning the Probe



CAUTIONS!

- Prevent any fluid from entering electrical or metal portions of the cable's connector during the cleaning and disinfecting process. Damage due to fluid in these areas may result.
 - Prevent any fluid from splashing on your mobile device's touchscreen during scanning and during cleaning. Damage due to fluid may result.
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➤ **To clean the probe:**

1. After each use of the probe, use one of the recommended liquid saturated wipes (Super Sani-Cloth® Germicidal Disposable Wipes by PDI, Inc., Super Sani-Cloth® AF3 Disposable Wipes by PDI, Inc., or a lint-free cloth moistened with water) to remove ultrasound transmission gel from the probe.
2. Disconnect the probe from the mobile device.
3. Wipe the probe, strain relief, cable, and connector with one of the recommended liquid saturated wipes for one (1) minute and until visibly clean.
4. Change the wipes as necessary and repeat the above step until the probe is visibly clean.
5. To dry the probe, use a soft cloth, blot the lens dry. Do not wipe the lens. Dry the rest of the probe, cable, strain relief, and connector.
6. Visually inspect the probe in a well-lit area to ensure all surfaces are clean. If the probe is not clean, repeat the cleaning steps above.
7. Dispose of cleaning material in accordance with all applicable regulations.

Disinfecting the Probe

After cleaning the probe, you must disinfect the probe.

It is recommended that you use Super Sani-Cloth® Germicidal Disposable Wipes by PDI, Inc or bleach (0.6% Sodium Hypochlorite) and clean non-linting wipes.



WARNING!

Always inspect the probe before and after cleaning, disinfection, or use. Check the lens face, cable, housing, seams, and connector for signs of damage such as cracks, chips, abrasions, or leaks. To avoid the risk of electrical hazards, do not use the probe if there is any sign of damage.

➤ **To disinfect the probe using Super Sani-Cloth® Germicidal Disposable Wipes by PDI:**

1. Wipe the probe, cable, strain relief, and connector with a Super Sani-Cloth® Germicidal Disposable Wipe. Use additional fresh wipes as needed.
2. Make sure the treated surface remains visibly wet for a minimum of two (2) minutes paying attention to seams, gaps, gasket material, and recessed areas.
3. Use additional fresh wipes as needed to ensure continuous two (2) minutes of contact time.
4. Allow to air dry.
5. Once clean and disinfected, visually inspect the probe, strain relief, cable, and connector for signs of damage or wear.

➤ **To disinfect the probe using bleach (0.6% Sodium Hypochlorite) and clean non-linting wipes:**

1. Wipe the probe, cable, strain relief, and connector using a clean non-linting wipe *wetted* (damp but not dripping) with bleach (0.6%). Use additional fresh wipes as needed.
2. Make sure the treated surface remains visibly wet for a minimum of ten (10) minutes paying attention to seams, gaps, gasket material, and recessed areas.
3. Use additional fresh wipes as needed to ensure continuous ten (10) minutes of contact time.
4. Allow to air dry.
5. Once clean and disinfected, visually inspect the probe, strain relief, cable, and connector for signs of damage or wear.


To reduce the risk of contamination and infection, it is important to choose the appropriate level of disinfection, based on prior exam usage and whether the use is classified as non-critical or semi-critical. Use Table 15-1 to determine the appropriate class and then follow the appropriate intermediate-level or high-level disinfection procedure.

Table 15-1 Probe Disinfection Class, Use, and Method

Class	Use	Method
Non-Critical Class	Touches intact skin	Cleaning followed by intermediate-level disinfection (ILD)
Semi-Critical Class	Touches mucous membranes and non-intact skin	Cleaning followed by high-level disinfection (HLD)

Intermediate-Level Disinfection (ILD)

It is recommended that you use Super Sani-Cloth® Germicidal Disposable Wipes by PDI, Inc. or bleach (0.6% Sodium Hypochlorite) and clean with non-linting wipes.

 **WARNING!** Always inspect the probe before and after cleaning, disinfection, or use. Check the lens face, cable, housing, seams, and connector for signs of damage such as cracks, chips, abrasions, or leaks. To avoid the risk of electrical hazards, do not use the probe if there is any sign of damage.

➤ **To disinfect the probe using the Intermediate-Level Disinfection (ILD) method with Super Sani-Cloth® Germicidal Disposable Wipes by PDI, Inc.:**

1. Wipe the probe, cable, strain relief, and connector with a Super Sani-Cloth® Germicidal Disposable Wipe. Use additional fresh wipes as needed.
2. Make sure the treated surface remains visibly wet for a minimum of two (2) minutes paying attention to seams, gaps, gasket material, and recessed areas.
3. Use additional fresh wipes as needed to ensure continuous two (2) minutes of contact time.
4. Allow to air dry.
5. Once clean and disinfected, visually inspect the probe, strain relief, cable, and connector for signs of damage or wear.

➤ **To disinfect the probe using the Intermediate-Level Disinfection (ILD) method with bleach (0.6% Sodium Hypochlorite) and clean non-linting wipes:**


1. Wipe the probe, cable, strain relief, and connector using a clean non-linting wipe *wetted* (damp but not dripping) with bleach (0.6%). Use additional fresh wipes as needed.
2. Make sure the treated surface remains visibly wet for a minimum of ten (10) minutes paying attention to seams, gaps, gasket material, and recessed areas.
3. Use additional fresh wipes as needed to ensure continuous ten (10) minutes of contact time.
4. Allow to air dry.
5. Once clean and disinfected, visually inspect the probe, strain relief, cable, and connector for signs of damage or wear.

High-Level Disinfection (HLD)

It is recommended that you use Cidex[®] OPA by Ethicon US, LLC.

Note — Perform the following steps to make sure that your probe is compatible with High-Level Disinfection (HLD) before using the HLD method.

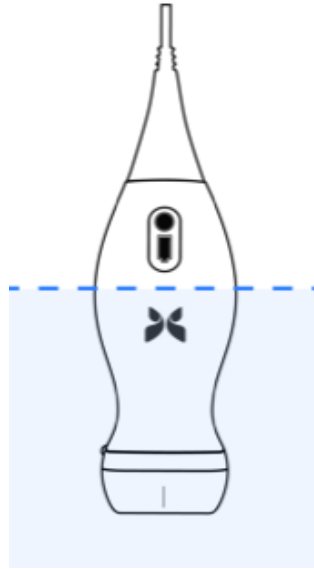
➤ **To make sure your probe is compatible with HLD:**

1. Tap  to display the **Settings** screen.
2. Tap **My iQ** to display the **My iQ** screen.
3. Ensure that the **High-Level Disinfection Supported** line indicates **Yes**.
4. Proceed with HLD only if supported on your probe.
5. Disconnect the probe from the mobile device.

➤ **To disinfect the probe using the High-Level Disinfection (HLD) method:**

1. After cleaning the probe, you must disinfect the probe. It is recommended that you use Cidex[®] OPA high-level disinfection solution.
2. Prepare Cidex[®] OPA high-level disinfection solution for use per the manufacturer's instructions. Fill a tray or basin with the disinfectant solution at room temperature (minimum temperature of 20°C) to a level allowing immersion of the probe up to the immersion line (the dashed line shown in Figure 15-2).

Figure 15-2 Probe Immersion Line



3. Immerse the probe in Cidex[®] OPA solution up to the immersion line and ensure no air or bubbles are trapped. Allow soaking according to the manufacturer's instructions.
4. Thoroughly rinse the probe (up to the immersion line) by immersing it in a large volume of room temperature critical (purified) water for a minimum of one (1) minute. Remove the probe and discard the rinse water. Do not reuse the water. Always use fresh volumes of water for each rinse. Repeat this stage two (2) additional times for a total of three (3) rinses.
5. Thoroughly dry all surfaces of the device using a sterile, lint-free wipe or cloth, changing wipes/cloths when necessary to ensure the device is completely dry. Visually inspect the device to ensure all surfaces are clean and dry. Repeat the drying steps if any moisture is visible.
6. Once clean and disinfected, visually inspect the probe, strain relief, cable, and connector for signs of damage or wear.

Disinfecting the Mobile Device

It may be necessary to disinfect your mobile device after use. For details, refer to your mobile device's policy and website for support.

Updating the Probe and App Software

Updates to the Butterfly iQ™ App and probe are handled through the Apple App Store.

Keep your mobile device's operating system and the Butterfly iQ™ App updated to ensure you have the most up-to-date version.